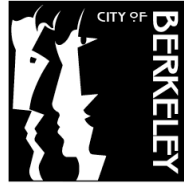


**REVISED AGENDA**  
**(ADDED CONTINUED ITEMS FROM DECEMBER 3, 2019)**



**BERKELEY CITY COUNCIL MEETING**

**Tuesday, December 10, 2019**

**6:00 PM**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Mark Numainville, City Clerk, (510) 981-6900.*

*The City Council may take action related to any subject listed on the Agenda. The Mayor may exercise a two minute speaking limitation to comments from Councilmembers. Meetings will adjourn at 11:00 p.m. - any items outstanding at that time will be carried over to a date/time to be specified.*

## **Preliminary Matters**

### **Roll Call:**

**Ceremonial Matters:** *In addition to those items listed on the agenda, the Mayor may add additional ceremonial matters.*

1. Adjourn in memory of Hampton Smith, former City of Berkeley employee

**City Manager Comments:** *The City Manager may make announcements or provide information to the City Council in the form of an oral report. The Council will not take action on such items but may request the City Manager place a report on a future agenda for discussion.*

**Public Comment on Non-Agenda Matters:** *Persons will be selected by lottery to address matters not on the Council agenda. If five or fewer persons submit speaker cards for the lottery, each person selected will be allotted two minutes each. If more than five persons submit speaker cards for the lottery, up to ten persons will be selected to address matters not on the Council agenda and each person selected will be allotted one minute each. Persons wishing to address the Council on matters not on the Council agenda during the initial ten-minute period for such comment, must submit a speaker card to the City Clerk in person at the meeting location and prior to commencement of that meeting. The remainder of the speakers wishing to address the Council on non-agenda items will be heard at the end of the agenda. Speaker cards are not required for this second round of public comment on non-agenda matters.*

## Consent Calendar

*The Council will first determine whether to move items on the agenda for “Action” or “Information” to the “Consent Calendar”, or move “Consent Calendar” items to “Action.” Items that remain on the “Consent Calendar” are voted on in one motion as a group. “Information” items are not discussed or acted upon at the Council meeting unless they are moved to “Action” or “Consent”.*

*No additional items can be moved onto the Consent Calendar once public comment has commenced. At any time during, or immediately after, public comment on Information and Consent items, any Councilmember may move any Information or Consent item to “Action.” Following this, the Council will vote on the items remaining on the Consent Calendar in one motion.*

*For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

**Public Comment on Consent Calendar and Information Items Only:** *The Council will take public comment on any items that are either on the amended Consent Calendar or the Information Calendar. Speakers will be entitled to two minutes each to speak in opposition to or support of Consent Calendar and Information Items. A speaker may only speak once during the period for public comment on Consent Calendar and Information items.*

*Additional information regarding public comment by City of Berkeley employees and interns: Employees and interns of the City of Berkeley, although not required, are encouraged to identify themselves as such, the department in which they work and state whether they are speaking as an individual or in their official capacity when addressing the Council in open session or workshops.*

## Consent Calendar – Continued Business

- A. Adopt an Ordinance adding a new Chapter 9.50 to the Berkeley Municipal Code Requiring Legal Rights for Legal Tender** *(Reviewed by the Land Use, Housing & Economic Development Policy Committee. Continued from December 3, 2019)*  
**From: Councilmembers Harrison, Hahn, Davila, and Bartlett**  
**Recommendation:** Adopt second reading of Ordinance No. 7,681-N.S. adding a new Chapter 9.50 to the Berkeley Municipal Code requiring legal rights for legal tender, requiring that all covered businesses accept cash.  
**First Reading Vote:** Ayes – Kesarwani, Davila, Bartlett, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes – None; Abstain – None; Absent – Harrison.  
**Financial Implications:** See report  
Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140
- B. Amendment: FY 2020 Annual Appropriations Ordinance** *(Continued from December 3, 2019)*  
**From: City Manager**  
**Recommendation:** Adopt second reading of Ordinance No. 7,682-N.S. amending the FY 2020 Annual Appropriations Ordinance No. 7,669–N.S. for fiscal year 2020 based upon recommended re-appropriation of committed FY 2019 funding and other adjustments authorized since July 1, 2019, in the amount of \$146,891,298 (gross) and \$140,427,518 (net).  
**First Reading Vote:** All Ayes.  
**Financial Implications:** See report  
Contact: Teresa Berkeley-Simmons, Budget Manager, (510) 981-7000



## Consent Calendar

**1. Minutes for Approval**

**From: City Manager**

**Recommendation:** Approve the minutes for the Council meetings of November 5, 2019 (special), November 12, 2019 (special and regular), and November 19, 2019 (special closed and regular).

**Financial Implications:** None

Contact: Mark Numainville, City Clerk, (510) 981-6900

**2. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on December 10, 2019**

**From: City Manager**

**Recommendation:** Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager's threshold will be returned to Council for final approval.

**Financial Implications:** Various Funds - \$2,913,252

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**3. Contract: First Alarm Security & Patrol, Inc. for Citywide Security Services**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute a contract and any amendments with First Alarm Security & Patrol, Inc. dba First Security Services to provide unarmed security guard staffing services at various City locations and facilities in an amount not to exceed \$2,100,000 for 36-months commencing on or about March 1, 2020 through to February 28, 2023 and including the option to extend for two additional 1-year periods for a total of 5 years at a total not-to-exceed amount of \$3,550,000, subject to the City's annual budget appropriation process.

**Financial Implications:** See report

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**4. Revenue Contract: Community Services Block Grant for Calendar Year 2020**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to accept the Community Services Block Grant (CSBG) Contract Number 20F-3001, estimated to be \$266,863 to provide services for low-income people for the period January 1, 2020 to December 31, 2020.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

## Consent Calendar

### 5. Memorandum of Understanding for a Winter Relief Program

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute a memorandum of understanding (MOU) between Alameda County and the City of Berkeley for a Winter Relief Program, consisting of \$75,000 allotted from Alameda County to the City, which will provide homeless people on the streets of Berkeley housing respite through May 31, 2020.

**Financial Implications:** \$75,000 (revenue)

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

### 6. Jointly Apply for Infill Infrastructure Grant Funding for Projects Seeking City Funding through the 2019 Housing Trust Fund Request for Proposals

**From: City Manager**

**Recommendation:** Adopt two Resolutions that enable affordable housing development projects that applied for City funding through the 2019 Housing Trust Fund Request for Proposals to access State of California Infill Infrastructure Grant (IIG) funds by:

1. Authorizing the City Manager to prepare and submit a joint application with each of the following developers proposing to use IIG funds: a. Satellite Affordable Housing Associates (for Blake Apartments at 2527 San Pablo); b. BRIDGE Housing Corporation (for 1740 San Pablo); c. Resources for Community Development (for Maudelle Miller Shirek Community at 2001 Ashby); and
2. Authorizing the City Manager to take actions needed for the City's participation in the IIG program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

### 7. Jointly Apply for No Place Like Home Funding for Maudelle Miller Shirek Community at 2001 Ashby Avenue

**From: City Manager**

**Recommendation:** Adopt two Resolutions that enable the proposed Maudelle Miller Shirek Community project to access State of California No Place Like Home program funds by:

1. Authorizing the City Manager to prepare and submit a joint application for Maudelle Miller Shirek Community at 2001 Ashby.
2. Authorizing the City Manager to take actions needed for the City's participation in the No Place Like Home program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents, and providing mental health services for tenants of the resulting housing.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

## Consent Calendar

### 8. 2020 Health Plan Changes

**From: City Manager**

**Recommendation:** Adopt two Resolutions:

1. Approving rates for the Kaiser Health Maintenance Organization (HMO) health plans as follows: (a) 2.58% increase for Kaiser S1 Group #60 (Active Group); (b) 2.07% increase for the HSA-Qualified Deductible HMO Plan (Active Group); (c) 6.01% increase for Pre-Medicare Eligible Retirees (Retiree Group); and (d) -0.004% decrease for Post-65 Senior Advantage (Retiree Group)
2. Approving rates for the Sutter Health Plus health plans as follows: (a) 5.37% increase for the Active HMO ML30 group; and (b) 5.41% increase for the Pre-Medicare retiree group.

The health plan premium rates will be effective for the period of January 1, 2020 through December 31, 2020.

**Financial Implications:** See report

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

### 9. Contract No. 31900092 Amendment: Basic Pacific, Third-Party Administrator for COBRA Administration and Retiree Health Premium Assistance Plan Administration

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute a contract amendment to Contract No. 31900092 with BASIC Pacific (BASIC) for COBRA Plan administration and administration of the Retiree Health Premium Assistance Plan for non-sworn retirees and other retiree medical programs for sworn Fire and Police, for the period covering October 1, 2018, through December 31, 2022; for a total cost not to exceed \$405,000.

**Financial Implications:** See report

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

### 10. Contract No. 10542 Amendment: ServiceNow, Inc. for Information Technology Service Management, Project Management, and Government Risk and Compliance Software Licenses

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10542 with ServiceNow, Inc., for the extension of software licenses of the IT Service Management, Business Management, and Governance Risk and Compliance (GRC) modules, for an additional amount not-to-exceed \$266,076 and a total not-to-exceed amount of \$527,832 from February 14, 2017 to June 30, 2022.

**Financial Implications:** See report

Contact: Savita Chaudhary, Information Technology, (510) 981-6500

## Consent Calendar

- 11. Waiver of City Ordinance No. 7,650-N.S. for Berkeley Tuolumne Camp Reconstruction Contracts**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing a waiver of City Ordinance No. 7,650-N.S. (which adds Chapter 13.105 to the Berkeley Municipal Code to Adopt a Sanctuary Contracting Ordinance) for Berkeley Tuolumne Camp Reconstruction Project contracts.  
**Financial Implications:** See report  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
- 12. Contract No. 3200082 Amendment: Mar Con Builders, Inc. for Live Oak Community Center Seismic Upgrade Project**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 3200082 with Mar Con Builders, Inc. for the Live Oak Community Center Seismic Upgrade Project, increasing the contract amount by \$241,451 plus a 20% contingency in the amount of \$48,290 for a total amount not to exceed of \$5,705,668.  
**Financial Implications:** Measure T1 Fund - \$289,741  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
- 13. Contract No. 10793 Amendment: Siegel & Strain Architects for Construction Administration for the Berkeley Tuolumne Camp Project**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to amend Contract No. 10793 with Siegel & Strain Architects for Construction Support Services for the Berkeley Tuolumne Camp Project, increasing the contract by \$2,900,000 for a total amount not to exceed \$7,200,000, and extending the term of the contract to July 1, 2022.  
**Financial Implications:** Camps Fund - \$2,900,000  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700

## Consent Calendar

### 14. **Adjustments to the Measure T1 Phase 1 Project List**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the following adjustments to the Measure T1 Phase 1 project list with no additional funding: 1. Removal of the following projects: -Transfer Station Conceptual Master Plan; -West Berkeley Service Center conceptual design; 2. Change of phase from construction to planning for the following projects: -Berkeley Health Clinic; -Public Safety Building; -Hopkins Street – San Pablo to the Alameda; -Bancroft Way – Milvia to Shattuck; 3. Change of phase from design to planning for the following projects: -Berkeley Municipal Pier; -Tom Bates (Gilman) Fields North Field House / Restroom; 4. Addition of the following projects and funding to supplement existing T1 projects at the same site: -San Pablo Park – Additional Play Structure Replacement (ages 2-5); -Strawberry Creek Park – Play Structure Replacement; -Codornices Creek at Kains Avenue.

**Financial Implications:** See report

Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700; Phillip Harrington, Public Works, (510) 981-6300

### 15. **Referral Response: Telegraph Avenue Loading Zone and Customer Parking Pilot Project Evaluation and Next Steps**

**From: City Manager**

**Recommendation:** Adopt a Resolution marking the successful completion of the Telegraph Avenue Loading Zone and Customer Parking pilot project, making the pilot parking changes permanent, and authorizing the City Traffic Engineer to establish similar loading zone and/or customer parking regulations in all parking meter districts citywide, based on staff parking demand analysis, at the request of adjacent merchants, and/or in consultation with local business associations.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

### 16. **Purchase Order: National Auto Fleet Group for Nine Ford F-Series Pickup Trucks with Various Service Body Configurations**

**From: City Manager**

**Recommendation:** Adopt a Resolution satisfying requirements of City Charter Article XI Sections 67.2 allowing the City to participate in Sourcewell contract bid procedures, and authorizing the City Manager to execute a purchase order for nine (9) Ford Super Duty F-Series Pickup Trucks with varying service body configurations with National Auto Fleet Group in an amount not to exceed \$492,284, and a subsequent purchase order for the conversion of the nine (9) Ford Super Duty F-Series Pickup Trucks to plug in hybrid vehicles in an amount not to exceed \$245,000 using XL Fleet technology when it becomes commercially available.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Consent Calendar

- 17. Contract Nos. 31900080 and 31900205 Amendment: Edgeworth Integration, LLC for Server Storage**  
**From: City Manager**  
**Recommendation:** Adopt two Resolutions authorizing the City Manager to execute:  
1. Amendment to Contract No. 31900080 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$36,588 for a total not to exceed amount of \$71,588.  
2. Amendment to Contract No. 31900205 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$17,972 for a total not to exceed amount of \$35,028.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300
- 18. Contract No. 9893B Amendment: ABM Industries for Expanding Electric Vehicle Charging Station Operations and Extended Maintenance Program**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 9893B with ABM Industries to extend the term by three years, purchase additional Electric Vehicle (EV) charging stations, and provide network operations and maintenance, including extended warranty services, in the amount of \$131,556 for a total Contract not to exceed \$557,552 through June 30, 2026.  
**Financial Implications:** Various Funds - \$131,556  
Contact: Phillip Harrington, Public Works, (510) 981-6300
- 19. Contract: Pacific Trenchless, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Dwight Way, Fourth Street, Camelia Street, Seventh Street, Heinz Avenue, University Avenue, Dana Street, Ward Street, Dover Street, Haskell Street, and Seawall Drive; accepting the bid of the lowest responsive and responsible bidder, Pacific Trenchless, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,821,569 which includes a 10% contingency of \$347,415.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300

## Consent Calendar

**20. Contract: Precision Engineering Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**

**From: City Manager**

**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on San Pablo Avenue at University Avenue, Parker Street, Carleton Street, Derby Street, and from Grayson Street to South City Limit; accepting the bid of the lowest responsive and responsible bidder, Precision Engineering Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$2,246,219, which includes a 10% contingency of \$204,202.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

**21. Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**

**From: City Manager**

**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Neilson Street Backline, Thousand Oaks Boulevard Backline, Portland Avenue Backline, Peralta Avenue, San Lorenzo Avenue/Washington Avenue, Capistrano Avenue, Miramar Avenue Backline, The Alameda Backline, Arlington Avenue Backline, Michigan Avenue Backline, Alamo Avenue Backline, San Diego Road and Backline, Santa Barbara Road and Backline, San Luis Road Backline, Henry Street Backline, Berryman Street and Backline, Grizzly Peak Boulevard and Backline, Cypress Street/Buena Avenue, Rose Street, Grant Street, Edith Street, and Milvia Street Backline; accepting the bid of the lowest responsive and responsible bidder, Cratus, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,654,358, which includes a 10% contingency of \$332,214.

**Financial Implications:** Sanitary Sewer Fund - \$3,654,358

Contact: Phillip Harrington, Public Works, (510) 981-6300

**22. Contract No. 10396A Amendment: Du-All Safety, LLC for Safety Consulting and Training Services**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10396 with Du-All Safety, LLC for continued safety training and consulting services up to \$100,000 for a total contract amount not to exceed \$300,000, and to extend the contract term through December 31, 2022.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Consent Calendar

- 23. Contract No. 31900124 Amendment: B Bros Construction Inc. for Adult Mental Health Services Center Renovations Project at 2640 Martin Luther King Jr Way From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to amend Contract No. 31900124 with B Bros Construction, Inc. to complete renovation and seismic upgrade work at the Adult Mental Health Services Center (Center), increasing the current contract amount of \$4,886,293 by \$500,000 for a total amount not-to-exceed (NTE) of \$5,386,293.

**Financial Implications:** T1 Fund - \$500,000

Contact: Phillip Harrington, Public Works, (510) 981-6300

- 24. 2019 Housing Trust Fund Request for Proposals Funding Reservations From: Measure O Bond Oversight Committee**

**Recommendation:** Adopt a Resolution to:

1. Reserve Measure O bond revenues and other available funds for the following proposals at the following levels, for a total reservation of \$36,002,640: a. Satellite Affordable Housing Associates' Blake Apartments development (2527 San Pablo) at \$11,500,000; and b. BRIDGE Housing Corporation's 1740 San Pablo Avenue development at \$7,500,000; and c. Northern California Land Trust's (NCLT) Anti-Displacement Project (2321-2323 10th Street) at \$1,570,640; and d. Resources for Community Development's (RCD) Maudelle Miller Shirek Community (2001 Ashby) at \$15,432,000.

2. Fund the projects in the priority order listed above. If the available funds are insufficient to support all four proposals in full, forward commit funds from the next planned issuance of Measure O funds.

3. Consider funding 2321-2323 10th Street/Anti-Displacement Project (NCLT) using general funds such as those received pursuant to Measure U1.

4. For the NCLT Project at 2321-2323 10th Street: a. Waive the HTF Guidelines requirements listed below to allow funding for this project: i. Threshold for developer experience; and ii. City subsidy limit equal to 40% of total development costs.

b. Condition this new funding on NCLT's demonstrated compliance with the Council-mandated requirements of its 2017 development loan agreement. c. Apply Small Sites Program development and operating budget standards to NCLT's project.

5. Authorize the City Manager to execute all original or amended documents or agreements to effectuate this action.

**Financial Implications:** See report

Contact: Amy Davidson, Commission Secretary, (510) 981-5400

- 25. Support for Non-Violent Activists and Protections of Animals in Commercial Operations**

**From: Peace and Justice Commission**

**Recommendation:** Adopt a resolution supporting non-violent activists and protecting animals in commercial operations.

**Financial Implications:** Minimal

Contact: Erin Steffen, Commission Secretary, (510) 981-7000



## Council Consent Items

**26. Ninth Annual Martin Luther King Jr. Celebration: City Sponsorship and Relinquishment of Council Office Budget Funds to General Fund and Grant of Such Fund**

**From: Mayor Arreguin and Councilmembers Davila and Bartlett**

**Recommendation:**

1. Adopt a Resolution co-sponsoring the 9th Annual Martin Luther King Jr. Celebration Breakfast on January 20, 2020.
2. Adopt a Resolution approving the expenditure of an amount not to exceed \$500 per Councilmember including \$500 from Mayor Arreguin, to the Berkeley Rotary Endowment, the fiscal sponsor of the 9th Annual Martin Luther King Jr. celebration, with funds relinquished to the City's general fund for this purpose from the discretionary Council Office Budgets of Mayor Arreguin and any other Councilmembers who would like to contribute.

**Financial Implications:** Mayor's Discretionary Fund - \$500

Contact: Jesse Arreguin, Mayor, (510) 981-7100

**27. February 2020 Berkeley Black History Month organized by Berkeley Juneteenth Association: Relinquishment of Council Office Budget Fund to General Fund and Grant of Such Funds**

**From: Councilmembers Bartlett and Davila**

**Recommendation:** Adopt a Resolution approving the expenditure of funds, including \$500 from Councilmember Bartlett, for Black History Month and the Berkeley Juneteenth Festival (organized by Berkeley Juneteenth Association, Inc. 501(c)(3). The funds should be relinquished to the City's general fund for this purpose from the discretionary council office budget of Councilmember Bartlett and any other Councilmembers who would like to contribute.

**Financial Implications:** Staff time

Contact: Ben Bartlett, Councilmember, District 3, (510) 981-7130

## Action Calendar

*The public may comment on each item listed on the agenda for action as the item is taken up. For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

*The Presiding Officer will request that persons wishing to speak line up at the podium to determine the number of persons interested in speaking at that time. Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. Speakers are permitted to yield their time to one other speaker, however no one speaker shall have more than four minutes. The Presiding Officer may, with the consent of persons representing both sides of an issue, allocate a block of time to each side to present their issue.*

*Action items may be reordered at the discretion of the Chair with the consent of Council.*

## Action Calendar – Public Hearings

*Staff shall introduce the public hearing item and present their comments. This is followed by five-minute presentations each by the appellant and applicant. The Presiding Officer will request that persons wishing to speak, line up at the podium to be recognized and to determine the number of persons interested in speaking at that time.*

*Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. Speakers are permitted to yield their time to one other speaker, however no one speaker shall have more than four minutes. The Presiding Officer may with the consent of persons representing both sides of an issue allocate a block of time to each side to present their issue.*

*Each member of the City Council shall verbally disclose all ex parte contacts concerning the subject of the hearing. Councilmembers shall also submit a report of such contacts in writing prior to the commencement of the hearing. Written reports shall be available for public review in the office of the City Clerk.*

### **28. 2019 Local Hazard Mitigation Plan**

**From: City Manager**

**Recommendation:** Conduct a public hearing and upon conclusion:

1. Adopt a Resolution adopting the 2019 Local Hazard Mitigation Plan (LHMP); and
2. Adopt a Resolution amending the General Plan to incorporate the LHMP.

**Financial Implications:** See report

Contact: David Brannigan, Fire, (510) 981-3473

### **29. Implement Residential Preferential Parking (RPP) Program on the 1500 Block of Lincoln Street**

**From: City Manager**

**Recommendation:** Conduct a public hearing and upon its conclusion, adopt a Resolution amending Resolution No. 56,508-N.S. Section 25N by adding a subsection to implement Residential Preferential Parking (RPP) on the 1500 block of Lincoln Street in RPP Area N.

**Financial Implications:** General Fund - \$2,000

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Action Calendar – Continued Business

**C. Recommendation to Immediately Fund and Implement the Safe Passages Program and Additional Actions to Ensure Emergency Equipment Access to All Parts of the City** *(Continued from December 3, 2019)*

**From: Disaster and Fire Safety Commission**

**Recommendation:** The recommendation as stated above from the Disaster and Fire Safety Commission (DFSC) to the Council includes the following seven components:

1. Allocate full funding of the Fire Department's Safe Passages Program;
2. Initiate immediate action;
3. Recognize that parking restrictions are necessary on some streets for the health and well-being of Berkeley residents;
4. Establish priorities for enacting parking restrictions;
5. Develop a departmental coordinated team effort;
6. Inform the public; and
7. Document and distribute the extent of the access and egress problem.

**Financial Implications:** See report

Contact: Keith May, Commission Secretary, (510) 981-3473

**Da. Public Works Commission Recommendation for the Five-Year Paving Plan** *(Continued from December 3, 2019)*

**From: Public Works Commission**

**Recommendation:** Adopt a resolution that recommends approval of the Five-Year Paving Plan for FY2020 to FY2024 as proposed by Staff and recommends the creation of a Long-Term Paving Master Plan.

**Financial Implications:** See report.

Contact: Nisha Patel, Commission Secretary, (510) 981-6300

**Db. Companion Report: Public Works Commission Recommendation for the Five-Year Street Rehabilitation Plan** *(Continued from December 3, 2019)*

**From: City Manager**

**Recommendation:** Adopt a Resolution updating the City's Five-Year Street Rehabilitation Plan for FY 2020 to FY 2024 and refer to the City Manager consideration of a Long-Term Paving Master Plan to be started after the completion of the public process of T1 Phase 2. The City Council may consider the information put forth by the Public Works Commission relevant to adoption of the recommended plan.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Action Calendar – New Business

- 30. Urgency Ordinance Amending Accessory Dwelling Unit (ADU) Ordinance to Comply with New State Law and Establish Interim Limits on Development; Amending BMC Chapter 23C.24**  
**From: City Manager**  
**Recommendation:** Adopt an Urgency Ordinance amending Berkeley Municipal Code Chapter 23C.24 (Accessory Dwelling Units) to comply with new State law and establish interim limits on ADU development pending further analysis, deliberation and adoption of local regulations, in order to help ensure public safety.  
**Financial Implications:** See report  
Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

## Council Action Items

- 31. Approval of a Memorandum of Understanding between the City of Berkeley and BART on Implementation of State Law AB 2923 at the Ashby and North Berkeley BART Stations and Establishment of a Community Advisory Group**  
**From: Mayor Arreguin, and Councilmembers Bartlett and Kesarwani**  
**Recommendation:**
1. Approve a Memorandum of Understanding (MOU) between the City of Berkeley and the Bay Area Rapid Transit District (BART) to establish a process for cooperatively pursuing the implementation of Assembly Bill 2923 (AB 2923, Stats. 2018, Chp. 1000) at the Ashby and North Berkeley BART Stations. This action is pursuant to unanimous City Council direction on May 9, 2019, to direct the City Manager to “engage with BART to develop an MOU that outlines the project planning process including feasibility analysis, project goals, and roles and responsibilities; and direct that the MOU return to Council for adoption.”
  2. Establish a Community Advisory Group (CAG) for the purposes of providing input:  
-To the City Planning Commission as it considers zoning standards that will be consistent with the City’s obligations under AB 2923 for the Ashby and North Berkeley BART station areas; and -To the City and BART as the parties establish a joint vision and priorities document that will be incorporated in eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART Properties.
- Financial Implications:** See report  
Contact: Jesse Arreguin, Mayor, (510) 981-7100

## Information Reports

- 32. City Council Short Term Referral Process – Monthly Update**  
**From: City Manager**  
Contact: Mark Numainville, City Clerk, (510) 981-6900
- 33. Examination of Department Directors Transition Procedures Follow-Up Audit - Status Report**  
**From: City Manager**  
Contact: Dave White, City Manager's Office, (510) 981-7000

## Information Reports

34. **Recommendation Status Reports: Credit Card Audit, Cash Handling, Business License Tax, and Contracts Review Audits**  
**From: City Manager**  
Contact: Henry Oyekanmi, Finance, (510) 981-7300
35. **Public Health Division Strategic Plan Update**  
**From: City Manager**  
Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400
36. **Report on Workers' Compensation Annual Program Review FY18-19**  
**From: City Manager**  
Contact: LaTanya Bellow, Human Resources, (510) 981-6800
37. **goBerkeley Parking Management Program - Recommended Adjustments for February 1, 2020**  
**From: City Manager**  
Contact: Phillip Harrington, Public Works, (510) 981-6300
38. **Recommendation Follow Up Report, December 2019**  
**From: Auditor**  
Contact: Jenny Wong, Auditor, (510) 981-6750

## Public Comment – Items Not Listed on the Agenda

### Adjournment

**NOTICE CONCERNING YOUR LEGAL RIGHTS:** *If you object to a decision by the City Council to approve or deny a use permit or variance for a project the following requirements and restrictions apply: 1) No lawsuit challenging a City decision to deny (Code Civ. Proc. §1094.6(b)) or approve (Gov. Code 65009(c)(5)) a use permit or variance may be filed more than 90 days after the date the Notice of Decision of the action of the City Council is mailed. Any lawsuit not filed within that 90-day period will be barred. 2) In any lawsuit that may be filed against a City Council decision to approve or deny a use permit or variance, the issues and evidence will be limited to those raised by you or someone else, orally or in writing, at a public hearing or prior to the close of the last public hearing on the project.*

Live captioned broadcasts of Council Meetings are available on Cable B-TV (Channel 33), via internet accessible video stream at <http://www.cityofberkeley.info/CalendarEventWebcastMain.aspx> and KPFB Radio 89.3.

Archived indexed video streams are available at <http://www.cityofberkeley.info/citycouncil>. Channel 33 rebroadcasts the following Wednesday at 9:00 a.m. and Sunday at 9:00 a.m.

Communications to the City Council are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk Department at 2180 Milvia Street. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk Department for further information.

Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be made available for public inspection at the public counter at the City Clerk Department located on the first floor of City Hall located at 2180 Milvia Street as well as posted on the City's website at <http://www.cityofberkeley.info>.

Agendas and agenda reports may be accessed via the Internet at <http://www.cityofberkeley.info/citycouncil> and may be read at reference desks at the following locations:

City Clerk Department  
2180 Milvia Street  
Tel: 510-981-6900  
TDD: 510-981-6903  
Fax: 510-981-6901  
Email: [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info)

Libraries:  
Main - 2090 Kittredge Street  
Claremont Branch – 2940 Benvenue  
West Branch – 1125 University  
North Branch – 1170 The Alameda  
South Branch – 1901 Russell

**COMMUNICATION ACCESS INFORMATION:**

This meeting is being held in a wheelchair accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at (510) 981-6418 (V) or (510) 981-6347 (TDD) at least three business days before the meeting date.

Attendees at public meetings are reminded that other attendees may be sensitive to various scents, whether natural or manufactured, in products and materials. Please help the City respect these needs.



Captioning services are provided at the meeting, on B-TV, and on the Internet. In addition, assisted listening devices for the hearing impaired are available from the City Clerk prior to the meeting, and are to be returned before the end of the meeting.

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***I hereby certify that the agenda for this meeting of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on December 5, 2019.***

A handwritten signature in black ink that reads "Mark Numainville".

Mark Numainville, City Clerk

## Communications

*Council rules limit action on Communications to referral to the City Manager and/or Boards and Commissions for investigation and/or recommendations. All communications submitted to Council are public record. Copies of individual communications are available for viewing at the City Clerk Department and through [Records Online](#).*

### **Item #14: Modification of Measure T1 Phase 1 Project List**

1. MiSoon Yang (2)

**Item #25: Support for Non-Violent Activists and Protections of Animals in Commercial Operations**

2. Shawna Hamilton

**Item #31: Approval of a Memorandum of Understanding between the City of Berkeley and BART on Implementation of State Law AB 2923 at the Ashby and North Berkeley BART Stations and Establishment of a Community Advisory Group**

3. Mary-Louise Hansen

**Women's Therapy Center**

4. Margie Cohen

**Kids Art Contest – North Berkeley BART**

5. Beth Gerstein, on behalf of Councilmember Kesarwani

**Trash Pick Up at University and Highway 80**

6. Diana Bohn

**Pedestrian Protection at Shattuck and Woolsey**

7. Ashleigh Kanat

**UC Berkeley/Citywide Security Concerns**

8. Marianna Bacher

**Public Safety Power Shutoffs**

9. Thomas Gregory

**Nutrition Standards at Checkout**

10. Darya Minovi, on behalf of the Center for Science in the Public Interest

11. Xochitl Castaneda, on behalf of the Health Initiative of the Americas

12. Amanda Nube

13. Juan Garay

**Support YSA's Tiny House Village Project**

14. Sara Fread

15. Helen Toy

16. Eunice Orfa Bonfil Tapia

**2710 Shattuck Apartment Building**

17. Hector Salgado

**5G/Cell Antenna Regulation**

18. Meaveen O'Connor

19. Carol Pinson

20. Beth Jerde

21. Councilmember Harrison

- 22. Gar Smith
- 23. T. Tobey
- 24. Regina DiMaggio
- 25. Tom Luce
- 26. Susan Griffin
- 27. Vivian Warkentin

### **Opportunity Zones**

- 28. Margy Wilkinson

### **Police Review**

- 29. Linda Franklin

### **Affordable Housing Framework**

- 30. Linda Franklin

### **Here/There Encampment**

- 31. Pedro Alvarez, Jr.

### **Supplemental Communications and Reports**

*Items received by the deadlines for submission will be compiled and distributed as follows. If no items are received by the deadline, no supplemental packet will be compiled for said deadline.*

- **Supplemental Communications and Reports 1**  
Available by 5:00 p.m. five days prior to the meeting.
- **Supplemental Communications and Reports 2**  
Available by 5:00 p.m. the day before the meeting.
- **Supplemental Communications and Reports 3**  
Available by 5:00 p.m. two days following the meeting.



ORDINANCE NO. 7,681–N.S.

ADDING A NEW CHAPTER 9.50 TO THE BERKELEY MUNICIPAL CODE  
REQUIRING BUSINESSES TO ACCEPT CASH

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Chapter 9.50 of the Berkeley Municipal Code is added to read as follows:

**Chapter 9.50  
LEGAL RIGHTS FOR LEGAL TENDER**

**Sections:**

**9.50.010 Findings and Purpose**

**9.50.020 Definitions**

**9.50.030 Covered Businesses Required to Accept Cash**

**9.50.040 Exceptions**

**9.50.050 Enforcement**

**9.50.060 Severability**

The Council finds and declares as follows:

- A. The City of Berkeley is committed to providing its community with transactional access to the goods and services provided by Berkeley’s businesses. For many City residents, such as those unable to obtain bank accounts, the ability to engage in consumer transactions, including goods and services vital to health and safety, depends on the ability to pay with legal cash tender established by the federal government of United States.
- B. Cashless business models present significant detrimental impacts to vulnerable groups, especially low-income people, as they require financial institution-sponsored payment in credit or debit cards, or other non-cash forms of payment.
- C. Cash payment, in the form of the United States Dollar, has been the official legal tender since 1792 and shall be recognized by businesses alongside other forms of legal tender.
- D. It is the intent of the Council to ensure Berkeley’s economy is inclusionary and accessible to everyone, including those who lack access to non-cash forms of payment.

**9.50.020 Definitions.**

- A. Covered Business shall mean any Drugstore, Food Products Store, or Retail Products Store operating at a fixed, permanent, physical premises. Covered businesses do not include any transactions occurring in an Itinerant Restaurant as defined in BMC 12.04.010.

- B. "Cash" means United States currency, in the form of both paper Federal Reserve Notes and metal coins.
- C. "Drugstore" shall have the same meaning as defined in BMC 23F.04.010.
- D. "Food Products Store" shall have the same meaning as defined in BMC 23F.04.010.
- E. "Retail Products Store" shall have the same meaning as defined in BMC 23F.04.010.

**9.50.030 Covered Businesses Required to Accept Cash.**

- A. Except as set forth in 9.50.040, every Covered Business within the City must accept payment in Cash, if offered, for any transaction involving the purchase of any tangible good and/or service.
- B. Except as set forward in 9.50.040, a Covered Business may not charge a fee or place any other condition on its acceptance of Cash as required by subsection A.

**9.50.040 Exceptions.**

The provisions set forward in this Act shall not apply in cases of:

- A. Suspected counterfeit currency. A Covered Business may refuse to accept Cash that the business reasonably suspects to be counterfeit.
- B. Large denominations. A Covered Business may refuse to accept Cash in any denomination larger than a twenty dollar note, but shall otherwise accept any combination of Federal Reserve Notes and metal coins in connection with any transaction.
- C. Single transactions above \$500. Where a single transaction involves the purchase of one or more goods and/or services, the total price of which (including tax) exceeds \$500, a Covered Business must accept Cash that is offered as payment for any amount up to and including \$500, but may refuse to accept Cash that is offered as payment for the remainder of the amount due.
- D. Reservations made without cash. Where a Covered Business requires the purchaser make an appointment or reservation using a noncash form of payment (such as a credit or debit card), the business may require that the transaction in question be paid for using the noncash payment already on file.

**9.50.050 Enforcement.**

- A. The obligation to ensure that a Covered Business complies with this Chapter 9.50 shall fall only on the business or, in the case that the owners of the business are responsible for a policy or practice causing a violation of this Chapter, on the owner or owners of the business. No employee or independent contractor working at a Covered Business shall be held liable for any violation of this Chapter.
- B. Each transaction or attempted transaction in which a Covered Business fails to accept Cash shall constitute a separate violation of this Chapter.
- C. Any aggrieved person who believes the provisions of this Chapter have been violated shall have the right to file an action for injunctive relief and/or damages. In

any action to enforce the provisions of the chapter, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs.

- D. The City may issue an Administrative Citation pursuant to Chapter 1.28 of the Berkeley Municipal Code for any violation of this Chapter. The amount of this fine shall be determined as specified below:
- a. For a first violation, an infraction punishable by a fine not exceeding \$100 and not less than \$50.
  - b. For a second violation within a twelve month period, an infraction punishable by a fine not exceeding \$200 and not less than \$100.
  - c. For a third violation within a twelve month period, an infraction punishable by a fine not exceeding \$1,000 and not less than \$500.

**9.50.060 Severability.**

If any word, phrase, sentence, part, section, subsection, or other portion of this Chapter, or any application thereof to any person or circumstance is declared void, unconstitutional, or invalid for any reason, then such word, phrase, sentence, part, section, subsection, or other portion, or the prescribed application thereof, shall be severable, and the remaining provisions of this Chapter, and all applications thereof, not having been declared void, unconstitutional or invalid, shall remain in full force and effect. The City Council hereby declares that it would have passed this title, and each section, subsection, sentence, clause and phrase of this Chapter, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases is declared invalid or unconstitutional.

Section 2. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King, Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on December 3, 2019, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: Harrison.



## ORDINANCE NO. 7,682-N.S.

AMENDING THE ANNUAL APPROPRIATIONS ORDINANCE NO. 7,669–N.S. FOR  
FISCAL YEAR 2020

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That the Annual Appropriations Ordinance based on the budget for FY 2020 submitted by the City Manager and passed by the City Council be amended as follows and as summarized in Exhibit A:

|                                                |                    |
|------------------------------------------------|--------------------|
| A. General Fund (Funds 001-099)                | 229,507,149        |
| B. Special Funds ( Funds 100-199)              | 117,087,692        |
| C. Grant Funds (Funds 300-399)                 | 46,751,427         |
| D. Capital Projects Funds (Funds 500-550)      | 68,241,949         |
| E. Debt Service Fund (Funds 551-599)           | 10,533,979         |
| F. Enterprise Funds (Funds 600-669)            | 144,115,620        |
| G. Internal Service Funds (Funds 146, 670-699) | 46,116,952         |
| H. Successor Agency (Funds 760-769)            | 56,960             |
| I. Agency Funds (Funds 771-799)                | 4,838,731          |
| J. Other Funds (Funds 800-899)                 | 5,497,649          |
| <u>K. Total</u>                                |                    |
| Total General Fund                             | 229,507,149        |
| Add: Total Other Than General Fund             | 443,240,959        |
| <b>Gross Revenue Appropriated</b>              | <b>672,748,107</b> |
| Less: Dual Appropriations                      | -26,171,544        |
| Less: Revolving/Internal Service Funds         | -46,002,952        |
| <b>Net Revenue Appropriated</b>                | <b>600,573,611</b> |

Section 2. The City Manager is hereby permitted, without further authority from the City Council, to make the following transfers by giving written notice to the Director of Finance:

- a. From the General Fund to the General Fund – Stability Reserve Fund; Catastrophic Reserve Fund; Health State Aid Realignment; Paramedic Tax Fund;

Capital Improvement Fund; Phone System Replacement; Equipment Replacement Fund; Public Liability Fund; Catastrophic Loss Fund; Police Employee Retiree Health Assistance Plan; Safety Members Pension Fund; Information Technology Cost Allocation Fund; and Sick Leave Entitlement Fund.

- b. To the General Fund from the Community Development Block Grant Fund; Street Lighting Assessment District Fund; Zero Waste Fund; Marina Operations and Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Permit Service Center Fund; Parking Meter Fund; Unified Program (CUPA); and Health State Aid Realignment Fund.
- c. To the First Source Fund from the Parks Tax Fund; Capital Improvement Fund; and the Marina Fund.
- d. From UC Settlement Fund to General Fund and Clean Storm Water Fund.
- e. From Capital Improvement Fund to PERS Savings Fund; Berkeley Repertory Theater Fund; and 2010 COP (Animal Shelter) Fund.
- f. To the Public Art Fund from the Parks Tax Fund; Capital Improvement Fund; and the Marina Fund.
- g. To CFD#1 District Fire Protection Bond (Measure Q) from Special Tax Bonds CFD#1 ML-ROOS.
- h. To Private Sewer Lateral Fund from Sanitary Sewer Operation Fund.
- i. To Catastrophic Loss Fund from Permit Service Center Fund.
- j. To Catastrophic Loss Fund from Unified Program (CUPA) Fund.
- k. To the Building Purchases and Management Fund from General Fund; Health (General) Fund; Rental Housing Safety Program Fund; Measure B Local Streets & Road Fund; Employee Training Fund; Zero Waste Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Permit Service Center Fund; Off Street Parking Fund; Parking Meter Fund; Unified Program (CUPA) Fund; Building Purchases & Management Fund; Building Maintenance Fund; Central Services Fund; and Health State Aide Realignment Trust Fund.
- l. To Equipment Replacement Fund from General Fund; Mental Health Services Act Fund; Health (Short/Doyle) Fund; Vector Control Fund; Paramedic Tax Fund; Playground Camp Fund; State Transportation Tax Fund; Rental Housing Safety Program Fund; Parks Tax Fund; Street Light Assessment District Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Permit Service Center Fund; Parking Meter Fund; Equipment Maintenance Fund; Building Maintenance Fund; and Central Services Fund.

- m. To the Equipment Maintenance Fund from General Fund; Health (General) Fund; Mental Health Services Act Fund; Health (Short/Doyle) Fund; Vector Control Fund; Paramedic Tax Fund; Library - Discretionary Fund; Playground Camp Fund; State Transportation Tax Fund; Rental Housing Safety Program Fund; Rent Stabilization Board Fund; Parks Tax Fund; Street Light Assessment District Fund; FEMA Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Permit Service Center Fund; Off Street Parking Fund; Parking Meter Fund; Equipment Maintenance Fund; Building Maintenance Fund; and Central Services Fund.
- n. To the Building Maintenance Fund from the General Fund; Health (General) Fund; Health (Short/Doyle) Fund; Measure B Local Street & Road Fund; Parks Tax Fund; Street Light Assessment District Fund; Zero Waste Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Off Street Parking Fund; Parking Meter Fund; Equipment Maintenance Fund; Building Maintenance Fund; and Mental Health State Aid Realignment Fund.
- o. To the Central Services Fund from the General Fund; First Source Fund; Health (Short/Doyle) Fund; Library-Discretionary Fund; Playground Camp Fund; Rent Stabilization Board Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation; Building Purchases & Management Fund; Building Maintenance Fund; Central Services Fund; and Mental Health State Aid Realignment Fund.
- p. To Information Technology Cost Allocation Plan Fund from General Fund; Target Case Management/Linkages Fund; Health (Short/Doyle); Library Fund; Playground Camp Fund; State Transportation Tax Fund; CDBG Fund; Rental Housing Safety Program; Rent Stabilization Board Fund; Parks Tax Fund; Street Light Assessment District Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation; Clean Storm Water Fund; Permit Service Center Fund; Off Street Parking Fund; Parking Meter Fund; Unified Program (CUPA) Fund; Equipment Maintenance Fund; Building Maintenance Fund; Information Technology Cost Allocation Plan Fund; Health State Aid Realignment Trust Fund; and Mental Health State Aid Realignment Fund.
- q. To the Workers' Compensation Self-Insurance Fund from General Fund; Special Tax for Severely Disabled Measure E Fund; First Source Fund; HUD Fund; ESGP Fund; Health (General) Fund; Target Case Management/Linkages Fund; Mental Health Service Act Fund; Health (Short/Doyle) Fund; EPSDT Expansion Proposal Fund; Senior Nutrition (Title III) Fund; C.F.P. Title X Fund; Fund Raising Activities Fund; Berkeley Unified School District Grant; Vector Control Fund; Paramedic Tax Fund; Alameda County Grants Fund; Senior Supportive Social Services Fund; Family Care Support Program Fund; Domestic Violence Prevention – Vital Statistics Fund; Affordable Housing Mitigation; Inclusionary Housing Program;

Library – Discretionary Fund; Playground Camp Fund; Community Action Program Fund; State Proposition 172 Public Safety Fund; State Transportation Tax Fund; CDBG Fund; Rental Housing Safety Program; Measure B Local State & Road Fund; Measure B Bike & Pedestrian Fund; Measure B – Paratransit Fund; Measure F Alameda County Vehicle Registration Fee Streets & Roads Fund; Measure BB – Paratransit Fund; One-Time Grant: No Cap Expense Fund; Rent Stabilization Board Fund; Parks Tax Fund; Measure GG – Fire Prep Tax Fund; Street Lighting Assessment District Fund; Employee Training Fund; Private Percent – Art Fund; Measure T1 – Infrastructure & Facilities Fund; FUND\$ Replacement Fund; Capital Improvement Fund; FEMA Fund; CFD #1 District Fire Protect Bond Fund; Special Tax Bonds CFD#1 ML-ROOS Fund; Shelter+Care HUD Fund; Shelter+Care County Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Private Sewer Lateral Fund; Permit Service Center Fund; Off-Street Parking Fund; Parking Meter Fund; Unified Program (CUPA) Fund; Building Purchases & Management Fund; Equipment Replacement Fund; Equipment Maintenance Fund; Building Maintenance Fund; Central Services Fund; Workers’ Compensation Fund; Public Liability Fund; Information Technology Cost Allocation Plan Fund; Health State Aid Realignment Trust Fund; Tobacco Control Trust Fund; Mental Health State Aid Realignment Fund; Alameda Abandoned Vehicle Abatement Authority; and Bio-Terrorism Grant Fund.

- r. To the Sick Leave and Vacation Leave Accrual Fund from General Fund; Special Tax for Severely Disabled Measure E Fund; First Source Fund; HUD Fund; ESGP Fund; Health (General) Fund; Target Case Management/Linkages Fund; Mental Health Service Act Fund; Health (Short/Doyle) Fund; EPSDT Expansion Proposal Fund; Senior Nutrition (Title III) Fund; C.F.P. Title X Fund; Fund Raising Activities Fund; Berkeley Unified School District Grant; Vector Control Fund; Paramedic Tax Fund; Alameda County Grants Fund; Senior Supportive Social Services Fund; Family Care Support Program Fund; Domestic Violence Prevention – Vital Statistics Fund; Affordable Housing Mitigation; Inclusionary Housing Program; Library – Discretionary Fund; Playground Camp Fund; Community Action Program Fund; State Proposition 172 Public Safety Fund; State Transportation Tax Fund; CDBG Fund; Rental Housing Safety Program; Measure B Local State & Road Fund; Measure B Bike & Pedestrian Fund; Measure B – Paratransit Fund; Measure F Alameda County Vehicle Registration Fee Streets & Roads Fund; Measure BB – Paratransit Fund; One-Time Grant: No Cap Expense Fund; Rent Stabilization Board Fund; Parks Tax Fund; Measure GG – Fire Prep Tax Fund; Street Lighting Assessment District Fund; Employee Training Fund; Private Percent – Art Fund; Measure T1 – Infrastructure & Facilities Fund; FUND\$ Replacement Fund; Capital Improvement Fund; FEMA Fund; CFD #1 District Fire Protect Bond Fund; Special Tax Bonds CFD#1 ML-ROOS Fund; Shelter+Care HUD Fund; Shelter+Care County Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Private Sewer Lateral Fund; Permit Service Center Fund; Off-Street Parking Fund; Parking Meter Fund; Unified Program (CUPA) Fund; Building Purchases & Management Fund; Equipment



Replacement Fund; Equipment Maintenance Fund; Building Maintenance Fund; Central Services Fund; Workers' Compensation Fund; Public Liability Fund; Information Technology Cost Allocation Plan Fund; Health State Aid Realignment Trust Fund; Tobacco Control Trust Fund; Mental Health State Aid Realignment Fund; Alameda Abandoned Vehicle Abatement Authority; and Bio-Terrorism Grant Fund.

- s. To the Payroll Deduction Trust Fund from General Fund; Special Tax for Severely Disabled Measure E Fund; First Source Fund; HUD Fund; ESGP Fund; Health (General) Fund; Target Case Management/Linkages Fund; Mental Health Service Act Fund; Health (Short/Doyle) Fund; EPSDT Expansion Proposal Fund; Senior Nutrition (Title III) Fund; C.F.P. Title X Fund; Fund Raising Activities Fund; Berkeley Unified School District Grant; Vector Control Fund; Paramedic Tax Fund; Alameda County Grants Fund; Senior Supportive Social Services Fund; Family Care Support Program Fund; Domestic Violence Prevention – Vital Statistics Fund; Affordable Housing Mitigation; Inclusionary Housing Program; Library – Discretionary Fund; Playground Camp Fund; Community Action Program Fund; State Proposition 172 Public Safety Fund; State Transportation Tax Fund; CDBG Fund; Rental Housing Safety Program; Measure B Local State & Road Fund; Measure B Bike & Pedestrian Fund; Measure B – Paratransit Fund; Measure F Alameda County Vehicle Registration Fee Streets & Roads Fund; Measure BB – Paratransit Fund; One-Time Grant: No Cap Expense Fund; Rent Stabilization Board Fund; Parks Tax Fund; Measure GG – Fire Prep Tax Fund; Street Lighting Assessment District Fund; Employee Training Fund; Private Percent – Art Fund; Measure T1 – Infrastructure & Facilities Fund; FUND\$ Replacement Fund; Capital Improvement Fund; FEMA Fund; CFD #1 District Fire Protect Bond Fund; Special Tax Bonds CFD#1 ML-ROOS Fund; Shelter+Care HUD Fund; Shelter+Care County Fund; Zero Waste Fund; Marina Operations/Maintenance Fund; Sanitary Sewer Operation Fund; Clean Storm Water Fund; Private Sewer Lateral Fund; Permit Service Center Fund; Off-Street Parking Fund; Parking Meter Fund; Unified Program (CUPA) Fund; Building Purchases & Management Fund; Equipment Replacement Fund; Equipment Maintenance Fund; Building Maintenance Fund; Central Services Fund; Workers' Compensation Fund; Public Liability Fund; Information Technology Cost Allocation Plan Fund; Health State Aid Realignment Trust Fund; Tobacco Control Trust Fund; Mental Health State Aid Realignment Fund; Alameda Abandoned Vehicle Abatement Authority; and Bio-Terrorism Grant Fund.

Section 3. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on December 3, 2019, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Bartlett, Davila, Droste, Hahn, Harrison, Kesarwani, Robinson, Wengraf, and Arreguin.

Noes: None.

Absent: None.

**Attachment for Annual Appropriations Ordinance - Fiscal Year 2020**

**REVOLVING FUNDS/INTERNAL SERVICE FUNDS**

Appropriations are identified with revolving and internal service funds. Such funds derive revenue by virtue of payment from other fund sources as benefits are received by such funds, and the total is reflected in the "Less Revolving Funds and Internal Service Funds" in item I. The funds are:

**Revolving/Internal Service Funds**

|                                                  |                      |
|--------------------------------------------------|----------------------|
| Employee Training Fund                           | 856,852              |
| Equipment Replacement Fund                       | 5,977,948            |
| Equipment Maintenance Fund                       | 8,194,536            |
| Building Maintenance Fund                        | 4,674,225            |
| Central Services Fund                            | 396,985              |
| Workers' Compensation Fund                       | 6,534,674            |
| Public Liability Fund                            | 3,274,495            |
| Information Technology Fund                      | 16,093,237           |
| <b>Subtotal Revolving/Internal Service Funds</b> | <b>\$ 46,002,952</b> |

**DUAL APPROPRIATIONS - WORKING BUDGET**

Dual appropriations are identified with revenues generated by one fund and transferred to another fund. Both funds are credited with the applicable revenue, and the total is reflected in the "Less Dual Appropriations" in item I. The dual appropriations are:

Transfers to the General Fund

|                                            |                     |
|--------------------------------------------|---------------------|
| <u>Indirect Cost Reimbursement</u>         |                     |
| CDBG Fund                                  | 154,260             |
| Street Light Assessment District Fund      | 112,971             |
| Zero Waste Fund                            | 2,195,402           |
| Marina Enterprise Fund                     | 438,683             |
| Sanitary Sewer Fund                        | 1,043,589           |
| Clean Storm Water Fund                     | 214,695             |
| Permit Service Center Fund                 | 1,734,781           |
| Unified Program (CUPA) Fund                | 90,763              |
| <b>Subtotal Transfers to General Fund:</b> | <b>\$ 5,985,144</b> |

|                                                                                                  |                      |
|--------------------------------------------------------------------------------------------------|----------------------|
| Transfer to Safety Members Pension Fund from General Fund                                        | 551,804              |
| Transfer to Health State Aid Realignment from General Fund                                       | 1,953,018            |
| Transfer to Paramedic Tax Fund from General Fund                                                 | 612,696              |
| Transfer to Capital Improvement Fund (CIP) from General Fund                                     | 4,950,905            |
| Transfer to Phone System Replacement - VOIP from General Fund                                    | 163,000              |
| Transfer to Equipment Replacement Fund from General Fund                                         | 1,336,699            |
| Transfer to Public Liability Fund from General Fund                                              | 1,695,888            |
| Transfer to Catastrophic Loss Fund from General Fund                                             | 1,351,564            |
| Transfer to Police Employee Retiree Health Assistance Plan from General Fund                     | 400,136              |
| Transfer to Sick Leave Entitlement Fund from General Fund                                        | 201,501              |
| Transfer to General Fund from UC Settlement Fund                                                 | 881,120              |
| Transfer to Clean Storm Water Fund from UC Settlement Fund                                       | 293,708              |
| Transfer to General Fund from Health State Aid Realignment Fund                                  | 2,643,280            |
| Transfer from CIP Fund to PERS Savings Fund                                                      | 151,632              |
| Transfer to Berkeley Repertory Theater Debt Service Fund from CIP Fund                           | 499,802              |
| Transfer from CIP Fund to 2010 COP (Animal Shelter) Fund                                         | 402,613              |
| Transfer to Private Sewer Lateral Fund from Sewer Fund                                           | 90,501               |
| Transfer to Catastrophic Loss Fund from Permit Service Center Fund                               | 50,555               |
| Transfer to Catastrophic Loss Fund from Unified Program (CUPA) Fund                              | 5,082                |
| Transfer to General Fund from Parking Meter Fund                                                 | 1,742,288            |
| Transfer from Special Tax Bonds CFD#1 ML-ROOS to CFD#1 District Fire<br>Protect Bond (Measure Q) | 100,000              |
| Transfer to First Source Fund from Parks Tax Fund                                                | 11,625               |
| Transfer to First Source Fund from Capital Improvement Fund                                      | 29,943               |
| Transfer to First Source Fund from Marina Fund                                                   | 1,875                |
| Transfer to Public Art Fund from Parks Tax Fund                                                  | 17,437               |
| Transfer to Public Art Fund from Capital Improvement Fund                                        | 44,915               |
| Transfer to Public Art Fund from Marina Fund                                                     | 2,813                |
| Subtotal Transfers to Other Funds:                                                               | <u>20,186,400</u>    |
| Sub-Total Dual Appropriations                                                                    | <u>\$ 26,171,544</u> |
| <b>Grand Total Dual Appropriations</b>                                                           | <b>\$ 72,174,496</b> |

SUMMARY OF APPROPRIATIONS BY FUND

| ERMA<br>Fund # | Fund                                    | FY 2020<br>Adopted | 1st AAO                 |                        |                      | FY 2020<br>Revised #1 |                 |
|----------------|-----------------------------------------|--------------------|-------------------------|------------------------|----------------------|-----------------------|-----------------|
|                |                                         |                    | Encumbered<br>Rollovers | Unencum.<br>Carryovers | Other<br>Adjustments |                       | Total<br>Amend. |
| 11             | General Fund Discretionary              | 196,913,849        | 5,512,512               | 4,177,247              | 22,903,541           | 32,593,300            | 229,507,149     |
| 101            | Library - Tax                           | 25,834,485         | 688,625                 |                        |                      | 688,625               | 26,523,110      |
| 103            | Library - Grants                        | 64,089             | 141                     |                        |                      | 141                   | 64,230          |
| 104            | Library - Friends & Gift                | 150,000            | 552                     |                        |                      | 552                   | 150,552         |
| 105            | Library - Foundation                    | 100,000            | 26,211                  |                        |                      | 26,211                | 126,211         |
| 106            | Asset Forfeiture                        | 201,000            |                         |                        |                      | -                     | 201,000         |
| 107            | Special Tax Measure E                   | 1,316,894          |                         |                        |                      | -                     | 1,316,894       |
| 108            | First Source Fund                       | 47,327             |                         |                        |                      | -                     | 47,327          |
| 110            | Sec 108 Loan Gty Asst.                  | 546,979            |                         |                        |                      | -                     | 546,979         |
| 111            | Fund Raising Activities                 | 71,408             |                         |                        | 21,000               | 21,000                | 92,408          |
| 113            | Sports Field (Vendor Oper)              | 189,807            | 6,484                   |                        | 30,000               | 36,484                | 226,291         |
| 114            | Gilman Fields Reserve                   | -                  | 73,173                  |                        |                      | 73,173                | 73,173          |
| 115            | Animal Shelter                          | 52,480             | 7,531                   |                        |                      | 7,531                 | 60,011          |
| 116            | Paramedic Tax                           | 3,872,044          |                         |                        |                      | -                     | 3,872,044       |
| 117            | CA Energy Commission                    | -                  | 44,249                  |                        |                      | 44,249                | 44,249          |
| 119            | Domestic Violence Prev - Vit Stat       | 25,646             |                         |                        |                      | -                     | 25,646          |
| 120            | Affordable Housing Mitigation           | 66,641             | 1,582,236               | 4,045,237              |                      | 5,627,473             | 5,694,114       |
| 121            | Affordable Child Care                   | 13,275             |                         |                        |                      | -                     | 13,275          |
| 122            | Inclusionary Housing Program            | 147,145            |                         | 525,872                |                      | 525,872               | 673,017         |
| 123            | Condo Conversion                        | -                  |                         | 997,980                |                      | 997,980               | 997,980         |
| 124            | Parking In-Lieu Fee                     | -                  | 82,010                  |                        |                      | 82,010                | 82,010          |
| 125            | Playground Camp                         | 1,956,129          | 1,985,378               | 1,685,000              | 768,568              | 4,438,946             | 6,395,075       |
| 126            | State-Prop 172 Pub.Safety               | 462,481            | 76,420                  |                        |                      | 76,420                | 538,901         |
| 127            | State Transportation Tax                | 5,419,156          | 2,049,187               | 621,169                | 82,508               | 2,752,864             | 8,172,020       |
| 128            | CDBG                                    | 2,513,991          | 1,314,326               |                        |                      | 1,314,326             | 3,828,317       |
| 129            | Rental Housing Safety Program           | 1,553,079          | 6,602                   |                        | 353,505              | 360,107               | 1,913,186       |
| 130            | Measure B - Local St & Road             | 3,029,395          | 1,917,465               |                        | 80,000               | 1,997,465             | 5,026,860       |
| 131            | Measure B - Bike and Pedestrian         | 415,769            | 80,414                  | 40,632                 | 83,562               | 204,608               | 620,377         |
| 132            | Measure B - Paratransit                 | 475,359            | 10,335                  |                        |                      | 10,335                | 485,694         |
| 133            | Measure F Alameda County VRF St & Rd    | 523,325            | 238,903                 | 100,000                |                      | 338,903               | 862,228         |
| 134            | Measure BB - Local St & Road            | 3,654,183          | 2,674,799               | 100,000                | 482,394              | 3,257,193             | 6,911,376       |
| 135            | Measure BB - Bike & Pedestrian          | 631,828            | 35,134                  |                        |                      | 35,134                | 666,962         |
| 136            | Measure BB - Paratransit                | 384,702            | 6,787                   |                        | 60,000               | 66,787                | 451,489         |
| 137            | One Time Funding                        | -                  | 139,080                 |                        |                      | 139,080               | 139,080         |
| 138            | Parks Tax                               | 16,342,573         | 1,420,119               | 1,471,318              | 621,000              | 3,512,437             | 19,855,010      |
| 139            | Street And Open Space Impr              | -                  | 1,140,512               |                        |                      | 1,140,512             | 1,140,512       |
| 140            | Measure GG - Fire Prep Tax              | 4,793,467          | 126,667                 |                        |                      | 126,667               | 4,920,134       |
| 141            | 1st Response Adv Life Supp              | -                  | 5,356                   | 55,144                 |                      | 60,500                | 60,500          |
| 142            | Streetlight Assesment District          | 2,620,883          | 484,869                 |                        | 26,189               | 511,058               | 3,131,941       |
| 143            | Berkeley Bus Ec Dev                     | 156,387            |                         |                        | 12,000               | 12,000                | 168,387         |
| 145            | Bayer (Miles Lab)                       | 8,500              |                         |                        |                      | -                     | 8,500           |
| 146            | Employee Training                       | 780,629            | 13,640                  | 62,583                 |                      | 76,223                | 856,852         |
| 147            | UC Settlement                           | 1,174,828          | 8,960                   |                        |                      | 8,960                 | 1,183,788       |
| 148            | Cultural Trust                          | 22,012             | 5,000                   | 141,144                |                      | 146,144               | 168,156         |
| 149            | Private Party Sidewalks                 | 100,000            | 72,485                  | 99,973                 |                      | 172,458               | 272,458         |
| 150            | Public Art Fund                         | 65,164             | 64,928                  | 10,516                 |                      | 75,444                | 140,608         |
| 152            | Vital & Health Statistics Trust Fund    | 28,195             |                         |                        |                      | -                     | 28,195          |
| 156            | Hlth State Aid Realign Trust            | 4,125,651          | 2,359                   |                        |                      | 2,359                 | 4,128,010       |
| 157            | Tobacco Cont.Trust                      | 350,227            | 32                      | 131,815                |                      | 131,847               | 482,074         |
| 158            | Mental Health State Aid Realign         | 3,003,718          | 708,140                 | 362,595                | 50,000               | 1,120,735             | 4,124,453       |
| 159            | Citizens Option Public Safety Trust     | 258,921            | 23,751                  |                        | 50,000               | 73,751                | 332,672         |
| 161            | Alameda Cty Abandoned Vehicle Abatement | 99,920             | 288                     |                        |                      | 288                   | 100,208         |
| 307            | Capital Grants - Local                  | -                  | 341,406                 |                        |                      | 341,406               | 341,406         |
| 309            | OTS DUI Enforcement Education Prg.      | 129,500            |                         |                        | 200,000              | 200,000               | 329,500         |
| 310            | HUD/Home                                | 831,094            |                         |                        |                      | -                     | 831,094         |
| 311            | ESGP                                    | 235,790            |                         |                        |                      | -                     | 235,790         |
| 312            | Health (General)                        | 2,190,908          | 5,260                   |                        | 16,466               | 21,726                | 2,212,634       |
| 313            | Target Case Management Linkages         | 809,278            | 105,841                 | 100,320                |                      | 206,161               | 1,015,439       |
| 314            | Alameda County Tay Tip                  | -                  | 8                       |                        |                      | 8                     | 8               |
| 315            | Mental Health Service Act               | 7,839,248          | 1,715,355               |                        | 1,831,875            | 3,547,230             | 11,386,478      |
| 316            | Health (Short/Doyle)                    | 4,196,856          | 148,499                 |                        | 159,000              | 307,499               | 4,504,355       |
| 317            | EPSDT Expansion Proposal                | 377,855            |                         |                        |                      | -                     | 377,855         |
| 318            | Alcoholic Bev Ctr OTS/UC                | 52,804             |                         |                        | 15,000               | 15,000                | 67,804          |
| 319            | Youth Lunch                             | 101,900            | 218,699                 |                        |                      | 218,699               | 320,599         |
| 320            | Sr. Nutrition Title III                 | 76,554             |                         |                        | 9,673                | 9,673                 | 86,227          |
| 321            | CFP Title X                             | 158,740            |                         |                        |                      | -                     | 158,740         |
| 324            | BUSD Grant                              | 307,624            |                         |                        |                      | -                     | 307,624         |
| 325            | Vector Control                          | 335,418            | 9,792                   |                        |                      | 9,792                 | 345,210         |
| 326            | Alameda County Grants                   | 556,234            | 2,197                   |                        | 15,784               | 17,981                | 574,215         |
| 327            | Senior Supportive Social Services       | 54,775             |                         |                        | 1,822                | 1,822                 | 56,597          |

SUMMARY OF APPROPRIATIONS BY FUND

| ERMA<br>Fund # Fund                           | FY 2020<br>Adopted | 1st AAO                 |                        |                      |                 | FY 2020<br>Revised #1 |
|-----------------------------------------------|--------------------|-------------------------|------------------------|----------------------|-----------------|-----------------------|
|                                               |                    | Encumbered<br>Rollovers | Unencum.<br>Carryovers | Other<br>Adjustments | Total<br>Amend. |                       |
| 328 Family Care Support Program               | 72,128             |                         |                        |                      | -               | 72,128                |
| 329 CA Integrated Waste Management            | 5,244              |                         |                        |                      | -               | 5,244                 |
| 331 Housing Mitigation                        | -                  |                         | 1,051,751              |                      | 1,051,751       | 1,051,751             |
| 333 CALHOME                                   | 363,100            |                         |                        |                      | -               | 363,100               |
| 334 Community Action                          | 264,258            |                         |                        |                      | -               | 264,258               |
| 336 One-Time Grant: No Cap Exp                | 1,966,893          | 670,807                 | 310,930                | 3,653,174            | 4,634,911       | 6,601,804             |
| 338 Bay Area Air Quality Management           | 60,000             |                         |                        |                      | -               | 60,000                |
| 339 MTC                                       | -                  | 2,552,414               |                        |                      | 2,552,414       | 2,552,414             |
| 340 FEMA                                      | 1,238,295          | 1,576,589               |                        | 22,650               | 1,599,239       | 2,837,534             |
| 341 Alameda Cty Waste Mgt.                    | 285,000            | 22,397                  |                        |                      | 22,397          | 307,397               |
| 343 State Dept Conserv/Recylg                 | 28,000             |                         |                        |                      | -               | 28,000                |
| 344 CALTRANS Grant                            | -                  | 350,958                 | 10,227                 |                      | 361,185         | 361,185               |
| 345 Measure WW Park Bond Grant                | 1,525,274          | 1,220                   | 1,447,829              |                      | 1,449,049       | 2,974,323             |
| 346 CALTRANS Safe Routes 2 Schools            | -                  | 9,757                   |                        |                      | 9,757           | 9,757                 |
| 347 Shelter+Care HUD                          | 5,168,632          |                         |                        |                      | -               | 5,168,632             |
| 348 Shelter+Care County                       | 546,638            |                         |                        |                      | -               | 546,638               |
| 349 JAG Grant                                 | 52,500             |                         |                        | 70,000               | 70,000          | 122,500               |
| 350 Bioterrorism Grant                        | 273,175            | 13                      |                        |                      | 13              | 273,188               |
| 501 Capital Improvement Fund                  | 7,399,464          | 4,491,447               | 4,335,261              | 5,053,831            | 13,880,539      | 21,280,003            |
| 502 Phone System Replacement                  | 198,000            |                         |                        |                      | -               | 198,000               |
| 503 FUND\$ Replacement                        | 6,028,585          | 881,378                 | 7,492,060              | 1,899,000            | 10,272,438      | 16,301,023            |
| 504 PEG-Public, Education & Government        | 100,000            |                         |                        |                      | -               | 100,000               |
| 506 Measure M - Street & Watershed Impv       | -                  | 1,012,683               | 1,000                  | 440,748              | 1,454,431       | 1,454,431             |
| 511 Measure T1 - Infra & Facil.               | 15,882,701         | 7,783,232               | 3,655,311              | 1,587,247            | 13,025,790      | 28,908,491            |
| 552 09 Measure FF Debt Service                | 1,619,731          |                         |                        |                      | -               | 1,619,731             |
| 553 2015 GORBS                                | 2,612,468          |                         |                        |                      | -               | 2,612,468             |
| 554 2012 Lease Revenue Bonds BJPFA            | 502,402            |                         |                        |                      | -               | 502,402               |
| 555 2015 GORBS - 2002 G.O. Refunding Bonds    | 482,600            |                         |                        |                      | -               | 482,600               |
| 556 2015 GORBS (2007, Series A)               | 181,674            |                         |                        |                      | -               | 181,674               |
| 557 2015 GORBS (2008 Measure I)               | 612,562            |                         |                        |                      | -               | 612,562               |
| 558 2010 COP (Animal Shelter)                 | 404,498            |                         |                        |                      | -               | 404,498               |
| 559 Measure M GO Street & Water Imps          | 1,647,738          |                         |                        |                      | -               | 1,647,738             |
| 560 Infrastructure & Facilities Measure T1    | 2,470,306          |                         |                        |                      | -               | 2,470,306             |
| 601 Zero Waste                                | 48,362,247         | 1,518,978               |                        | 180,340              | 1,699,318       | 50,061,565            |
| 606 MAR - Costal Conservancy                  | -                  |                         | 125,400                |                      | 125,400         | 125,400               |
| 608 Marina Operation                          | 7,118,243          | 461,487                 | 432,490                |                      | 893,977         | 8,012,220             |
| 611 Sewer                                     | 23,524,301         | 13,275,285              | 629,522                | 272,549              | 14,177,356      | 37,701,657            |
| 612 Private Sewer Lateral FD                  | 197,441            |                         |                        |                      | -               | 197,441               |
| 616 Clean Storm Water                         | 4,171,366          | 66,906                  | 120,000                | 552,804              | 739,710         | 4,911,076             |
| 621 Permit Service Center                     | 19,405,470         | 844,180                 |                        | 969,680              | 1,813,860       | 21,219,330            |
| 622 Unified Program (CUPA)                    | 918,190            | 3,271                   |                        |                      | 3,271           | 921,461               |
| 627 Off Street Parking                        | 6,226,848          | 876,791                 | 554,340                | 30,000               | 1,461,131       | 7,687,979             |
| 631 Parking Meter                             | 9,401,361          | 429,753                 |                        | 144,627              | 574,380         | 9,975,741             |
| 636 Building Purchases and Management         | 3,205,142          | 92,461                  |                        | 4,146                | 96,607          | 3,301,749             |
| 671 Equipment Replacement                     | 4,618,500          | 1,333,478               |                        | 25,970               | 1,359,448       | 5,977,948             |
| 672 Equipment Maintenance                     | 7,801,313          | 272,978                 |                        | 120,245              | 393,223         | 8,194,536             |
| 673 Building Maintenance Fund                 | 4,460,082          | 79,687                  |                        | 134,456              | 214,143         | 4,674,225             |
| 674 Central Services                          | 382,999            | 13,986                  |                        |                      | 13,986          | 396,985               |
| 675 Computer Replacement Fund                 | -                  | -                       | 114,000                |                      | 114,000         | 114,000               |
| 676 Workers Compensation                      | 6,534,671          | 3                       |                        |                      | 3               | 6,534,674             |
| 678 Public Liability                          | 1,995,642          | 78,853                  |                        | 1,200,000            | 1,278,853       | 3,274,495             |
| 680 Information Technology                    | 12,965,336         | 346,881                 | 1,547,193              | 1,233,827            | 3,127,901       | 16,093,237            |
| 762 Successor Agency - Savo DSF               | 56,960             |                         |                        |                      | -               | 56,960                |
| 774 Sustainable Energy Fin District           | 28,748             |                         |                        |                      | -               | 28,748                |
| 776 Thousand Oaks Underground                 | 100,350            |                         |                        |                      | -               | 100,350               |
| 777 Measure H - School Tax                    | 500,000            | 2                       |                        |                      | 2               | 500,002               |
| 778 Measure Q - CFD#1 Dis. Fire Protect Bond  | 175,844            | 74,555                  |                        | 280,000              | 354,555         | 530,399               |
| 779 Spl Tax Bds. CFD#1 ML-ROOS                | 875,783            |                         |                        |                      | -               | 875,783               |
| 781 Berkeley Tourism BID                      | 650,000            |                         |                        |                      | -               | 650,000               |
| 782 Elmwood Business Improvement District     | 30,000             | 1                       |                        |                      | 1               | 30,001                |
| 783 Solano Ave BID                            | 25,000             |                         |                        |                      | -               | 25,000                |
| 784 Telegraph Avenue Bus. Imp. District       | 515,637            |                         |                        |                      | -               | 515,637               |
| 785 North Shattuck BID                        | 182,647            |                         |                        |                      | -               | 182,647               |
| 786 Downtown Berkeley Prop & Improv. District | 1,281,760          | 118,404                 |                        |                      | 118,404         | 1,400,164             |
| 801 Rent Board                                | 5,334,943          | 162,706                 |                        |                      | 162,706         | 5,497,649             |
| GROSS EXPENDITURE:                            | 525,856,809        | 64,586,258              | 36,555,859             | 45,749,181           | 146,891,298     | 672,748,107           |
| Dual Appropriations                           | (26,171,544)       | -                       | -                      | -                    | -               | (26,171,544)          |
| Revolving & Internal Service Funds            | (39,539,172)       | (2,139,506)             | (1,609,776)            | (2,714,498)          | (6,463,780)     | (46,002,952)          |

SUMMARY OF APPROPRIATIONS BY FUND

| ERMA<br>Fund # | Fund             | 1st AAO            |                         |                        |                      | FY 2020<br>Revised #1 |                 |
|----------------|------------------|--------------------|-------------------------|------------------------|----------------------|-----------------------|-----------------|
|                |                  | FY 2020<br>Adopted | Encumbered<br>Rollovers | Unencum.<br>Carryovers | Other<br>Adjustments |                       | Total<br>Amend. |
|                | NET EXPENDITURE: | 460,146,093        | 62,446,752              | 34,946,083             | 43,034,683           | 140,427,518           | 600,573,611     |







Disaster and Fire Safety Commission

ACTION CALENDAR

December 10, 2019

*(Continued from December 3, 2019)*

To: Honorable Mayor and Members of the City Council

From: Disaster and Fire Safety Commission

Submitted by: Gradiva Couzin, Chairperson, Disaster and Fire Safety Commission

Subject: Recommendation to Immediately Fund and Implement the Safe Passages Program and Additional Actions to Ensure Emergency Equipment Access to All Parts of the City

RECOMMENDATION

The recommendation as stated above from the Disaster and Fire Safety Commission (DFSC) to the Council includes the following seven components:

1. Allocate full funding of the Fire Department's Safe Passages Program;
2. Initiate immediate action;
3. Recognize that parking restrictions are necessary on some streets for the health and well-being of Berkeley residents;
4. Establish priorities for enacting parking restrictions;
5. Develop a departmental coordinated team effort;
6. Inform the public; and
7. Document and distribute the extent of the access and egress problem.

FISCAL IMPACTS OF RECOMMENDATION

Exact costs and staff time are to be determined. This program is expected to require a substantial investment of staff time from multiple departments, including the City Attorney, Fire Department, Public Works and the Police Department - Parking Enforcement.

CURRENT SITUATION AND ITS EFFECTS

**1. Funding the Fire Department's Safe Passages Program:**

On February 5, 2019: At a Council Work Session, Fire Chief Brannigan described the Fire Department's Safe Passages Program as follows:

"The Berkeley Safe Passages pilot program is designed to blend traditional parking restrictions with innovative road markings and signage. Many roads in Fire Zones 2 and 3 are too narrow for parking and safe passage of vehicles when emergencies arise. Three locations will be selected to demonstrate Keep Clear corridors, no parking zones,

and pedestrian access so that staff and the public can evaluate the efficacy and impact of Safe Passage corridors.”

The Chief listed three actions that needed to be done for the Safe Passages Program:

- Identify, paint, and provide signage for new “Keep Clear” pinch points on streets
- Expand “No Parking” areas throughout dangerously narrow streets
- Identify funding for additional capacity for parking enforcement

**2. There is a clear historic need for immediate action:**

There is consensus among fire officials throughout California that while the risk of fire is high throughout the entire year, and communities must be ever vigilant, the months in the fall are the times of the greatest danger.

This is born out historically as shown by the following list of the top 10 most destructive wildfires in California ranked by structures (homes, commercial properties, barns, garages, sheds, etc.) destroyed since 1900. Please note that 80% occurred in the months of October through December:

| <u>Destroyed</u>                    | <u>Date</u> | <u>Deaths</u> | <u>Structures</u> |
|-------------------------------------|-------------|---------------|-------------------|
| 1. Camp Fire (Butte)                | Nov 2018    | 86            | 18,804            |
| 2. Tubbs Fire (Napa, Sonoma)        | Oct 2017    | 22            | 5,636             |
| 3. Tunnel Fire (Alameda)            | Oct 1991    | 25            | 2,900             |
| 4. Cedar Fire (San Diego)           | Oct 2003    | 15            | 2,820             |
| 5. Valley Fire (Lake, Napa, Sonoma) | Sept 2015   | 4             | 1,955             |
| 6. Witch Fire (San Diego)           | Oct 2007    | 2             | 1,650             |
| 7. Woolsey Fire (Ventura)           | Nov 2018    | 3             | 1,643             |
| 8. Carr Fire (Shasta, Trinity)      | July 2018   | 8             | 1,614             |
| 9. Nuns (Sonoma)                    | Oct 2017    | 3             | 1,355             |
| 10. Thomas (Ventura, Santa Barbara) | Dec 2017    | 2             | 1,063             |

The 1923 fire in Berkeley occurred on September 17<sup>th</sup> and, according to notarized affidavits at the time, the first house to be destroyed was at 125 Shasta Road

(presumably this address was in the upper portion of Shasta Road), and the second was at 1350 Tamalpais Road. The fire destroyed around 640 structures of which 584 were homes and depending on which article is sourced, it burned to around Oxford or to Hearst at Shattuck before the strong northeasterly wind shifted. Most articles about this fire state that it was stopped only because of the wind shift. The origin of the fire is said to have come into Berkeley from Wildcat Canyon, somewhere around Inspiration Point, or possibly close to where Fire Station 7 is now located, 3000 Grizzly Peak Blvd. It is interesting to note that while the origin of this fire was never determined, one of the factors mentioned was that the City Council had declined that year to pay for the usual allocation to fund a fire break along the City's northern border.

At that time, the City of Berkeley had a total population of 56,000. Today's current population is approximately 122,000.

In addition, Berkeley is among those communities in the State that are at high risk from earthquakes. It is likely that fires will occur after such an event. The Hayward Fault runs north to south in the eastern part of our community. This area, known as the Alquist-Priolo Zone, is well-mapped. The vulnerable mapped quake areas also include identified liquefaction zones in West Berkeley. According to the USGS website, they have found evidence of 11 major earthquakes along the Hayward Fault over the past 1,900 years: The last six (in years 1134, 1317, 1475, 1629, 1725 and 1856) occurred at average intervals of 150 years. The 150<sup>th</sup> year anniversary following the 1856 quake occurred on October 21, 2018. In 1856, there were 24,000 residents living in the area, today there are close to 3 million, which places the Hayward Fault in the category of being highly dangerous due to potential death and injuries to residents and the adverse economic impacts to the communities that lie within the fault area. It is important to note that the USGS website states much can be done to prevent loss of life and reduce economic impact, IF local jurisdictions and populations take action to prepare ahead of time.

**3. The importance of enacting as official City policy in all appropriate documents the recognition that parking restrictions on streets that impede emergency equipment access are necessary for the health and well-being of Berkeley residents:**

Although full documentation is difficult to establish, it can be established that the City has known of emergency equipment access problems for at least 41 years. In March 1978, a 29-year old woman lost her life and world-renowned conductor George Cleve suffered severe burns when fire equipment was hampered in responding to a house fire on Tamalpais Road. Despite years of knowing about the access problem and numerous recommendations and referrals, some, but not all narrow streets in Berkeley have had parking restrictions enacted. Examples of that history are as follows:

On June 24, 2005, Berkeley attorney, Paul M. Schwartz wrote a letter "placing the City of Berkeley on notice" about hazardous conditions that continued to exist on Tamalpais

Road. He wrote that when two cars are parked across from one another, fire equipment access is denied, that blockages caused by dumpsters and construction equipment exist, and he suggested ways to alleviate such situations. He wrote that this was “a formal request” for the City to “create a parking plan for this street that assures the safety of all individuals and protection of property.”

On February 9, 2016 the Council approved a January 12, 2016 recommendation from DFSC requesting that they:

“refer to staff the Design of a parking restriction program in the Hills Fire Zone to ensure access for emergency vehicles and to allow for safe evacuations in an emergency and to hold public meetings to get community input in the design of such a program

That report stated:

“Today we are 24 years after the devastating Oakland Hills Fire and 50 years after concern was first expressed for the safety of residents given the conditions that will save lives in the Berkeley Hills”

On November 28, 2017 the City Council asked the DFSC and the City Manager’s Office to explore developing a five-year plan for expanded disaster preparedness services which specifically included limiting parking to one side of streets narrower than 26 feet.

On January 30, 2018: The City Council asked the City Manager to study and evaluate in consultation with relevant Commissions several fire safety and prevention measures which included a “red curb program to address specific identified conditions on streets that are impassable by Emergency Vehicles or present unusual ingress or egress challenges.”

On March 28, 2018: The DFSC recommended that the City Council review some 80 items listed on a spread sheet regarding wildfires. Eight of the items pertained to parking, one of which was identified as “immediate priority” which is to:

Item 9: Enforce CVC 22514 for stopping or parking near a fire hydrant, including adding proper signage and/or red paint.

The other seven parking-related items are:

#8: Design and Propose a tailored red-curb program to address specific identified conditions on streets impassable by emergency vehicles or present ingress or egress challenges.

#10: Complete installation of blue reflectors marking location of fire hydrants.

#11: Have Beat Police Officers ticket hydrant infractions when making rounds in the hills fire zone.

#12: Adopt parking restrictions on narrow streets in hills fire zone.

#13: Limit parking one side of street narrower than 26 feet.

#14: Restrict parking on red flag days, similar to the LA Red Flag restricted parking program.

#15: Have traffic control personnel randomly canvass hills fire zones to ensure parking compliance.

On February 27, 2019: The DFSC approved submitting comments for the Local Hazard Mitigation Plan update to “recommend coordination with other City plans including the General Plan, the Climate Action Plan and Zero Waste Plan, addition of maps including narrow streets and pinch points and improving the plan’s maps via the City’s GIS portal, inclusion of a transparent process to real homeless, ESL and disabled population and inclusion of a list of priority goals for each of the upcoming years of the 5-year plan.”

There can be no doubt that many streets in Berkeley’s Hazardous Fire Zones are too narrow and/or winding to accommodate both unrestricted on-street parking and access by emergency response vehicles, and while parked cars are the main culprit intruding on access, the problem is exacerbated by lack of sidewalks, on-street storage of trash bins and intruding vegetation, and construction and delivery vehicles. Additionally, even in areas where parking has been restricted, there have been instances of non-compliance, particularly involving parking that hinders access to fire hydrants. This situation creates a life-safety hazard in the hills in all emergency situations, but especially in a wildfire scenario, when rapid evacuation of residents will be necessary.

#### **4. Establish priorities for enacting parking restrictions:**

As parking restrictions on narrow streets that impede emergency equipment access involve a large area, it is recommended that a ranking system be created. Such a system would place a higher priority on locations within Hazardous Fire Zones which have particularly dangerous conditions and designation of streets that are established as, or will be, potential evacuation routes. Since not all work will be able to be done at the same time, the purpose of such ranking will be to enable the City to proceed in an orderly fashion which will first place such restrictions on streets where they will be most effective in saving lives.

#### **5. Develop a departmental coordinated team effort**

Enactment and implementation of a program of ensuring emergency access to all properties in the City of Berkeley will require coordination among many Departments.

Particularly Police, Public Works, Zero Waste and Transportation. It is recommended that the Fire Department have the lead position in such an effort but that the duties and responsibilities of each department in the team be fully defined.

Further, deadlines for completion of tasks must be established in order to receive progress reports from appropriate departments at regular intervals until the completion especially of:

- installing signs and other markers which indicate No Parking or Stopping Zones around fire hydrants
- installing pavement markers to identify hydrant locations – particularly important for guiding mutual aid responders who are unfamiliar with Berkeley streets
- developing and implementation of the enforcement of new parking restrictions, including ticketing and towing

Enforcement of restrictions by the Police Department is of high import because the public must fully understand that violation of parking regulations is of such seriousness that it will be enforced consistently. Additionally, over and above those issues, there needs to be a definition of Police Department responsibility in an early evacuation plan for vulnerable residents (seniors and disabled) who may require not only early notice but also auto-related assistance in evacuation, as well as use of the announcement system in police cars as an integral part of the City's alert system both for red flag days and impending fire danger.

## **6. Inform the Public**

It is recommended that the City institute a broad public outreach campaign which includes direct mailing to property owners with instructions to notify any tenants of properties or in homes of affected properties, all rental agencies including those that offer short term rentals such as Abnb, all job and home care placement agencies, and all news and social media that the City is undertaking a program of new parking restrictions in the Hazardous Fire Zones and other areas which impede emergency access vehicles.

## **7. Assess and document the extent of the access and egress problem**

Produce a current and accurate map that displays:

- all narrow streets without parking restrictions along with their width
- all narrow streets with parking restrictions already in place

- “pinch-points” on other streets that constrain emergency equipment access
- major streets and “collector” streets planned for use in evacuation
- include pathways if technically possible within such a map. If not possible, attach a separate map identifying the exact location of pathways
- indications of the priority ranking as that information becomes available

This map shall be available to the public and kept up to date as the status changes. As a visual example, this map will assist residents to understand the need for parking restrictions. It will also serve as an information tool that would be helpful to residents during an emergency.

#### BACKGROUND

During the Council discussion of the 2020-2021 budget, the Council received a recommendation from the Council Committee on Budget and Finance that funding for the Safe Passages Program should be deferred and that the City should seek grants for this program. The City’s website indicates that the recommendation from the Council Committee was adopted, but that the Safe Passages Program would be reviewed again in November 2019 and grant funding would be considered.

Because of concerns generated by the disastrous recent wildfires around our City and the increased fire danger due to the heavy vegetation fuel level generated by rains earlier in the year, the Fire Department began to evaluate and document the problem of emergency equipment access on the many narrow roads in the City’s designated high fire risk areas. While that process has begun, it has been significantly hampered by the lack of adequate staffing. The DFSC also points out that seeking grant funding to do this work would take a considerable amount of time before any action would occur.

#### ENVIRONMENTAL SUSTAINABILITY

More parking restrictions in residential areas of the City may have a positive environmental impact by reducing the use of private vehicles for transportation.

In addition to potentially saving lives and property, providing improved access for firefighting equipment may reduce the spread of house-fires and wildland-urban interface fires, reducing the pollution, hazardous waste, loss of habitat, and other environmental damage caused by uncontrolled fire

#### RATIONALE FOR RECOMMENDATION

As seen in the years of background and the multiple times that parking restrictions have been recommended by the DFSC and by Council, we believe there appears to be a consensus that narrow streets that impede emergency vehicle access are a threat to life safety in Berkeley, and that parking restrictions are needed to address this problem.

Given the many years that the City has been aware of this problem, it is perplexing that no action has been taken to complete what needs to be done, nor has funding been allocated for the Safe Passages program. This issue must not be delayed any further. It is time to recognize the reality of the often-repeated statement that “it is impossible to evacuate everyone safely at the same time,” and with that recognition, take immediate action.

#### ALTERNATIVE ACTIONS CONSIDERED

In the DFSC recommendation from 2016, “Restrict Parking in the Hills Hazardous Fire Area” numerous alternative actions were considered and discussed with staff, following models used in other jurisdictions including LA, Pasadena, Santa Barbara, and Mill Valley.

#### CITY MANAGER

The City Manager refers the recommendations of the Commission’s Report to the budget process.

#### CONTACT PERSON

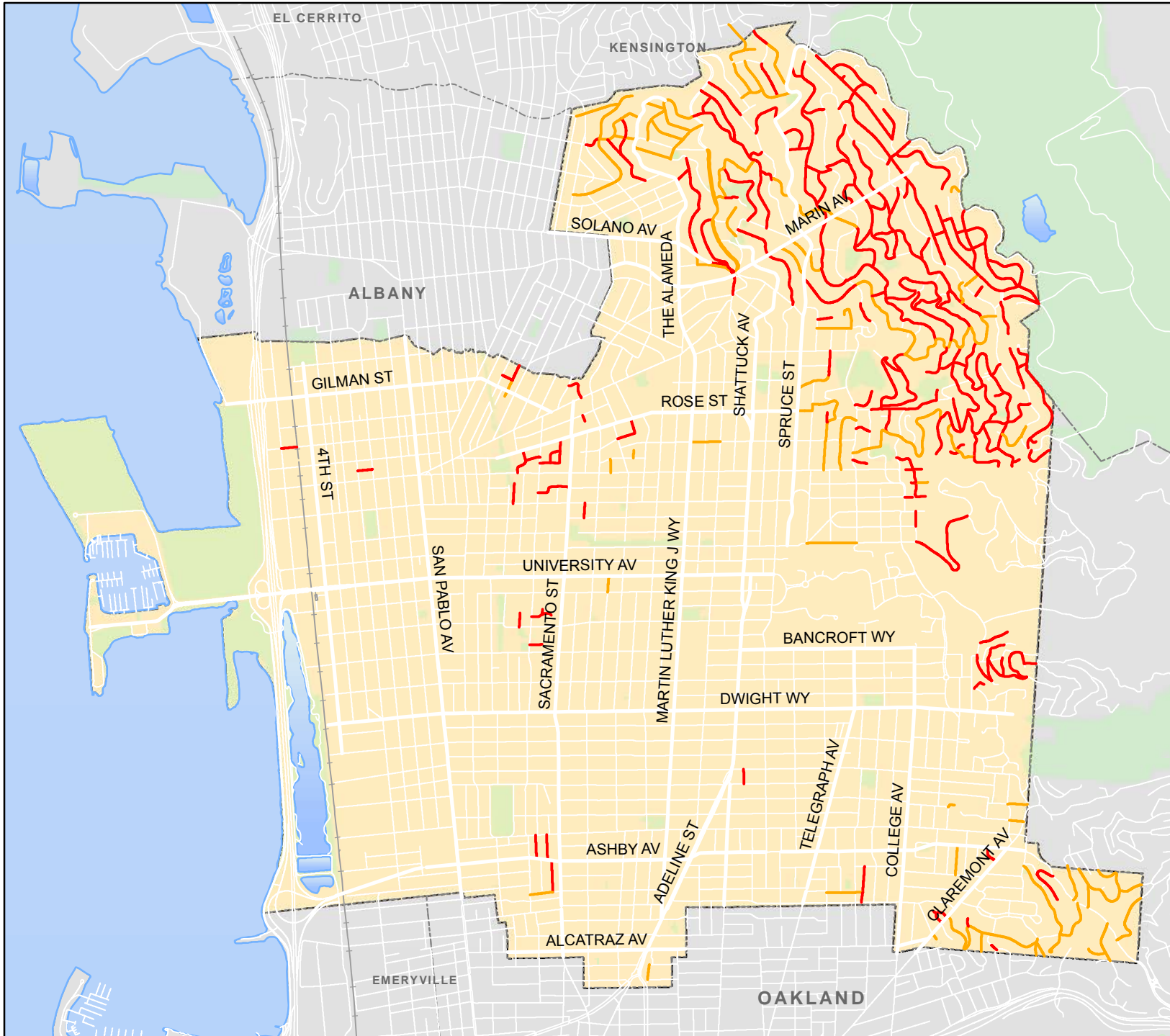
Keith May, Secretary, Disaster and Fire Safety Commission, 510-981-5508

#### Attachments:

1: Fire Access Map: Streets with Pavement Width Less than 26 Feet



# FIRE ACCESS MAP

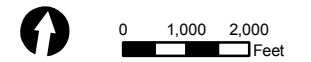


- Pavement Width Less than 24 ft
- Pavement Width Less than 26 ft
- Parks
- City Limits

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.

October 2, 2015



**CITY OF BERKELEY**  
 Land Use Planning Division  
 Dept of Planning & Development  
 2120 Milvia Street, 2nd Floor  
 Berkeley, CA 94704

**TOTAL LENGTH (FEET) 231,679**

| Street Name                 | Beginning Location        | Ending Location               | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|-----------------------------|---------------------------|-------------------------------|-------|-----------|---------------------|----------------------|
| ACACIA AVE (5-98)           | CRAGMONT AVE              | EUCLID AVE                    | 2     | R         | 22                  | 500                  |
| ACROFT CT (1400-1499)       | ACTON ST                  | DEAD END (ACTON ST)           | 2     | R         | 20                  | 270                  |
| ACTON CIR (2-7)             | DEAD END (ACTON CRESCENT) | ACTON CRESCENT                | 2     | R         | 21                  | 120                  |
| ACTON CIR (1401-1480)       | ACTON ST                  | EAST DEAD END (ACTON ST)      | 2     | R         | 21                  | 470                  |
| AJAX PL (1-20)              | AJAX LANE                 | SUMMIT RD                     | 2     | R         | 20                  | 240                  |
| ALAMO AVE (5-98)            | SPRUCE ST                 | HALKIN LANE                   | 2     | R         | 20                  | 840                  |
| ALTA RD (20-60)             | SPRUCE ST                 | CRAGMONT AVE                  | 2     | R         | 22                  | 390                  |
| ALVARADO RD (145-617)       | BRIDGE RD                 | NORTH CITY LIMIT AB WILLOW WK | 2     | R         | 24                  | 1890                 |
| ALVARADO RD (1-59)          | TUNNEL RD                 | NORTH CITY LIMIT              | 2     | R         | 24                  | 770                  |
| ALVARADO RD (111-142)       | NORTH CITY LIMIT          | BRIDGE RD                     | 2     | R         | 24                  | 450                  |
| ARCADE AVE (1-6)            | GRIZZLY PEAK BLVD         | FAIRLAWN DR                   | 2     | R         | 23                  | 310                  |
| ARCH ST                     | SPRUCE ST                 | SCENIC AVE                    | 2     | R         | 25                  | 820                  |
| ARDEN RD (9-100)            | MOSSWOOD RD               | PANORAMIC WAY                 | 2     | R         | 15                  | 610                  |
| ARLINGTON AVE (700-974)     | THOUSAND OAKS BLVD        | THE CIRCLE                    | 2     | C         | 25                  | 2940                 |
| ATLAS PL (1-10)             | HILL RD                   | SUMMIT RD                     | 2     | R         | 20                  | 200                  |
| AVALON AVE (3016-3017)      | CLAREMONT BLVD            | CLAREMONT AVE                 | 2     | R         | 25                  | 300                  |
| AVENIDA DR (27-33)          | OLYMPUS AVE               | QUEENS RD                     | 2     | R         | 20                  | 145                  |
| AVENIDA DR (1-27)           | CAMPUS DR                 | OLYMPUS AVE                   | 2     | R         | 23                  | 300                  |
| AVENIDA DR (41-191)         | QUEENS RD                 | GRIZZLY PEAK BLVD             | 2     | R         | 18                  | 1315                 |
| AVIS RD (20-68)             | SAN ANTONIO AVE           | SAN LUIS RD                   | 2     | R         | 16                  | 440                  |
| BATAAN AVE (900-920)        | 7TH ST                    | 8TH ST                        | 2     | R         | 22                  | 330                  |
| BATEMAN ST (3015-3071)      | WEBSTER ST                | 108 N/O PRINCE ST.            | 2     | R         | 14                  | 411                  |
| BONNIE LN (10-95)           | HILLDALE AVE              | MARIN AVE                     | 2     | R         | 18                  | 750                  |
| BRET HARTE RD (12-51)       | KEITH AVE                 | CREGMONT AVE                  | 2     | R         | 21                  | 300                  |
| BRET HARTE RD (131-198)     | CRAGMONT AVE              | KEELER RD                     | 2     | R         | 17                  | 750                  |
| BROOKSIDE CT (152-156)      | DEAD END NR BROOKSIDE DR  | BROOKSIDE DR                  | 2     | R         | 22                  | 110                  |
| BROOKSIDE DR (110-190)      | CLAREMONT AVE             | CLAREMONT AVE                 | 2     | R         | 22                  | 535                  |
| BUENA AVE (1705-1738)       | MCGEE AVE                 | CYPRESS ST                    | 2     | R         | 23                  | 400                  |
| BUENA VISTA WAY             | DELMAR AVE                | 260' NORTH OF PRIVATE PROP    | 2     | R         | 22                  | 470                  |
| BUENA VISTA WAY (2500-3025) | EUCLID AVE                | DEL MAR AVE                   | 2     | R         | 24                  | 3775                 |
| CAMPUS DR (1205-1238)       | SHASTA RD                 | QUAIL AVE                     | 2     | R         | 22                  | 370                  |
| CAMPUS DR (1250-1298)       | QUAIL AVE                 | GLENDALE AVE                  | 2     | R         | 22                  | 385                  |
| CAMPUS DR (1405-1456)       | DELMAR AVE                | AVENIDA DRIVE                 | 2     | R         | 21                  | 525                  |
| CAMPUS DR (1462-1511)       | AVENIDA DR                | PARNASSUS RD                  | 2     | R         | 22                  | 540                  |
| CAMPUS DR (1521-1590)       | PARNASSUS RD              | DEAD END, U C PLOT 82         | 2     | R         | 19                  | 760                  |
| CAMPUS DR (1300-1405)       | GLENDALE AVE              | DELMAR AVE                    | 2     | R         | 22                  | 1090                 |
| CANYON RD (15-67)           | RIM ROAD (UC CAMPUS)      | DEAD END                      | 2     | R         | 15                  | 583                  |
| CAPISTRANO AVE (1901-1937)  | THE ALAMEDA               | CONTRA COSTA AVE              | 2     | R         | 16                  | 1075                 |
| CATHERINE DR (1420-1475)    | KEONCREST DR              | KEONCREST DR                  | 2     | R         | 23                  | 410                  |
| CEDAR ST (2710-2716)        | LA LOMA AVE               | END ABOVE LA VEREDA           | 2     | R         | 12                  | 515                  |
| CLAREMONT CRES (1-26)       | ASHBY AVE                 | CLAREMONT AVE                 | 2     | R         | 20                  | 410                  |

**TOTAL LENGTH (FEET) 231,679**

| Street Name                | Beginning Location         | Ending Location              | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|----------------------------|----------------------------|------------------------------|-------|-----------|---------------------|----------------------|
| CODORNICES RD (40-100)     | DEAD END (EUCLID AVE)      | EUCLID AVE                   | 2     | R         | 15                  | 600                  |
| COLORADO AVE (42-99)       | VERMONT AVE                | MICHIGAN AVE                 | 2     | R         | 24                  | 260                  |
| COLORADO AVE (24-32)       | BOYNTON AVE                | VERMONT AVE                  | 2     | R         | 24                  | 250                  |
| COLUMBIA CIR (1-22)        | COLUMBIA PATH              | FAIRLAWN DR                  | 2     | R         | 21                  | 230                  |
| COMSTOCK CT (1526-1537)    | JAYNES ST                  | CEDAR ST                     | 2     | R         | 24                  | 300                  |
| CONTRA COSTA AVE (712-929) | YOSEMITE RD                | SOLAND                       | 2     | R         | 18                  | 2775                 |
| CONTRA COSTA AVE (939)     | SOLANO                     | LOS ANGELES AVE              | 2     | R         | 24                  | 150                  |
| CORONA CT (2310-2358)      | ARCH ST                    | DEAD END (ARCH ST)           | 2     | R         | 22                  | 320                  |
| CRAGMONT AVE (1000-1032)   | SANTA BARBARA RD           | EUCLID AVE                   | 2     | R         | 22                  | 830                  |
| CRAGMONT AVE (900-996)     | MARIN AVE                  | SANTA BARBARA RD             | 2     | R         | 23                  | 1110                 |
| CRAGMONT AVE (1041-1099)   | EUCLID AVE                 | BRET HARTE RD                | 2     | R         | 20                  | 1420                 |
| CRAGMONT AVE (1100-1106)   | BRET HARTE RD              | SHASTA RD                    | 2     | R         | 21                  | 1625                 |
| CRAGMONT AVE (471-897)     | GRIZZLY PEAK BLVD          | MARIN AVE                    | 2     | C         | 22                  | 4100                 |
| CRAGMONT AVE               | SPRUCE ST                  | MARIN AVE                    | 2     | R         | 24                  | 1050                 |
| CRESTON RD (600-798)       | GRIZZLY PEAK BLVD          | SUNSET LANE                  | 2     | R         | 22                  | 1910                 |
| CRESTON RD (821-1097)      | SUNSET LANE                | GRIZZLY PEAK BLVD            | 2     | R         | 22                  | 1910                 |
| CYCLOTRON RD               | HIGHLAND PL                | DEAD END (CYCLOTRON RD)      | 2     | R         | 23                  | 140                  |
| CYPRESS ST (1404-1417)     | ROSE ST                    | BUENA AVE                    | 2     | R         | 22                  | 325                  |
| DEL MAR AVE (2-100)        | BUENA VISTA WAY            | GLENDALE AVE                 | 2     | R         | 21                  | 795                  |
| DOHR ST (2905-2950)        | RUSSELL ST                 | ASHBY AVE                    | 2     | R         | 22                  | 489                  |
| EL CAMINO REAL (1-118)     | DOMINGO AVE                | THE UPLANDS                  | 2     | R         | 25                  | 1840                 |
| EL CAMINO REAL (151-220)   | THE UPLANDS                | DEAD END ABOVE THE UPLANDS   | 2     | R         | 24                  | 320                  |
| EL PORTAL CT (5-11)        | DEAD END (LA LOMA AVE)     | LA LOMA AVE                  | 2     | R         | 18                  | 250                  |
| EOLA ST (1702-1715)        | VIRGINIA ST                | FRANCISCO ST                 | 2     | R         | 22                  | 325                  |
| ETON CT (1-15)             | CLAREMONT AVE              | DEAD END (CLAREMONT AVE)     | 2     | R         | 25                  | 150                  |
| EUCALYPTUS RD (1-29)       | HILLCREST RD               | SOUTH CITY LIMIT             | 2     | R         | 25                  | 440                  |
| EUCLID AVE                 | BEG OF DIVIDED ROAD        | END OF DIVIDED ROAD          | 2     | R         | 18                  | 850                  |
| EUCLID AVE                 | CRAGMONT AVE               | HILLDALE AVE                 | 2     | R         | 20                  | 1240                 |
| FAIRLAWN DR (249-293)      | AVENIDA DR                 | OLYMPUS DR                   | 2     | R         | 20                  | 615                  |
| FAIRLAWN DR (9-231)        | QUEENS RD                  | AVENIDA DR                   | 2     | R         | 21                  | 1645                 |
| FOREST LN (1-95)           | HILLDALE AVE               | KEELER AVE                   | 2     | R         | 19                  | 520                  |
| FOREST LN (106-263)        | KEELER AVE                 | CRESTON RD                   | 2     | R         | 22                  | 1160                 |
| FOUNTAIN WALK (1011)       | SANTA BARBARA RD           | SPRUCE ST                    | 2     | R         | 23                  | 1150                 |
| GARBER ST (2710-3020)      | CLAREMONT BLVD             | EAST CITY LIMIT (TANGLEWOOD) | 2     | R         | 24                  | 4505                 |
| GLEN AVE (1202-1299)       | EUNICE ST                  | CORNER BETWEEN SUMMER/ARCH   | 2     | R         | 22                  | 620                  |
| GLEN AVE (2201-2323)       | CORNER BETWEEN SUMMER/ARCH | SPRUCE ST                    | 2     | R         | 24                  | 380                  |
| GLENDALE AVE (1400-1444)   | LA LOMA AVE                | DEL MAR AVE                  | 2     | R         | 22                  | 875                  |
| GREENWOOD TER (1-1491)     | ROSE ST                    | BUENA VISTA WAY              | 2     | R         | 17                  | 850                  |
| GRIZZLY PEAK BLVD          | FAIRLAWN DR                | GRIZZLY PEAK BLVD            | 2     | R         | 24                  | 700                  |
| HALKIN LN (27-70)          | SPRUCE ST                  | CRAGMONT AVE                 | 2     | R         | 20                  | 515                  |
| HAWTHORNE TER (2501-2535)  | LE ROY AVE                 | EUCLID AVE                   | 2     | R         | 22                  | 365                  |

**TOTAL LENGTH (FEET) 231,679**

| Street Name                 | Beginning Location      | Ending Location            | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|-----------------------------|-------------------------|----------------------------|-------|-----------|---------------------|----------------------|
| HAWTHORNE TER (1400-1598)   | EUCLID AVE              | CEDAR ST                   | 2     | R         | 24                  | 1465                 |
| HEARST AVE (2309-2451)      | ARCH ST                 | EUCLID AVE                 | 2     | A         | 25                  | 1160                 |
| HIGH CT (1101-1151)         | DEAD END                | OAK ST                     | 2     | R         | 24                  | 710                  |
| HIGHLAND PL (1730-1771)     | LE CONTE AVE            | RIDGE RD                   | 2     | R         | 13                  | 280                  |
| HILGARD AVE (2709)          | LA LOMA AVE             | LA VEREDA                  | 2     | R         | 10                  | 180                  |
| HILGARD AVE (2725-2808)     | LA VEREDA               | DEAD END                   | 2     | R         | 24                  | 340                  |
| HILL CT (2501-2525)         | EUCLID AVE              | DEAD END (EUCLID AVE)      | 2     | R         | 14                  | 310                  |
| HILL RD (80-185)            | DEAD END NR AJAX LANE   | GRIZZLY PEAK BLVD (SOUTH)  | 2     | R         | 17                  | 510                  |
| HILL RD (11-75)             | SHASTA RD               | DEAD END                   | 2     | R         | 14                  | 530                  |
| HILLCREST CT (2-18)         | THE FOOTWAY             | HILLCREST RD               | 2     | R         | 20                  | 190                  |
| HILLCREST RD                | CLAREMONT AVE           | ROANOK RD                  | 2     | R         | 25                  | 3150                 |
| HILLCREST RD (6-240)        | ROANOK RD               | DEAD END ABOVE ROANOK RD   | 2     | R         | 24                  | 390                  |
| HILLDALE AVE (900-998)      | MARIN AVE               | REGAL RD                   | 2     | R         | 20                  | 1265                 |
| HILLDALE AVE (630-876)      | GRIZZLY PEAK BLVD       | MARIN AVE                  | 2     | R         | 21                  | 1870                 |
| HILLSIDE CT (11-23)         | DEAD END (HILLSIDE AVE) | HILLSIDE AVE               | 2     | R         | 16                  | 290                  |
| HILLVIEW RD (1100-1149)     | WOODSIDE RD             | PARK HILLS RD              | 2     | R         | 22                  | 1265                 |
| HOPKINS CT (2-39)           | ALBINA AVE              | HOPKINS ST                 | 2     | R         | 22                  | 570                  |
| JEFFERSON AVE (2015-2060)   | UNIVERSITY AVE          | ADDISON ST                 | 2     | R         | 24                  | 335                  |
| JUANITA WAY (1505-1569)     | ROSE ST                 | CEDAR ST                   | 2     | R         | 23                  | 595                  |
| KEELER AVE (1064-1099)      | STERLING AVE            | BRET HARTE RD              | 2     | R         | 18                  | 400                  |
| KEELER AVE (1000-1049)      | MILLER AVE              | POPPY LANE                 | 2     | R         | 18                  | 600                  |
| KEELER AVE (900-998)        | MARIN AVE               | MILLER AVE                 | 2     | R         | 19                  | 1025                 |
| KEELER AVE (700-893)        | GRIZZLY PEAK BLVD       | MARIN AVE                  | 2     | R         | 20                  | 1350                 |
| KEELER AVE (1101-1199)      | BRET HARTE RD           | SHASTA RD                  | 2     | R         | 23                  | 1760                 |
| KEITH AVE (1001-1067)       | SPRUCE ST               | EUCLID AVE                 | 2     | C         | 22                  | 1472                 |
| KEITH AVE (1075-1202)       | EUCLID AVE              | SHASTA RD                  | 2     | C         | 25                  | 2570                 |
| KENTUCKY AVE (433-494)      | MARYLAND AVE            | MICHIGAN AVE               | 2     | R         | 18                  | 840                  |
| KEONCREST DR (1410-1558)    | ROSE ST                 | ACTON ST                   | 2     | R         | 23                  | 950                  |
| LA LOMA AVE (1343-1401)     | QUARRY RD               | ROSE ST                    | 2     | C         | 22                  | 400                  |
| LA VEREDA RD (1550-1595)    | LA LOMA AVE             | CEDAR ST                   | 2     | R         | 15                  | 550                  |
| LA VEREDA RD (1601-1736)    | CEDAR ST                | DEAD END ABOVE VIRGINIA ST | 2     | R         | 15                  | 820                  |
| LATHAM LN (125-130)         | CRESTON RD              | OVERLOOK RD                | 2     | R         | 21                  | 275                  |
| LATHAM LN (11-70)           | MILLER AVE              | GRIZZLY PEAK               | 2     | R         | 21                  | 550                  |
| LINCOLN ST (1400-1483)      | ACTON ST                | SACRAMENTO ST              | 2     | R         | 22                  | 750                  |
| LOS ANGELES AVE (1928-1992) | THE CIRCLE              | CONTRA COSTA AVE           | 2     | R         | 24                  | 845                  |
| M L KING JR WAY (3333-3359) | 63RD ST                 | MARTIN LUTHER KING JR WAY  | 2     | R         | 24                  | 520                  |
| MAGNOLIA ST (2930-2970)     | ASHBY AVE               | WEBSTER ST                 | 2     | R         | 24                  | 660                  |
| MARIN AVE (2314-2457)       | SPRUCE ST               | EUCLID AVE                 | 2     | C         | 23                  | 1050                 |
| MARIN AVE (2520-2637)       | EUCLID AVE              | GRIZZLY PEAK BLVD          | 2     | C         | 23                  | 1078                 |
| MARIN AVE (2006-2275)       | THE CIRCLE              | SPRUCE ST                  | 2     | C         | 23                  | 1646                 |
| MENDOCINO AVE (811-965)     | ARLINGTON AVE           | LOS ANGELES AVE            | 2     | R         | 22                  | 1650                 |

**TOTAL LENGTH (FEET) 231,679**

| Street Name                | Beginning Location         | Ending Location            | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|----------------------------|----------------------------|----------------------------|-------|-----------|---------------------|----------------------|
| MENLO PL (1-51)            | THOUSAND OAKS BLVD         | SANTA ROSA AVE             | 2     | R         | 25                  | 490                  |
| MENLO PL (53-90)           | SANTA ROSA AVE             | THE ALAMEDA                | 2     | R         | 24                  | 450                  |
| MICHIGAN AVE (401-500)     | MARYLAND AVE               | SPRUCE ST                  | 2     | R         | 24                  | 1480                 |
| MIDDLEFIELD RD (1000-1019) | THE CROSSWAYS              | THE SHORTCUT               | 2     | R         | 21                  | 360                  |
| MIDDLEFIELD RD (1020-1050) | THE SHORTCUT               | PARK HILLS RD              | 2     | R         | 21                  | 410                  |
| MILLER AVE (959-1190)      | HILLDALE AVE               | SHASTA RD                  | 2     | R         | 21                  | 3510                 |
| MILLER RD                  | HILLDALE AVE               | SHASTA RD                  | 2     | R         | 21                  | 3510                 |
| MIRAMONTE CT (1358-1367)   | ADA ST                     | SOUTH DEAD END (ADA ST)    | 2     | R         | 21                  | 180                  |
| MONTROSE RD (1-44)         | SAN LUIS RD                | SANTA BARBARA RD           | 2     | R         | 23                  | 375                  |
| MONTROSE RD (101-194)      | SANTA BARBARA RD           | SPRUCE ST                  | 2     | R         | 24                  | 640                  |
| MOSSWOOD RD (1-48)         | PANORAMIC WAY              | DEAD END ABOVE ARDEN RD    | 2     | R         | 15                  | 800                  |
| MUIR WAY (3-16)            | GRIZZLY PEAK BLVD          | PARK HILLS RD              | 2     | R         | 25                  | 385                  |
| NORTH ST (1501-1515)       | NORTH DEAD END (JAYNES ST) | JAYNES ST                  | 2     | R         | 24                  | 155                  |
| NORTHAMPTON AVE (4-98)     | SANTA BARBARA RD           | SPRUCE ST                  | 2     | R         | 23                  | 1150                 |
| NORTHBRAE TUNNEL           | SANTA BARBARA RD           | SPRUCE ST                  | 2     | R         | 23                  | 1150                 |
| NORTHGATE AVE (1-99)       | DEAD END (NORTHGATE PATH)  | SHASTA RD                  | 2     | R         | 21                  | 880                  |
| OAK ST (2301-2395)         | ARCH ST                    | HIGH CT                    | 2     | R         | 24                  | 660                  |
| OAK ST (2410)              | DEAD END                   | OAK ST                     | 2     | R         | 24                  | 710                  |
| OAKRIDGE RD (10-92)        | TUNNEL RD                  | DEAD END (OAK RIDGE STEPS) | 2     | R         | 17                  | 1200                 |
| OLYMPUS AVE (1530-1590)    | FAIRLAWN DR                | DEAD END (U C PLOT 82)     | 2     | R         | 21                  | 760                  |
| OLYMPUS AVE (1451-1520)    | AVENIDA DR                 | FAIRLAWN DR                | 2     | R         | 21                  | 1140                 |
| OVERLOOK RD (964-1072)     | END NORTH OF THE CROSSWAYS | PARK HILLS RD              | 2     | R         | 22                  | 1715                 |
| OXFORD ST (807-850)        | INDIAN ROCK AVE            | MARIN AVE                  | 2     | R         | 23                  | 975                  |
| OXFORD ST (900-1053)       | MARIN AVE                  | LOS ANGELES AVE            | 2     | R         | 23                  | 1400                 |
| PAGE ST (648)              | 2ND ST                     | RAILROAD TRACKS            | 2     | R         | 16                  | 345                  |
| PALM CT (2817-2828)        | KELSEY ST                  | DEAD END (KELSEY ST)       | 2     | R         | 25                  | 150                  |
| PANORAMIC WAY (1-61)       | CANYON RD                  | 1ST TURN                   | 2     | R         | 17                  | 670                  |
| PANORAMIC WAY (62-130)     | 1ST TURN                   | ARDEN RD                   | 2     | R         | 15                  | 1215                 |
| PANORAMIC WAY (136-367)    | ARDEN RD                   | EAST CITY LIMIT            | 2     | R         | 15                  | 1695                 |
| PARK HILLS RD (1002-1042)  | WILDCAT CANYON RD          | MIDDLEFIELD RD             | 2     | R         | 22                  | 850                  |
| PARK HILLS RD (1141-1180)  | PARK GATE                  | SHASTA RD                  | 2     | R         | 22                  | 920                  |
| PARK HILLS RD (1051-1131)  | MIDDLEFIELD RD             | PARK GATE                  | 2     | R         | 22                  | 1305                 |
| PARNASSUS CT (5-12)        | PARNASSUS RD               | DEAD END (PARNASSUS RD)    | 2     | R         | 22                  | 210                  |
| PARNASSUS RD (2-100)       | DEL MAR AVE                | CAMPUS DR                  | 2     | R         | 24                  | 1145                 |
| POPLAR ST (10-190)         | CRAGMONT AVE               | HILLDALE AVE               | 2     | R         | 20                  | 1240                 |
| POPPY LN (8-80)            | HILLDALE AVE               | KEELER AVE                 | 2     | R         | 22                  | 860                  |
| PRINCE ST (1401-1490)      | ACTON ST                   | STANTON ST                 | 2     | R         | 24                  | 523                  |
| PRINCE ST (2436-2511)      | DANA ST                    | BATEMAN ST                 | 2     | R         | 24                  | 771                  |
| QUAIL AVE (60-90)          | CAMPUS DR                  | QUEENS RD                  | 2     | R         | 21                  | 325                  |
| QUAIL AVE (1-39)           | NORTHGATE AVE              | CAMPUS DR                  | 2     | R         | 21                  | 340                  |
| QUEENS RD (1200-1260)      | SHASTA RD                  | QUAIL AVE                  | 2     | R         | 22                  | 640                  |

Streets with Pavement Width less than 26 feet

**TOTAL LENGTH (FEET) 231,679**

| Street Name                      | Beginning Location            | Ending Location               | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|----------------------------------|-------------------------------|-------------------------------|-------|-----------|---------------------|----------------------|
| QUEENS RD (1263-1345)            | QUAIL AVE                     | FAIRLAWN DR                   | 2     | R         | 21                  | 880                  |
| QUEENS RD (1355-1444)            | FAIRLAWN DR                   | AVENIDA DR                    | 2     | R         | 21                  | 1075                 |
| REGAL RD (931-990)               | EUCLID AVE                    | CRAGMONT AVE                  | 2     | R         | 22                  | 1325                 |
| REGAL RD (801-894)               | SPRUCE ST                     | MARIN AVE                     | 2     | R         | 24                  | 1050                 |
| REGAL RD (900-925)               | MARIN AVE                     | EUCLID AVE                    | 2     | R         | 24                  | 550                  |
| ROANE                            | EUCLID AVE                    | CRAGMONT AVE                  | 2     | R         | 22                  | 1325                 |
| ROANOKE RD (20-46)               | HILLCREST RD & THE UPLANDS    | SOUTH CITY LIMIT              | 2     | R         | 24                  | 300                  |
| ROBLE CT (5-40)                  | DEAD END (ROBLE RD)           | ROBLE RD                      | 2     | R         | 24                  | 430                  |
| ROBLE RD (6-59)                  | TUNNEL RD                     | SOUTH CITY LIMIT (ROBLE CT)   | 2     | R         | 24                  | 920                  |
| ROCK LN (1-95)                   | POPLAR ST                     | CRAGMONT AVE                  | 2     | R         | 22                  | 800                  |
| ROSE ST (2555-2707)              | LE ROY AVE                    | LA LOMA AVE                   | 2     | R         | 15                  | 750                  |
| ROSE ST (2224-2333)              | SPRUCE ST                     | SCENIC AVE                    | 2     | R         | 25                  | 820                  |
| ROSEMONT AVE (1-10)              | CRESTON RD                    | VISTAMONT AVE                 | 2     | R         | 23                  | 460                  |
| ROSLYN CT (2-19)                 | THE SOUTH CROSSWAYS           | CHABOLYN TERRACE              | 2     | R         | 20                  | 150                  |
| RUGBY AVE (355-371)              | NORTH CITY LIMIT (VERMONT)    | VERMONT AVE                   | 2     | R         | 25                  | 210                  |
| SAN ANTONIO AVE (1901-1940)      | ARLINGTON AVE                 | 300 FT +/- EAST OF AVIS RD    | 2     | R         | 17                  | 525                  |
| SAN ANTONIO AVE (1800-1891)      | SAN RAMON AVE & THE ALAMEDA   | ARLINGTON AVE                 | 2     | R         | 24                  | 865                  |
| SAN BENITO RD (900-954)          | MARIN AVE                     | SPRUCE ST                     | 2     | R         | 24                  | 810                  |
| SAN DIEGO RD (743-824)           | SOUTHAMPTON AVE               | INDIAN ROCK AVE               | 2     | R         | 19                  | 1850                 |
| SAN FERNANDO AVE (614-686; 1930) | ARLINGTON AVE                 | YOSEMITE RD                   | 2     | R         | 24                  | 1055                 |
| SAN JUAN AVE (1815-1895)         | SANTA CLARA AVE               | SAN FERNANDO AVE              | 2     | R         | 24                  | 900                  |
| SAN LUIS RD (501-846)            | ARLINGTON AVE                 | INDIAN ROCK AVE               | 2     | R         | 22                  | 3430                 |
| SAN MATEO RD (7-96)              | DEAD END (SOMERSET PL)        | INDIAN ROCK AVE               | 2     | R         | 24                  | 780                  |
| SAN MIGUEL AVE (600-630)         | THOUSAND OAKS BLVD            | SANTA ROSA AVE                | 2     | R         | 22                  | 470                  |
| SAN RAMON AVE (1800-1895)        | SAN ANTONIO AVE & THE ALAMEDA | SAN FERNANDO AVE              | 2     | R         | 24                  | 1060                 |
| SANTA BARBARA RD (501-630)       | ARLINGTON AVE                 | FLORIDA AVE                   | 2     | R         | 23                  | 1040                 |
| SANTA BARBARA RD (551-699)       | SPRUCE ST                     | CRAGMONT AVE                  | 2     | R         | 24                  | 605                  |
| SANTA BARBARA RD (900-948)       | MARIN AVE                     | SPRUCE ST                     | 2     | R         | 24                  | 510                  |
| SANTA CLARA AVE (945; 951-993)   | SAN RAMON AVE                 | THOUSAND OAKS BLVD            | 2     | R         | 24                  | 870                  |
| SANTA ROSA AVE (551-699)         | MENLO PLACE                   | SAN LORENZO AVE               | 2     | R         | 22                  | 1735                 |
| SCENIC AVE (1350-1589)           | ROSE ST                       | CEDAR ST                      | 2     | R         | 24                  | 1720                 |
| SENIOR AVE (3-48)                | FAIRLAWN DR                   | GRIZZLY PEAK BLVD             | 2     | R         | 24                  | 700                  |
| SHASTA RD (2701-2737)            | TAMALPAIS RD                  | KEITH AVE                     | 2     | R         | 20                  | 565                  |
| SHASTA RD (3000-3085)            | PARK GATE                     | EAST CITY LIMIT (GOLF COURSE) | 2     | C         | 20                  | 565                  |
| SHASTA RD (2601-2699)            | TAMALPAIS RD AND ROSE ST      | TAMALPAIS RD                  | 2     | R         | 22                  | 1540                 |
| SHASTA RD (2800-2827)            | CRAGMONT AVE                  | KEELER AVE                    | 2     | C         | 25                  | 680                  |
| SHASTA RD (2834-2925)            | KEELER AVE                    | QUEENS RD                     | 2     | C         | 24                  | 1315                 |
| SHASTA RD (2931-2998)            | QUEENS RD                     | GRIZZLY PEAK BLVD             | 2     | C         | 25                  | 1130                 |
| SHASTA RD (2740-2798)            | KEITH AVE                     | CRAIGMONT AVE                 | 2     | C         | 24                  | 1000                 |
| SHATTUCK AVE (800-840)           | INDIAN ROCK AVE               | MARIN AVE                     | 2     | R         | 24                  | 615                  |
| SHATTUCK AVE (900-964)           | MARIN AVE                     | LOS ANGELES AVE               | 2     | R         | 24                  | 950                  |



**TOTAL LENGTH (FEET) 231,679**

| Street Name                    | Beginning Location            | Ending Location               | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|--------------------------------|-------------------------------|-------------------------------|-------|-----------|---------------------|----------------------|
| SOLANO AVE                     | SANTA BARBARA RD              | SPRUCE ST                     | 2     | R         | 23                  | 1150                 |
| SOMERSET PL (30-49)            | SOUTHAMPTON AVE               | DEAD END (JOHN HINKEL PARK)   | 2     | R         | 22                  | 425                  |
| SOMERSET PL (2)                | ARLINGTON AVE                 | SAN LUIS RD                   | 2     | R         | 24                  | 2050                 |
| SOUTHAMPTON AVE (221-260)      | SAN LUIS RD                   | SANTA BARBARA RD              | 2     | R         | 22                  | 4000                 |
| SOUTHAMPTON AVE (11-180)       | ARLINGTON AVE                 | SAN LUIS RD                   | 2     | R         | 24                  | 2050                 |
| SPRING WAY (1402-1418)         | DEAD END                      | SCENIC AVE                    | 2     | R         | 18                  | 260                  |
| STANTON ST (2907-2952)         | RUSSELL ST                    | ASHBY AVE                     | 2     | R         | 22                  | 560                  |
| STANTON ST (3001-3053)         | ASHBY AVE                     | PRINCE ST                     | 2     | R         | 23                  | 706                  |
| STERLING AVE (1050-1195)       | KELLER                        | SHASTA RD                     | 2     | R         | 20                  | 2310                 |
| STEVENSON AVE (5-69)           | GRIZZLY PEAK BLVD             | MILLER AVE                    | 2     | R         | 24                  | 520                  |
| STODDARD WAY (25-40)           | DEAD END                      | GRIZZLY PEAK BLVD             | 2     | R         | 20                  | 260                  |
| SUMMIT LN (6-12)               | SUMMIT RD NR GRIZZLY PEAK     | DEAD END                      | 2     | R         | 6                   | 180                  |
| SUMMIT RD                      | AJAX LANE                     | ATLAS PL                      | 2     | R         | 20                  | 240                  |
| SUMMIT RD (1500-1545)          | GRIZZLY PEAK BLVD             | END SOUTH OF GRIZZLY PEAK BL  | 2     | R         | 18                  | 740                  |
| SUMMIT RD (1300-1498)          | ATLAS PL                      | GRIZZLY PEAK BLVD             | 2     | R         | 23                  | 2530                 |
| SUNSET LN (50-70)              | WOODMONT RD                   | WILDCAT CANYON RD             | 2     | R         | 17                  | 318                  |
| SUNSET LN (4-6)                | GRIZZLY PEAK BLVD             | WOODMONT RD                   | 2     | R         | 17                  | 344                  |
| TAMALPAIS RD (1-190)           | SHASTA RD                     | ROSE ST                       | 2     | R         | 22                  | 2075                 |
| TEVLIN ST (1200-1306)          | NORTH CITY LIMIT              | WATKINS ST                    | 2     | R         | 18                  | 300                  |
| TEVLIN ST (1248-1305)          | WATKINS ST                    | END SOUTH OF GILMAN ST        | 2     | R         | 25                  | 425                  |
| THE ALAMEDA (500-597)          | SAN ANTONIO AVE               | THOUSAND OAKS BLVD            | 2     | R         | 24                  | 1385                 |
| THE BRIDGE RD (9-30)           | ALVARADO RD                   | TUNNEL RD                     | 2     | R         | 24                  | 450                  |
| THE CRESCENT (2-60)            | PARK HILLS RD (NORTH)         | PARK HILLS RD (SOUTH)         | 2     | R         | 20                  | 1020                 |
| THE CROSSWAYS (202-209)        | OVERLOOK RD                   | MIDDLEFIELD RD                | 2     | R         | 21                  | 230                  |
| THE SHORT CUT                  | MIDDLEFIELD RD                | PARK HILLS RD                 | 2     | R         | 22                  | 200                  |
| THE SPIRAL (304-319)           | DEAD END                      | WILDCAT CANYON RD             | 2     | R         | 25                  | 305                  |
| THE UPLANDS (220-305)          | EL CAMINO REAL                | TUNNEL RD                     | 2     | R         | 25                  | 1048                 |
| THOUSAND OAKS BLVD (1601-1665) | COLUSA AVE                    | VINCENTE AVE                  | 2     | C         | 20                  | 380                  |
| THOUSAND OAKS BLVD (1666-1797) | VINCENTE AVE                  | THE ALAMEDA                   | 2     | C         | 24                  | 850                  |
| TOMLEE DR (1355-1380)          | JUANITA WAY                   | ACTON ST                      | 2     | R         | 23                  | 330                  |
| TWAIN AVE (1-71)               | KEELER AVE                    | STERLING AVE                  | 2     | R         | 18                  | 740                  |
| VALLEJO ST (6-52)              | THE ALAMEDA                   | SAN RAMON AVE                 | 2     | R         | 24                  | 460                  |
| VALLEY ST (2150-2183)          | NORTH DEAD END (ALLSTON)      | ALLSTON WAY                   | 2     | R         | 23                  | 375                  |
| VASSAR AVE (350-399)           | NORTH CITY LIMIT (KENTUCKY)   | KENTUCKY AVE                  | 2     | R         | 23                  | 375                  |
| VASSAR AVE (401-486)           | KENTUCKY AVE                  | SPRUCE ST                     | 2     | R         | 24                  | 1160                 |
| VERMONT AVE (424-499)          | MARYLAND AVE                  | COLORADO AVE                  | 2     | R         | 25                  | 750                  |
| VERMONT AVE (300-420)          | DEAD END (VERMONT)            | MARYLAND                      | 2     | R         | 24                  | 780                  |
| VICENTE RD (1-95)              | EAST CITY LIMIT NR GRAND VIEW | TUNNEL RD                     | 2     | R         | 24                  | 1310                 |
| VICENTE RD (150-181)           | ALVARADO RD                   | EAST CITY LIMIT NR GRAND VIEW | 2     | R         | 24                  | 550                  |
| VINCENTE AVE (750-814)         | COLUSA AVE                    | PERALTA AVE                   | 2     | R         | 24                  | 1000                 |
| VINCENTE AVE (451-595)         | NORTH END (VINCENTE WALK)     | THOUSAND OAKS BLVD            | 2     | R         | 24                  | 1400                 |

**TOTAL LENGTH (FEET) 231,679**

| Street Name             | Beginning Location            | Ending Location             | Lanes | Fire Code | Pavement Width (ft) | Pavement Length (ft) |
|-------------------------|-------------------------------|-----------------------------|-------|-----------|---------------------|----------------------|
| VINE ST                 | COLUSA AVE                    | PERALTA AVE                 | 2     | R         | 24                  | 1000                 |
| VIRGINIA GDNS (1-22)    | NORTH DEAD END (CEDAR)        | VIRGINIA ST                 | 2     | R         | 20                  | 470                  |
| VIRGINIA ST (2701-2711) | LA LOMA AVE                   | DEAD END (AT LA VEREDA)     | 2     | R         | 17                  | 220                  |
| VISALIA AVE (1500-1598) | WEST CITY LIMIT (NEILSON)     | COLUSA AVE                  | 2     | R         | 24                  | 325                  |
| VISALIA AVE (1606-1697) | COLUSA AVE                    | VINCENTE AVE                | 2     | R         | 24                  | 890                  |
| VISTAMONT AVE (520-669) | WOODMONT AVE                  | WOODMONT AVE NR SUNSET LANE | 2     | R         | 18                  | 2410                 |
| WALKER ST (2701-2708)   | DERBY ST                      | WARD ST                     | 2     | R         | 18                  | 330                  |
| WATKINS ST (1341-1350)  | NEILSON ST                    | TEVLIN ST                   | 2     | R         | 22                  | 250                  |
| WHITAKER AVE (1-99)     | MILLER AVE                    | STERLING AVE                | 2     | R         | 18                  | 550                  |
| WILSON CIR (2-14; 1579) | OLYMPUS DR                    | WILSON WALK                 | 2     | R         | 23                  | 180                  |
| WOODMONT AVE (515-581)  | WILDCAT CANYON & GRIZZLY PEAK | ROSEMONT AVE                | 2     | R         | 20                  | 1355                 |
| WOODMONT AVE (600-691)  | ROSEMONT AVE                  | SUNSET LANE                 | 2     | R         | 20                  | 1700                 |
| WOODMONT AVE (800)      | SUNSET LANE                   | DEAD END                    | 2     | R         | 12                  | 1950                 |
| WOODMONT CT (1-5)       | WOODMONT AVE (NORTH)          | WOODMONT AVE (SOUTH)        | 2     | R         | 23                  | 285                  |
| WOODSIDE RD (1051-1155) | THE CRESCENT                  | PARK HILLS RD               | 2     | R         | 22                  | 1450                 |
| YOSEMITE RD (1800-1891) | THE ALAMEDA                   | SAN FERNANDO AVE            | 2     | R         | 24                  | 870                  |





Public Works Commission

ACTION CALENDAR

December 10, 2019

*(Continued from December 3, 2019)*

To: Honorable Mayor and Members of the City Council

From: Public Works Commission

Submitted by: Ray Yep, Chair, Public Works Commission

Subject: Public Works Commission Recommendation for the Five-Year Paving Plan

RECOMMENDATION

Adopt a resolution that recommends approval of the Five-Year Paving Plan for FY2020 to FY2024 as proposed by Staff and recommends the creation of a Long-Term Paving Master Plan.

SUMMARY

This Report to Council is comprised of three sections:

1. Recommendations on the City’s Proposed 5-Year Paving Plan
2. Report to Council on requested actions from 2017 and 2018
3. Recommendation from the Public Works Commission (PWC) to address the on-going paving condition deficit through the creation and implementation of a Long-Term Paving Master Plan.

The City of Berkeley’s Street Rehabilitation and Repair Policy (Street Policy) requires that a 5-year paving plan be reviewed each year and adopted formally by the City Council, with advice from the PWC. The Rehabilitation Plan (commonly called the Paving Plan) for FY 2020 to FY 2024 has been reviewed by the PWC and it is recommending adoption of all five years of the plan.

At their meetings in December 2017 and 2018, City Council directed Staff to coordinate with the PWC on the items outlined in their motions. A progress report on the action items was submitted to Council on July 24, 2018. All of the action items have been worked on and this report highlights the status.

Berkeley’s streets are in an “at-risk” condition, far from the City’s target of having our streets in “good” condition, and continue to decline year on year. The PWC recommends that a master plan be prepared to understand the funding and resources needed to improve Berkeley’s streets to a “good” condition.

FISCAL IMPACTS OF RECOMMENDATION

This Paving Plan is based on the Adopted Biennial Budget for Fiscal Years 2020 & 2021, and on the following estimated available funding levels from all sources, including State Transportation (Gas) Tax, Measure B, Measure BB, Measure F, and the General Fund.

| Five-Year Paving Program Funding Sources by Year, in \$ |                  |                  |                  |                  |                  |
|---------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| Fund Description                                        | FY 2020          | FY 2021          | FY 2022          | FY 2023          | FY 2024          |
| State Transportation Tax                                | 495,303          | 495,303          | 495,303          | 495,303          | 495,303          |
| State Transportation Tax –SB1                           | 1,500,000        | 1,700,000        | 1,700,000        | 2,000,000        | 2,000,000        |
| Measure B - Local Streets & Roads                       | 700,000          | 1,000,000        | 700,000          | 0                | 0                |
| Measure BB – Local Streets & Roads                      | 2,200,000        | 1,700,000        | 2,000,000        | 2,700,000        | 2,700,000        |
| Measure F Vehicle -Registration Fee                     | 155,000          | 155,000          | 155,000          | 155,000          | 155,000          |
| Capital Improvement Fund                                | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        |
| <b>TOTAL</b>                                            | <b>6,975,303</b> | <b>6,975,303</b> | <b>6,975,303</b> | <b>7,272,303</b> | <b>7,272,303</b> |

In addition to the City's program funding, additional grant and bond funding has been made available for paving in FY 2020 and 2021, summarized below.

| Other Funding for Paving by Year, in \$ |                   |                  |          |          |          |
|-----------------------------------------|-------------------|------------------|----------|----------|----------|
| Funding Source                          | FY 2020           | FY 2021          | FY 2022  | FY 2023  | FY 2024  |
| Measure T1 approved                     | 7,500,000         | 1,000,000        | 0        | 0        | 0        |
| Grants                                  | 2,777,000         | 1,200,000        | 0        | 0        | 0        |
| <b>TOTAL</b>                            | <b>10,277,000</b> | <b>2,200,000</b> | <b>0</b> | <b>0</b> | <b>0</b> |

The PWC is recommending the preparation of a Long-Term Paving Master Plan. This is currently not budgeted and a request to fund the work needs to be prepared and submitted.

CURRENT SITUATION AND ITS EFFECTS

In December 2017 and 2018, the PWC made recommendations on the 5-year paving plan and provided a detailed analysis of Berkeley's street condition in our reports to Council. Based on the city-wide Pavement Condition Index (PCI), Berkeley's streets continue to be evaluated as "at risk," and do not meet the City's target to be in "good" condition. Council requested certain analysis and action be taken.

This report addresses the following topics:

1. Recommendations on the City's Proposed 5-Year Paving Plan
2. Report to Council on requested actions from 2017 and 2018

3. Recommendation from the Public Works Commission (PWC) to address the on-going paving condition deficit through the creation and implementation of a Long-Term Paving Master Plan.

#### Review of 5-year Paving Plan

A significant amount of street paving was done in the summer of 2019. This includes the paving delayed from 2018, the paving approved for 2019, and paving the Panoramic Hill area.

Staff prepared a list of paving projects for the new 5-year planning period (FY 2020 – 2024). This was prepared using guidance from Berkeley’s Street Rehabilitation Policy, StreetSaver program analysis, knowledge of what has been accomplished in recent years, and available funding. The proposed plan is summarized as follows.

|                                        | FY2020         | FY2021         | FY2022         | FY2023         | FY2024         | Total            | % of Total |
|----------------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|------------|
| <b><u>Square Footage of Paving</u></b> |                |                |                |                |                |                  |            |
| Arterials, sq. ft.                     | 84,360         | 0              | 77,580         | 6,600          | 0              | 168,540          | 6          |
| Collectors, sq. ft.                    | 400,480        | 6,900          | 58,810         | 63,250         | 163,170        | 754,710          | 26         |
| Residential, sq. ft.                   | 284,758        | 477,584        | 474,528        | 366,739        | 365,668        | 1,969,277        | 68         |
| <b>Total sq. ft.</b>                   | <b>769,598</b> | <b>546,584</b> | <b>610,918</b> | <b>436,589</b> | <b>528,838</b> | <b>2,892,527</b> | <b>100</b> |
| <b><u>Miles</u></b>                    |                |                |                |                |                |                  |            |
| Arterials, miles                       | 0.32           | 0.00           | 0.41           | 0.04           | 0.00           | 0.77             | 5          |
| Collectors, miles                      | 1.77           | 0.51           | 0.23           | 0.62           | 0.81           | 3.94             | 24         |
| Residential, miles                     | 1.58           | 3.33           | 2.39           | 2.17           | 1.93           | 11.40            | 71         |
| <b>Total miles</b>                     | <b>3.67</b>    | <b>3.84</b>    | <b>3.03</b>    | <b>2.83</b>    | <b>2.74</b>    | <b>16.11</b>     | <b>100</b> |
| <b><u>Cost</u></b>                     |                |                |                |                |                |                  |            |
| Arterials, \$millions                  | \$0            | \$0            | \$0.896        | \$0.078        | \$0            | \$0.974          | 3          |
| Collectors, \$millions                 | \$2.521        | \$0.881        | \$0.956        | \$1.290        | \$1.946        | \$7.594          | 24         |
| Residential, \$millions                | \$3.744        | \$5.041        | \$2.996        | \$3.252        | \$3.957        | \$18.990         | 60         |
| Discretionary, \$millions              | \$0            | \$1.046        | \$1.046        | \$1.091        | \$1.091        | \$4.274          | 13         |
| <b>Total cost, \$millions</b>          | <b>\$6.265</b> | <b>\$6.968</b> | <b>\$5.894</b> | <b>\$5.711</b> | <b>\$6.994</b> | <b>\$31.832</b>  | <b>100</b> |

The above summary does not include \$7.5 million in FY 2020, and \$1 million in FY 2021 from Measure T1 funding. It also does not include \$3.98 million in grant funding in FY2020 and FY2021.

The PWC paving subcommittee discussed the plan with Public Works Department staff and we have the following comments.

1. The Paving Plan uses asphalt paving technology. As such, the plan is not contributing to reducing greenhouse gas emissions. The PWC encourages staff to use greener and more sustainable technologies to help meet our climate action

goals. One suggestion is to start calling this a “street surface treatment plan” and not paving plan.

2. Staff prepared a process flow diagram that describes the inputs used to prepare the 5-year paving plan. This document provides a high-level overview of all the work that staff puts into the development of the paving plan and it has been very informative for the PWC. This has been included as Attachment 3 to this report for Council’s review.
3. Many of the City’s streets with the lowest PCI are residential streets. The proposed plan by staff shifts more focus of the paving plan to residential streets. While this is outside of the City’s Paving Policy for allocation of paving funds by street type, this plan helps address the roads that are in the greatest need and will do the most to improve the City-wide average PCI. The PWC believes that on a long-term basis, the Paving Policy is still valid to prioritize funding for arterials, collectors, bike routes, and bus routes. The following is a breakdown as compared to the Paving Policy:

|                     | <b>Cost Breakdown<br/>Per Paving Policy</b> | <b>Cost Breakdown<br/>Per 5-Year Paving Plan<br/>(FY2020-2024)</b> |
|---------------------|---------------------------------------------|--------------------------------------------------------------------|
| Arterial streets    | 10%                                         | 3%                                                                 |
| Collector streets   | 50%                                         | 24%                                                                |
| Residential streets | 25%                                         | 60%                                                                |
| Discretionary       | 15%                                         | 13%                                                                |

4. The plan was reviewed with the City of Berkeley’s Bicycle Plan 2017. Of the total length of streets to be paved, 5.8 miles (36%) are current or future bike routes. However, of those 5.8 miles, 1.6 miles (27%) are on Hopkins or Cedar and just doing the pavement does not bring the streets to the requirements of the Berkeley Bicycle Plan. To complete the bikeways on these streets, additional funding is needed from the Transportation Division and a project is needed prior to paving beginning on these streets. The plan was also reviewed with the Transportation Commission and with their concerns about bike routes.
5. The PWC has reviewed the plan for contiguous streets and that the work is bundled for cost effective implementation. This is balanced with having the paving work be spread across all Council Districts of the City. Over the 5-year Paving Plan, the cost is distributed between 7% to 16% for each District.
6. The PWC agrees with including the streets that were approved under Phase 1 of Measure T1. However, the PWC recommends that bond funds be used only for work that will last for at least as long as the duration of the bond repayment period (this would be 40 years in the case of projects funded by Measure T-1 bond proceeds). Road treatments that match this recommendation only include full street reconstruction work, as other standard maintenance may extend the life of these assets beyond the duration of the bond repayment period. Maintenance work, such

as overlays, cape and slurry seals, should be funded from the Paving Program funds or the General Fund.

7. Specific attention should be given to the Adeline Corridor Specific Plan and its proposed changes to the street alignment. The street will be repaved using Measure T1 funds. This means that changes to the street may occur before the debt financing is paid off.
8. The PWC agrees that 15% of the available funding should be reserved for discretionary and/or demonstration projects. The PWC is in the process of developing a recommendation for criteria to help prioritize projects to be funded with the discretionary reserve.

#### Progress with Council Requested Actions

At their meetings in December 2017 and 2018, City Council directed Staff to coordinate with the PWC on the items outlined in their motions. A progress report on the action items was submitted to Council on July 24, 2018. Progress continues to be made on the action items and we would like to highlight the following.

1. Use of life cycle cost analysis – The City received a grant from the Metropolitan Transportation Commission (MTC) for technical assistance to evaluate life cycle cost analysis for street paving technologies. The MTC has retained Pavement Engineering Inc. (PEI) to conduct the analysis. The PWC paving sub-committee is working closely with PEI and staff on the study. The study will evaluate the life cycle cost of asphalt and alternative technologies, including permeable pavement, and will consider multiple benefits from each. These benefits, called externalities, include considerations for attenuating storm water peak flows, improving water quality, reducing traffic speeds, enhanced public safety, and reducing greenhouse gas emissions. PEI's analysis is projected to be completed in fall 2019.
2. Use of 15% discretionary and demonstration funds – The PWC paving sub-committee is working with staff to identify potential sites for permeable pavement projects or alternative durable pavement technologies. We are developing a matrix of criteria and candidate locations. The criteria include current condition, soil permeability, constructability, location attributes, life cycle cost analysis, and other factors. An allocation of 15% discretionary and demonstration funds has been included in FY2021-2024.
3. Work with consultants who have experience with long-lasting innovative technologies – The City retained several new on-call civil engineering consultants in 2018. The consultants include Bellecci and Associates, Harrison Engineering Inc., Pavement Engineering Inc., and Mark Thomas Company. All of these firms have demonstrated experience with long-lasting innovative and green infrastructure.
4. Report to Council on funding sources for scheduled and completed paving – A report to Council was made on September 10, 2019 on the breakdown of paving costs.

5. Annual report to Council on Measure M – The Public Works Department staff will prepare a report on the performance of Measure M at the completion of the 2019 paving season and the completion of the Woolsey Street stormwater cistern project.
6. Consult with Transportation Commission – Members from the Transportation Commission have participated at the PWC’s paving sub-committee meetings and a presentation of the 5-year paving plan was given to the Transportation Commission on June 20, 2019.

Master Plan to Improve the Condition of Berkeley’s Streets

The current citywide average PCI is 58 on a scale of 100, and is firmly in the “at risk,” category. Streets in this category tend to degrade at a more accelerated rate than those in a “good” or “fair” condition. Under the proposed paving plan, the PCI is estimated to dip to 52 by 2023. This is far from the City’s target of having our streets in “good” condition (PCI of 70 -79), and it is clear that action is needed to reverse this trend before our road fall into “failing” condition. Below is a summary of the current conditions of Berkeley’s streets by road type. This information was prepared by staff and PEI.

| Section/Area        | PCI in 2019 |
|---------------------|-------------|
| Overall system      | 58          |
| Arterial streets    | 66          |
| Collector streets   | 64          |
| Residential streets | 55          |
| Bus routes          | 66          |
| Bike lanes          | 62          |

The PWC recommends that a master plan be prepared to understand the funding and resources needed to improve Berkeley’s streets to a “good” condition. The master plan should represent street paving priorities that align with the values of the city and should consider the following:

1. Update the Street Policy – The policy was last updated in 2009. The policy should be reviewed and updated to incorporate current thinking about using life cycle cost analysis, Vision Zero, equity, sustainable multi-benefit technologies, the Bicycle Plan recommendations, Climate Action Plan, Resilience Strategy, Local Hazard Mitigation Plan, and other factors. With these considerations in mind, the updated policy should include new performance metrics that capture the diverse objectives the City holds for our road network.
2. A long-term paving capital plan – The Master Plan should include a 40-year paving or road surfacing plan to help the City identify the most efficient path to move the current PCI from “at risk” to “good.” This approach spans two cycles of typical asphalt roads expected useful life, and allows for decisions on street surfacing to be

optimized for the greatest bang for our buck over the full life of our assets, rather than the current short-term approach.

3. Equity -- The City's Street Policy calls for street paving to be equitably allocated among the City's nine districts. This is a worthy goal; however, the policy stops there and does not provide a clear method for how to evaluate equity. Should it be measured by dollars spent, miles paved, miles treated, the average PCI in a district, and should this equity be for each year of the paving plan over the full five years of the paving plan, or measured retrospectively? The Master Plan will propose a more definitive metric that will provide a clear directive to staff moving forward and provide the community with enhanced transparency in the City's paving decisions.
4. Financing Strategy -- Lack of funding for street paving plays a major role in the overall condition of the City's streets. As part of the Master Plan, the work should include a long-term funding gap analysis, a financial plan to address the funding gap, a cost-of-service rate study to develop recommended rates needed to sustainably finance the Paving Program, and an impact fee analysis to allow the City to recoup the cost of accelerated wear on our roads imposed by heavy vehicles. We also recommend the master plan include an evaluation of grant funding opportunities.
5. Public Engagement -- Public feedback is critical to the successful implementation of any City Plan. The Master Plan should provide guidance for public engagement strategies that will allow the collection and synthesis of public feedback regarding the future of the City streets.

The recommendation to approve both the 5-year paving plan and the recommendation for a Paving Master Plan and to forward it to Council was discussed by the Public Works Commission at its July 11, 2019 meeting.

Action: M/S/C (Schueler/Dominguez)

Vote: (8 Ayes: Yep, Schueler, Dominguez, Hitchen, Constantine, Krpata, Erbe, Freiberg; 0 Noes; 1 Absent: McGrath; 0 Abstain)

#### ENVIRONMENTAL SUSTAINABILITY

Permeable pavers provide a way of reducing the volume of storm water entering the City storm drain system; improving the quality of urban runoff from the roadway that is conveyed to local creeks and the Bay; and reducing greenhouse gas emissions by installing a durable product that requires less maintenance than traditional asphalt concrete.

Full Depth Reclamation (FDR), a cost-effective alternative to traditional street reconstruction methods, is planned for use in several of the streets selected for rehabilitation. It recycles much of the existing pavement on site, and incorporates it into the pavement subgrade, thereby reducing truck trips to and from construction sites.

In addition, the Paving Plan includes repair of the City's deteriorating storm drain infrastructure that minimizes degradation of water quality in local creeks and the Bay. These repairs are consistent with the City of Berkeley's 2011 Watershed Management Plan. Furthermore, the Paving Plan also proposes approximately 5.8 miles of improvements to bicycle routes, and improvements to sidewalk and curb ramps adopted from the Bicycle and Pedestrian Plans. These steps result in lower emissions of greenhouse gases into the environment, which is consistent with the goals of the 2009 Berkeley Climate Action Plan.

RATIONALE FOR RECOMMENDATION

It is the policy of the City of Berkeley that there shall be a Five-year Street Rehabilitation Plan for the entire City to be adopted by the City Council. Further, the proposed plan provides for much needed street infrastructure improvements that are consistent with the City's Street Policy.

ALTERNATIVE ACTIONS CONSIDERED

None

CITY MANAGER REPORT

See companion report.

CONTACT PERSON

Ray Yep, Chair, Public Works Commission (510) 318-4894

Nisha Patel, Manager of Engineering (510) 981-6406

Joe Enke, Supervising Civil Engineer (510) 981-6411

Attachments:

1. Resolution

Exhibit A: Five-Year Street Rehabilitation Plan Update to Council, July 24, 2018

2. 5-Year Paving Plan Process Flow Diagram



Attachment 1

RESOLUTION NO. ##,###-N.S.

APPROVAL OF THE FIVE-YEAR PAVING PLAN FOR FY 2020 TO FY2024 AND  
RECOMMENDATION FOR THE CREATION OF A LONG-TERM PAVING MASTER  
PLAN

WHEREAS, the Street Rehabilitation Policy, Resolution No. 55,384-N.S. approved on May 22, 1990, requires there be a Five-Year Street Paving Plan for the entire City to be adopted by the City Council, and

WHEREAS, the City Council requests advice from the Public Works Commission on the Five-Year Paving Plan; and

WHEREAS, on July 11, 2019, the Public Works Commission voted to approve submitting the FY 2020 to FY2024 Five-year Paving Plan to City Council, attached as Exhibit A;

WHEREAS, the condition of Berkeley's streets are at an "at risk" condition and a long-term strategy is needed to improve the condition to the "good" level,

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the FY 2020 to FY2024 Five-Year Paving Plan attached as Exhibit A hereof and the request to create a long-term paving master plan, are hereby adopted.

Exhibit A: Five-Year Paving Plan for FY2020 to FY2024

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From              | To                    | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P   | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|-------------------|-----------------------|-------|------------------------------|--------------------|----------|-----|---------|-------------|---------------|----------|----------------------------|
| 2020        | 321100    | 30         | CEDAR ST          | 6TH ST            | SAN PABLO AVE         | C     | Reconstruct                  | \$ 1,239,036       | 1        | 3C* | 0.31    | 27          | 10/1/1994     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 320685    | 10         | MARINA BLVD       | SPINNAKER WAY     | UNIVERSITY AVE        | C     | Heavy Mtce                   |                    | 1        | N   | 0.43    | 58          | 9/1/1986      | A - AC   | OVERLAY                    |
| 2020        | 735382    | 60         | MILVIA ST         | BLAKE ST          | RUSSELL ST            | R     | Heavy Rehab                  | \$ 764,300         | 3        | 3E  | 0.44    | 28          | 9/1/1993      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 516492    | 75         | ROSE ST           | LE ROY AVE        | LA LOMA AVE           | R     | Reconstruct                  | \$ 205,000         | 6        | N   | 0.14    | 0           |               | A - AC   |                            |
| 2020        | 319525    | 35         | SANTA FE AVE      | GILMAN ST         | CORNELL AVE & PAGE    | R     | Heavy Rehab                  | \$ 409,600         | 1        | 3C* | 0.27    | 49          | 7/1/1995      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2020        | 319525    | 30         | SANTA FE AVE      | NORTH CITY LIMIT  | GILMAN ST             | R     | Light Mtce                   | \$ 37,355          | 1        | 3C* | 0.11    | 60          | 8/31/2004     | O -      | MILL AND THIN OVERLAY      |
| 2020        | 115532    | 77         | SHASTA RD         | GRIZZLY PEAK BLVD | PARK GATE             | C     | Heavy Rehab                  | \$ 86,667          | 6        | N   | 0.05    | 14          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 115532    | 79         | SHASTA RD         | PARK GATE         | EAST CITY LIMIT (GOLF | C     | Reconstruct                  | \$ 234,789         | 6        | N   | 0.11    | 10          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 320686    | 10         | SPINNAKER WAY     | BREAKWATER DR     | MARINA BLVD           | R     | Reconstruct                  | \$ 1,000,000       | 1        | N   | 0.28    | 24          | 8/1/1991      | A - AC   | OVERLAY                    |
| 2020        | 213386    | 22         | MONTEREY AVE      | THE ALAMEDA       | HOPKINS ST            | C     | Heavy Rehab                  | \$ 960,667         | 5        | 2A  | 0.57    | 54          | 11/30/2011    | A - AC   | MILL AND OVERLAY           |
| 2020        | 933653    | 40         | WARD ST           | SAN PABLO AVE     | ACTON ST              | R     | Reconstruct                  | \$ 1,328,400       | 2        | N   | 0.31    | 20          | 9/1/1991      | A - AC   | MILL AND OVERLAY W/FABRIC  |
| 2020        | 320620    | 15         | UNIVERSITY AVE    | MARINA BLVD       | WEST FRONTAGE RD      | C     | Reconstruct                  |                    | 1, 2     | N   | 0.30    | 0           | 12/1/1989     | A - AC   | OVERLAY                    |
| 2020        | 729533    | 55         | SHATTUCK AVE      | CENTER ST         | ALLSTON WAY           | A     | Reconstruct                  |                    | 4        |     | 0.06    | 2           | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729533    | 57         | SHATTUCK AVE (SB) | CENTER ST         | UNIVERSITY AVE        | A     | Reconstruct                  |                    | 4        |     | 0.13    | 12          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729007    | 64         | ADDISON ST        | SHATTUCK AVE      | SHATTUCK AVE          | R     | Heavy Rehab                  |                    | 4        |     | 0.03    |             |               |          |                            |
| 2020        | 729051    | 52         | BERKELEY SQUARE   | ADDISON ST        | CENTER ST             | A     | Heavy Rehab                  |                    | 4        |     | 0.06    |             |               |          |                            |
| 2020        | 729535    | 50         | SHATTUCK SQUARE   | UNIVERSITY AVE    | ADDISON               | A     | Heavy Rehab                  |                    | 4        |     | 0.07    | 28          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
|             |           |            |                   |                   |                       |       |                              | \$ 6,265,814       |          |     | 3.69    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From               | To                | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P         | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|--------------------|-------------------|-------|------------------------------|--------------------|----------|-----------|---------|-------------|---------------|----------|----------------------------|
| 2021        | 940005    | 70         | ACTON ST          | ASHBY ST           | 66TH ST           | R     | Light Mtce                   | \$ 83,640          | 2        | N         | 0.23    | 60          | 8/29/2007     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 516020    | 30         | ARCADE AVE        | GRIZZLY PEAK BLVD  | FAIRLAWN DR       | R     | Heavy Rehab                  | \$ 63,378          | 6        | N         | 0.06    | 7           | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 628042    | 78         | BANCROFT WAY      | BOWDITCH ST        | COLLEGE AVE       | C     | Heavy Mtce                   | \$ 161,036         | 7        | 3C*       | 0.13    | 62          | 12/1/1990     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 627042    | 80         | BANCROFT WAY      | COLLEGE AVE        | PIEDMONT AVE      | C     | Heavy Rehab                  | \$ 254,076         | 7        | 3C*       | 0.13    | 57          | 12/1/1990     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 829102    | 60         | CENTER ST         | MARTIN LUTHER KING | MILVIA ST         | R     | Heavy Rehab                  | \$ 315,645         | 4        |           | 0.13    | 59          | 7/1/1991      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 729102    | 63         | CENTER ST         | MILVIA ST          | SHATTUCK          | R     | Heavy Rehab                  | \$ 564,000         | 4        | 2A*       | 0.13    | 72          | 7/1/1991      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 111127    | 10         | CRESTON RD        | GRIZZLY PEAK BLVD  | SUNSET LANE       | R     | Heavy Mtce                   | \$ 93,378          | 6        | N         | 0.36    | 67          | 6/1/1995      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115127    | 20         | CRESTON RD        | SUNSET LANE        | GRIZZLY PEAK BLVD | R     | Heavy Mtce                   | \$ 116,258         | 6        | N         | 0.36    | 64          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 728140    | 50         | DANA ST           | BANCROFT WAY       | DWIGHT WAY        | R     | Heavy Rehab                  | \$ 467,400         | 7        | 2A to 2B* | 0.25    | 51          | 12/1/1989     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 739141    | 70         | DEAKIN ST         | ASHBY AVE          | PRINCE ST         | R     | Light Mtce                   | \$ 45,920          | 3        | N         | 0.16    | 76          | 4/3/2008      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 736141    | 68         | DEAKIN ST         | RUSSELL ST         | ASHBY AVE         | R     | Light Rehab                  | \$ 109,200         | 3        | N         | 0.10    | 57          | 7/1/1988      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 940148    | 70         | DOHR ST           | ASHBY AVE          | PRINCE ST         | R     | Heavy Rehab                  | \$ 176,569         | 2        | N         | 0.14    | 53          | 10/1/1992     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115344    | 80         | LATHAM LANE       | MILLER AVE         | GRIZZLY PEAK      | R     | Heavy Mtce                   | \$ 38,500          | 6        | N         | 0.10    | 61          | 6/1/1994      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115380    | 70         | MILLER AVE        | HILLDALE AVE       | SHASTA RD         | R     | Light Rehab                  | \$ 425,880         | 6        | N         | 0.66    | 58          | 6/1/1994      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 830491    | 58         | ROOSEVELT AVE     | CHANNING WAY       | DWIGHT WAY        | R     | Light Rehab                  | \$ 172,480         | 4        | N         | 0.13    | 65          | 12/1/1989     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 728584    | 50         | TELEGRAPH AVE     | BANCROFT WAY       | DWIGHT WAY        | C     | Heavy Rehab                  | \$ 473,060         | 7        | 3C*       | 0.25    | 52          | 7/1/1988      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 931657    | 55         | WEST ST           | BANCROFT WAY       | DWIGHT WAY        | R     | Heavy Mtce                   | \$ 263,822         | 2        | N         | 0.25    | 65          | 10/1/1994     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 320528    | 47         | 2ND ST            | DELAWARE ST        | HEARST AVE        | R     | Reconstruct                  | \$ 775,833         | 1        | N         | 0.09    | 2           | NA            |          |                            |
| 2021        | 320528    | 48         | 2ND ST            | HEARST AVE         | UNIVERSITY AVE    | R     | Heavy Rehab                  | \$ 762,222         | 1        | N         | 0.09    | 46          | NA            |          |                            |
| 2021        | 920528    | 50         | 2ND ST            | UNIVERSITY AVE     | ADDISON ST        | R     | Heavy Rehab                  | \$ 560,000         | 2        | N         | 0.09    | 0           | 8/27/1997     |          | MILL AND OVERLAY W/FABRIC  |
| 2021        |           |            | 15% DISCRETIONARY |                    |                   |       |                              | \$ 1,046,295       |          |           |         |             |               |          |                            |
|             |           |            |                   |                    |                   |       |                              | \$ 6,968,593       |          |           | 3.84    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From         | To               | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P   | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                   |
|-------------|-----------|------------|-------------------|--------------|------------------|-------|------------------------------|--------------------|----------|-----|---------|-------------|---------------|----------|------------------------------|
| 2022        | 931073    | 50         | BROWNING ST       | ADDISON ST   | DWIGHT WAY       | R     | Heavy Rehab                  | \$ 911,600         | 2        | N   | 0.50    | 63          | 10/1/1995     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 638115    | 70         | COLLEGE AVE       | ASHBY AVE    | SOUTH CITY LIMIT | A     | Heavy Rehab                  | \$ 896,480         | 8        | N   | 0.41    | 51          | 8/23/2000     | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        | 729152    | 60         | DURANT AVE        | MILVIA ST    | SHATTUCK AVE     | C     | Reconstruct                  | \$ 693,355         | 4        | N   | 0.13    | 0           | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 729152    | 64         | DURANT AVE        | SHATTUCK AVE | FULTON ST        | C     | Heavy Rehab                  | \$ 262,880         | 4        | N   | 0.10    | 28          | 8/12/1997     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 728180    | 50         | ELLSWORTH ST      | BANCROFT WAY | DWIGHT WAY       | R     | Reconstruct                  | \$ 422,400         | 7        | N   | 0.25    | 20          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 736180    | 60         | ELLSWORTH ST      | DWIGHT WAY   | WARD ST          | R     | Light Mtce                   | \$ 129,360         | 7        | N   | 0.38    | 83          | 5/11/2011     | A - AC   | RECONSTRUCT SURFACE (AC)     |
| 2022        | 736180    | 65         | ELLSWORTH ST      | WARD ST      | ASHBY AVE        | R     | Light Mtce                   | \$ 99,307          | 3        | N   | 0.29    | 87          | 5/11/2011     | A - AC   | RECONSTRUCT SURFACE (AC)     |
| 2022        | 736227    | 60         | FULTON ST         | DWIGHT WAY   | BLAKE ST         | R     | Heavy Mtce                   | \$ 76,128          | 3        | 3E* | 0.06    | 61          | 6/1/1993      | O -      | MEDIUM AC OVERLAY (2 INCHES) |
| 2022        | 736227    | 61         | FULTON ST         | BLAKE ST     | PARKER ST        | R     | Heavy Mtce                   | \$ 27,840          | 3        | 3E* | 0.07    |             |               |          |                              |
| 2022        | 736227    | 63         | FULTON ST         | PARKER ST    | STUART ST        | R     | Heavy Mtce                   | \$ 321,592         | 3        | 3E* | 0.25    | 61          | 2/1/1992      | O -      | THIN AC OVERLAY(1.5 INCHES)  |
| 2022        | 835431    | 65         | OTIS ST           | RUSSELL ST   | ASHBY AVE        | R     | Heavy Rehab                  | \$ 224,000         | 3        | N   | 0.13    | 61          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        | 736561    | 70         | STUART ST         | FULTON ST    | HILLEGASS AVE    | R     | Heavy Rehab                  | \$ 784,000         | 7        | N   | 0.46    | 54          | 11/13/1998    | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        |           |            | 15% DISCRETIONARY |              |                  |       |                              | \$ 1,046,295       |          |     |         |             |               |          |                              |
|             |           |            |                   |              |                  |       |                              | \$ 5,895,237       |          |     | 3.03    |             |               |          |                              |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From            | To              | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P     | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|-----------------|-----------------|-------|------------------------------|--------------------|----------|-------|---------|-------------|---------------|----------|----------------------------|
| 2023        | 729042    | 65         | BANCROFT WAY      | SHATTUCK AVE    | FULTON ST       | C     | Heavy Rehab                  | \$ 277,778         | 4        | 4*    | 0.09    | 32          | 8/7/1997      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 729042    | 60         | BANCROFT WAY      | MILVIA WAY      | SHATTUCK AVE    | C     | Heavy Rehab                  | \$ 359,836         | 4        | N     | 0.13    | 28          | 12/1/1989     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 736140    | 65         | DANA ST           | BLAKE ST        | WARD ST         | R     | Light Rehab                  | \$ 454,080         | 7        | 3E*   | 0.25    | 45          | 7/30/2008     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 739186    | 60         | EMERSON ST        | ADELIN ST       | SHATTUCK AVE    | R     | Light Rehab                  | \$ 180,320         | 3        | N     | 0.15    | 65          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 839191    | 60         | ESSEX ST          | ADELIN ST       | TREMONT ST      | R     | Heavy Mtce                   | \$ 76,160          | 3        | N     | 0.06    | 76          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 739191    | 62         | ESSEX ST          | TREMONT ST      | SHATTUCK AVE    | R     | Light Rehab                  | \$ 129,920         | 3        | N     | 0.11    | 62          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 637217    | 80         | FOREST AVE        | COLLEGE AVE     | CLAREMONT BLVD  | R     | Heavy Rehab                  | \$ 600,000         | 8        | N     | 0.36    | 50          | 8/1/1996      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 516340    | 36         | LA LOMA AVE       | ROSE ST         | BUENA VISTA WAY | C     | Heavy Rehab                  | \$ 248,827         | 6        | N     | 0.16    | 36          | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 516340    | 38         | LA LOMA AVE       | BUENA VISTA WAY | CEDAR ST        | C     | Heavy Rehab                  | \$ 221,340         | 6        | N     | 0.14    | 51          | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 834371    | 65         | MC GEE AVE        | DERBY ST        | RUSSELL ST      | R     | Light Rehab                  | \$ 461,992         | 3        | N     | 0.25    | 60          | 12/10/1998    | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 834371    | 60         | MC GEE AVE        | DWIGHT WAY      | DERBY ST        | R     | Light Rehab                  | \$ 302,400         | 3        | N     | 0.26    | 59          | 7/1/1988      | O -      | THIN OVERLAY w/FABRIC      |
| 2023        | 319293    | 47         | HOPKINS ST        | GILMAN ST       | SACRAMENTO ST   | R     | Heavy Rehab                  | \$ 203,942         | 5        | 3A, C | 0.10    | 0           | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 50         | HOPKINS ST        | HOPKINS CT      | MONTEREY AVE    | C     | Light Rehab                  | \$ 75,193          | 5        | 3A, C | 0.05    | 54          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 52         | HOPKINS ST        | MONTEREY AVE    | MC GEE AVE      | C     | Heavy Rehab                  | \$ 107,167         | 5        | 2A, C | 0.05    | 71          | 12/1/1989     |          | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 319293    | 45         | HOPKINS ST        | NORTHSIDE AVE   | PERALTA AVE     | R     | Light Mtce                   | \$ 233,587         | 1        | N     | 0.10    | 78          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 46         | HOPKINS ST        | PERALTA AVE     | GILMAN ST       | R     | Heavy Mtce                   | \$ 433,031         | 1, 5     | N     | 0.27    | 64          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 49         | HOPKINS ST        | SACRAMENTO ST   | HOPKINS CT      | A     | Heavy Rehab                  | \$ 77,755          | 5        | 3A, C | 0.04    | 30          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 40         | HOPKINS ST        | SAN PABLO AVE   | STANNAGE AVE    | R     | Light Mtce                   | \$ 19,188          | 1        | N     | 0.09    | 73          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 42         | HOPKINS ST        | STANNAGE AVE    | NORTHSIDE AVE   | R     | Heavy Mtce                   | \$ 157,658         | 1        | N     | 0.17    | 80          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        |           |            | 15% DISCRETIONARY |                 |                 |       |                              | \$ 1,091,295       |          |       |         |             |               |          |                            |
|             |           |            |                   |                 |                 |       |                              | \$ 5,711,469       |          |       | 2.86    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From               | To                   | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P         | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                  |
|-------------|-----------|------------|-------------------|--------------------|----------------------|-------|------------------------------|--------------------|----------|-----------|---------|-------------|---------------|----------|-----------------------------|
| 2024        | 729014    | 63         | ALLSTON WAY       | MILVIA ST          | SHATTUCK AVE         | R     | Heavy Rehab                  | \$ 228,800         | 4        | N         | 0.14    | 19          | 11/1/1990     | O -      | MILL AND THIN OVERLAY       |
| 2024        | 729014    | 65         | ALLSTON WAY       | SHATTUCK AVE       | OXFORD ST            | R     | Reconstruct                  | \$ 344,036         | 4        | N         | 0.11    | 10          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 729104    | 63         | CHANNING WAY      | MILVIA ST          | SHATTUCK AVE         | R     | Heavy Rehab                  | \$ 267,640         | 4        | 2A to 2B* | 0.13    | 27          | 9/1/1991      | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 829104    | 60         | CHANNING WAY      | MARTIN LUTHER KING | MILVIA ST            | R     | Reconstruct                  | \$ 462,920         | 4        | 2A to 2B* | 0.13    | 10          | 5/1/1995      | O -      | THIN AC OVERLAY(1.5 INCHES) |
| 2024        | 322142    | 48         | DELAWARE ST       | ACTON ST           | SACRAMENTO ST        | C     | Heavy Mtce                   | \$ 78,175          | 1        | 4*        | 0.13    |             |               |          |                             |
| 2024        | 636146    | 78         | DERBY ST          | HILLEGASS AVE      | COLLEGE AVE          | R     | Reconstruct                  | \$ 498,560         | 8        | 3E*       | 0.14    |             |               |          |                             |
| 2024        | 627155    | 85         | DWIGHT WAY        | HILLSIDE AVE       | DEAD END ABOVE       | R     | Reconstruct                  | \$ 406,204         | 8        | N         | 0.11    | 0           | 9/1/1993      | A - AC   | RECONSTRUCT SURFACE (AC)    |
| 2024        | 627155    | 83         | DWIGHT WAY        | PIEDMONT AVE       | HILLSIDE AVE         | R     | Reconstruct                  | \$ 526,688         | 7, 8     | N         | 0.14    | 3           | 9/1/1993      | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 111249    | 17         | GRIZZLY PEAK BLVD | KEELER AVE         | MARIN AVE            | C     | Reconstruct                  | \$ 843,578         | 6        | 3C*       | 0.27    |             |               |          |                             |
| 2024        | 920275    | 40         | HEINZ AVE         | 7TH ST             | SAN PABLO AVE        | R     | Reconstruct                  | \$ 897,408         | 2        | 3E        | 0.26    |             |               |          |                             |
| 2024        | 739285    | 70         | HILLEGASS AVE     | ASHBY AVE          | CITY LIMIT (WOOLSEY) | R     | Light Mtce                   | \$ 68,400          | 8        | 3E        | 0.16    | 83          | 7/28/2003     | A - AC   | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 736285    | 60         | HILLEGASS AVE     | DWIGHT WAY         | ASHBY AVE            | R     | Light Mtce                   | \$ 256,000         | 8        | 3E        | 0.61    | 83          | 5/31/2000     | A - AC   | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 213293    | 53         | HOPKINS ST        | MC GEE AVE         | CARLOTTA AVE         | C     | Heavy Rehab                  | \$ 149,680         | 5        | 2A, C     | 0.06    | 47          | 12/1/1989     |          | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 213293    | 55         | HOPKINS ST        | CARLOTTA AVE       | JOSEPHINE ST         | C     | Heavy Rehab                  | \$ 874,580         | 5        | 2A, C     | 0.35    | 60          | 12/1/1989     |          | MILL AND OVERLAY            |
| 2024        |           |            | 15% DISCRETIONARY |                    |                      |       |                              | \$ 1,091,295       |          |           |         |             |               |          |                             |
|             |           |            |                   |                    |                      |       |                              | \$ 6,993,964       |          |           | 2.74    |             |               |          |                             |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

FISCAL YEAR 2020 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 6,265,814</b> | <b>3.67 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.32    | 1                   | 0.69              | \$1,685,991 |
| COLLECTORS                            | 1.77    | 2                   | 0.31              | \$1,328,400 |
| RESIDENTIALS                          | 1.58    | 3                   | 0.44              | \$764,300   |
|                                       | 3.67    | 4                   | 0.03              | \$0         |
|                                       |         | 5                   | 0.57              | \$960,667   |
|                                       |         | 6                   | 0.30              | \$526,456   |
|                                       |         | 7                   | 0.00              | \$0         |
|                                       |         | 8                   | 0.00              | \$0         |
| <hr/>                                 |         | Arterial/PRW        | 1.33              | \$1,000,000 |
|                                       |         |                     | 3.67              | \$6,265,814 |
|                                       |         |                     |                   | 6975303     |

FISCAL YEAR 2021 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 6,968,593</b> | <b>3.84 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.00    | 1                   | 0.18              | \$1,538,055 |
| COLLECTORS                            | 0.51    | 2                   | 0.71              | \$1,084,031 |
| RESIDENTIALS                          | 3.33    | 3                   | 0.26              | \$155,120   |
|                                       | 3.84    | 4                   | 0.39              | \$1,052,125 |
|                                       |         | 5                   | 0.00              | \$0         |
|                                       |         | 6                   | 1.54              | \$737,394   |
|                                       |         | 7                   | 0.76              | \$1,355,572 |
|                                       |         | 8                   | 0.00              | \$0         |
|                                       |         | 15%                 |                   | \$1,046,295 |
| <hr/>                                 |         |                     | 3.84              | \$6,968,592 |
|                                       |         |                     |                   | 6975303     |



FISCAL YEAR 2022 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 5,895,237</b> | <b>3.03 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.41    | 1                   | 0.00              | \$0         |
| COLLECTORS                            | 0.23    | 2                   | 0.50              | \$911,600   |
| RESIDENTIALS                          | 2.39    | 3                   | 0.80              | \$748,867   |
|                                       | 3.03    | 4                   | 0.23              | \$956,235   |
|                                       |         | 5                   | 0.00              | \$0         |
|                                       |         | 6                   | 0.00              | \$0         |
|                                       |         | 7                   | 1.09              | \$1,335,760 |
|                                       |         | 8                   | 0.00              | \$0         |
| <hr/>                                 |         | Arterial            | 0.41              | \$896,480   |
|                                       |         | 15%                 |                   | \$1,046,295 |
|                                       |         |                     | 3.03              | \$5,895,237 |
|                                       |         |                     |                   | 6975303     |

FISCAL YEAR 2023 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 5,711,469</b> | <b>2.83 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.04    | 1                   | 0.50              | \$626,949   |
| COLLECTORS                            | 0.62    | 2                   | 0.00              | \$0         |
| RESIDENTIALS                          | 2.17    | 3                   | 0.83              | \$1,150,792 |
|                                       | 2.83    | 4                   | 0.22              | \$637,614   |
|                                       |         | 5                   | 0.34              | \$602,817   |
|                                       |         | 6                   | 0.30              | \$470,167   |
|                                       |         | 7                   | 0.25              | \$454,080   |
|                                       |         | 8                   | 0.36              | \$600,000   |
|                                       |         | Arterial            | 0.04              | \$77,755    |
|                                       |         | 15%                 |                   | \$1,091,295 |
| <hr/>                                 |         |                     | 2.83              | \$5,711,469 |
|                                       |         |                     |                   | 7275303     |

FISCAL YEAR 2024 TOTALS

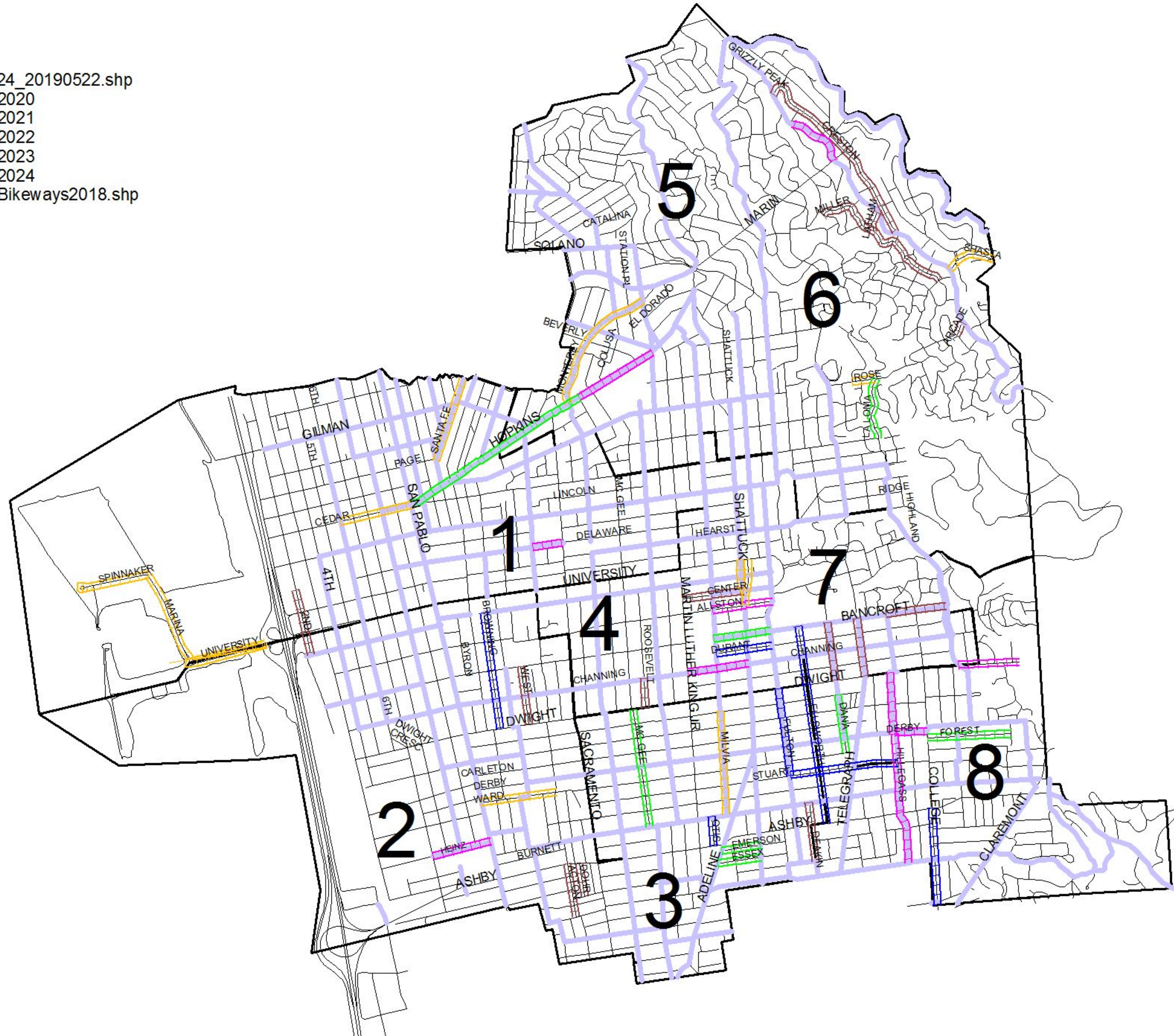
| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 6,993,964</b> | <b>2.74 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.00    | 1                   | 0.13              | \$78,175    |
| COLLECTORS                            | 0.81    | 2                   | 0.26              | \$897,408   |
| RESIDENTIALS                          | 1.93    | 3                   | 0.00              | \$0         |
|                                       | 2.74    | 4                   | 0.51              | \$1,303,396 |
|                                       |         | 5                   | 0.41              | \$1,024,260 |
|                                       |         | 6                   | 0.27              | \$843,578   |
|                                       |         | 7                   | 0.00              | \$0         |
|                                       |         | 8                   | 1.16              | \$1,755,852 |
| <hr/>                                 |         | Arterial            | 0.00              | \$0         |
|                                       |         | 15%                 |                   | \$1,091,295 |
|                                       |         |                     | 2.74              | \$6,993,964 |
|                                       |         |                     |                   | 7275303     |

FISCAL YEAR 2020 to 2024 TOTALS

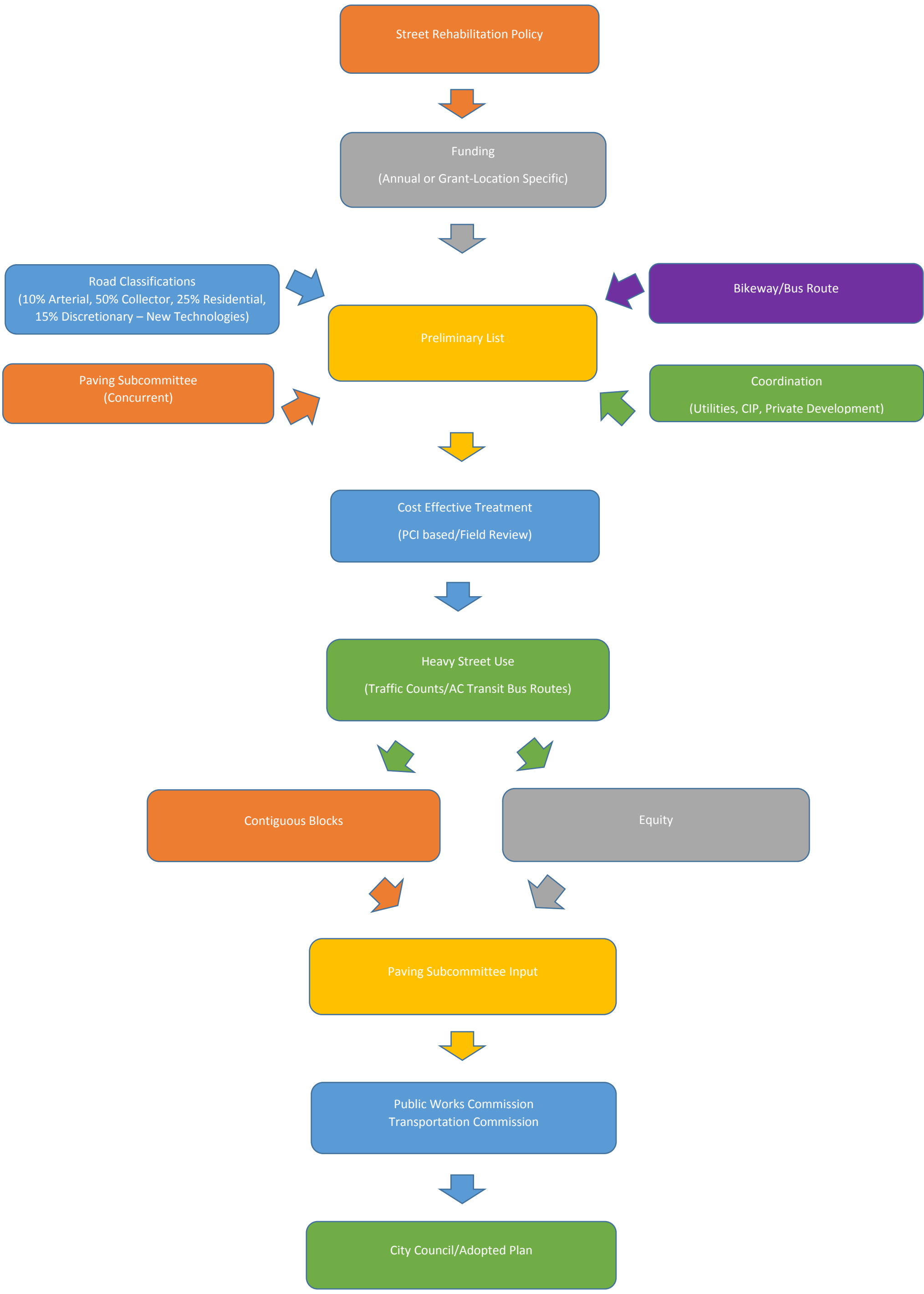
| Total Estimated Cost and Miles |         |      |        |        | \$ 31,835,077 | 16.11 miles |              |
|--------------------------------|---------|------|--------|--------|---------------|-------------|--------------|
|                                | MILEAGE | %    | % COST | % MILE | District      | Miles       | Cost         |
| ARTERIALS                      | 0.77    | 5%   | 12%    | 9%     | 1             | 1.50        | \$3,929,170  |
| COLLECTORS                     | 3.94    | 24%  | 13%    | 11%    | 2             | 1.78        | \$4,221,439  |
| RESIDENTIALS                   | 11.40   | 71%  | 9%     | 14%    | 3             | 2.33        | \$2,819,079  |
|                                | 16.11   | 100% | 12%    | 9%     | 4             | 1.38        | \$3,949,370  |
|                                |         |      | 8%     | 8%     | 5             | 1.32        | \$2,587,744  |
|                                |         |      | 8%     | 15%    | 6             | 2.41        | \$2,577,595  |
|                                |         |      | 10%    | 13%    | 7             | 2.10        | \$3,145,412  |
|                                |         |      | 7%     | 9%     | 8             | 1.52        | \$2,355,852  |
|                                |         |      | 6%     | 11%    | Arterial/PRW  | 1.78        | \$1,974,235  |
|                                |         |      | 13%    | 0%     | 15%           |             | \$4,275,180  |
|                                |         |      | 100%   | 100%   |               | 16.11       | \$31,835,076 |
|                                |         |      |        |        |               |             | \$35,476,515 |



- 5vr1924\_20190522.shp
- 2020
- 2021
- 2022
- 2023
- 2024
- Bikeways2018.shp









Office of the City Manager

ACTION CALENDAR

December 10, 2019

*(Continued from December 3, 2019)*

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip L. Harrington, Director, Department of Public Works

Subject: Companion Report: Public Works Commission Recommendation for the Five-Year Street Rehabilitation Plan

RECOMMENDATION

Adopt a Resolution updating the City's Five-Year Street Rehabilitation Plan for FY 2020 to FY 2024 and refer to the City Manager consideration of a Long-Term Paving Master Plan to be started after the completion of the public process of T1 Phase 2. The City Council may consider the information put forth by the Public Works Commission relevant to adoption of the recommended plan.

SUMMARY

In Part A, Section 1, the City of Berkeley's Street Rehabilitation Policy<sup>1</sup> (Policy) states, "It is the policy of the City of Berkeley that there shall be a Five-Year Street Rehabilitation Plan (Rehabilitation Plan, otherwise referred to as the "Paving Plan") for the entire City to be adopted by the City Council." The Public Works Commission (PWC) is charged by the Policy with reviewing and advising on that Rehabilitation Plan. Staff has carefully considered the PWC's advice, and recommends the City Council: 1.) approve the Five Year Street Rehabilitation Plan, and 2.) postpone the preparation of a Long-Term Paving Master Plan.

The City updates its Pavement Management System every two years providing the most current information for the City's pavement condition which staff bases decisions for development of the Rehabilitation Plan. The PWC is recommending addressing the pavement condition through the creation and implementation of a long-term paving plan. Staff believes that until additional funding, potentially from the second phase of Measure T1, can be identified to address the significant funding shortfall, consideration of the development of a longer term paving plan should be deferred until after the community process for selecting projects for the second phase of T1. The public process and community outreach as part of the second phase of the T1 bond measure will provide information and input on what is most important to the residents of Berkeley. This information is an essential first step before starting the development of a longer term paving plan. The input will help prioritize selection of improvements and define possible revisions to the Policy about the distribution of funds to bicycle routes, residential streets,

<sup>1</sup> [https://www.cityofberkeley.info/Public\\_Works/Sidewalks-Streets-Utility/Street\\_Rehabilitation\\_and\\_Repair\\_Policy\\_updated\\_March\\_2009.aspx](https://www.cityofberkeley.info/Public_Works/Sidewalks-Streets-Utility/Street_Rehabilitation_and_Repair_Policy_updated_March_2009.aspx)

green infrastructure and Vision Zero improvements. The City's PCI has been declining and was projected to be 57. The current PCI of 59.7 reflects a slight increase, and with increased funding support, the City could see additional improvement.

#### FISCAL IMPACTS OF RECOMMENDATION

This Rehabilitation Plan is based on the adopted biennial budget for Fiscal Years 2020 and 2021, and the estimated available funding levels from all sources, including State Transportation (Gas) Taxes, Measure B, Measure BB, County Measure F, and the General Fund. Similarly, the street rehabilitation programs for future years are based on projected budgets and estimated available funding levels. The funding allocations for street rehabilitation in the next five fiscal years FY 2020 - 2024 are provided in the Table below.

| <b>Table 1: Current Year and Five-Year Paving Program Funding Source Allocations by Year, in \$</b> |                  |                  |                  |                  |                  |
|-----------------------------------------------------------------------------------------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Fund Description</b>                                                                             | <b>FY 2020</b>   | <b>FY 2021</b>   | <b>FY 2022</b>   | <b>FY 2023</b>   | <b>FY 2024</b>   |
| <b>State Transportation Tax</b>                                                                     | 495,303          | 495,303          | 495,303          | 495,303          | 495,303          |
| <b>Measure B - Local Streets &amp; Roads</b>                                                        | 700,000          | 1,000,000        | 700,000          | 0                | 0                |
| <b>Measure BB – Local Streets &amp; Roads</b>                                                       | 2,200,000        | 1,700,000        | 2,000,000        | 2,700,000        | 2,700,000        |
| <b>Measure F Vehicle - Registration Fee</b>                                                         | 155,000          | 155,000          | 155,000          | 155,000          | 155,000          |
| <b>Capital Improvement Fund</b>                                                                     | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        | 1,925,000        |
| <b>Road Repair and Accountability Act of 2017</b>                                                   | 1,500,000        | 1,700,000        | 1,700,000        | 2,000,000        | 2,000,000        |
| <b>TOTAL</b>                                                                                        | <b>6,975,303</b> | <b>6,975,303</b> | <b>6,975,303</b> | <b>7,275,303</b> | <b>7,275,303</b> |

City bond measures and grants shown in the table below have also been sources of funding for the street rehabilitation program. However, these funds are not guaranteed annual fund sources. Approximately \$8.5 million of Phase 1 Measure T1 bond funds will be spent on street improvements in Fiscal Years 2020 and 2021. An extensive community process to identify and vet potential projects to be delivered with Phase 2 of T1 bond funds is scheduled to start in in early 2020. Phase 2 of T1 bond funds will not be available until after Council approves the Phase 2 Measure T1 projects, which is anticipated to occur in March 2021. Federal grant funds were secured for the Shattuck Reconfiguration Project in the amount of \$2.78 million dollars, and the funds will be spent in Fiscal Year 2020. Federal grant funds in the amount of \$1.2 million were also secured for street rehabilitation in association with the Southside Complete Streets project to be spent in Fiscal Year 2021.



| <b>Table 2: Other Funding Source Allocations by Year, in \$</b> |                |                |                |                |                |
|-----------------------------------------------------------------|----------------|----------------|----------------|----------------|----------------|
| <b>Fund Description</b>                                         | <b>FY 2020</b> | <b>FY 2021</b> | <b>FY 2022</b> | <b>FY 2023</b> | <b>FY 2024</b> |
| <b>Measure T1</b>                                               | 7,500,000      | 1,000,000      | 0              | 0              | 0              |
| <b>Grants</b>                                                   | 2,777,000      | 1,200,000      | 0              | 0              | 0              |

### CURRENT SITUATION AND ITS EFFECTS

The City has performed a significant amount of street paving this past year. With all of the recent work, the City street network Pavement Condition Index (PCI) has increased slightly from a PCI of 57 in 2017 to a PCI of 59.7. Even though this represents a slight change, it is a positive change in the right direction.

The current PCI is a result of historical funding levels appropriated to the City's street rehabilitation program and decades of deferred maintenance. In addition to pavement maintenance and rehabilitation, street paving projects incorporate many other improvements as part of a "complete streets" approach that repairs or replaces street infrastructure such as curb ramps, curbs, gutters, sidewalks, drainage inlets and pipes, signage and striping. These non-pavement construction costs average about 35% of the available funding levels. Projects soft costs such as design, construction management and inspection, survey, and material testing average about 15% of the available funding levels. Together, these non-pavement related expenses represent approximately 50% of the available funding levels for the Rehabilitation Plan.

City maintenance forces have also significantly increased pavement maintenance efforts in recent years to include a robust crack sealing program and an expanded program to address potholes, localized base failure repairs, thermoplastic striping, and sidewalk repairs.

Per the Policy, funds allocated for street rehabilitation are recommended to be used as follows:

- 10% for Arterial Streets
- 50% for Collector Streets
- 25% for Residential Streets
- 15% for Discretionary and Demonstration Projects

Per the above distribution guidelines, residential streets (generally low speed, low traffic volume streets serving neighborhoods) have historically received lower funding levels, and as a result, have more pavement rehabilitation needs than arterials (serve major activity centers with highest traffic volumes) and collectors (transfer traffic from residential streets to arterials).

For this Rehabilitation Plan, staff and the PWC collectively agreed to propose a greater distribution toward residential streets as follows:

- Approximately 3% to Arterial Streets
- Approximately 24% for Collector Streets
- Approximately 60% for Residential Streets

The PWC is in the process of developing a recommendation for criteria to assist with prioritizing projects to be funded with the approximately 15% of funding discretionary reserve. Previously funding for discretionary and demonstration projects have been spent on projects such as the Allston Way Permeable Paver project. However, consideration could also be given to using these funds on other beneficial improvements related to vision zero or bicycle master plans. Staff concurs with the PWC that the Policy should be reviewed and updated to reflect changes since the last update in 2009.

A review of the Allston Way project showed that project costs were approximately \$1,500,000 or about \$485/square yard (SY). The estimated cost of an asphalt surface reconstruction would have been approximately \$150,000 or about \$49/SY. In April of 2019, approximately 4-1/2 years after the initial paver installation, City maintenance workers had to replenish the gravel joint filler material that helps holds the pavers in place. Replenishment of bedding material was originally projected to be required at year 10 (2024). The cost to replenish the joint filler was approximately \$42,000 or about \$14/SY. The recommended maintenance treatment for the asphalt pavement would be an \$8/SY slurry seal at year 8 (2022) at an estimated cost of \$25,000. It is expected that regular replenishment of the filler material will be required along with a more significant effort to relevel several areas that have experienced excessive settlement. The Allston project also involved a full road closure for nearly 4 months. The asphalt pavement option limits construction impacts to normal working hours for a few weeks.

In addition to the distribution of funding by street classification, the Policy requires consideration of other items in street selection process for the Rehabilitation Plan which are depicted in the 5-Year Paving Plan Process Flow Diagram (Attachment 3).

**Bikeways / Bus Route:** Staff coordinated with Bike East Bay and also considered comments from Walk Bike Berkeley. Staff also reviewed the City's Bicycle Plan and the Pedestrian Plan to incorporate pedestrian mobility improvements and improvements to bicycle routes into the Rehabilitation Plan. The Rehabilitation Plan includes several streets in the bicycle plan, including Milvia Street, Cedar Street, Santa Fe Avenue, and Hopkins Street, and several streets that are also bus routes including Monterey Avenue, Bancroft Way, Center Street, Dana Street and Telegraph Avenue.

**Utility Coordination:** The Rehabilitation Plan has also been coordinated with future sewer projects, with East Bay Municipal Utility District (EBMUD) pipeline replacement, and with planned gas and electric line relocations by Pacific Gas and Electric. The City is currently working with EBMUD to have Ellsworth Street from Bancroft Way to Ashby Avenue and Stuart Street from Fulton to Hillegass Avenue pavement rehabilitation in FY 2022 incorporated into their Wildcat Aqueduct Pipeline Improvement Project construction.

**Equity:** Although not explicitly relayed in the Street Rehabilitation Policy staff tries to balance equity among the districts and to rehabilitate contiguous streets.

From Fiscal Years 2020 to 2024 the City will pave a total of 16.11 miles of streets, as described in Exhibit A, at a cost of \$27.6 million. The total includes 11.40 miles of residential streets, 0.77 miles of arterials, and 3.04 miles of collectors.

Pavement Engineering Inc. (PEI) updated the City's Pavement Management System using the Metropolitan Transportation Commission's (MTC) Streetsaver® program. The purpose of the Pavement Management System, a pavement assessment of the entire City's street network, is to track inventory, store work history, and furnish budget estimates to optimize funding for improving the City's pavement system.

The updated Pavement Management System showed that the City's current overall average PCI is 59.7. The breakdown by functional classification of street is provided in the table below. Residential streets which are the largest category of streets in the City, have the lowest PCI of 56.

| <b>FUNCTIONAL CLASS</b> | <b>CENTERLINE MILES (CL)</b> | <b>AREA (SQUARE FEET)</b> | <b>PERCENT OF SYSTEM</b> | <b>AVERAGE PCI</b> |
|-------------------------|------------------------------|---------------------------|--------------------------|--------------------|
| Arterial                | 22                           | 5,688,148                 | 14%                      | 67.9               |
| Collector               | 37                           | 6,966,432                 | 18%                      | 65.4               |
| Residential             | 156                          | 26,385,401                | 68%                      | 56.4               |
| <b>TOTAL</b>            | <b>215</b>                   | <b>39,039,981</b>         | <b>100%</b>              | <b>59.7</b>        |

The breakdown by mileage and PCI by Council District for the entire street network is provided in Table 4. It shows that the percent of pavement area per District ranges from 5.1% to 18.4%, and the PCI ranges from 50 to 62. The centerline miles in each District varies as well, from 9.4 to 36.5 miles.

The Rehabilitation Plan proposes to rehabilitate pavement such that the percentage of funds are distributed among the Districts as shown in the far right two columns of Table 4. The percentage of funds spent on rehabilitation per District ranges from 8% to 14%. The centerline miles of pavement rehabilitated per District ranges from 1.50 to 2.41 miles. The percentage of funds to be spent in each district is based on the total estimated street rehabilitation costs.

| Table 4: Council District Mileage, PCI, Rehabilitation Plan |           |         |           |     |                     |          |
|-------------------------------------------------------------|-----------|---------|-----------|-----|---------------------|----------|
| Mileage & PCI By District                                   |           |         |           |     | Rehabilitation Plan |          |
|                                                             | Area (SF) | Mileage | % of area | PCI | % Funds*            | Mileage* |
| District 1                                                  | 7,189,018 | 36.5    | 18.4%     | 57  | 9%                  | 1.50     |
| District 2                                                  | 5,923,823 | 31.5    | 15.2%     | 50  | 11%                 | 1.78     |
| District 3                                                  | 4,987,344 | 23.7    | 12.8%     | 58  | 14%                 | 2.33     |
| District 4                                                  | 3,510,446 | 16.1    | 9.0%      | 55  | 9%                  | 1.38     |
| District 5                                                  | 6,313,826 | 37.3    | 16.2%     | 62  | 8%                  | 1.32     |
| District 6                                                  | 4,946,098 | 36.6    | 12.7%     | 60  | 15%                 | 2.41     |
| District 7                                                  | 1,997,809 | 9.4     | 5.1%      | 62  | 13%                 | 1.52     |
| District 8                                                  | 4,179,713 | 23.6    | 10.7%     | 60  | 9%                  | 1.78     |

\* does not include arterial or waterfront streets or discretionary funding.

The breakdown by mileage and PCI for bikeways and bus routes is provided in Table 5 below. It shows that bikeways and bus routes are a significant portion the City's roadways. The PCI is 66 for bus routes, which is higher than the system wide average PCI of 59.7. This is a reflection of focus and funding spent on arterials and collectors.

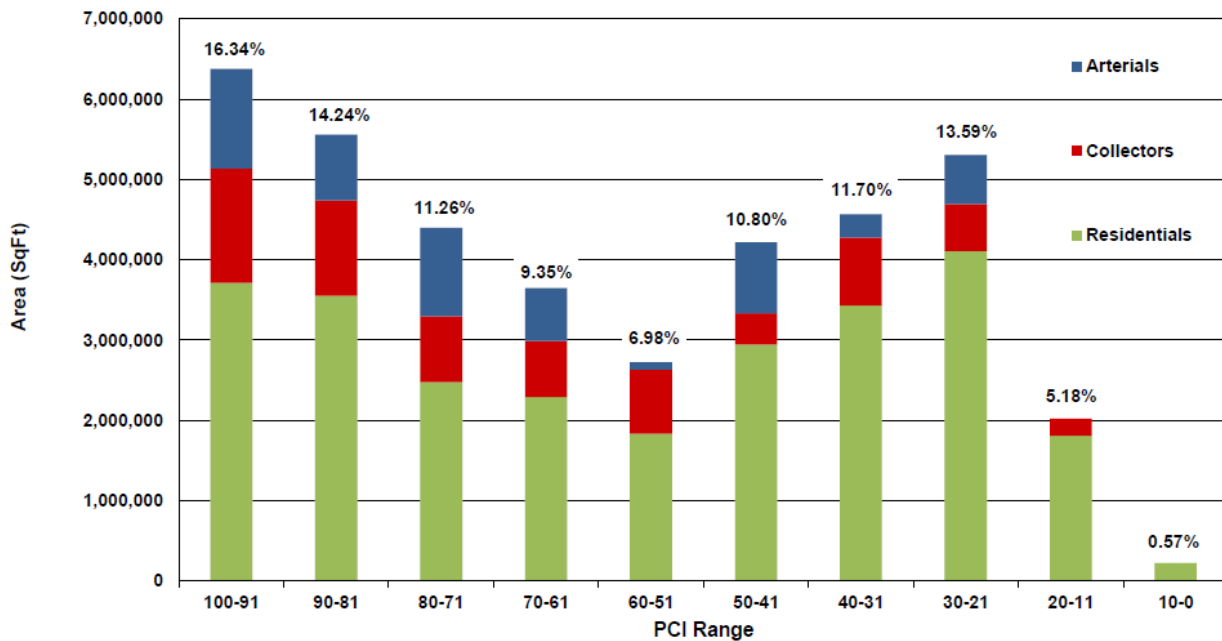
| Table 5: Bikeway / Bus Route Mileage and PCI |            |         |     |     |
|----------------------------------------------|------------|---------|-----|-----|
|                                              | Area (SF)  | Mileage | %   | PCI |
| Bikeway                                      | 13,415,581 | 65      | 34% | 61  |
| Bus Route                                    | 9,167,372  | 40      | 23% | 66  |

The table below shows the breakdown of the system into PCI Condition Categories.

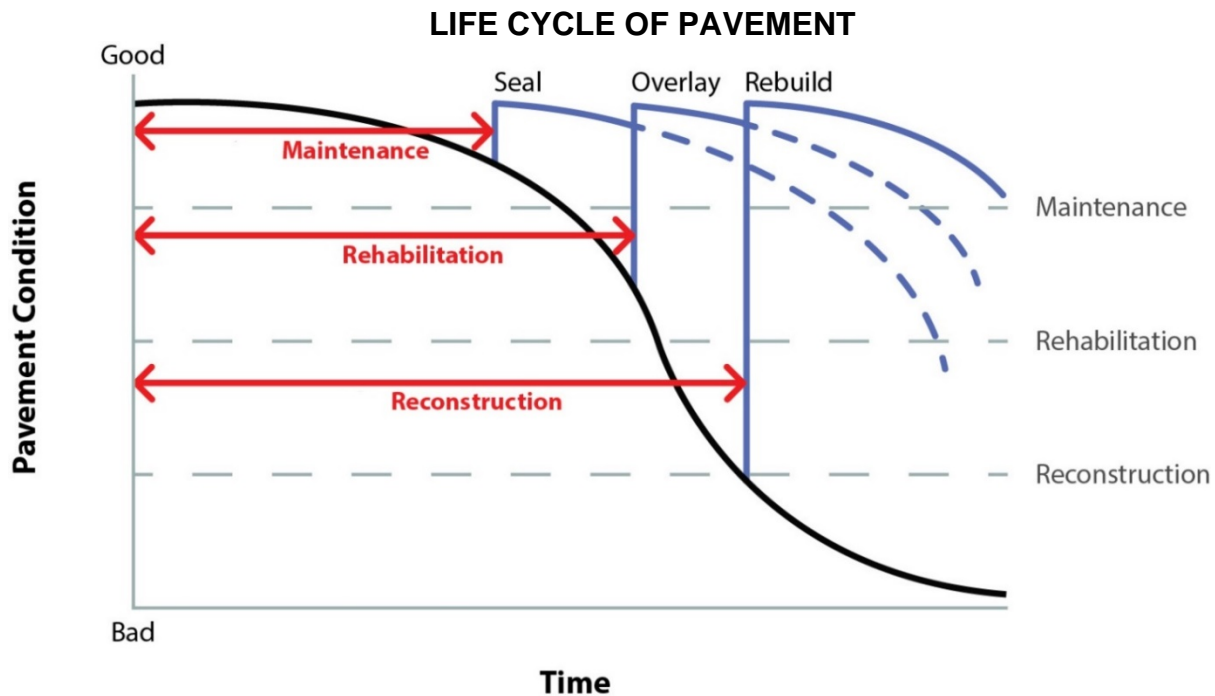
| Table 6: PCI Condition Categories |           |             |                   |            |
|-----------------------------------|-----------|-------------|-------------------|------------|
| CONDITION                         | PCI RANGE | % OF TOTAL  | SQUARE FEET       | CL MILES   |
| EXCELLENT                         | 100-91    | 16%         | 6,378,721         | 34         |
| GOOD                              | 90-71     | 26%         | 9,957,142         | 53         |
| FAIR                              | 70-51     | 16%         | 6,373,028         | 37         |
| POOR                              | 50-31     | 23%         | 8,784,629         | 48         |
| FAILED                            | 30-0      | 19%         | 7,546,461         | 43         |
|                                   |           | <b>100%</b> | <b>39,039,981</b> | <b>215</b> |

The analysis shows that **42%** of the City's pavement is in **Excellent to Good** condition and that **39%** of the City's pavement is in **Fair to Poor** condition. This is further illustrated in the bar graph below shows a breakdown of the system into 10pt PCI ranges, by Functional Classification. This shows that while the overall PCI is 59.7, the pavement system needs require a mix of both maintenance treatments and rehabilitation treatments. Maintenance treatments include slurry and cape seals, and thin overlays. Costs for these treatments range from \$8 to \$27 per square yard. Rehabilitation treatments include thick overlays, pavement milling/filling, and full depth reclamation. Costs for these treatments range from \$52 to \$104 per square yard.

**Berkeley Total System by Functional Class by PCI**

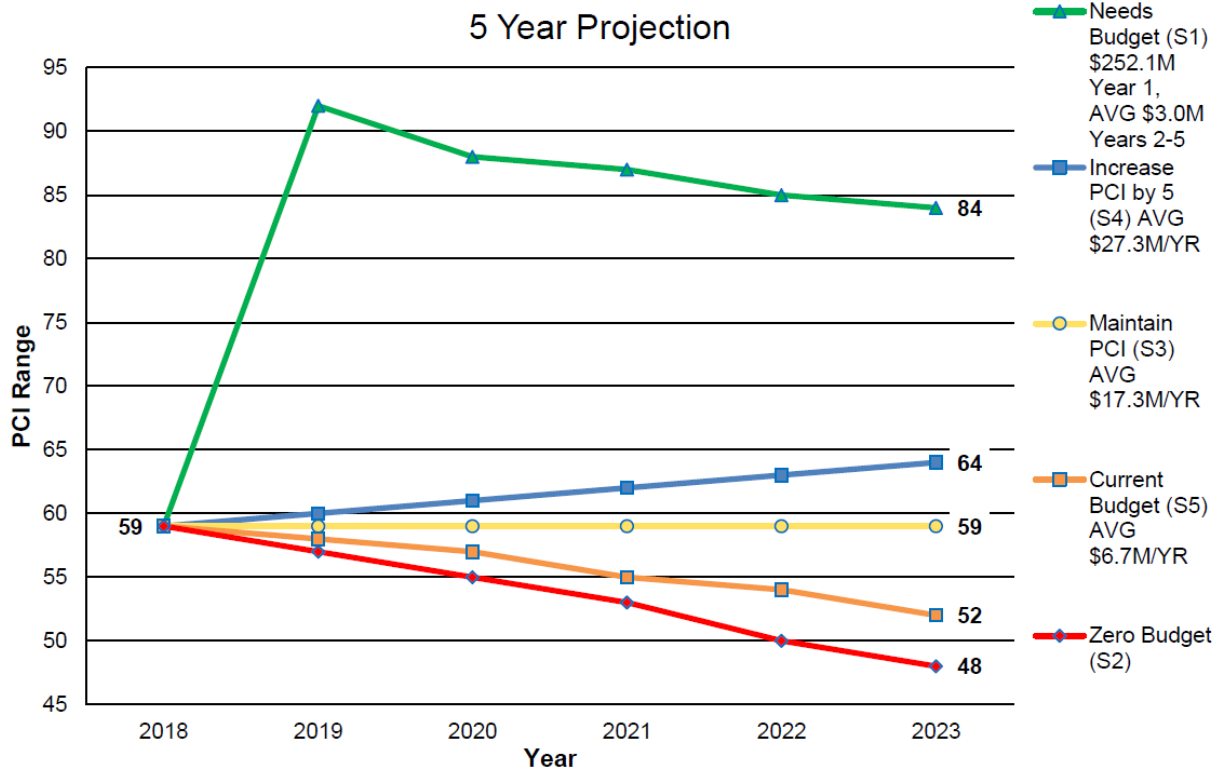


The graph below shows the life cycle or deterioration curve of pavement over time. The City's overall PCI of 59.7 is in the steepest part of the curve. This shows that the pavement can progress from good (able to be rehabilitated) to bad (in need of a total reconstruction) in a short period of time. The treatment (blue) lines on the graph show this, the importance of applying the right treatment at the right time to maximize the service life of the road.



- PEI analyzed the following pavement rehabilitation scenarios: Unconstrained budget needs for next 5 years
- Amount of funds needed to maintain current PCI
- Impact of the current funding amount (5 Year Plan)
- Budget needed to increase the overall PCI level by 5 points
- Result if zero dollars are spent on the City's street system

For each of these scenarios, PEI performed 5-year projections, represented by the graph below.



An explanation of the 5-year scenarios and their result are as follows:

- Scenario 1 (S1):** Represents the budget required based on the “Needs” of the system. Assumes all pavements are treated at their optimum timing. With an initial investment of \$252.1M in year one and an average of \$3.0M in years 2-5, the PCI increases from 59 to 84.
- Scenario 2 (S2):** Represents the impact to the PCI if Zero dollars are spent.
- Scenario 3 (S3):** Amount of funding to maintain the current PCI of 59 - \$17.3M/Yr. (Avg.)
- Scenario 4 (S4):** Budget to increase overall PCI by 5 points – \$27.3M/Yr. Avg. (Raises the PCI from 59 to 64).
- Scenario 5 (S5):** Impact of the current 5 Year Plan (averaging \$6.7M/Yr.) The overall system PCI would be 52.

The City is currently budgeting an average of \$7 million of baseline funding annually. At this funding level, the PCI is expected to drop to 52 by the year 2023. If the City would like to maintain the current PCI of 59, it needs to invest an additional \$10 million annually into the street Capital Improvement Program. If the City would like increase the PCI 5 points to a PCI of 64, it will need to invest \$27 million each year, an increase of \$20 million over

current funding levels. In order to improve the PCI from the “at risk” category to the “good” category (PCI 70 to 79) the City will need to invest over \$30 million annually.

This resolution updating the Five Year Street Rehabilitation Plan for FY 2020 – FY2024 advances the City’s strategic goal of providing state-of-the-art, well-maintained infrastructure, amenities, and facilities.

### BACKGROUND

It is the policy of the City of Berkeley that there shall be a Five-Year Street Rehabilitation Plan for the entire City to be adopted by the City Council. To the extent practicable, this Rehabilitation Plan shall be consistent with the priorities of the City’s Street Rehabilitation Policy. The primary purpose of the Policy is to maintain a safe surface conveyance system in the public right-of-way for vehicles, bicycles, transit, and pedestrians alike. Per the Policy, the Rehabilitation Plan shall strive to identify and implement integrated solutions that address the multiple demands on the street infrastructure, that are designed for safety, environmental sustainability and economic efficiency over the long run.

Each year, the PWC reviews the Rehabilitation Plan for consistency with the City’s current Policy, and the Plan is subsequently presented to the City Council for adoption.

### ENVIRONMENTAL SUSTAINABILITY

The City includes environmental sustainability in the development of its Rehabilitation Plan. In accordance with the street rehabilitation policy, the City set asides 15% of its funds towards demonstration or discretionary projects such as street rehabilitation which provides environmental benefits. In Fiscal Year 2020, a demonstration project the City plans to construct includes the use of permeable concrete in the parking lanes. The Public Works Commission is currently identifying additional green infrastructure projects in FY 2021 to 2024 to be funded by the discretionary and demonstration funds.

In addition, environmentally conscious pavement treatments are incorporated in the paving projects such as Full Depth Reclamation (FDR). FDR is being used as a cost-effective alternative to traditional street reconstruction methods. It recycles much of the existing pavement on site, and incorporates it into the pavement subgrade, thereby reducing truck trips to and from construction sites.

The Rehabilitation Plan also includes repair of the City’s deteriorating storm drain infrastructure that minimizes degradation of water quality in local creeks and the Bay. These repairs are consistent with the City of Berkeley’s 2011 Watershed Management Plan. Furthermore, the Plan also proposes approximately 5.8 miles of improvements to bicycle routes, and improvements to sidewalk and curb ramps adopted from the Bicycle and Pedestrian Plans. These steps result in lower emissions of greenhouse gases into the environment, which is consistent with the goals of the 2009 Berkeley Climate Action Plan.

### RATIONALE FOR RECOMMENDATION

It is the policy of the City of Berkeley that there shall be a Five-year Street Rehabilitation Plan for the entire City to be adopted by the City Council. Further, the proposed plan



provides for much needed street infrastructure improvements that are consistent with the City's Street Rehabilitation Policy.

ALTERNATIVE ACTIONS CONSIDERED

No alternative actions were considered.

CONTACT PERSON

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Attachments:

1. Resolution  
Exhibit A: 5-Year Street Rehabilitation Plan for FY 2020 to FY 2024
2. Map of the 5-Year Street Rehabilitation Plan, FY 2020 to FY 2024
3. 5-Year Paving Plan Process Flow Diagram

RESOLUTION NO. ##,###-N.S.

APPROVAL OF THE FIVE-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO  
FY 2024

WHEREAS, the Street Rehabilitation Policy, Resolution No. 55,384-N.S. approved on May 22, 1990, requires a Five-Year Street Rehabilitation Plan for the entire City be adopted by the City Council; and

WHEREAS, the Five-Year Street Rehabilitation Plan shall be reviewed and updated annually by the City Council, with advice from the Public Works Commission; and

WHEREAS, the Street Rehabilitation Policy, proposes distribution of funds to be used for street rehabilitation as follows: 10% for arterial streets; 50% for collector streets; 25% for residential streets; 15% for discretionary and demonstration projects; and

WHEREAS, residential streets have historically received lower funding levels and as a result have more pavement rehabilitation needs than the other street classifications; and

WHEREAS, Department of Public Works staff recommends more funding to be distributed to residential streets and less to the other street classifications as proposed in the FY 2020 to FY 2024 Five-Year Street Rehabilitation Plan, attached as Exhibit A; and

WHEREAS, Department of Public Works staff recommends Council adopt the FY 2020 to FY 2024 Five-Year Street Rehabilitation Plan.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the FY 2020 to FY 2024 Five-Year Street Rehabilitation Plan, attached as Exhibit A hereof, is hereby adopted.

Exhibit A: Five-Year Street Rehabilitation Plan for FY 2020 to FY 2024

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From              | To                 | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P   | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|-------------------|--------------------|-------|------------------------------|--------------------|----------|-----|---------|-------------|---------------|----------|----------------------------|
| 2020        | 321100    | 30         | CEDAR ST          | 6TH ST            | SAN PABLO AVE      | C     | Reconstruct                  | \$ 1,239,036       | 1        | 3C* | 0.31    | 23          | 10/1/1994     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 320685    | 10         | MARINA BLVD       | SPINNAKER WAY     | UNIVERSITY AVE     | C     | Heavy Mtce                   |                    | 1        | N   | 0.43    | 56          | 9/1/1986      | A - AC   | OVERLAY                    |
| 2020        | 735382    | 60         | MILVIA ST         | BLAKE ST          | RUSSELL ST         | R     | Heavy Rehab                  | \$ 764,300         | 3        | 3E  | 0.44    | 26          | 9/1/1993      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 516492    | 75         | ROSE ST           | LE ROY AVE        | EAST END           | R     | Reconstruct                  | \$ 205,000         | 6        | N   | 0.14    | 8           |               | A - AC   |                            |
| 2020        | 319525    | 35         | SANTA FE AVE      | GILMAN ST         | CORNELL AVE & PAGE | R     | Heavy Rehab                  | \$ 409,600         | 1        | 3C* | 0.27    | 41          | 7/1/1995      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2020        | 319525    | 30         | SANTA FE AVE      | NORTH CITY LIMIT  | GILMAN ST          | R     | Light Mtce                   | \$ 37,355          | 1        | 3C* | 0.11    | 93          | 8/31/2004     | O -      | MILL AND THIN OVERLAY      |
| 2020        | 115532    | 77         | SHASTA RD         | GRIZZLY PEAK BLVD | PARK GATE          | C     | Heavy Rehab                  | \$ 86,667          | 6        | N   | 0.05    | 28          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 115532    | 79         | SHASTA RD         | PARK GATE         | EAST CITY LIMIT    | C     | Reconstruct                  | \$ 234,789         | 6        | N   | 0.11    | 26          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2020        | 320686    | 10         | SPINNAKER WAY     | BREAKWATER DR     | MARINA BLVD        | R     | Reconstruct                  | \$ 1,000,000       | 1        | N   | 0.28    | 22          | 8/1/1991      | A - AC   | OVERLAY                    |
| 2020        | 213386    | 22         | MONTEREY AVE      | THE ALAMEDA       | HOPKINS ST         | C     | Heavy Rehab                  | \$ 960,667         | 5        | 2A  | 0.57    | 47          | 11/30/2011    | A - AC   | MILL AND OVERLAY           |
| 2020        | 933653    | 40         | WARD ST           | SAN PABLO AVE     | ACTON ST           | R     | Reconstruct                  | \$ 1,328,400       | 2        | N   | 0.31    | 21          | 9/1/1991      | A - AC   | MILL AND OVERLAY W/FABRIC  |
| 2020        | 320620    | 15         | UNIVERSITY AVE    | MARINA BLVD       | WEST FRONTAGE RD   | C     | Reconstruct                  |                    | 1, 2     | N   | 0.30    | 9           | 12/1/1989     | A - AC   | OVERLAY                    |
| 2020        | 729533    | 55         | SHATTUCK AVE      | CENTER ST         | ALLSTON WAY        | A     | Reconstruct                  |                    | 4        |     | 0.06    | 18          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729533    | 57         | SHATTUCK AVE (SB) | CENTER ST         | UNIVERSITY AVE     | A     | Reconstruct                  |                    | 4        |     | 0.13    | 25          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729007    | 64         | ADDISON ST        | SHATTUCK AVE      | SHATTUCK AVE       | R     | Heavy Rehab                  |                    | 4        |     | 0.03    | 48          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729051    | 52         | BERKELEY SQUARE   | ADDISON ST        | CENTER ST          | A     | Heavy Rehab                  |                    | 4        |     | 0.06    | 34          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2020        | 729535    | 50         | SHATTUCK SQUARE   | UNIVERSITY AVE    | ADDISON            | A     | Heavy Rehab                  |                    | 4        |     | 0.07    | 30          | 7/1/1994      | O -      | MILL AND OVERLAY W/FABRIC  |
|             |           |            |                   |                   |                    |       |                              | \$ 6,265,814       |          |     | 3.69    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From               | To                | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P         | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|--------------------|-------------------|-------|------------------------------|--------------------|----------|-----------|---------|-------------|---------------|----------|----------------------------|
| 2021        | 940005    | 70         | ACTON ST          | ASHBY ST           | 66TH ST           | R     | Light Mtce                   | \$ 83,640          | 2        | N         | 0.23    | 79          | 8/29/2007     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 516020    | 30         | ARCADE AVE        | GRIZZLY PEAK BLVD  | FAIRLAWN DR       | R     | Heavy Rehab                  | \$ 63,378          | 6        | N         | 0.06    | 27          | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 628042    | 78         | BANCROFT WAY      | BOWDITCH ST        | COLLEGE AVE       | C     | Heavy Mtce                   | \$ 161,036         | 7        | 3C*       | 0.13    | 56          | 12/1/1990     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 627042    | 80         | BANCROFT WAY      | COLLEGE AVE        | PIEDMONT AVE      | C     | Heavy Rehab                  | \$ 254,076         | 7        | 3C*       | 0.13    | 28          | 12/1/1990     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 829102    | 60         | CENTER ST         | MARTIN LUTHER KING | MILVIA ST         | R     | Heavy Rehab                  | \$ 315,645         | 4        |           | 0.13    | 49          | 7/1/1991      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 729102    | 63         | CENTER ST         | MILVIA ST          | SHATTUCK          | R     | Heavy Rehab                  | \$ 564,000         | 4        | 2A*       | 0.13    | 49          | 7/1/1991      | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 111127    | 10         | CRESTON RD        | GRIZZLY PEAK BLVD  | SUNSET LANE       | R     | Heavy Mtce                   | \$ 93,378          | 6        | N         | 0.36    | 63          | 6/1/1995      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115127    | 20         | CRESTON RD        | SUNSET LANE        | GRIZZLY PEAK BLVD | R     | Heavy Mtce                   | \$ 116,258         | 6        | N         | 0.36    | 64          | 11/1/1988     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 728140    | 50         | DANA ST           | BANCROFT WAY       | DWIGHT WAY        | R     | Heavy Rehab                  | \$ 467,400         | 7        | 2A to 2B* | 0.25    | 45          | 12/1/1989     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 739141    | 70         | DEAKIN ST         | ASHBY AVE          | PRINCE ST         | R     | Light Mtce                   | \$ 45,920          | 3        | N         | 0.16    | 79          | 4/3/2008      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 736141    | 68         | DEAKIN ST         | RUSSELL ST         | ASHBY AVE         | R     | Light Rehab                  | \$ 109,200         | 3        | N         | 0.10    | 55          | 7/1/1988      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 940148    | 70         | DOHR ST           | ASHBY AVE          | PRINCE ST         | R     | Heavy Rehab                  | \$ 176,569         | 2        | N         | 0.14    | 41          | 10/1/1992     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115344    | 80         | LATHAM LANE       | MILLER AVE         | GRIZZLY PEAK      | R     | Heavy Mtce                   | \$ 38,500          | 6        | N         | 0.10    | 59          | 6/1/1994      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 115380    | 70         | MILLER AVE        | HILLDALE AVE       | SHASTA RD         | R     | Light Rehab                  | \$ 425,880         | 6        | N         | 0.66    | 53          | 6/1/1994      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2021        | 830491    | 58         | ROOSEVELT AVE     | CHANNING WAY       | DWIGHT WAY        | R     | Light Rehab                  | \$ 172,480         | 4        | N         | 0.13    | 52          | 12/1/1989     | A - AC   | RECONSTRUCT SURFACE (AC)   |
| 2021        | 728584    | 50         | TELEGRAPH AVE     | BANCROFT WAY       | DWIGHT WAY        | C     | Heavy Rehab                  | \$ 473,060         | 7        | 3C*       | 0.25    | 39          | 7/1/1988      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 931657    | 55         | WEST ST           | BANCROFT WAY       | DWIGHT WAY        | R     | Heavy Mtce                   | \$ 263,822         | 2        | N         | 0.25    | 55          | 10/1/1994     | O -      | MILL AND OVERLAY W/FABRIC  |
| 2021        | 320528    | 47         | 2ND ST            | DELAWARE ST        | HEARST AVE        | R     | Reconstruct                  | \$ 775,833         | 1        | N         | 0.09    | 9           | NA            |          |                            |
| 2021        | 320528    | 48         | 2ND ST            | HEARST AVE         | UNIVERSITY AVE    | R     | Heavy Rehab                  | \$ 762,222         | 1        | N         | 0.09    | 33          | NA            |          |                            |
| 2021        | 920528    | 50         | 2ND ST            | UNIVERSITY AVE     | ADDISON ST        | R     | Heavy Rehab                  | \$ 560,000         | 2        | N         | 0.09    | 32          | 8/27/1997     |          | MILL AND OVERLAY W/FABRIC  |
| 2021        |           |            | 15% DISCRETIONARY |                    |                   |       |                              | \$ 1,046,295       |          |           |         |             |               |          |                            |
|             |           |            |                   |                    |                   |       |                              | \$ 6,968,593       |          |           | 3.84    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From         | To               | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P   | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                   |
|-------------|-----------|------------|-------------------|--------------|------------------|-------|------------------------------|--------------------|----------|-----|---------|-------------|---------------|----------|------------------------------|
| 2022        | 931073    | 50         | BROWNING ST       | ADDISON ST   | DWIGHT WAY       | R     | Heavy Rehab                  | \$ 911,600         | 2        | N   | 0.50    | 35          | 10/1/1995     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 638115    | 70         | COLLEGE AVE       | ASHBY AVE    | SOUTH CITY LIMIT | A     | Heavy Rehab                  | \$ 896,480         | 8        | N   | 0.41    | 42          | 8/23/2000     | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        | 729152    | 60         | DURANT AVE        | MILVIA ST    | SHATTUCK AVE     | C     | Reconstruct                  | \$ 693,355         | 4        | N   | 0.13    | 11          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 729152    | 64         | DURANT AVE        | SHATTUCK AVE | FULTON ST        | C     | Heavy Rehab                  | \$ 262,880         | 4        | N   | 0.10    | 32          | 8/12/1997     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 728180    | 50         | ELLSWORTH ST      | BANCROFT WAY | DWIGHT WAY       | R     | Reconstruct                  | \$ 422,400         | 7        | N   | 0.25    | 22          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC    |
| 2022        | 736180    | 60         | ELLSWORTH ST      | DWIGHT WAY   | WARD ST          | R     | Light Mtce                   | \$ 129,360         | 7        | N   | 0.38    | 92          | 5/11/2011     | A - AC   | RECONSTRUCT SURFACE (AC)     |
| 2022        | 736180    | 65         | ELLSWORTH ST      | WARD ST      | ASHBY AVE        | R     | Light Mtce                   | \$ 99,307          | 3        | N   | 0.29    | 92          | 5/11/2011     | A - AC   | RECONSTRUCT SURFACE (AC)     |
| 2022        | 736227    | 60         | FULTON ST         | DWIGHT WAY   | BLAKE ST         | R     | Heavy Mtce                   | \$ 76,128          | 3        | 3E* | 0.06    | 60          | 6/1/1993      | O -      | MEDIUM AC OVERLAY (2 INCHES) |
| 2022        | 736227    | 61         | FULTON ST         | BLAKE ST     | PARKER ST        | R     | Heavy Mtce                   | \$ 27,840          | 3        | 3E* | 0.07    | 69          | 6/1/1993      | O -      | MEDIUM AC OVERLAY (2 INCHES) |
| 2022        | 736227    | 63         | FULTON ST         | PARKER ST    | STUART ST        | R     | Heavy Mtce                   | \$ 321,592         | 3        | 3E* | 0.25    | 58          | 2/1/1992      | O -      | THIN AC OVERLAY(1.5 INCHES)  |
| 2022        | 835431    | 65         | OTIS ST           | RUSSELL ST   | ASHBY AVE        | R     | Heavy Rehab                  | \$ 224,000         | 3        | N   | 0.13    | 49          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        | 736561    | 70         | STUART ST         | FULTON ST    | HILLEGASS AVE    | R     | Heavy Rehab                  | \$ 784,000         | 7        | N   | 0.46    | 39          | 11/13/1998    | A - AC   | RECONSTRUCT STRUCTURE (AC)   |
| 2022        |           |            | 15% DISCRETIONARY |              |                  |       |                              | \$ 1,046,295       |          |     |         |             |               |          |                              |
|             |           |            |                   |              |                  |       |                              | \$ 5,895,237       |          |     | 3.03    |             |               |          |                              |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From            | To              | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P     | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                 |
|-------------|-----------|------------|-------------------|-----------------|-----------------|-------|------------------------------|--------------------|----------|-------|---------|-------------|---------------|----------|----------------------------|
| 2023        | 729042    | 65         | BANCROFT WAY      | SHATTUCK AVE    | FULTON ST       | C     | Heavy Rehab                  | \$ 277,778         | 4        | 4*    | 0.09    | 41          | 8/7/1997      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 729042    | 60         | BANCROFT WAY      | MILVIA WAY      | SHATTUCK AVE    | C     | Heavy Rehab                  | \$ 359,836         | 4        | N     | 0.13    | 34          | 12/1/1989     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 736140    | 65         | DANA ST           | BLAKE ST        | WARD ST         | R     | Light Rehab                  | \$ 454,080         | 7        | 3E*   | 0.25    | 65          | 7/30/2008     | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 739186    | 60         | EMERSON ST        | ADELIN ST       | SHATTUCK AVE    | R     | Light Rehab                  | \$ 180,320         | 3        | N     | 0.15    | 59          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 839191    | 60         | ESSEX ST          | ADELIN ST       | TREMONT ST      | R     | Heavy Mtce                   | \$ 76,160          | 3        | N     | 0.06    | 68          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 739191    | 62         | ESSEX ST          | TREMONT ST      | SHATTUCK AVE    | R     | Light Rehab                  | \$ 129,920         | 3        | N     | 0.11    | 64          | 4/1/2001      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 637217    | 80         | FOREST AVE        | COLLEGE AVE     | CLAREMONT BLVD  | R     | Heavy Rehab                  | \$ 600,000         | 8        | N     | 0.36    | 45          | 8/1/1996      | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 516340    | 36         | LA LOMA AVE       | ROSE ST         | BUENA VISTA WAY | C     | Heavy Rehab                  | \$ 248,827         | 6        | N     | 0.16    | 37          | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 516340    | 38         | LA LOMA AVE       | BUENA VISTA WAY | CEDAR ST        | C     | Heavy Rehab                  | \$ 221,340         | 6        | N     | 0.14    | 49          | 6/1/1995      | O -      | MILL AND OVERLAY W/FABRIC  |
| 2023        | 834371    | 65         | MC GEE AVE        | DERBY ST        | RUSSELL ST      | R     | Light Rehab                  | \$ 461,992         | 3        | N     | 0.25    | 59          | 12/10/1998    | A - AC   | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 834371    | 60         | MC GEE AVE        | DWIGHT WAY      | DERBY ST        | R     | Light Rehab                  | \$ 302,400         | 3        | N     | 0.26    | 51          | 7/1/1988      | O -      | THIN OVERLAY w/FABRIC      |
| 2023        | 319293    | 47         | HOPKINS ST        | GILMAN ST       | SACRAMENTO ST   | R     | Heavy Rehab                  | \$ 203,942         | 5        | 3A, C | 0.10    | 32          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 50         | HOPKINS ST        | HOPKINS CT      | MONTEREY AVE    | C     | Light Rehab                  | \$ 75,193          | 5        | 3A, C | 0.05    | 59          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 213293    | 52         | HOPKINS ST        | MONTEREY AVE    | MC GEE AVE      | C     | Heavy Rehab                  | \$ 107,167         | 5        | 2A, C | 0.05    | 47          | 12/1/1989     |          | RECONSTRUCT STRUCTURE (AC) |
| 2023        | 319293    | 45         | HOPKINS ST        | NORTHSIDE AVE   | PERALTA AVE     | R     | Light Mtce                   | \$ 233,587         | 1        | N     | 0.10    | 78          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 46         | HOPKINS ST        | PERALTA AVE     | GILMAN ST       | R     | Heavy Mtce                   | \$ 433,031         | 1, 5     | N     | 0.27    | 58          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 49         | HOPKINS ST        | SACRAMENTO ST   | HOPKINS CT      | A     | Heavy Rehab                  | \$ 77,755          | 5        | 3A, C | 0.04    | 38          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 40         | HOPKINS ST        | SAN PABLO AVE   | STANNAGE AVE    | R     | Light Mtce                   | \$ 19,188          | 1        | N     | 0.09    | 74          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        | 319293    | 42         | HOPKINS ST        | STANNAGE AVE    | NORTHSIDE AVE   | R     | Heavy Mtce                   | \$ 157,658         | 1        | N     | 0.17    | 69          | 9/13/2002     |          | MILL AND OVERLAY W/FABRIC  |
| 2023        |           |            | 15% DISCRETIONARY |                 |                 |       |                              | \$ 1,091,295       |          |       |         |             |               |          |                            |
|             |           |            |                   |                 |                 |       |                              | \$ 5,711,469       |          |       | 2.86    |             |               |          |                            |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

EXHIBIT A  
5-YEAR STREET REHABILITATION PLAN FOR FY 2020 TO FY 2024

Revised: 05/22/2019

| Fiscal Year | Street ID | Section ID | Street Name       | From               | To                  | Class | Treatment (from StreetSaver) | Updated Total Cost | District | P         | Mileage | Current PCI | Last M&R Date | Last M&R | Last Paved                  |
|-------------|-----------|------------|-------------------|--------------------|---------------------|-------|------------------------------|--------------------|----------|-----------|---------|-------------|---------------|----------|-----------------------------|
| 2024        | 729014    | 63         | ALLSTON WAY       | MILVIA ST          | SHATTUCK AVE        | R     | Heavy Rehab                  | \$ 228,800         | 4        | N         | 0.14    | 37          | 11/1/1990     | O -      | MILL AND THIN OVERLAY       |
| 2024        | 729014    | 65         | ALLSTON WAY       | SHATTUCK AVE       | OXFORD ST           | R     | Reconstruct                  | \$ 344,036         | 4        | N         | 0.11    | 12          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 729104    | 63         | CHANNING WAY      | MILVIA ST          | SHATTUCK AVE        | R     | Heavy Rehab                  | \$ 267,640         | 4        | 2A to 2B* | 0.13    | 34          | 9/1/1991      | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 829104    | 60         | CHANNING WAY      | MARTIN LUTHER KING | MILVIA ST           | R     | Reconstruct                  | \$ 462,920         | 4        | 2A to 2B* | 0.13    | 15          | 5/1/1995      | O -      | THIN AC OVERLAY(1.5 INCHES) |
| 2024        | 322142    | 48         | DELAWARE ST       | ACTON ST           | SACRAMENTO ST       | C     | Heavy Mtce                   | \$ 78,175          | 1        | 4*        | 0.13    | 61          | 10/1/1992     | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 636146    | 78         | DERBY ST          | HILLEGASS AVE      | COLLEGE AVE         | R     | Reconstruct                  | \$ 498,560         | 8        | 3E*       | 0.14    | 25          | 8/8/1997      | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 627155    | 85         | DWIGHT WAY        | HILLSIDE AVE       | DEAD END ABOVE      | R     | Reconstruct                  | \$ 406,204         | 8        | N         | 0.11    | 22          | 9/1/1993      | A - AC   | RECONSTRUCT SURFACE (AC)    |
| 2024        | 627155    | 83         | DWIGHT WAY        | PIEDMONT AVE       | HILLSIDE AVE        | R     | Reconstruct                  | \$ 526,688         | 7, 8     | N         | 0.14    | 12          | 9/1/1993      | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 111249    | 17         | GRIZZLY PEAK BLVD | KEELER AVE         | MARIN AVE           | C     | Reconstruct                  | \$ 843,578         | 6        | 3C*       | 0.27    | 19          | 10/1/1992     | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 920275    | 40         | HEINZ AVE         | 7TH ST             | SAN PABLO AVE       | R     | Reconstruct                  | \$ 897,408         | 2        | 3E        | 0.26    | 22          | 11/1/1992     | O -      | MILL AND OVERLAY W/FABRIC   |
| 2024        | 739285    | 70         | HILLEGASS AVE     | ASHBY AVE          | CITY LIMIT (WOOLSEY | R     | Light Mtce                   | \$ 68,400          | 8        | 3E        | 0.16    | 76          | 7/28/2003     | A - AC   | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 736285    | 60         | HILLEGASS AVE     | DWIGHT WAY         | ASHBY AVE           | R     | Light Mtce                   | \$ 256,000         | 8        | 3E        | 0.61    | 78          | 5/31/2000     | A - AC   | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 213293    | 53         | HOPKINS ST        | MC GEE AVE         | CARLOTTA AVE        | C     | Heavy Rehab                  | \$ 149,680         | 5        | 2A, C     | 0.06    | 45          | 12/1/1989     |          | RECONSTRUCT STRUCTURE (AC)  |
| 2024        | 213293    | 55         | HOPKINS ST        | CARLOTTA AVE       | JOSEPHINE ST        | C     | Heavy Rehab                  | \$ 874,580         | 5        | 2A, C     | 0.35    | 50          | 12/1/1989     |          | MILL AND OVERLAY            |
| 2024        |           |            | 15% DISCRETIONARY |                    |                     |       |                              | \$ 1,091,295       |          |           |         |             |               |          |                             |
|             |           |            |                   |                    |                     |       |                              | \$ 6,993,964       |          |           | 2.74    |             |               |          |                             |

Note: Column P denotes presence of bike facility type (1 paved path, 2A 2B bike lane, 3A sign-only, 3C Sharrows, 3E bike blvd, 4 cycle track); C for bus route; and N for none.

\*Proposed bike facilities from 2017 Bike Plan.

FISCAL YEAR 2020 TOTALS

**Total Estimated Cost and Miles**

|              |         | <b>\$ 6,265,814</b> | <b>3.67 miles</b> |             |         |
|--------------|---------|---------------------|-------------------|-------------|---------|
|              | MILEAGE | District            | Miles             | Cost        |         |
| ARTERIALS    | 0.32    | 1                   | 0.69              | \$1,685,991 |         |
| COLLECTORS   | 1.77    | 2                   | 0.31              | \$1,328,400 |         |
| RESIDENTIALS | 1.58    | 3                   | 0.44              | \$764,300   |         |
|              | 3.67    | 4                   | 0.03              | \$0         |         |
|              |         | 5                   | 0.57              | \$960,667   |         |
|              |         | 6                   | 0.30              | \$526,456   |         |
|              |         | 7                   | 0.00              | \$0         |         |
|              |         | 8                   | 0.00              | \$0         |         |
| <hr/>        |         | <u>Arterial/PRW</u> | 1.33              | \$1,000,000 |         |
|              |         |                     | 3.67              | \$6,265,814 | 6975303 |



FISCAL YEAR 2021 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 6,968,593</b> | <b>3.84 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.00    | 1                   | 0.18              | \$1,538,055 |
| COLLECTORS                            | 0.51    | 2                   | 0.71              | \$1,084,031 |
| RESIDENTIALS                          | 3.33    | 3                   | 0.26              | \$155,120   |
|                                       | 3.84    | 4                   | 0.39              | \$1,052,125 |
|                                       |         | 5                   | 0.00              | \$0         |
|                                       |         | 6                   | 1.54              | \$737,394   |
|                                       |         | 7                   | 0.76              | \$1,355,572 |
|                                       |         | 8                   | 0.00              | \$0         |
|                                       |         | 15%                 |                   | \$1,046,295 |
| <hr/>                                 |         |                     | 3.84              | \$6,968,592 |
|                                       |         |                     |                   | 6975303     |

FISCAL YEAR 2022 TOTALS

**Total Estimated Cost and Miles**

|              | MILEAGE |          | <b>\$ 5,895,237</b> | <b>3.03 miles</b> |         |
|--------------|---------|----------|---------------------|-------------------|---------|
|              |         | District | Miles               | Cost              |         |
| ARTERIALS    | 0.41    | 1        | 0.00                | \$0               |         |
| COLLECTORS   | 0.23    | 2        | 0.50                | \$911,600         |         |
| RESIDENTIALS | 2.39    | 3        | 0.80                | \$748,867         |         |
|              | 3.03    | 4        | 0.23                | \$956,235         |         |
|              |         | 5        | 0.00                | \$0               |         |
|              |         | 6        | 0.00                | \$0               |         |
|              |         | 7        | 1.09                | \$1,335,760       |         |
|              |         | 8        | 0.00                | \$0               |         |
|              |         | Arterial | 0.41                | \$896,480         |         |
|              |         | 15%      |                     | \$1,046,295       |         |
|              |         |          | 3.03                | \$5,895,237       | 6975303 |

FISCAL YEAR 2023 TOTALS

| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 5,711,469</b> | <b>2.83 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.04    | 1                   | 0.50              | \$626,949   |
| COLLECTORS                            | 0.62    | 2                   | 0.00              | \$0         |
| RESIDENTIALS                          | 2.17    | 3                   | 0.83              | \$1,150,792 |
|                                       | 2.83    | 4                   | 0.22              | \$637,614   |
|                                       |         | 5                   | 0.34              | \$602,817   |
|                                       |         | 6                   | 0.30              | \$470,167   |
|                                       |         | 7                   | 0.25              | \$454,080   |
|                                       |         | 8                   | 0.36              | \$600,000   |
|                                       |         | Arterial            | 0.04              | \$77,755    |
|                                       |         | 15%                 |                   | \$1,091,295 |
| <hr/>                                 |         |                     | 2.83              | \$5,711,469 |
|                                       |         |                     |                   | 7275303     |

FISCAL YEAR 2024 TOTALS

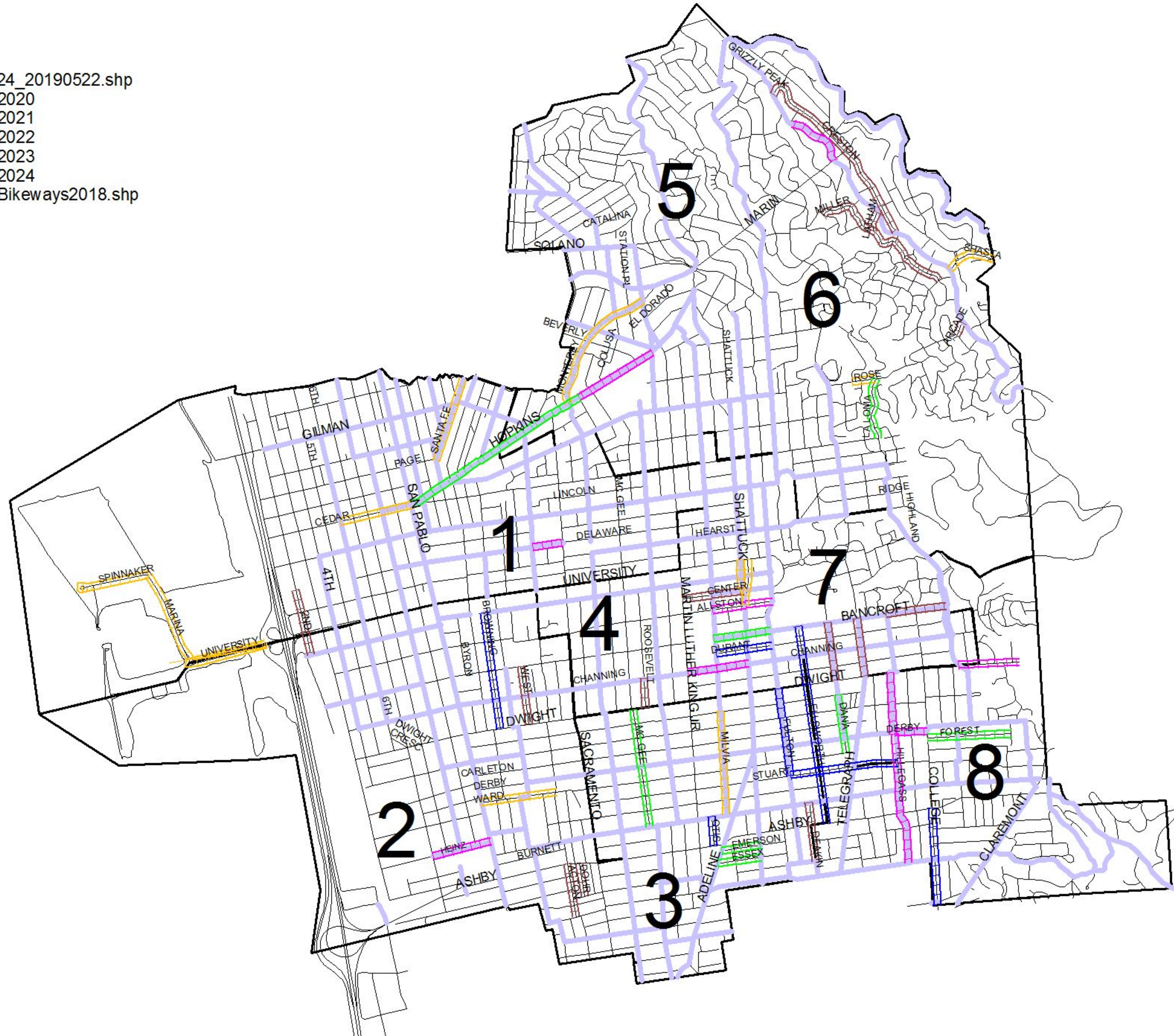
| <b>Total Estimated Cost and Miles</b> |         | <b>\$ 6,993,964</b> | <b>2.74 miles</b> |             |
|---------------------------------------|---------|---------------------|-------------------|-------------|
|                                       | MILEAGE | District            | Miles             | Cost        |
| ARTERIALS                             | 0.00    | 1                   | 0.13              | \$78,175    |
| COLLECTORS                            | 0.81    | 2                   | 0.26              | \$897,408   |
| RESIDENTIALS                          | 1.93    | 3                   | 0.00              | \$0         |
|                                       | 2.74    | 4                   | 0.51              | \$1,303,396 |
|                                       |         | 5                   | 0.41              | \$1,024,260 |
|                                       |         | 6                   | 0.27              | \$843,578   |
|                                       |         | 7                   | 0.00              | \$0         |
|                                       |         | 8                   | 1.16              | \$1,755,852 |
| <hr/>                                 |         | Arterial            | 0.00              | \$0         |
|                                       |         | 15%                 |                   | \$1,091,295 |
|                                       |         |                     | 2.74              | \$6,993,964 |
|                                       |         |                     |                   | 7275303     |

FISCAL YEAR 2020 to 2024 TOTALS

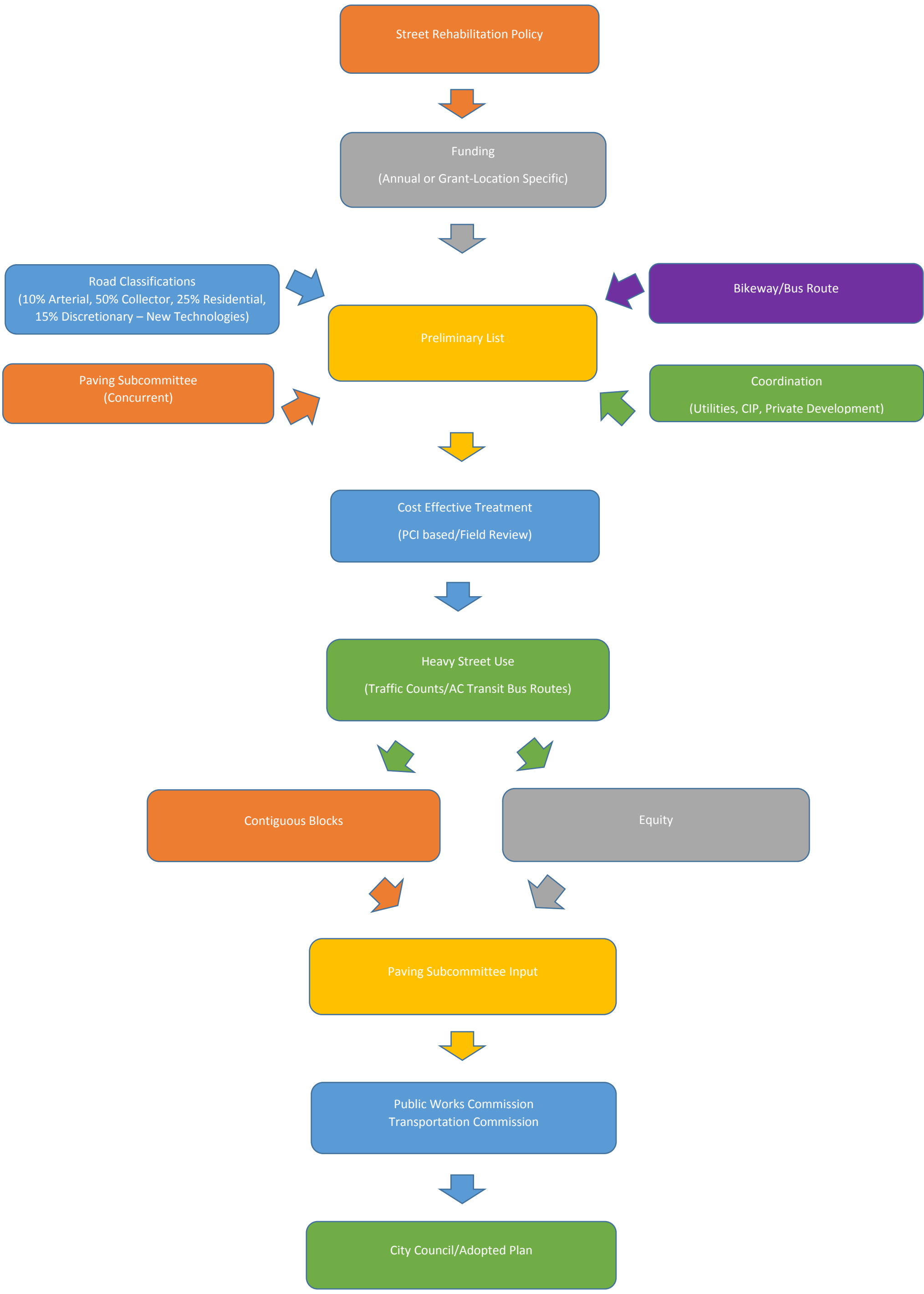
| Total Estimated Cost and Miles |         |      | \$ 31,835,077 |        |              | 16.11 miles |              |
|--------------------------------|---------|------|---------------|--------|--------------|-------------|--------------|
|                                | MILEAGE | %    | % COST        | % MILE | District     | Miles       | Cost         |
| ARTERIALS                      | 0.77    | 5%   | 12%           | 9%     | 1            | 1.50        | \$3,929,170  |
| COLLECTORS                     | 3.94    | 24%  | 13%           | 11%    | 2            | 1.78        | \$4,221,439  |
| RESIDENTIALS                   | 11.40   | 71%  | 9%            | 14%    | 3            | 2.33        | \$2,819,079  |
|                                | 16.11   | 100% | 12%           | 9%     | 4            | 1.38        | \$3,949,370  |
|                                |         |      | 8%            | 8%     | 5            | 1.32        | \$2,587,744  |
|                                |         |      | 8%            | 15%    | 6            | 2.41        | \$2,577,595  |
|                                |         |      | 10%           | 13%    | 7            | 2.10        | \$3,145,412  |
|                                |         |      | 7%            | 9%     | 8            | 1.52        | \$2,355,852  |
|                                |         |      | 6%            | 11%    | Arterial/PRW | 1.78        | \$1,974,235  |
|                                |         |      | 13%           | 0%     | 15%          |             | \$4,275,180  |
|                                |         |      | 100%          | 100%   |              | 16.11       | \$31,835,076 |
|                                |         |      |               |        |              |             | \$35,476,515 |



- 5vr1924\_20190522.shp
- 2020
- 2021
- 2022
- 2023
- 2024
- Bikeways2018.shp



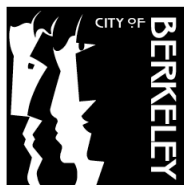








# AGENDA



## BERKELEY CITY COUNCIL MEETING

**Tuesday, December 10, 2019  
6:00 PM**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

*This meeting will be conducted in accordance with the Brown Act, Government Code Section 54953. Any member of the public may attend this meeting. Questions regarding this matter may be addressed to Mark Numainville, City Clerk, (510) 981-6900.*

*The City Council may take action related to any subject listed on the Agenda. The Mayor may exercise a two minute speaking limitation to comments from Councilmembers. Meetings will adjourn at 11:00 p.m. - any items outstanding at that time will be carried over to a date/time to be specified.*

## Preliminary Matters

### Roll Call:

**Ceremonial Matters:** *In addition to those items listed on the agenda, the Mayor may add additional ceremonial matters.*

1. Adjourn in memory of Hampton Smith, former City of Berkeley employee

**City Manager Comments:** *The City Manager may make announcements or provide information to the City Council in the form of an oral report. The Council will not take action on such items but may request the City Manager place a report on a future agenda for discussion.*

**Public Comment on Non-Agenda Matters:** *Persons will be selected by lottery to address matters not on the Council agenda. If five or fewer persons submit speaker cards for the lottery, each person selected will be allotted two minutes each. If more than five persons submit speaker cards for the lottery, up to ten persons will be selected to address matters not on the Council agenda and each person selected will be allotted one minute each. Persons wishing to address the Council on matters not on the Council agenda during the initial ten-minute period for such comment, must submit a speaker card to the City Clerk in person at the meeting location and prior to commencement of that meeting. The remainder of the speakers wishing to address the Council on non-agenda items will be heard at the end of the agenda. Speaker cards are not required for this second round of public comment on non-agenda matters.*

## Consent Calendar

*The Council will first determine whether to move items on the agenda for “Action” or “Information” to the “Consent Calendar”, or move “Consent Calendar” items to “Action.” Items that remain on the “Consent Calendar” are voted on in one motion as a group. “Information” items are not discussed or acted upon at the Council meeting unless they are moved to “Action” or “Consent”.*

*No additional items can be moved onto the Consent Calendar once public comment has commenced. At any time during, or immediately after, public comment on Information and Consent items, any Councilmember may move any Information or Consent item to “Action.” Following this, the Council will vote on the items remaining on the Consent Calendar in one motion.*

*For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

**Public Comment on Consent Calendar and Information Items Only:** *The Council will take public comment on any items that are either on the amended Consent Calendar or the Information Calendar. Speakers will be entitled to two minutes each to speak in opposition to or support of Consent Calendar and Information Items. A speaker may only speak once during the period for public comment on Consent Calendar and Information items.*

*Additional information regarding public comment by City of Berkeley employees and interns: Employees and interns of the City of Berkeley, although not required, are encouraged to identify themselves as such, the department in which they work and state whether they are speaking as an individual or in their official capacity when addressing the Council in open session or workshops.*

## Consent Calendar

### 1. Minutes for Approval

**From: City Manager**

**Recommendation:** Approve the minutes for the Council meetings of November 5, 2019 (special), November 12, 2019 (special and regular), and November 19, 2019 (special closed and regular).

**Financial Implications:** None

Contact: Mark Numainville, City Clerk, (510) 981-6900

### 2. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on December 10, 2019

**From: City Manager**

**Recommendation:** Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager’s threshold will be returned to Council for final approval.

**Financial Implications:** Various Funds - \$2,913,252

Contact: Henry Oyekanmi, Finance, (510) 981-7300

## Consent Calendar

**3. Contract: First Alarm Security & Patrol, Inc. for Citywide Security Services  
From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute a contract and any amendments with First Alarm Security & Patrol, Inc. dba First Security Services to provide unarmed security guard staffing services at various City locations and facilities in an amount not to exceed \$2,100,000 for 36-months commencing on or about March 1, 2020 through to February 28, 2023 and including the option to extend for two additional 1-year periods for a total of 5 years at a total not-to-exceed amount of \$3,550,000, subject to the City's annual budget appropriation process.

**Financial Implications:** See report

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**4. Revenue Contract: Community Services Block Grant for Calendar Year 2020  
From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to accept the Community Services Block Grant (CSBG) Contract Number 20F-3001, estimated to be \$266,863 to provide services for low-income people for the period January 1, 2020 to December 31, 2020.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**5. Memorandum of Understanding for a Winter Relief Program  
From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute a memorandum of understanding (MOU) between Alameda County and the City of Berkeley for a Winter Relief Program, consisting of \$75,000 allotted from Alameda County to the City, which will provide homeless people on the streets of Berkeley housing respite through May 31, 2020.

**Financial Implications:** \$75,000 (revenue)

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

## Consent Calendar

**6. Jointly Apply for Infill Infrastructure Grant Funding for Projects Seeking City Funding through the 2019 Housing Trust Fund Request for Proposals**  
**From: City Manager**

**Recommendation:** Adopt two Resolutions that enable affordable housing development projects that applied for City funding through the 2019 Housing Trust Fund Request for Proposals to access State of California Infill Infrastructure Grant (IIG) funds by:

1. Authorizing the City Manager to prepare and submit a joint application with each of the following developers proposing to use IIG funds: a. Satellite Affordable Housing Associates (for Blake Apartments at 2527 San Pablo); b. BRIDGE Housing Corporation (for 1740 San Pablo); c. Resources for Community Development (for Maudelle Miller Shirek Community at 2001 Ashby); and
2. Authorizing the City Manager to take actions needed for the City's participation in the IIG program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**7. Jointly Apply for No Place Like Home Funding for Maudelle Miller Shirek Community at 2001 Ashby Avenue**

**From: City Manager**

**Recommendation:** Adopt two Resolutions that enable the proposed Maudelle Miller Shirek Community project to access State of California No Place Like Home program funds by:

1. Authorizing the City Manager to prepare and submit a joint application for Maudelle Miller Shirek Community at 2001 Ashby.
2. Authorizing the City Manager to take actions needed for the City's participation in the No Place Like Home program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents, and providing mental health services for tenants of the resulting housing.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

## Consent Calendar

### 8. 2020 Health Plan Changes

**From: City Manager**

**Recommendation:** Adopt two Resolutions:

1. Approving rates for the Kaiser Health Maintenance Organization (HMO) health plans as follows: (a) 2.58% increase for Kaiser S1 Group #60 (Active Group); (b) 2.07% increase for the HSA-Qualified Deductible HMO Plan (Active Group); (c) 6.01% increase for Pre-Medicare Eligible Retirees (Retiree Group); and (d) -0.004% decrease for Post-65 Senior Advantage (Retiree Group)
2. Approving rates for the Sutter Health Plus health plans as follows: (a) 5.37% increase for the Active HMO ML30 group; and (b) 5.41% increase for the Pre-Medicare retiree group.

The health plan premium rates will be effective for the period of January 1, 2020 through December 31, 2020.

**Financial Implications:** See report

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

### 9. Contract No. 31900092 Amendment: Basic Pacific, Third-Party Administrator for COBRA Administration and Retiree Health Premium Assistance Plan Administration

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute a contract amendment to Contract No. 31900092 with BASIC Pacific (BASIC) for COBRA Plan administration and administration of the Retiree Health Premium Assistance Plan for non-sworn retirees and other retiree medical programs for sworn Fire and Police, for the period covering October 1, 2018, through December 31, 2022; for a total cost not to exceed \$405,000.

**Financial Implications:** See report

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

### 10. Contract No. 10542 Amendment: ServiceNow, Inc. for Information Technology Service Management, Project Management, and Government Risk and Compliance Software Licenses

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10542 with ServiceNow, Inc., for the extension of software licenses of the IT Service Management, Business Management, and Governance Risk and Compliance (GRC) modules, for an additional amount not-to-exceed \$266,076 and a total not-to-exceed amount of \$527,832 from February 14, 2017 to June 30, 2022.

**Financial Implications:** See report

Contact: Savita Chaudhary, Information Technology, (510) 981-6500

## Consent Calendar

- 11. Waiver of City Ordinance No. 7,650-N.S. for Berkeley Tuolumne Camp Reconstruction Contracts**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing a waiver of City Ordinance No. 7,650-N.S. (which adds Chapter 13.105 to the Berkeley Municipal Code to Adopt a Sanctuary Contracting Ordinance) for Berkeley Tuolumne Camp Reconstruction Project contracts.  
**Financial Implications:** See report  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
- 12. Contract No. 32000082 Amendment: Mar Con Builders, Inc. for Live Oak Community Center Seismic Upgrade Project**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 32000082 with Mar Con Builders, Inc. for the Live Oak Community Center Seismic Upgrade Project, increasing the contract amount by \$241,451 plus a 20% contingency in the amount of \$48,290 for a total amount not to exceed of \$5,705,668.  
**Financial Implications:** Measure T1 Fund - \$289,741  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700
- 13. Contract No. 10793 Amendment: Siegel & Strain Architects for Construction Administration for the Berkeley Tuolumne Camp Project**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to amend Contract No. 10793 with Siegel & Strain Architects for Construction Support Services for the Berkeley Tuolumne Camp Project, increasing the contract by \$2,900,000 for a total amount not to exceed \$7,200,000, and extending the term of the contract to July 1, 2022.  
**Financial Implications:** Camps Fund - \$2,900,000  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700

## Consent Calendar

### 14. Adjustments to the Measure T1 Phase 1 Project List

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the following adjustments to the Measure T1 Phase 1 project list with no additional funding: 1. Removal of the following projects: -Transfer Station Conceptual Master Plan; -West Berkeley Service Center conceptual design; 2. Change of phase from construction to planning for the following projects: -Berkeley Health Clinic; -Public Safety Building; -Hopkins Street – San Pablo to the Alameda; -Bancroft Way – Milvia to Shattuck; 3. Change of phase from design to planning for the following projects: -Berkeley Municipal Pier; -Tom Bates (Gilman) Fields North Field House / Restroom; 4. Addition of the following projects and funding to supplement existing T1 projects at the same site: -San Pablo Park – Additional Play Structure Replacement (ages 2-5); -Strawberry Creek Park – Play Structure Replacement; -Codornices Creek at Kains Avenue.

**Financial Implications:** See report

Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700; Phillip Harrington, Public Works, (510) 981-6300

### 15. Referral Response: Telegraph Avenue Loading Zone and Customer Parking Pilot Project Evaluation and Next Steps

**From: City Manager**

**Recommendation:** Adopt a Resolution marking the successful completion of the Telegraph Avenue Loading Zone and Customer Parking pilot project, making the pilot parking changes permanent, and authorizing the City Traffic Engineer to establish similar loading zone and/or customer parking regulations in all parking meter districts citywide, based on staff parking demand analysis, at the request of adjacent merchants, and/or in consultation with local business associations.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

### 16. Purchase Order: National Auto Fleet Group for Nine Ford F-Series Pickup Trucks with Various Service Body Configurations

**From: City Manager**

**Recommendation:** Adopt a Resolution satisfying requirements of City Charter Article XI Sections 67.2 allowing the City to participate in Sourcewell contract bid procedures, and authorizing the City Manager to execute a purchase order for nine (9) Ford Super Duty F-Series Pickup Trucks with varying service body configurations with National Auto Fleet Group in an amount not to exceed \$492,284, and a subsequent purchase order for the conversion of the nine (9) Ford Super Duty F-Series Pickup Trucks to plug in hybrid vehicles in an amount not to exceed \$245,000 using XL Fleet technology when it becomes commercially available.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Consent Calendar

- 17. Contract Nos. 31900080 and 31900205 Amendment: Edgeworth Integration, LLC for Server Storage**  
**From: City Manager**  
**Recommendation:** Adopt two Resolutions authorizing the City Manager to execute:  
1. Amendment to Contract No. 31900080 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$36,588 for a total not to exceed amount of \$71,588.  
2. Amendment to Contract No. 31900205 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$17,972 for a total not to exceed amount of \$35,028.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300
- 18. Contract No. 9893B Amendment: ABM Industries for Expanding Electric Vehicle Charging Station Operations and Extended Maintenance Program**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 9893B with ABM Industries to extend the term by three years, purchase additional Electric Vehicle (EV) charging stations, and provide network operations and maintenance, including extended warranty services, in the amount of \$131,556 for a total Contract not to exceed \$557,552 through June 30, 2026.  
**Financial Implications:** Various Funds - \$131,556  
Contact: Phillip Harrington, Public Works, (510) 981-6300
- 19. Contract: Pacific Trenchless, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Dwight Way, Fourth Street, Camelia Street, Seventh Street, Heinz Avenue, University Avenue, Dana Street, Ward Street, Dover Street, Haskell Street, and Seawall Drive; accepting the bid of the lowest responsive and responsible bidder, Pacific Trenchless, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,821,569 which includes a 10% contingency of \$347,415.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300



## Consent Calendar

**20. Contract: Precision Engineering Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**

**From: City Manager**

**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on San Pablo Avenue at University Avenue, Parker Street, Carleton Street, Derby Street, and from Grayson Street to South City Limit; accepting the bid of the lowest responsive and responsible bidder, Precision Engineering Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$2,246,219, which includes a 10% contingency of \$204,202.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

**21. Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations**

**From: City Manager**

**Recommendation:** Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Neilson Street Backline, Thousand Oaks Boulevard Backline, Portland Avenue Backline, Peralta Avenue, San Lorenzo Avenue/Washington Avenue, Capistrano Avenue, Miramar Avenue Backline, The Alameda Backline, Arlington Avenue Backline, Michigan Avenue Backline, Alamo Avenue Backline, San Diego Road and Backline, Santa Barbara Road and Backline, San Luis Road Backline, Henry Street Backline, Berryman Street and Backline, Grizzly Peak Boulevard and Backline, Cypress Street/Buena Avenue, Rose Street, Grant Street, Edith Street, and Milvia Street Backline; accepting the bid of the lowest responsive and responsible bidder, Cratus, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,654,358, which includes a 10% contingency of \$332,214.

**Financial Implications:** Sanitary Sewer Fund - \$3,654,358

Contact: Phillip Harrington, Public Works, (510) 981-6300

**22. Contract No. 10396A Amendment: Du-All Safety, LLC for Safety Consulting and Training Services**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10396 with Du-All Safety, LLC for continued safety training and consulting services up to \$100,000 for a total contract amount not to exceed \$300,000, and to extend the contract term through December 31, 2022.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Consent Calendar

- 23. Contract No. 31900124 Amendment: B Bros Construction Inc. for Adult Mental Health Services Center Renovations Project at 2640 Martin Luther King Jr Way From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager to amend Contract No. 31900124 with B Bros Construction, Inc. to complete renovation and seismic upgrade work at the Adult Mental Health Services Center (Center), increasing the current contract amount of \$4,886,293 by \$500,000 for a total amount not-to-exceed (NTE) of \$5,386,293.

**Financial Implications:** T1 Fund - \$500,000

Contact: Phillip Harrington, Public Works, (510) 981-6300

- 24. 2019 Housing Trust Fund Request for Proposals Funding Reservations From: Measure O Bond Oversight Committee**

**Recommendation:** Adopt a Resolution to:

1. Reserve Measure O bond revenues and other available funds for the following proposals at the following levels, for a total reservation of \$36,002,640: a. Satellite Affordable Housing Associates' Blake Apartments development (2527 San Pablo) at \$11,500,000; and b. BRIDGE Housing Corporation's 1740 San Pablo Avenue development at \$7,500,000; and c. Northern California Land Trust's (NCLT) Anti-Displacement Project (2321-2323 10th Street) at \$1,570,640; and d. Resources for Community Development's (RCD) Maudelle Miller Shirek Community (2001 Ashby) at \$15,432,000.

2. Fund the projects in the priority order listed above. If the available funds are insufficient to support all four proposals in full, forward commit funds from the next planned issuance of Measure O funds.

3. Consider funding 2321-2323 10th Street/Anti-Displacement Project (NCLT) using general funds such as those received pursuant to Measure U1.

4. For the NCLT Project at 2321-2323 10th Street: a. Waive the HTF Guidelines requirements listed below to allow funding for this project: i. Threshold for developer experience; and ii. City subsidy limit equal to 40% of total development costs.

b. Condition this new funding on NCLT's demonstrated compliance with the Council-mandated requirements of its 2017 development loan agreement. c. Apply Small Sites Program development and operating budget standards to NCLT's project.

5. Authorize the City Manager to execute all original or amended documents or agreements to effectuate this action.

**Financial Implications:** See report

Contact: Amy Davidson, Commission Secretary, (510) 981-5400

- 25. Support for Non-Violent Activists and Protections of Animals in Commercial Operations**

**From: Peace and Justice Commission**

**Recommendation:** Adopt a resolution supporting non-violent activists and protecting animals in commercial operations.

**Financial Implications:** Minimal

Contact: Erin Steffen, Commission Secretary, (510) 981-7000

## Council Consent Items

**26. Ninth Annual Martin Luther King Jr. Celebration: City Sponsorship and Relinquishment of Council Office Budget Funds to General Fund and Grant of Such Fund**

**From: Mayor Arreguin and Councilmembers Davila and Bartlett**

**Recommendation:**

1. Adopt a Resolution co-sponsoring the 9th Annual Martin Luther King Jr. Celebration Breakfast on January 20, 2020.
2. Adopt a Resolution approving the expenditure of an amount not to exceed \$500 per Councilmember including \$500 from Mayor Arreguin, to the Berkeley Rotary Endowment, the fiscal sponsor of the 9th Annual Martin Luther King Jr. celebration, with funds relinquished to the City's general fund for this purpose from the discretionary Council Office Budgets of Mayor Arreguin and any other Councilmembers who would like to contribute.

**Financial Implications:** Mayor's Discretionary Fund - \$500

Contact: Jesse Arreguin, Mayor, (510) 981-7100

**27. February 2020 Berkeley Black History Month organized by Berkeley Juneteenth Association: Relinquishment of Council Office Budget Fund to General Fund and Grant of Such Funds**

**From: Councilmembers Bartlett and Davila**

**Recommendation:** Adopt a Resolution approving the expenditure of funds, including \$500 from Councilmember Bartlett, for Black History Month and the Berkeley Juneteenth Festival (organized by Berkeley Juneteenth Association, Inc. 501(c)(3). The funds should be relinquished to the City's general fund for this purpose from the discretionary council office budget of Councilmember Bartlett and any other Councilmembers who would like to contribute.

**Financial Implications:** Staff time

Contact: Ben Bartlett, Councilmember, District 3, (510) 981-7130

## Action Calendar

*The public may comment on each item listed on the agenda for action as the item is taken up. For items moved to the Action Calendar from the Consent Calendar or Information Calendar, persons who spoke on the item during the Consent Calendar public comment period may speak again at the time the matter is taken up during the Action Calendar.*

*The Presiding Officer will request that persons wishing to speak line up at the podium to determine the number of persons interested in speaking at that time. Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. Speakers are permitted to yield their time to one other speaker, however no one speaker shall have more than four minutes. The Presiding Officer may, with the consent of persons representing both sides of an issue, allocate a block of time to each side to present their issue.*

*Action items may be reordered at the discretion of the Chair with the consent of Council.*

## Action Calendar – Public Hearings

*Staff shall introduce the public hearing item and present their comments. This is followed by five-minute presentations each by the appellant and applicant. The Presiding Officer will request that persons wishing to speak, line up at the podium to be recognized and to determine the number of persons interested in speaking at that time.*

*Up to ten (10) speakers may speak for two minutes. If there are more than ten persons interested in speaking, the Presiding Officer may limit the public comment for all speakers to one minute per speaker. Speakers are permitted to yield their time to one other speaker, however no one speaker shall have more than four minutes. The Presiding Officer may with the consent of persons representing both sides of an issue allocate a block of time to each side to present their issue.*

*Each member of the City Council shall verbally disclose all ex parte contacts concerning the subject of the hearing. Councilmembers shall also submit a report of such contacts in writing prior to the commencement of the hearing. Written reports shall be available for public review in the office of the City Clerk.*

### 28. 2019 Local Hazard Mitigation Plan

**From: City Manager**

**Recommendation:** Conduct a public hearing and upon conclusion:

1. Adopt a Resolution adopting the 2019 Local Hazard Mitigation Plan (LHMP); and
2. Adopt a Resolution amending the General Plan to incorporate the LHMP.

**Financial Implications:** See report

Contact: David Brannigan, Fire, (510) 981-3473

### 29. Implement Residential Preferential Parking (RPP) Program on the 1500 Block of Lincoln Street

**From: City Manager**

**Recommendation:** Conduct a public hearing and upon its conclusion, adopt a Resolution amending Resolution No. 56,508-N.S. Section 25N by adding a subsection to implement Residential Preferential Parking (RPP) on the 1500 block of Lincoln Street in RPP Area N.

**Financial Implications:** General Fund - \$2,000

Contact: Phillip Harrington, Public Works, (510) 981-6300

## Action Calendar – New Business

### 30. Urgency Ordinance Amending Accessory Dwelling Unit (ADU) Ordinance to Comply with New State Law and Establish Interim Limits on Development; Amending BMC Chapter 23C.24

**From: City Manager**

**Recommendation:** Adopt an Urgency Ordinance amending Berkeley Municipal Code Chapter 23C.24 (Accessory Dwelling Units) to comply with new State law and establish interim limits on ADU development pending further analysis, deliberation and adoption of local regulations, in order to help ensure public safety.

**Financial Implications:** See report

Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

## Council Action Items

- 31. Approval of a Memorandum of Understanding between the City of Berkeley and BART on Implementation of State Law AB 2923 at the Ashby and North Berkeley BART Stations and Establishment of a Community Advisory Group From: Mayor Arreguin, and Councilmembers Bartlett and Kesarwani**

**Recommendation:**

1. Approve a Memorandum of Understanding (MOU) between the City of Berkeley and the Bay Area Rapid Transit District (BART) to establish a process for cooperatively pursuing the implementation of Assembly Bill 2923 (AB 2923, Stats. 2018, Chp. 1000) at the Ashby and North Berkeley BART Stations. This action is pursuant to unanimous City Council direction on May 9, 2019, to direct the City Manager to “engage with BART to develop an MOU that outlines the project planning process including feasibility analysis, project goals, and roles and responsibilities; and direct that the MOU return to Council for adoption.”

2. Establish a Community Advisory Group (CAG) for the purposes of providing input:  
-To the City Planning Commission as it considers zoning standards that will be consistent with the City’s obligations under AB 2923 for the Ashby and North Berkeley BART station areas; and -To the City and BART as the parties establish a joint vision and priorities document that will be incorporated in eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART Properties.

**Financial Implications:** See report

Contact: Jesse Arreguin, Mayor, (510) 981-7100

## Information Reports

- 32. City Council Short Term Referral Process – Monthly Update**

**From: City Manager**

Contact: Mark Numainville, City Clerk, (510) 981-6900

- 33. Examination of Department Directors Transition Procedures Follow-Up Audit - Status Report**

**From: City Manager**

Contact: Dave White, City Manager's Office, (510) 981-7000

- 34. Recommendation Status Reports: Credit Card Audit, Cash Handling, Business License Tax, and Contracts Review Audits**

**From: City Manager**

Contact: Henry Oyekanmi, Finance, (510) 981-7300

- 35. Public Health Division Strategic Plan Update**

**From: City Manager**

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

- 36. Report on Workers’ Compensation Annual Program Review FY18-19**

**From: City Manager**

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

## Information Reports

37. **goBerkeley Parking Management Program - Recommended Adjustments for February 1, 2020**  
**From: City Manager**  
Contact: Phillip Harrington, Public Works, (510) 981-6300
38. **Recommendation Follow Up Report, December 2019**  
**From: Auditor**  
Contact: Jenny Wong, Auditor, (510) 981-6750

## Public Comment – Items Not Listed on the Agenda

### Adjournment

**NOTICE CONCERNING YOUR LEGAL RIGHTS:** *If you object to a decision by the City Council to approve or deny a use permit or variance for a project the following requirements and restrictions apply: 1) No lawsuit challenging a City decision to deny (Code Civ. Proc. §1094.6(b)) or approve (Gov. Code 65009(c)(5)) a use permit or variance may be filed more than 90 days after the date the Notice of Decision of the action of the City Council is mailed. Any lawsuit not filed within that 90-day period will be barred. 2) In any lawsuit that may be filed against a City Council decision to approve or deny a use permit or variance, the issues and evidence will be limited to those raised by you or someone else, orally or in writing, at a public hearing or prior to the close of the last public hearing on the project.*

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Archived indexed video streams are available at <http://www.cityofberkeley.info/citycouncil>. Channel 33 rebroadcasts the following Wednesday at 9:00 a.m. and Sunday at 9:00 a.m.

Communications to the City Council are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk Department at 2180 Milvia Street. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk Department for further information.

Any writings or documents provided to a majority of the City Council regarding any item on this agenda will be made available for public inspection at the public counter at the City Clerk Department located on the first floor of City Hall located at 2180 Milvia Street as well as posted on the City's website at <http://www.cityofberkeley.info>.

Agendas and agenda reports may be accessed via the Internet at <http://www.cityofberkeley.info/citycouncil>

and may be read at reference desks at the following locations:

City Clerk Department  
2180 Milvia Street  
Tel: 510-981-6900  
TDD: 510-981-6903  
Fax: 510-981-6901  
Email: [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info)

Libraries:  
Main - 2090 Kittredge Street  
Claremont Branch – 2940 Benvenue  
West Branch – 1125 University  
North Branch – 1170 The Alameda  
South Branch – 1901 Russell

COMMUNICATION ACCESS INFORMATION:

This meeting is being held in a wheelchair accessible location.

To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at (510) 981-6418 (V) or (510) 981-6347 (TDD) at least three business days before the meeting date.

Attendees at public meetings are reminded that other attendees may be sensitive to various scents, whether natural or manufactured, in products and materials. Please help the City respect these needs.



Captioning services are provided at the meeting, on B-TV, and on the Internet. In addition, assisted listening devices for the hearing impaired are available from the City Clerk prior to the meeting, and are to be returned before the end of the meeting.

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*I hereby certify that the agenda for this meeting of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City's website, on November 27, 2019.*

Mark Numainville, City Clerk

## Communications

*Council rules limit action on Communications to referral to the City Manager and/or Boards and Commissions for investigation and/or recommendations. All communications submitted to Council are public record. Copies of individual communications are available for viewing at the City Clerk Department and through [Records Online](#).*

### **Item #14: Modification of Measure T1 Phase 1 Project List**

1. MiSoon Yang (2)

### **Item #25: Support for Non-Violent Activists and Protections of Animals in Commercial Operations**

2. Shawna Hamilton

### **Item #31: Approval of a Memorandum of Understanding between the City of Berkeley and BART on Implementation of State Law AB 2923 at the Ashby and North Berkeley BART Stations and Establishment of a Community Advisory Group**

3. Mary-Louise Hansen

### **Women's Therapy Center**

4. Margie Cohen

**Kids Art Contest – North Berkeley BART**

- 5. Beth Gerstein, on behalf of Councilmember Kesarwani

**Trash Pick Up at University and Highway 80**

- 6. Diana Bohn

**Pedestrian Protection at Shattuck and Woolsey**

- 7. Ashleigh Kanat

**UC Berkeley/Citywide Security Concerns**

- 8. Marianna Bacher

**Public Safety Power Shutoffs**

- 9. Thomas Gregory

**Nutrition Standards at Checkout**

- 10. Darya Minovi, on behalf of the Center for Science in the Public Interest
- 11. Xochitl Castaneda, on behalf of the Health Initiative of the Americas
- 12. Amanda Nube
- 13. Juan Garay

**Support YSA's Tiny House Village Project**

- 14. Sara Fread
- 15. Helen Toy
- 16. Eunice Orfa Bonfil Tapia

**2710 Shattuck Apartment Building**

- 17. Hector Salgado

**5G/Cell Antenna Regulation**

- 18. Meaveen O'Connor
- 19. Carol Pinson
- 20. Beth Jerde
- 21. Councilmember Harrison
- 22. Gar Smith
- 23. T. Tobey
- 24. Regina DiMaggio
- 25. Tom Luce
- 26. Susan Griffin
- 27. Vivian Warkentin

**Opportunity Zones**

- 28. Margy Wilkinson

**Police Review**

- 29. Linda Franklin



## **Affordable Housing Framework**

30. Linda Franklin

## **Here/There Encampment**

31. Pedro Alvarez, Jr.

## **Supplemental Communications and Reports**

*Items received by the deadlines for submission will be compiled and distributed as follows. If no items are received by the deadline, no supplemental packet will be compiled for said deadline.*

- **Supplemental Communications and Reports 1**  
Available by 5:00 p.m. five days prior to the meeting.
- **Supplemental Communications and Reports 2**  
Available by 5:00 p.m. the day before the meeting.
- **Supplemental Communications and Reports 3**  
Available by 5:00 p.m. two days following the meeting.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Mark Numainville, City Clerk  
Subject: Minutes for Approval

RECOMMENDATION

Approve the minutes for the Council meetings of November 5, 2019 (special), November 12, 2019 (special and regular), and November 19, 2019 (special closed and regular).

CONTACT PERSON

Mark Numainville, City Clerk, 981-6900

Attachments:

1. November 5, 2019 – Special City Council Meeting
2. November 12, 2019 – Special City Council Meeting
3. November 12, 2019 – Regular City Council Meeting
4. November 19, 2019 – Special Closed City Council Meeting
5. November 19 2019 – Regular City Council Meeting

**MINUTES  
SPECIAL MEETING OF THE  
BERKELEY CITY COUNCIL**

**Tuesday, November 5, 2019**

**6:00 P.M.**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

**Preliminary Matters**

**Roll Call:** 6:12 p.m.

**Present:** Bartlett, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin

**Absent:** Kesarwani, Davila

Councilmember Davila present at 6:13 p.m.

Councilmember Kesarwani present at 6:19 p.m.

**Worksession**

**1. Solid Waste and Recycling Transfer Station Feasibility Study Presentation  
From: City Manager**

Contact: Phillip Harrington, Public Works, (510) 981-6300

**Action:** 5 speakers. Presentation made and discussion held.

**2. Development of a Vision Zero Action Plan**

**From: City Manager**

Contact: Phillip Harrington, Public Works, (510) 981-6300

**Action:** 1 speaker. Presentation made and discussion held.

## Adjournment

**Action:** M/S/C (Droste/Davila) to adjourn the meeting.

**Vote:** Ayes – Kesarwani, Davila, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes - None; Abstain - None; Absent – Bartlett.

Councilmember Bartlett absent at 8:50 p.m. – 9:25 p.m.

Adjourned at 9:25 p.m.

I hereby certify that the forgoing is a true and correct record of the special meeting of November 5, 2019 as approved by the Berkeley City Council.

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April Richardson, Assistant City Clerk

## Communications

- None

## Supplemental Communications and Reports 1

- None

## Supplemental Communications and Reports 2

### Item #2: Development of a Vision Zero Action Plan

1. Revised material, submitted by Public Works

## Supplemental Communications and Reports 3

### Item #1: Solid Waste and Recycling Transfer Station Feasibility Study Presentation

2. Presentation, submitted by Public Works
3. Martin Bourque, Executive Director of the Ecology Center

### Item #2: Development of a Vision Zero Action Plan

4. Presentation, submitted by Transportation

**MINUTES  
SPECIAL MEETING OF THE  
BERKELEY CITY COUNCIL**

**Tuesday, November 12, 2019**

**4:00 P.M.**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

**Preliminary Matters**

**Roll Call:** 4:11 p.m.

**Present:** Kesarwani, Bartlett, Wengraf, Robinson, Droste, Arreguin

**Absent:** Davila, Harrison, Hahn

Councilmember Harrison present at 4:12 p.m.

Councilmember Davila present at 4:14 p.m.

Councilmember Hahn present at 4:15 p.m.

**Action Calendar – New Business**

**1a. Traffic Circle Policy and Program Recommendations**

**From: Traffic Circle Policy Task Force**

**Recommendation:** Adopt a Resolution to approve the Traffic Circle Policy as outlined in the report and refer to the traffic engineer for codification.

Integrate the Community Common Space Stewardship Program into the “Adopt a Spot Initiative,” which the City Council approved on April 23, 2019 (Item #33), and request that the City Council refer it to the Traffic Circle Task Force, rather than the Parks and Public Works Commissions, for the purpose of development, outlining criteria and environmental benefits, program costs and staffing.

Refer additional traffic calming measures at Ellsworth for the intersections with Dawn Redwoods to the mid-year budget process and request mitigation funds from East Bay Municipal Utility District (EBMUD) due to the impact on these streets from their Wildcat Pipeline Project.

Refer to the City Manager:

1. Create the Community Common Space Stewardship Program as described in the report.
2. Refer the additional staff and material costs of this program to the budget process.

**Financial Implications:** See report

Contact: Tano Trachtenberg, Commission Secretary, (510) 981-7100

## Action Calendar – New Business

### 1b. Technical Memo on Traffic Circle Planting Policies

**From: City Manager**

Contact: Phillip Harrington, Public Works, (510) 981-6300

**Action:** 47 speakers. M/S/C (Arreguin/Davila) to:

1. Adopt Resolution No. 69,164–N.S. approving the Traffic Circle Policy as outlined in the report from the Traffic Circle Policy Task Force, and revised as follows:
  - a. Add a Whereas clause to the resolution emphasizing the importance of pedestrian and bicyclist safety.
  - b. Remove the following language from the Policy, and refer the removed language to the Facilities, Infrastructure, Transportation, Environment & Sustainability Committee for consideration:

“New trees proposed by traffic circle coordinators or volunteers will be approved by the City Forester, with a preference for natives and a focus on maximizing ecosystem services.  
The Task Force recommends revisiting trunk size considerations every five years as the implications of climate change and autonomous vehicles become clearer. In the interim, large trunked trees such as redwoods will not be planted.”
  - c. Change references to maximum vegetation height allowances from 30 inches to 24 inches from the top of the traffic circle planter curb throughout. In addition, refer the Traffic Circle Policy as revised to the traffic engineer for codification.
2. Integrate the Community Common Space Stewardship Program into the “Adopt a Spot Initiative,” and refer to the Parks and Waterfront Commission and the Public Works Commission to consider the Traffic Circle Policy Task Force’s recommendations.
3. Request mitigation funds from East Bay Municipal Utility District (EBMUD) due to the impact on streets from the Wildcat Pipeline Project.
4. Refer to the City Manager to:
  - a. Create the Community Common Space Stewardship Program based on the report from the Traffic Circle Policy Task Force.
  - b. Refer the additional staff and material costs of this program to the budget process.
5. Refer to the City Manager to consider options for the maintenance of the Traffic Circles prior to the implementation of an “Adopt a Spot Initiative”, including consideration of a landscape maintenance contract or the organization of volunteer work days.
6. Prior to the planting of a Traffic Circle by the community, a proposal of the planting is to be submitted to the City for acceptance.

**Vote:** All Ayes.

## Adjournment

**Action:** M/S/C (Bartlett/Wengraf) to adjourn the meeting.

**Vote:** Ayes – Bartlett, Harrison, Hahn, Wengraf Robinson, Droste, Arreguin; Noes – None; Absent – Kesarwani, Davila.

Councilmember Kesarwani absent from 6:35 p.m. – 6:36 p.m.

Councilmember Davila absent from 6:35 p.m. – 6:36 p.m.

Adjourned at 6:36 p.m.

I hereby certify that the forgoing is a true and correct record of the special meeting of November 12, 2019 as approved by the Berkeley City Council.

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Rose Thomsen, Deputy City Clerk

## Communications

### Item #1a: Traffic Circle Policy and Program Recommendations

1. Save Our Traffic Circle Trees – 24 pages of signatures
2. Rob Wren
3. Sage Linda Spatz
4. Rose Ann Cochran
5. Linda Burden
6. Pam Speich
7. Larry Hendel
8. Rachel Terp
9. Zizi Searles
10. Melanie Popper
11. Paul Deuter
12. Julian Redwood
13. Kathleen Davis
14. Ann Einstein

## Supplemental Communications and Reports 1

- None

## Supplemental Communications and Reports 2

### Item #1a: Traffic Circle Policy and Program Recommendations

15. 8 identical form letters in support of trees
16. Sallie Hannarhyne
17. Sally Nelson
18. Rachel Terp
19. Tamara Birdsall
20. Marcia Edelen



21. Larry Hendel
22. Councilmember Bartlett
23. Neighbors on Cornell Avenue
24. Linda Burden on behalf of the Le Conte Neighborhood Association
25. Karl Reeh
26. Henry Teare
27. Chimey Lee

### **Supplemental Communications and Reports 3**

#### **Item #1a: Traffic Circle Policy and Program Recommendations**

28. Presentation, submitted by the Traffic Circle Task Force
29. Melanie Abrams
30. Shirley Dean
31. Chimey Lee
32. Jennifer Griffin
33. Nancy Carleton
34. Holly Scheider

**MINUTES**  
**BERKELEY CITY COUNCIL MEETING**  
**Tuesday, November 12, 2019**  
**6:00 PM**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

**Preliminary Matters**

**Roll Call:** 6:53 p.m.

**Present:** Kesarwani, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin

**Absent:** Davila, Bartlett, Wengraf

Councilmember Wengraf present at 6:55 p.m.

Councilmember Davila present at 6:56 p.m.

Councilmember Bartlett present at 7:08 p.m.

**Ceremonial Matters:**

1. Honoring Lena Wolff and Miriam Klein Stahl
2. Honoring Ray Yep, Public Works Commissioner

**City Manager Comments:** None

**City Auditor Comments:** None

**Public Comment on Non-Agenda Matters:** 10 speakers.

**Consent Calendar**

**Action:** M/S/C (Robinson/Harrison) to add an urgent item to the agenda related to the emergency declaration for the public safety power shut-off.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin;  
Noes – None; Absent – Droste.

Councilmember Droste absent 7:22 p.m. – 7:26 p.m.

## Consent Calendar

**Public Comment on Consent Calendar and Information Items Only:** 6 speakers.

**Action:** M/S/C (Hahn/Wengraf) to adopt the Consent Calendar in one motion except as indicated.

**Vote:** All Ayes.

### **Resolution Terminating the Proclamation of Emergency by the Director of Emergency Services Due to PG&E Public Safety Power Shutoff**

**From:** City Manager

**Recommendation:** Adopt a Resolution Terminating the Proclamation of Emergency by the Director of Emergency Services due to the PG&E Public Safety Power Shutoff on October 25, 2019, ratified by Council on October 29, 2019 (Resolution No. 69,151 N.S.).

**Financial Implications:** See report

Contact: Farimah Brown, City Attorney, (510) 981-6998

**Action:** Adopted Resolution No. 69,165–N.S.

#### **1. Revision to the 2020 City Council Meeting Schedule**

**From:** City Manager

**Recommendation:** Adopt a Resolution revising the City Council regular meeting schedule for 2020, with starting times of 6:00 p.m. and rescinding Resolution No. 69,029-N.S.

**Financial Implications:** None

Contact: Mark Numainville, City Clerk, (510) 981-6900

**Action:** Adopted Resolution No. 69,166–N.S.

#### **2. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on November 12, 2019**

**From:** City Manager

**Recommendation:** Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager's threshold will be returned to Council for final approval.

**Financial Implications:** Various Funds - \$40,093,600

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**Action:** Approved recommendation.

## Consent Calendar

- 3. Contract No. 31900203 Amendment: Resource Development Associates for Crisis, Assessment and Triage Line Evaluation**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute an amendment to Contract No. 31900203 with Resource Development Associates (RDA) to provide additional evaluation consulting services for the Crisis, Assessment and Triage (CAT) line, in an amount not to exceed \$15,000 for a total contract amount not to exceed \$63,000 through June 30, 2021. The amended contract will include a revised scope of services, paid for with the additional funding requested here.  
**Financial Implications:** See report  
Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400  
**Action:** Adopted Resolution No. 69,167–N.S.
- 4. Contract: Berkeley Unified School District for Mental Health MHSA-Funded Programs**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to execute a contract and any amendments with Berkeley Unified School District (BUSD) to provide Mental Health Services Act (MHSA) funded programs in local schools through June 30, 2020 in an amount not to exceed \$392,778.  
**Financial Implications:** Various Funds - \$392,778  
Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400  
**Action:** Adopted Resolution No. 69,168–N.S.
- 5. Authorize the City Manager to Submit Senate Bill 2 Planning Grants Program Application**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to submit the application for Senate Bill 2 Planning Grants Program (PGP) in the amount of \$310,000 and sign documents or amendments when the grant is awarded.  
**Financial Implications:** See report  
Contact: Timothy Burroughs, Planning and Development, (510) 981-7400  
**Action:** Adopted Resolution No. 69,169–N.S.

## Consent Calendar

**6. Adoption of Berkeley Building Codes, including Local Amendments to California Building Standards Code**

**From: City Manager**

**Recommendation:**

1. Adopt first reading of an Ordinance repealing and reenacting the Berkeley Building, Residential, Electrical, Mechanical, Plumbing, Energy and Green Building Standards Codes in BMC Chapters 19.28, 19.29, 19.30, 19.32, 19.34, 19.36 and 19.37, and adopting related procedural and stricter provisions, and schedule a Public Hearing for the second reading on December 3, 2019, pursuant to state law; and
2. Adopt a Resolution setting forth findings of local conditions that justify more stringent regulations than those provided by the 2019 California Building Standards Code, approving cost effectiveness studies relevant to local amendments to the 2019 California Energy Code, and rescinding Resolution No. 67,736-N.S.

**Financial Implications:** See report

Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

**Action:** 1. Adopted first reading of Ordinance No. 7,678–N.S. as revised in the Supplemental 1 Communications packet. Second reading scheduled for December 3, 2019. 2. Adopted Resolution No. 69,170–N.S.

**7. Companion Report: Recommendations for a Fossil Fuel Free Berkeley**  
*(Reviewed by the Facilities, Infrastructure, Transportation, Environment & Sustainability Committee. Item contains revised material.)*

**From: City Manager**

**Recommendation:** Refer to the City Manager to continue to implement existing policies and programs that are consistent with the recommendations in the Berkeley Energy Commission's Fossil Fuel Free Berkeley Report, such as the Building Energy Saving Ordinance and development of new building codes that promote building electrification, and also to complete new evaluations and analyses of current and potential future greenhouse gas reduction programs and policies in order to inform next steps for accelerating progress to a Fossil Fuel Free Berkeley.

**Financial Implications:** See report

Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

**Action:** Moved to Action Calendar to consider with Item 31. See action for Item 31.

## Consent Calendar

- 8. Contracts: On-Call Environmental Consulting Services: GSI Environmental, Inc., Wood Environment & Infrastructure Solutions, Inc., and Northgate Environmental Management, Inc.**  
**From: City Manager**  
**Recommendation:** Adopt three Resolutions authorizing the City Manager to execute contracts and any amendments with the following firms for on-call citywide environmental consulting services, each for a period of November 1, 2019 through November 30, 2022:
1. GSI Environmental, Inc. for an amount not to exceed \$150,000.
  2. Wood Environment & Infrastructure Solutions, Inc. \$300,000.
  3. Northgate Environmental Management, Inc. for an amount not to exceed \$150,000.
- Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,171–N.S. (GSI); Resolution No. 69,172–N.S. (Wood); Resolution No. 69,173–N.S. (Northgate).
- 9. Final Map of Tract 8369: 2747 San Pablo Avenue**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution approving the final map of Tract Map 8369, a forty-two unit condominium project consisting of thirty-nine residential units, two live/work units, and one commercial unit, located at 2747 San Pablo Avenue.  
**Financial Implications:** None  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,174–N.S.
- 10. Stop Sign Warrant Policy**  
**From: Transportation Commission**  
**Recommendation:** Adopt the attached Berkeley Stop Sign Warrant to supplement state law for determining when stop signs may be warranted to protect pedestrians, wheelchair users and/or bicyclists in the City of Berkeley.  
**Financial Implications:** See report.  
Contact: Farid Javandel, Commission Secretary, (510) 981-6300  
**Action:** Approved recommendation.
- 11. Support of SB 378 – Reducing Deenergization Events**  
**From: Mayor Arreguin and Councilmembers Wengraf, Harrison, and Hahn**  
**Recommendation:** Adopt a Resolution in support of SB 378 (Wiener), which would place commonsense regulations on deenergization events such as PG&E’s Public Safety Power Shutoffs. Send a copy of the Resolution to Governor Gavin Newsom, State Senators Scott Wiener and Nancy Skinner, and Assemblymember Buffy Wicks.  
**Financial Implications:** See report  
Contact: Jesse Arreguin, Mayor, (510) 981-7100  
**Action:** Adopted Resolution No. 69,175–N.S.

## Council Consent Items

- 12. Budget Referral: BART Station Environmental Planning**  
**From: Mayor Arreguin**  
**Recommendation:** Refer to the budget process \$250,000 for BART station planning. This budget allocation will allow the initiation of environmental review required as part of developing and adopting zoning for the Ashby and North Berkeley BART Stations that is in conformance with Assembly Bill 2923.  
**Financial Implications:** \$250,000  
Contact: Jesse Arreguin, Mayor, (510) 981-7100  
**Action:** Councilmembers Robinson, Kesarwani, and Bartlett added as co-sponsors. Approved recommendation.
- 13. Modifying Appointments to City Council Standing Policy Committees**  
**From: Mayor Arreguin**  
**Recommendation:** Adopt a Resolution modifying appointments to City Council Standing Policy Committees.  
**Financial Implications:** None  
Contact: Jesse Arreguin, Mayor, (510) 981-7100  
**Action:** Moved to Action Calendar. 2 speakers. M/S/C (Arreguin/Harrison) to adopt Resolution No. 69,176–N.S. modifying appointments to City Council Standing Policy Committees.  
**Vote:** Ayes – Kesarwani, Bartlett, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes – None; Abstain – Davila, Harrison.
- 14. Support Impeachment Actions to Immediately Remove the 45th President of the United States**  
**From: Councilmembers Davila and Harrison**  
**Recommendation:** Adopt a Resolution supporting impeachment efforts to immediately remove the 45th President of the United States, and send a letter including this resolution to California State Assemblymember Buffy Wicks, California State Senator Nancy Skinner, US House of Representatives Speaker Nancy Pelosi, as well as, Congress Representatives Barbara Lee, Alexandria Ocasio-Cortez, Rashida Tlaib and Ayanna Pressley.  
**Financial Implications:** None  
Contact: Cheryl Davila, Councilmember, District 2, (510) 981-7120  
**Action:** Adopted Resolution No. 69,177–N.S.

## Council Consent Items

**15. Additional funding to Enhance Services at the Berkeley Drop-In Center**

**From: Councilmember Bartlett**

**Recommendation:** That the Council refers to the November Budget Annual Appropriations Ordinance to fund \$210,000 to enhance services at the Berkeley Drop-In Center, specifically for the installation of a public shower, installation of washer and dryer, renovation of the existing publicly accessible restroom, and additional payee service capacity. This request will provide one-time funding for the renovation of permits and installation of the washer, dryer, and shower.

**Financial Implications:** See report

Contact: Ben Bartlett, Councilmember, District 3, (510) 981-7130

**Action:** Councilmember Davila added as a co-sponsor. Approved recommendation.

**16. Additional funding for Berkeley Community Gardening Collaborative/Moving South Berkeley Forward**

**From: Councilmember Bartlett, Mayor Arreguin, and Councilmember Harrison**

**Recommendation:** That the Council refers to the November Budget Annual Appropriations Ordinance to fund \$10,582.06 to Berkeley Community Gardening Collaborative for a coordinator for the year-long Moving South Berkeley Forward project.

**Financial Implications:** \$10,582.06

Contact: Ben Bartlett, Councilmember, District 3, (510) 981-7130

**Action:** Councilmember Davila added as a co-sponsor. Approved recommendation.

**17. Budget Referral: Evaluation and Implementation of Pedestrian and Bicycle Safety Along Oxford Street**

**From: Councilmember Harrison**

**Recommendation:** Refer \$75,000 to the FY20 2019 AAO Process for the purpose of assessing, identifying, and implementing improvements to pedestrian and bicycle safety across Oxford Street, particularly between University Avenue and Bancroft Street.

**Financial Implications:** Excess Equity - \$75,000

Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

**Action:** Moved to Action Calendar. 0 speakers. M/S/C (Arreguin/Hahn) to refer \$75,000 to the FY20 2019 AAO Process for the purpose of assessing, identifying, and implementing improvements to pedestrian and bicycle safety across Oxford Street, particularly between University Avenue and Bancroft Street.

**Vote:** Ayes – Kesarwani, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes – None; Abstain – Davila; Absent – Bartlett.

Councilmember Bartlett absent 7:58 p.m. – 8:23 p.m.



## Council Consent Items

**18. Request for Information: Police Dispatch**

**From: Councilmember Harrison**

**Recommendation:** Refer to the City Manager a request for information clarifying:

1. when non-emergency phone calls to the police are directed to the Berkeley Police Department and when to the California Highway Patrol or other outside agencies, and 2. what staffing or technological changes would be needed to direct more calls to Berkeley dispatch.

**Financial Implications:** Staff time

Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140

**Action:** Approved recommendation.

**19. Budget Referral: Expansion of Homeless Navigation Facilities and Programs**

**From: Councilmember Hahn and Mayor Arreguin**

**Recommendation:** Pursuant to Measure P Panel of Expert Investment Area Priorities #1 and #2:

-Authorize the establishment of a third sleeping unit at the Berkeley Pathways STAIR Center to increase capacity, and direct staff to explore options to operate and provide services to the expanded population.

-Refer to the budget process to allocate funds to establish a third sleeping unit and additional facilities as needed to increase capacity at the STAIR Center, and to fund operational and programmatic needs.

**Financial Implications:** See report

Contact: Sophie Hahn, Councilmember, District 5, (510) 981-7150

**Action:** Moved to Action Calendar. 2 speakers. M/S/C (Hahn/Kesarwani) to add Councilmember Kesarwani as a co-sponsor, and approve the recommendation revised to read as follows:

Pursuant to Measure P Panel of Expert Investment Area Priorities #1 and #2:

-Refer to the budget process to allocate funds to establish a third sleeping unit and additional facilities as needed to increase capacity at the STAIR Center, approximately \$100,000, and to fund operational and programmatic needs, approximately \$600,000 for 15 additional beds and \$750,000 for 23 additional beds, inclusive of rehousing flexible funds.

-If the City Council allocates sufficient funding, refer to the City Manager the establishment of a third sleeping unit at the Berkeley Pathways STAIR Center to increase capacity, and options to operate and provide services to the expanded population.

**Vote:** Ayes – Bartlett, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes - None; Abstain – Davila; Absent – Kesarwani.

Councilmember Kesarwani absent 8:34 p.m. – 8:36 p.m.

## Council Consent Items

### 20. Wildfire Mitigation Mid-Year Budget Referral

**From: Councilmembers Wengraf, Hahn, and Bartlett**

**Recommendation:** Refer to the Mid-Year Budget Process an amount of \$550,000 for wildfire mitigation measures, including the removal of fire fuel on City properties and the extension by six additional months of the Fire Captain position to provide wildfire safety planning, Safe Passages implementation, and oversight of mitigation programs and public education.

**Financial Implications:** \$550,000

Contact: Susan Wengraf, Councilmember, District 6, (510) 981-7160

**Action:** Councilmember Droste added as a co-sponsor. Approved recommendation.

## Action Calendar – Public Hearings

### 21. Amend BMC Chapter 14.52 Adding the North Shattuck Metered Parking Area to the goBerkeley Program *(Continued from October 29, 2019)*

**From: City Manager**

**Recommendation:** Conduct a public hearing, and upon conclusion adopt first reading of an Ordinance amending Berkeley Municipal Code (BMC) Chapter 14.52 to add the North Shattuck metered parking area to the goBerkeley parking program.

**Financial Implications:** See report

Contact: Phillip Harrington, Public Works, (510) 981-6300

**Public Testimony:** The Mayor opened the public hearing. 2 speakers. M/S/C (Wengraf/Hahn) to close the public hearing.

**Vote:** Ayes – Kesarwani, Davila Bartlett, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes - None; Abstain – None; Absent – Harrison (recused – lives within 500 feet of the proposed area).

**Action:** M/S/C (Hahn/Wengraf) to adopt first reading of Ordinance No. 7,679-N.S. amending Berkeley Municipal Code (BMC) Chapter 14.52 to add the North Shattuck metered parking area to the goBerkeley parking program, and accept the revised material in the Supplemental 1 Communications Packet. Second reading scheduled for December 3, 2019.

**Vote:** Ayes – Kesarwani, Davila Bartlett, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes - None; Abstain – None; Absent – Harrison (recused – lives within 500 feet of the proposed area).

Councilmember Harrison absent 8:38 p.m. – 8:40 p.m.

## Action Calendar – Public Hearings

### 22. Adoption of the 2019 California Fire Code with Local Amendments

**From: City Manager**

**Recommendation:**

1. Adopt the first reading of an Ordinance repealing the Berkeley Fire Code (Berkeley Municipal Chapter 19.48) and reenacting BMC Chapter 19.48;
2. Adopt a Resolution setting forth findings of local conditions that require more stringent building standards than those provided by the 2019 California Fire Code (“CFC”) and rescinding Resolution number 67,743–N.S.;
3. In compliance with state law on adopting such codes by reference, hold a public hearing following the first reading and before the second reading, and schedule the public hearing for December 3, 2019.
4. Conduct a public hearing, and upon conclusion, adopt a Resolution establishing annual permit fees, inspection and billing rates for inspection of property sites by the Berkeley Fire Department, and rescinding Resolution number 67,990–N.S. and all Resolutions amendatory thereof.

**Financial Implications:** See report

Contact: David Brannigan, Fire, (510) 981-3473

**Public Testimony:** The Mayor opened the public hearing. 0 speakers.

M/S/C (Wengraf/Robinson) to close the public hearing.

**Vote:** All Ayes.

**Action:** M/S/C (Wengraf/Robinson) to:

1. Adopt first reading of Ordinance No. 7,680–N.S. repealing the Berkeley Fire Code (Berkeley Municipal Chapter 19.48) and reenacting BMC Chapter 19.48. Second reading scheduled for December 3, 2019.
2. Adopt Resolution No. 69,178–N.S. setting forth findings of local conditions that require more stringent building standards than those provided by the 2019 California Fire Code (“CFC”) and rescinding Resolution number 67,743–N.S.
3. In compliance with state law on adopting such codes by reference, hold a public hearing following the first reading and before the second reading, and schedule the public hearing for December 3, 2019.
4. Adopt Resolution No. 69,179–N.S. establishing annual permit fees, inspection and billing rates for inspection of property sites by the Berkeley Fire Department, and rescinding Resolution number 67,990–N.S. and all Resolutions amendatory thereof.

**Vote:** All Ayes.

## Action Calendar – Public Hearings

### 23. Public Hearing and Approval of California Municipal Finance Authority Bond Financing for 1601 Oxford Street

**From: City Manager**

**Recommendation:**

1. Conduct the public hearing under the requirements of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) and the Internal Revenue Code of 1986, as amended; and
2. Adopt a Resolution approving the issuance of the Bonds by the California Municipal Finance Authority (CMFA) for the benefit of Satellite Affordable Housing Associates or an affiliate thereof, a California limited partnership (the “Borrower”), to provide for the financing of the Project, such adoption is solely for the purposes of satisfying the requirements of TEFRA, the Internal Revenue Code and the California Government Code Section 6500 (and following).

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**Public Testimony:** The Mayor opened the public hearing. 0 speakers.

M/S/C (Bartlett/Hahn) to close the public hearing.

**Vote:** All Ayes.

**Action:** M/S/C (Harrison/Hahn) to adopt Resolution No. 69,180–N.S. approving the issuance of the Bonds by the California Municipal Finance Authority (CMFA) for the benefit of Satellite Affordable Housing Associates or an affiliate thereof, a California limited partnership (the “Borrower”), to provide for the financing of the Project, such adoption is solely for the purposes of satisfying the requirements of TEFRA, the Internal Revenue Code and the California Government Code Section 6500 (and following).

**Vote:** All Ayes.

### 24. ZAB Appeal: 2701 Shattuck Avenue, Use Permit #ZP2016-0244

**From: City Manager**

**Recommendation:** Conduct a public hearing and, upon conclusion, adopt a Resolution approving “Plan B”, as presented to the Council on November 12, 2019 for Use Permit #ZP2016-0244 to construct a 5-story, 60-foot tall, mixed-use building with 57 dwelling units (including five Very Low Income units and three live/work units), and 14 parking spaces, and dismissing the appeal.

**Financial Implications:** None

Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

**Action:** Appeal withdrawn by appellants. No action taken on Item 24.

## Action Calendar – Old Business

- 25. Companion Report: Utilization of City-Owned Property at 1281 University Avenue to House up to 8 - 10 RV Dwellers** *(Continued from September 24, 2019)*  
**From: City Manager**  
**Recommendation:** Refer to the City Manager to conduct a feasibility analysis of 1281 University Avenue as an interim site to host Recreational Vehicle (RV) dwellers.  
**Financial Implications:** See report  
Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400  
**Action:** 1 speaker. M/S/C (Arreguin/Kesarwani) to take no action on Item 25.  
**Vote:** All Ayes.
- 26. City Council Rules of Procedure and Order Revisions** *(Reviewed by the Agenda & Rules Committee. Continued from October 29, 2019.)*  
**From: City Manager**  
**Recommendation:** Adopt a Resolution revising the City Council Rules of Procedure and Order to integrate the previously adopted regulations for policy committees and make associated changes to other sections; update outdated references and practices; conform to the Open Government Ordinance; make other technical corrections; and rescinding any preceding amendatory resolutions.  
**Financial Implications:** None  
Contact: Mark Numainville, City Clerk, (510) 981-6900  
**Action:** Item 26 and the corresponding revised material in the Supplemental 1 Communications Packet continued to November 19, 2019.
- 27. Referral Response: Lava Mae Mobile Shower and Hygiene Services** *(Continued from October 29, 2019)*  
**From: City Manager**  
Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400  
**Action:** Moved to the Consent Calendar. Report deemed accepted.
- 28. Repealing and Reenacting BMC Chapter 13.104, Wage Theft Prevention** *(Continued from October 29, 2019)*  
**From: Mayor Arreguin and Councilmembers Harrison, Droste, and Hahn**  
**Recommendation:** Adopt second reading of Ordinance No. 7,668-N.S. repealing and reenacting BMC Chapter 13.104, Wage Theft Prevention to improve enforcement of the ordinance by requiring a signed acknowledgement of ordinance requirements and signed attestation at completion of the project.  
First Reading Vote: All Ayes.  
**Financial Implications:** Staff time  
Contact: Jesse Arreguin, Mayor, (510) 981-7100  
**Action:** Item referred to the Agenda and Rules Committee for scheduling.

## Action Calendar – Old Business

### 29. Referral: Measures to Address Traffic Enforcement and Bicycle Safety

*(Continued from October 29, 2019. Item contains revised material.)*

**From: Councilmember Robinson**

**Recommendation:**

1. Refer to the Transportation Commission to consider a Resolution deprioritizing enforcement against the Idaho Stop convention for persons operating a bicycle, in an empty intersection after the operator has yielded to any other road users with the right of way, by prohibiting the use of any City funds or resources in assisting in the enforcement or issuance of citations for bicyclist violations of California Vehicle Code Section 22450(a).
2. Refer to the City Manager to establish the opportunity for bicyclists to participate in a ticket diversion program that would provide safety education as an alternative to monetary fines related to other infractions, and to ensure integration of Vision Zero principles in implementation of state Office of Traffic Safety grants. Staff should consider either the creation of a City of Berkeley-operated ticket diversion program or cooperation with ticket diversion programs operated by neighboring jurisdictions.
3. Refer to the City Manager to develop a plan to calm and divert motor vehicle traffic on bicycle boulevards to provide people who bicycle and walk a safe, comfortable and convenient mobility experience by adding or reconfiguring stop signage and other traffic calming measures, per the recommendations of the 2017 Bicycle Plan.

**Financial Implications:** See report

Contact: Rigel Robinson, Councilmember, District 7, (510) 981-7170

**Action:** 8 speakers. M/S/C (Hahn/Robinson) to:

1. Refer to the Transportation Commission to consider a Resolution deprioritizing enforcement against the Idaho Stop convention for persons operating a bicycle, in an empty intersection after the operator has yielded to any other road users with the right of way, by limiting the use of any City funds or resources in assisting in the enforcement or issuance of citations for bicyclist violations of California Vehicle Code Section 22450(a), and to develop a process for evaluating the before and after effects on safety.
2. Refer to the City Manager to establish the opportunity for bicyclists to participate in a ticket diversion program that would provide safety education as an alternative to monetary fines related to other infractions, and to ensure integration of Vision Zero principles in implementation of state Office of Traffic Safety grants. Staff should consider either the creation of a City of Berkeley-operated ticket diversion program or cooperation with ticket diversion programs operated by neighboring jurisdictions.
3. Refer to the City Manager to develop a plan to calm and divert motor vehicle traffic on bicycle boulevards to provide people who bicycle and walk a safe, comfortable and convenient mobility experience by adding or reconfiguring stop signage and other traffic calming measures, per the recommendations of the 2017 Bicycle Plan.

**Vote:** All Ayes.

Recess 9:42 p.m. – 10:01 p.m.

## Action Calendar – New Business

**30. Surveillance Technology Report, Surveillance Acquisition Report, and Surveillance Use Policy for Automatic License Plate Readers, GPS Trackers, and Body Worn Cameras**

**From: City Manager**

**Recommendation:** Adopt a Resolution accepting the Surveillance Technology Report, Surveillance Acquisition Report, and Surveillance Use Policy for Automatic License Plate Readers, GPS Trackers, and Body Worn Cameras submitted pursuant to Chapter 2.99 of the Berkeley Municipal Code.

**Financial Implications:** None

Contact: Andrew Greenwood, Police, (510) 981-5900; Dave White, City Manager's Office, (510) 981-7000

**Action:** M/S/C (Arreguin/Hahn) to suspend the rules and extend the meeting to 11:15 p.m.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – Davila, Droste.

**Action:** M/S/C (Arreguin/Hahn) to suspend the rules and extend the meeting to 11:25 p.m.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – Davila, Droste; Abstain – Wengraf.

**Action:** 4 speakers. Item 30 referred to the Agenda & Rules Committee as Unfinished Business for scheduling.

## Action Calendar – New Business

**31. Recommendations for a Fossil Fuel Free Berkeley** *(Reviewed by the Facilities, Infrastructure, Transportation, Environment & Sustainability Committee)*

**From: Energy Commission**

**Recommendation:** The Berkeley Energy Commission recommends the City Council refer to the City Manager to implement the recommendations listed below as well as additional measures outlined in the attached report to aggressively reduce greenhouse gas (GHG) emissions in the city and the region.

**Financial Implications:** Unknown

Contact: Billi Romain, Commission Secretary, (510) 981-7400

**Action:** 3 speakers. M/S/C (Robinson/Harrison) to:

1. Receive the report from the Energy Commission in Item 31 and thank the Commission for its work.
2. Adopt the recommendation from the City Manager in Item 7 to refer to the City Manager to continue to implement existing policies and programs that are consistent with the recommendations in the Berkeley Energy Commission's Fossil Fuel Free Berkeley Report, such as the Building Energy Saving Ordinance and development of new building codes that promote building electrification, and also to complete new evaluations and analyses of current and potential future greenhouse gas reduction programs and policies in order to inform next steps for accelerating progress to a Fossil Fuel Free Berkeley, and to add the report from the Energy Commission in Item 31 as an appendix to the report from the City Manager in Item 7.

**Vote:** All Ayes.

**32. Bird Safe Berkeley Requirements**

**From: Community Environmental Advisory Commission**

**Recommendation:** Refer to the Planning Commission and the City Attorney the attached ordinance amending Berkeley Municipal Code Title 23C, adding a new Chapter 23C.27 establishing bird safety requirements for new construction and significant renovations and a new Chapter 23C.28 establishing a dark skies ordinance, for review and approval.

**Financial Implications:** See report

Contact: Viviana Garcia, Commission Secretary, (510) 981-7460

**Action:** Moved to the Consent Calendar. Approved the recommendation revised to read as follows: "Refer to the Planning Commission and the City Manager to consider the attached ordinance amending Berkeley Municipal Code Title 23C, adding a new Chapter 23C.27 establishing bird safety requirements for new construction and significant renovations and a new Chapter 23C.28 establishing a dark skies ordinance, for review and approval."



## Council Action Items

### 33. **Budget Referral: Transportation to Support Mobility-Impaired Individuals Experiencing Homelessness who are Engaged in Rehousing and other Services**

**From: Councilmember Hahn and Mayor Arreguin**

**Recommendation:** Refer to the budget process to allocate funds to provide transportation for mobility-impaired individuals experiencing homelessness who are engaged with rehousing and other services through the STAIR Center, The Hub, or other City of Berkeley-funded homeless services.

Refer to staff to determine needs and establish the best method for providing such transit services. Options include, but are not limited to, helping one or more service providers to purchase or lease wheelchair-accessible vehicle(s), or to repair or retrofit currently owned vehicle(s), providing additional vouchers for existing Paratransit services, providing additional taxi scripts (as recommended by the Homeless Commission), or contracting with a suitable transportation service. Consistent with the Americans with Disabilities Act (ADA), vehicles purchased, leased, or otherwise procured for these purposes should include the option of/access to a boarding device (e.g. lift or ramp) so that a passenger who uses a wheelchair or mobility device can reach a securement location onboard.

**Financial Implications:** See report

Contact: Sophie Hahn, Councilmember, District 5, (510) 981-7150

**Action:** Moved to the Consent Calendar. Councilmember Harrison added as a co-sponsor. Approved recommendation as revised in the Supplemental Communications Packet 2 and further amended to read as follows:

“Refer to the budget process to allocate funds to provide transportation for mobility-impaired individuals experiencing homelessness who are engaged with rehousing and other services through the STAIR Center, The Hub, or other City of Berkeley-funded homeless services.

Refer to staff to determine needs and establish the best method for providing transit services to mobility-impaired individuals, and to also consider potential transit needs of other individuals engaged with rehousing and homeless services. For the mobility-impaired, options include, but are not limited to, helping one or more service providers to purchase or lease wheelchair-accessible vehicle(s), or to repair or retrofit currently owned vehicle(s), providing additional vouchers for existing Paratransit services, providing additional taxi scripts (as recommended by the Homeless Commission), or contracting with a suitable transportation service. Also consider making mobility services and transportation available during enforcement activities, both for people and belongings.

Consistent with the Americans with Disabilities Act (ADA), vehicles purchased, leased, or otherwise procured for the mobility-impaired should include the option of/access to a boarding device (e.g. lift or ramp) so that a passenger who uses a wheelchair or mobility device can reach a securement location onboard.”

## Information Reports

**34. Age-Friendly Berkeley Update**

**From: City Manager**

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**Action:** Received and filed.

**35. Denial of Request to Waive Fees, 2992 Adeline Street**

**From: City Manager**

Contact: Timothy Burroughs, Planning and Development, (510) 981-7400

**Action:** Received and filed.

**Public Comment – Items Not Listed on the Agenda - 0 speakers.**

## Adjournment

Adjourned at 11:25 p.m.

I hereby certify that the forgoing is a true and correct record of the regular meeting of November 12, 2019 as approved by the Berkeley City Council.

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Rose Thomsen, Deputy City Clerk

## Communications

**Item 20: Wildfire Mitigation Mid-Year Budget Referral**

1. Laurie McWhorter, on behalf of Councilmember Wengraf

**Item 24: ZAB Appeal: 2701 Shattuck Avenue, Use Permit #ZP2016-0244**

2. Ben Libbey
3. Diego Aguilar-Canabal

**Item 25: Companion Report: Utilization of City-Owned Property at 1281 University Avenue to House up to 8 - 10 RV Dwellers**

4. Berkeley Warehouse (3)
5. Ben Zlotkin, on behalf of Edition One Group
6. Peter Nervo
7. Rose Hill, on behalf of Studio 4
8. Farr Hariri, on behalf of Belfiore Cheese Company

**Homelessness/Encampments**

9. Parisa Jorjani (3)

**Homeless Project**

- 10. Alfred Twu
- 11. Irene Rosenthal
- 12. Tom Luce
- 13. Gabriela Kramer

**PG&E – Public Safety Power Shutoff**

- 14. Nina Beety

**Utility Undergrounding**

- 15. Lloyd Morgan, on behalf of Environmental Health Trust

**5G**

- 16. Arthur Stopes III (2)

**Upper Hearst Project Lawsuit**

- 17. Somya Jain, on behalf of Local Government Relations Director for Cal
- 18. Ruben Lizardo, Director of Local Government Relations Director for Cal

**Cannabis**

- 19. Susan Soares

**Measure O Template**

- 20. Phyllis Orrick

**Berkeley Transfer Center**

- 21. Robert Abiad

**Triangle Park on Telegraph**

- 22. Therese Fitzpatrick

**Pedestrian Safety**

- 23. David Lerman

**Traffic Circle Trees**

- 24. Ernest Machen

**Herbert Bradford Cleaveland**

- 25. Miriam Berg
- 26. Tracy Taylor

**Opportunity Zones**

- 27. Margy Wilkinson

**Tenant Eviction Notice**

- 28. Selma Rockett (2)

**Standards for Building Shadows**

29. Topher Brennan

**PRC Charter**

30. Peace and Justice Commission

31. 6 identically worded letters

32. 9 mail@changemail.org

**Support Artist – 1740 San Pablo Live/Work Space**

33. Susan Duhan Felix

**Mental Health Treatment Pilot Plan**

34. Eric Friedman

35. Margy Wilkinson (2)

**City Council Not Reading Emails**

36. Margy Wilkinson

**Affordable Housing Framework**

37. Jessica Woodard

**Removal of Big People from the Bridge**

38. Jordan Klein, on behalf of the City of Berkeley

**Supplemental Communications and Reports 1**

**Item #6: Adoption of Berkeley Building Codes, including Local Amendments to California Building Standards Code**

39. Supplemental material, submitted by Planning and Development

**Item #21: Amend BMC Chapter 14.52 Adding the North Shattuck Metered Parking Area to the goBerkeley Program**

40. Revised material, submitted by Public Works

**Item #24: ZAB Appeal: 2701 Shattuck Avenue, Use Permit #ZP2016-0244**

41. Supplemental material, submitted by Planning and Development

42. Betsy Thagard

**Item #25: Companion Report: Utilization of City-Owned Property at 1281 University Avenue to House up to 8-10 RV Dwellers**

43. Linda Franklin

**Item #26: City Council Rules of Procedure and Order Revisions**

44. Revised material, submitted by the City Clerk

**Item #30: Surveillance Technology Report, Surveillance Acquisition Report, and Surveillance Use Policy for Automatic License Plate Readers, GPS Trackers, and Body Worn Cameras**

45. George Perezvelez, Chairperson, Police Review Commission

## **Supplemental Communications and Reports 2**

### **Item #6: Adoption of Berkeley Building Codes, including Local Amendments to California Building Standards Code**

46. Miya Kitahara on behalf of StopWaste

### **Item #24: ZAB Appeal: 2701 Shattuck Avenue, Use Permit #ZP2016-0244**

47. Ali Sidisalah

48. Noemi Levine

49. Lee Bishop

50. Mohamed Touzari

51. Theo Posselt

52. Hayley Currier

53. Bhima Sheridan

54. Milo Trauss

55. Louise Rosenkrantz

56. Elizabeth Ditmars

57. Alexander Benn

58. Joshua D'Amato

59. Thomas Graly

60. Pablo Chong Herrera

61. Samantha Warren

62. Todd Darling

### **Item #29: Referral: Measures to Address Traffic Enforcement and Bicycle Safety**

63. Alejandro Chavez

64. Liza Lutzker and Ben Gerhardstein, on behalf of Walk Bike Berkeley

65. Paul Rauber

66. Charles Siegel

67. Tom Lent

### **Item #30: Surveillance Technology Report, Surveillance Acquisition Report, and Surveillance Use Policy for Automatic License Plate Readers, GPS Trackers, and Body Worn Cameras**

68. Revised material, submitted by Councilmember Harrison

69. Supplemental material, submitted by the City Manager

### **Item #32: Bird Safe Berkeley Requirements**

70. Sally Hughes

71. Zofia Burr

72. Hannelore Lewis

73. Robin Pulich

74. Eleni Sotos

75. Corinne Greenberg

76. Martin Nicolaus

77. Pam Shandrick

78. Ian Duncan
79. Golden Gate Audubon Society
80. Michael Scott
81. Dorothy Gregor
82. Jennifer Michels
83. Laura Cholodenko
84. Nancy Parker
85. Robert Lewis
86. Andi Cassidy
87. Deanna Ewers
88. Pauline Fong
89. Laura Klein
90. Daniella Salzman
91. Emily Ladner
92. Marilyn Siegel
93. Ed Vine
94. David Jaber
95. Judith Dickman
96. Mary Law
97. Jennifer Steele
98. Kevin Steen
99. Marina Imfeld
100. Lisa and Ken Wahl
101. Tony Corman
102. Crystal Brunzell
103. Steve Scholl
104. Kate Rakelly
105. Katie Slive
106. Ryan Kladar
107. Kathleen Shiring
108. Jesse Greenspan
109. Steve Robey
110. Erin Diehm
111. Anna Cobbett
112. Michele Bernal
113. Sarah Swanson-Hysell
114. Jeremy Nichols
115. Phil Price
116. Gail Kurtz
117. Kenneth Weidner
118. Isaac Turiel
119. Jane Graly
120. June Kodani
121. Diane Perea
122. Melanie Lawrence
123. Juli Dickey

- 124. Morton Paley
- 125. Mari Vlastos
- 126. Alana Shindler and Bernard Rosen
- 127. Fredrick Seil
- 128. Mari Litsky
- 129. Sally de Becker
- 130. Jessica Danelon
- 131. Amy Parsons
- 132. Rachel Eiseman Tanner

**Item 33: Budget Referral: Transportation to Support Mobility-Impaired Individuals Experiencing Homelessness who are Engaged in Rehousing and other Services**

- 133. Supplemental material, submitted by Councilmember Hahn

**Supplemental Communications and Reports 3**

**Urgency Item: Resolution Terminating the Proclamation of Emergency by the Director of Emergency Services Due to PG&E Public Safety Power Shutoff**

- 134. Agenda material, submitted by the City Manager

**Item 21: Amend BMC Chapter 14.52 Adding the North Shattuck Metered Parking Area to the goBerkeley Program**

- 135. Presentation, submitted by Public Works

**Item #24: ZAB Appeal: 2701 Shattuck Avenue, Use Permit #ZP2016-0244**

- 136. Presentation, submitted by Planning
- 137. Cal Berkeley Democrats
- 138. Shirley Dean
- 139. Timothy Etter
- 140. Davina Srioudom
- 141. Varsha Sarveshar, on behalf of Associated Students of Cal
- 142. Meher Mann

**Item #29: Referral: Measures to Address Traffic Enforcement and Bicycle Safety**

- 143. Melanie Curry

**Item #32: Bird Safe Berkeley Requirements**

- 144. Kimberly Ryan

**Miscellaneous Communications**

**Funding for Homeless Youth, Ages 16 to 25**

- 145. Sally Hindman

**MINUTES  
BERKELEY CITY COUNCIL  
SPECIAL MEETING MINUTES**

**TUESDAY, NOVEMBER 19, 2019**

**5:00 P.M.**

**School District Board Room – 1231 Addison Street, Berkeley, CA**

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

**Preliminary Matters**

**Roll Call:** 5:03 p.m.

**Present:** Bartlett, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin

**Absent:** Kesarwani, Davila

Councilmember Davila present at 5:05 p.m.

Councilmember Kesarwani present at 5:07 p.m.

**Public Comment - Limited to items on this agenda only – 2 speakers**

**CLOSED SESSION:**

The City Council will convene in closed session to meet concerning the following:

**1. CONFERENCE WITH LEGAL COUNSEL – PENDING LITIGATION PURSUANT TO GOVERNMENT CODE SECTIONS 54956.9(a) and 54956.9(d)(1)**

a. *1444 Fifth Street LLC v. City of Berkeley*, Alameda County Superior Court Case No. 19032434

**Action:** No reportable action taken.

**OPEN SESSION:**

No reportable action taken.

**Adjournment**

**Action:** M/S/C (Wengraf/Robinson) to adjourn the meeting.

**Vote:** All Ayes.

Adjourned at 6:31 p.m.



I hereby certify that the foregoing is a true and correct record of the City Council Closed Session meeting held on November 19, 2019.

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Mark Numainville  
City Clerk

### **Communications**

- None

### **Supplemental Communications and Reports 1**

- None

### **Supplemental Communications and Reports 2**

- None

### **Supplemental Communications and Reports 3**

**Item #1: Conference With Legal Counsel – Pending Litigation Pursuant To Government Code Secitons 54956.9(a) and 54956.9(d)(1)**

1. Greenfire Law, PC

**MINUTES**  
**BERKELEY CITY COUNCIL MEETING**  
**Tuesday, November 19, 2019**  
**6:00 PM**

SCHOOL DISTRICT BOARD ROOM - 1231 ADDISON STREET, BERKELEY, CA 94702

JESSE ARREGUIN, MAYOR

Councilmembers:

DISTRICT 1 – RASHI KESARWANI  
DISTRICT 2 – CHERYL DAVILA  
DISTRICT 3 – BEN BARTLETT  
DISTRICT 4 – KATE HARRISON

DISTRICT 5 – SOPHIE HAHN  
DISTRICT 6 – SUSAN WENGRAF  
DISTRICT 7 – RIGEL ROBINSON  
DISTRICT 8 – LORI DROSTE

**Preliminary Matters**

**Roll Call:** 6:40 p.m.

**Present:** Kesarwani, Davila, Harrison, Hahn, Wengraf, Robinson, Wengraf, Droste, Arreguin

**Absent:** Bartlett

Councilmember Bartlett present at 6:43 p.m.

**Ceremonial Matters:**

1. Recognition of Dru Howard, Berkeley Commissioner and Local Activist
2. Adjourned in Memory of Gene Bernardi, Local Activist
3. Adjourned in Memory of Barnard Tyson, Former Kaiser CEO
4. Adjourned in Memory of Carole Brill, Local Activist

**City Manager Comments:**

1. Update in Police Recruitment
2. PG&E announced no power shutoffs for Alameda County this week
3. Safe Passages Program for evacuations and emergency vehicle access has started

**Public Comment on Non-Agenda Matters:** 10 speakers.

**Consent Calendar**

**Public Comment on Consent Calendar and Information Items Only:** 2 speakers.

## Consent Calendar

**Action:** M/S/C (Arreguin/Hahn) to accept an urgency item from Councilmember Harrison regarding the Trash Crisis in Berkeley and add it to the Action Calendar.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – Droste.

**Action:** M/S/Failed (Davila/Bartlett) to accept an urgency item from Councilmember Davila regarding a budget allocation for Youth Spirit Artworks and add it to the Consent Calendar.

**Vote:** Ayes – Davila, Bartlett, Harrison; Noes – Hahn, Droste, Arreguin; Abstain – Kesarwani, Wengraf, Robinson.

**Action:** M/S/C (Arreguin/Davila) to accept an urgency item from Councilmember Davila regarding a budget allocation for Strawberry Creek Lodge, amended to be a budget referral and add it to the Consent Calendar.

**Vote:** All Ayes.

**Action:** M/S/C (Arreguin/Hahn) to reconsider the vote to accept an urgency item from Councilmember Harrison regarding the Trash Crisis in Berkeley and add it to the Action Calendar.

**Vote:** All Ayes.

**Action:** M/S/C (Arreguin/Hahn) to accept an urgency item from Councilmember Harrison regarding the Trash Crisis in Berkeley and add it to the Action Calendar.

**Vote:** Ayes – All Ayes.

**Action:** M/S/C (Wengraf/Robinson) to adopt the Consent Calendar in one motion except as indicated.

**Vote:** All Ayes.

### **Urgency Item: Budget Referral: Funding for Strawberry Creek Lodge Food Program for Fiscal Year 2020**

**From:** Councilmember Davila

**Recommendation:** Adopt a resolution amending the Fiscal Year 2020 budget to include at least \$100,000 to fund the Strawberry Creek Lodge Food Program.

Contact: Cheryl Davila, Councilmember, District 2, (510) 981-7120

**Action:** Approved revised recommendation to refer the allocation to the budget process.

### **1. Minutes for Approval**

**From:** City Manager

**Recommendation:** Approve the minutes for the Council meetings of October 15, 2019 (special closed and regular), October 21, 2019 (special), October 22, 2019 (special closed and special), and October 29, 2019 (special closed and regular).

**Financial Implications:** None

Contact: Mark Numainville, City Clerk, (510) 981-6900

**Action:** Approved minutes as submitted.

## Consent Calendar

**2. Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on November 19, 2019**

**From: City Manager**

**Recommendation:** Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager's threshold will be returned to Council for final approval.

**Financial Implications:** Various Funds - \$800,000

Contact: Henry Oyekanmi, Finance, (510) 981-7300

**Action:** Approved recommendation.

**3. Revenue Grant Agreements: Funding Support from the State of California to Conduct the State Childhood Lead Poisoning Prevention Services**

**From: City Manager**

**Recommendation:** Adopt a Resolution authorizing the City Manager or her designee to submit a grant agreement to the State of California, to accept the grant, and execute any resultant revenue agreements and amendments to conduct public health promotion, protection, and prevention services for the Childhood Lead Poisoning Prevention Program (CLPPP) Agreement, which includes services to detect, manage and prevent childhood lead poisoning and promote healthy environments and behaviors in the projected amount of \$94,821 per fiscal year FY2021 through FY2023 for a total of \$284,463.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**Action:** Adopted Resolution No. 69,181–N.S.

**4. Authorizing City Manager To Provide a 2.5 Hour Minimum Overtime Pay For Emergency Call Back Employees In The Information Technology Department**

**From: City Manager**

**Recommendation:** Adopt a Resolution Authorizing Information Technology Employees with Service Employees International Union, Local 1021 Community Services And Part Time Recreation Leaders Association ("SEIU" or "SEIU Local 1021 CSU & PTRLA) to receive 2.5 hours of overtime compensation for emergency call back involving remote work. The City has already negotiated a 2.5 hour rate with SEIU Local 1021 CSU & PTRLA in a new MOU indicated as 13.5.1.

**Financial Implications:** See report

Contact: LaTanya Bellow, Human Resources, (510) 981-6800

**Action:** Adopted Resolution No. 69,182–N.S.

## Consent Calendar

- 5. Donations from Friends of Berkeley Tuolumne Camp and Berkeley Echo Lake Camp Association for Echo Lake Camp Scholarships and Programs**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution accepting a cash donation of \$7,050 from the Friends of Berkeley Tuolumne Camp (FOBTC), and a cash donation of \$4,725 from the Berkeley Echo Lake Camp Association (BELCA), for support of Echo Lake Camp scholarships and programs.  
**Financial Implications:** Camp Fund Donation - \$11,775  
Contact: Scott Ferris, Parks, Recreation and Waterfront, (510) 981-6700  
**Action:** Adopted Resolution No. 69,183–N.S.
- 6. Priority Development Area Nomination – North Berkeley BART Station**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution supporting the nominating of the North Berkeley BART station as a Priority Development Area.  
**Financial Implications:** See report  
Contact: Timothy Burroughs, Planning and Development, (510) 981-7400  
**Action:** Adopted Resolution No. 69,184–N.S.  
**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Wengraf, Robinson, Droste, Arreguin; Noes – None; Abstain – Davila.
- 7. Contract: Redgwick Construction Company for Ninth Street Bicycle Boulevard Pathway Extension Phase II**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution: 1. Approving plans and specifications for the Ninth Street Bicycle Boulevard Pathway Extension Phase II, (“Ninth Street Pathway – Phase II”, or “Project”), Specification No. 19-11331-C; and 2. Rejecting the bid protest of Mark Lee and Yong Kay Inc., doing business as Bay Construction Company, the third-lowest bidder; and 3. Accepting the bid of J. A. Gonsalves & Son Construction, Inc., the second-lowest responsive and responsible bidder; and 4. Accepting the bid of Redgwick Construction Company, the lowest responsive and responsible bidder; and 5. Authorizing the City Manager to execute a contract with Redgwick Construction Company and any amendments, extensions, and/or change orders until completion of the Project in accordance with the approved plans and specifications, in an amount not to exceed \$1,481,417, which includes a contingency of ten percent.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,185–N.S.

## Consent Calendar

- 8. Contract No. 10340 Amendment: HF&H Consultants, LLC for the Study of the City Providing Commercial Collection Services and Development and Update of Rate Model**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10340 with HF&H Consultants, LLC to increase the current contract by \$50,000 for a total not to exceed amount of \$200,000 and to extend the contract term to June 30, 2021 for the Study of the City Providing Commercial Collection Services and Development and Update of Rate Model.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,186–N.S.
- 9. Purchase Order: National Auto Fleet Group for Seven (7) 25 Cubic Yard Capacity Heavy Duty Rear Loading Collection Trucks**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution satisfying requirements of City Charter Article XI Section 67.2 allowing the City to participate in Sourcewell contract bid procedures, authorizing the City Manager to execute a purchase order for seven (7) 2019 Crane Carrier 25 Cubic Yard Capacity Heavy Duty Rear Loader Collection Trucks with National Auto Fleet Group in an amount not to exceed \$2,348,733, and authorizing the disposal of three (3) Autocar and four (4) Volvo collection trucks by public auction.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,187–N.S.
- 10. Purchase Order: Braun Northwest, Inc. for Five (5) 2020 North Star 155-1 Ambulances**  
**From: City Manager**  
**Recommendation:** Adopt a Resolution satisfying requirements of City Charter Article XI Section 67.2 allowing the City to participate in HGACBuy contract bid procedures, and authorizing the City Manager to execute a purchase order for five (5) 2020 North Star 155-1, Type 1 Ambulances with Braun Northwest, Inc. in an amount not to exceed \$1,110,000, and authorizing the disposal of three (3) Freightliner and two (2) International ambulances by public auction.  
**Financial Implications:** See report  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Adopted Resolution No. 69,188–N.S.

## Council Consent Items

- 11. Extension of Declaration of Homeless Shelter Crisis**  
**From: Mayor Arreguin and Councilmembers Davila, Robinson, and Harrison**  
**Recommendation:** Adopt a Resolution extending Resolution No. 68,206 – N.S., Declaring a Homeless Shelter Crisis until January 19, 2022.  
**Financial Implications:** Staff time  
Contact: Jesse Arreguin, Mayor, (510) 981-7100  
**Action:** Adopted Resolution No. 69,189–N.S.
- 12. Letter to Richmond City Council, California Environmental Protection Agency (CalEPA), California Department of Toxics (DTSC) concerning recent action of cleaning up AstraZeneca Site near Berkeley**  
**From: Councilmembers Davila and Hahn**  
**Recommendation:** Send a Letter to the Richmond City Council, California Environmental Protection Agency (CalEPA) and the California Department of Toxics (DTSC), including California State Assemblymember Buffy Wicks and State Senator Nancy Skinner, concerning recent Council action of cleaning up the nearby AstraZeneca Site and reconsideration of such action.  
**Financial Implications:** None  
Contact: Cheryl Davila, Councilmember, District 2, (510) 981-7120  
**Action:** No action taken.  
**Vote:** Ayes – Davila, Hahn, Robinson; Noes – None; Abstain – Kesarwani, Bartlett, Harrison, Wengraf, Droste, Arreguin.
- 13. Budget Referral: BigBelly Trash Receptacles in Ohlone Park**  
**From: Councilmembers Harrison and Bartlett**  
**Recommendation:** Refer \$15,000 to the November 2019 Annual Appropriations Ordinance Budget Process to purchase two BigBelly trash receptacles for Ohlone Park.  
**Financial Implications:** See report  
Contact: Kate Harrison, Councilmember, District 4, (510) 981-7140  
**Action:** Moved to Action Calendar. 0 speakers. M/S/C (Arreguin/Robinson) to approve the recommendation.  
**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – Davila; Absent – Droste.

## Council Consent Items

- 14. Referral to City Manager to Return to Council with an Amnesty Program for Undocumented Secondary Units** *(Reviewed by the Land Use, Housing & Economic Development)*  
**From: Councilmembers Wengraf, Harrison, Hahn, and Mayor Arreguin**  
**Recommendation:** Referral to City Manager to Return to Council with an Amnesty Program for Undocumented Secondary Units using the guiding framework presented in the Background.  
**Financial Implications:** See report  
Contact: Susan Wengraf, Councilmember, District 6, (510) 981-7160

**Action:** M/S/C (Arreguin/Wengraf) to continue Items 14, A, 16, 17 to December 3, 2019 with direction that Item 14 be the first Action Item.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Droste.

**Action:** M/S/C (Arreguin/Hahn) to reconsider the vote to continue Items 14, A, 16, 17 to December 3, 2019 with direction that Item 14 be the first Action Item.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – Davila; Abstain – None; Absent – Droste.

**Action:** M/S/C (Arreguin/Wengraf) to continue Items A, 16, 17 to December 3, 2019.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Droste.

**Action:** Moved to Action Calendar. 1 speaker. M/S/C (Arreguin/Kesarwani) to approve the recommendation.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Davila, Droste.

Councilmember Davila absent 10:53 p.m. – 10:55 p.m.

## Action Calendar – Continued Business

- A. City Council Rules of Procedure and Order Revisions** *(Reviewed by the Agenda & Rules Committee. Continued from November 12, 2019. Item contains revised material.)*  
**From: City Manager**  
**Recommendation:** Adopt a Resolution revising the City Council Rules of Procedure and Order to integrate the previously adopted regulations for policy committees and make associated changes to other sections; update outdated references and practices; conform to the Open Government Ordinance; make other technical corrections; and rescinding any preceding amendatory resolutions.  
**Financial Implications:** None  
Contact: Mark Numainville, City Clerk, (510) 981-6900  
**Action:** Item A continued to December 3, 2019.



## Action Calendar – New Business

### **Urgency Item: Addressing the Trash Crisis in Berkeley**

**From: Councilmember Harrison**

**Recommendation:** Direct the City Manager to arrange regular weekly trash pickup near Caltrans property at University Avenue and Highway 80. Consider installing cameras to capture images of illegal dumping in the same area for the purpose of ticketing offenders.

**Action:** 1 speaker. M/S/C (Arreguin/Harrison) to approve the recommendation amended to include that the City Manager seek reimbursement from Caltrans.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Wengraf, Droste.

**Action:** M/S/C (Harrison/Hahn) to suspend the rules and extend the meeting to 11:30 p.m.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – Davila; Abstain – None; Absent – Wengraf, Droste.

Councilmember Wengraf absent 11:00 p.m. – 11:45 p.m.

## Action Calendar – New Business

### 15. FY 2019 Year-End Results and FY 2020 First Quarter Budget Update

**From: City Manager**

**Recommendation:** Discuss and determine funding allocations for FY 2020 based on the FY 2019 General Fund Excess Equity and Excess Property Transfer Tax for the following: 1) the General Fund Reserves 2) the Mayor's June 25, 2019, Supplemental Budget Recommendations approved by the Council and 3) the Council's Budget Referrals approved during FY 2020 to be considered in November 2019.

**Financial Implications:** See report

Contact: Teresa Berkeley-Simmons, Budget Manager, (510) 981-7000

Recess 9:07 p.m. – 9:27 p.m.

**Action:** 50 speakers. M/S/C (Arreguin/Kesarwani) to approve \$150,000 from excess property transfer tax revenues for Capoeira Arts in the form of a forgivable loan with the amendment to request that the organization provide financial documentation to the Office of Economic Development for review.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Droste.

Councilmember Droste absent 9:54 p.m. – 11:45 p.m.

**Action:** M/S/C (Arreguin/Wengraf) to continue Item 15 to December 3, 2019.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Wengraf, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Droste.

**Action:** M/S/C (Harrison/Hahn) to suspend the rules and extend the meeting to 11:15 p.m.

**Vote:** Ayes – Kesarwani, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – Davila, Wengraf; Abstain – None; Absent – Droste.

### 16. Amendment: FY 2020 Annual Appropriations Ordinance

**From: City Manager**

**Recommendation:** Adopt first reading of an Ordinance amending the FY 2020 Annual Appropriations Ordinance No. 7,669–N.S. for fiscal year 2020 based upon recommended re-appropriation of committed FY 2019 funding and other adjustments authorized since July 1, 2019, in the amount of \$136,730,924 (gross) and \$130,267,144 (net).

**Financial Implications:** See report

Contact: Teresa Berkeley-Simmons, Budget Manager, (510) 981-7000

**Action:** Item 16 continued to December 3, 2019.

## Action Calendar – New Business

**17. goBerkeley Residential Shared Parking Pilot Project Update**

**From: City Manager**

**Recommendation:** Receive a presentation providing an update on the Residential Shared Parking Pilot project, and offer any comments to staff on the implementation of the project.

**Financial Implications:** None

Contact: Phillip Harrington, Public Works, (510) 981-6300

**Action:** Item 17 continued to December 3, 2019.

**18a. Recommendations for Allocation of FY19/20 Measure P Funds**

**From: Homeless Services Panel of Experts**

**Recommendation:** Approve recommendations for the allocation of FY19/20 General Funds at least commensurate with resources accrued to date from the passage of Measure P. Refer to the City Manager to produce data regarding the percentage of those transported with County Emergency Mental Health Transport who are homeless, and other sources that could be used to cover this cost.

**Financial Implications:** See report

Contact: Peter Radu, Commission Secretary, (510) 981-5400

## Action Calendar – New Business

### 18b. Companion Report: Recommendations for Allocation of FY19/20 Measure P Funds

**From: City Manager**

**Recommendation:** The City Manager recommends that Council:

1. Approve the Homeless Services Panel of Experts' recommendation for the allocation of FY20 General Funds (Measure P) in the following investment areas: a. Immediate Street conditions & Hygiene; b. Flexible Housing Subsidies; and c. Infrastructure. For any allocation of "Flexible Housing Subsidies" to families, limit eligibility to those who are imminently at-risk of homelessness, and allow the City Manager to sole-source contracts for the implementation of these subsidies.
2. Refer discussion of the recommendations pertaining to the following areas to the Council Budget & Finance Policy Committee: a. Permanent Housing, b. Shelter & Temporary Accommodations, and c. Supportive Services. The City Manager recommends that the Policy Committee consider the following pertaining to these funding areas: - Allow the "permanent subsidies" allocation to fund tenancy sustaining services, and dedicate 10% of total funding to homeless families. - Allow the "Shelter and temporary accommodations" allocation to fund the creation of new programs (including for new RV parking programs) or maintenance of existing shelter programs funded by HEAP, when that funding is exhausted. - Authorize the City Manager to award any funding for shelter expansion and tenancy sustaining services to agencies that have already responded to the FY20-23 Community Agency Request for Proposals (RFP). - Authorize the City Manager to release one or more RFPs for an RV parking program that would require a non-profit operator and for any supportive services including street medicine, substance abuse treatment or mental health outreach.

**Financial Implications:** See report

Contact: Kelly Wallace, Housing and Community Services, (510) 981-5400

**Action:** M/S/C (Arreguin/Hahn) to suspend the rules and extend the meeting to 11:45 p.m.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Wengraf, Droste.

**Action:** 17 speakers. M/S/C (Arreguin/Davila) to continue Item 18a and 18b to December 3, 2019.

**Vote:** Ayes – Kesarwani, Davila, Bartlett, Harrison, Hahn, Robinson, Arreguin; Noes – None; Abstain – None; Absent – Wengraf, Droste.

## Information Reports

### 19. City Council Short Term Referral Process – Monthly Update

**From: City Manager**

Contact: Mark Numainville, City Clerk, (510) 981-6900

**Action:** Received and filed.

## Information Reports

20. **goBerkeley Program Update – Fall 2019**  
**From: City Manager**  
Contact: Phillip Harrington, Public Works, (510) 981-6300  
**Action:** Received and filed.
21. **Short Term Rental Revenue Allocations for Civic Arts and the Affordable Housing Trust Fund**  
**From: Civic Arts Commission**  
Contact: Jennifer Lovvorn, Commission Secretary, (510) 981-7530  
**Action:** Received and filed.
22. **Alignment of Processes with Modernized Contract Registration Workflow**  
**From: Auditor**  
Contact: Jenny Wong, Auditor, (510) 981-6750  
**Action:** Received and filed.

**Public Comment – Items Not Listed on the Agenda** - 0 speakers.

## Adjournment

Adjourned at 11:45 p.m.

I hereby certify that the forgoing is a true and correct record of the regular meeting of November 19, 2019 as approved by the Berkeley City Council.

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Mark Numainville, City Clerk

## Communications

### Telegraph Avenue Restrooms

1. Brittany Cliffe
2. Hyungil Shim
3. Maya Rankupalli

### Money for Streets

4. Barbara Gilbert

### Electric Bikes in the Hills and the Bike Plan

5. Tom Lent

**Ordinance Prohibiting Gas in New Construction**

6. Mary Oram

**Helping the Homeless**

7. Avram Gur Arye

8. Connie Tyler

9. Sheila Jordan

10. Linda Franklin

11. Nicky Gonzalez Yuen

**Opportunity Zones**

12. Margy Wilkinson

**Proposed Retail (Chain Stores) Regulations**

13. Councilmember Hahn

**Construction at 1499 University**

14. Jesse Goldberg

15. Timothy Burroughs, on behalf of the Planning Department

**5G and Cell Towers**

16. Phoebe Anne Sorgen (2)

17. Stephanie Thomas

18. Vivian Warkentin

**2650 Telegraph and ZAB**

19. Cecile Leneman (2)

20. Ashley James (3)

**Memorial for Herbert “Brad” Cleaveland**

21. Miriam Berg

**PRC Charter**

22. Merle Lustig

23. Christina Crowley

**YSA – Tiny House Project**

24. Tom Luce

**1148-Page Meeting Agenda**

25. Eric Friedman

**Criminal Records Information on Rental Application Forms**

26. Merle Lustig

27. Ash Lynnette

## Supplemental Communications and Reports 1

### **Item #6: Priority Development Area Nomination – North Berkeley BART Station**

28. Walter Wood

### **Item #12: Letter to Richmond City Council, California Environmental Protection Agency (CalEPA), California Department of Toxics (DTSC) concerning recent action of cleaning up AstraZeneca Site near Berkeley**

29. Laura Mangels

### **Item #14: Referral to City Manager to Return to Council with an Amnesty Program for Undocumented Secondary Units**

30. Marian Wolfe

31. Nancy Schimmel

### **Item #15: FY2019 Year-End Results and FY2020 First Quarter Budget Update**

32. Rahel Smith

33. Ben Burch

34. Joanna Foley

35. Erica Etelson

36. Evan Ettinghoff

37. Seth Bain

38. Timur Khan

39. Megan Moran

40. Andrew Guenthner

41. Sally Hindman

42. Raymond Picket

43. Alex Au

44. Didi Miller

45. Susan Quinlan

### **Item #18a: Companion Report: Recommendations for Allocation of FY19/20 Measure P Funds**

46. John Caner, on behalf of the Downtown Berkeley Association

## Supplemental Communications and Reports 2

### **Item #A: City Council Rules of Procedure and Order Revisions**

47. Supplemental material, submitted by Councilmember Hahn

### **Item #15: FY2019 Year-End Results and FY2020 First Quarter Budget Update**

48. James Brennerman

49. Robert Kane

50. Mary Hill

51. Godhears7

52. Laura Stupin

53. Barbara Daniell

54. Jane Eisenstark

### **Supplemental Communications and Reports 3**

#### **Urgency Item: Addressing the Trash Crisis in Berkeley**

55. Urgent agenda material, submitted by Councilmember Harrison and Mayor Arreguin

#### **Urgency Item: Funding for Strawberry Creek Lodge Food Program of Fiscal Year 2020**

56. Urgent agenda material, submitted by Councilmember Davila

#### **Item #15: FY2019 Year-End Results and FY2020 First Quarter Budget Update**

57. Cat Zavis

58. Lydia Henry

59. Lynn Sullivan

60. Tom Luce

61. Marge Turngren

62. Tom McAninley

63. Roberta Shaw

64. Darin Lounds

#### **Item #18b: Recommendations for Allocation of FY19/20 Measure P Funds**

65. Sheila Jordan

66. Carol Denney

67. Krista Lucchesi

68. Friends of Adeline





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Henry Oyekanmi, Director, Finance  
 Subject: Formal Bid Solicitations and Request for Proposals Scheduled for Possible Issuance After Council Approval on December 10, 2019

RECOMMENDATION

Approve the request for proposals or invitation for bids (attached to staff report) that will be, or are planned to be, issued upon final approval by the requesting department or division. All contracts over the City Manager's threshold will be returned to Council for final approval.

FISCAL IMPACTS OF RECOMMENDATION

Total estimated cost of items included in this report is \$2,913,252.

<u>PROJECT</u>	<u>Fund</u>	<u>Source</u>	<u>Amount</u>
2180 Milvia Carpet Replacement Project	501	Capital Improvement Fund	\$230,000
On-Call Citywide Bicycle Parking Installation and Maintenance	338 135	Bay Area Air Quality MGMT Measure BB – Bike and Pedestrian	\$330,000
Southside Complete Streets	305 147	Capital Grant UC Settlement	\$893,252
Berkeley Tuolumne Camp Reconstruction Special Inspection & Testing Services	125	Playground Camp	\$250,000
Bus Transportation for Summer Day CampS	125 011	Playground Camp Discretionary	\$350,000

Formal Bid Solicitations and Request for Proposals  
 Scheduled for Possible Issuance After Council  
 Approval on December 10, 2019

CONSENT CALENDAR  
 December 10, 2019

Ashby and North Berkeley BART Station zoning standards and EIR	011	Discretionary	\$560,000
Labor Relations Consulting Services – Police and Fire Associations	011	Discretionary	\$200,000
AVAYA Voice Over IP (VoIP) Phone System Support	502	Phone System Replacement	\$100,000
<b>Total:</b>			<b>\$2,913,252</b>

CURRENT SITUATION AND ITS EFFECTS

On May, 6, 2008, Council adopted Ordinance No. 7,035-N.S. effective June 6, 2008, which increased the City Manager’s purchasing authority for services to \$50,000. As a result, this required report submitted by the City Manager to Council is now for those purchases in excess of \$100,000 for goods; and \$200,000 for playgrounds and construction; and \$50,000 for services. If Council does not object to these items being sent out for bid or proposal within one week of them appearing on the agenda, and upon final notice to proceed from the requesting department, the IFB (Invitation for Bid) or RFP (Request for Proposal) may be released to the public and notices sent to the potential bidder/respondent list.

BACKGROUND

On May 6, 2008, Council adopted Ordinance No. 7,035-N.S., amending the City Manager’s purchasing authority for services.

ENVIRONMENTAL SUSTAINABILITY

The Finance Department reviews all formal bid and proposal solicitations to ensure that they include provisions for compliance with the City’s environmental policies. For each contract that is subject to City Council authorization, staff will address environmental sustainability considerations in the associated staff report to City Council.

RATIONALE FOR RECOMMENDATION

Need for the services.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Dennis Dang, Acting General Services Manager, Finance, 510-981-7329

Attachments:

- 1: Formal Bid Solicitations and Request for Proposals Scheduled For Possible Issuance After Council Approval on December 10, 2019

Formal Bid Solicitations and Request for Proposals  
Scheduled for Possible Issuance After Council  
Approval on December 10, 2019

CONSENT CALENDAR  
December 10, 2019

- a) 2180 Milvia Carpet Replacement Project
- b) On-Call Citywide Bicycle Parking Installation and Maintenance
- c) Southside Complete Streets
- d) Berkeley Tuolumne Camp Reconstruction Special Inspection & Testing Services
- e) Bus Transportation for Summer Day Camps
- f) Ashby and North Berkeley BART Station zoning standards and EIR
- g) Labor Relations Consulting Services – Police and Fire Associations
- h) AVAYA Voice Over IP (VoIP) Phone System Support

Note: Original of this attachment with live signature of authorizing personnel is on file in General Services.

DATE SUBMITTED: December 10, 2019

SPECIFICATION NO.	DESCRIPTION OF GOODS / SERVICES BEING PURCHASED	APPROX. RELEASE DATE	APPROX. BID OPENING DATE	INTENDED USE	ESTIMATED COST	BUDGET CODE TO BE CHARGED	DEPT. / DIVISION	CONTACT NAME & PHONE
20-11370-C	2180 Milvia Carpet Replacement Project	1/6/2020	2/1/2020	Re-Carpeting 3rd floor at 2180 Milvia Finance.	\$230,000	501-54-623-677-0000-000-444-624110-(19BM03/PWENBM1903)	PW	Elmar Kapfer 981-6435
20-11371-C	On-Call Citywide Bicycle Parking Installation and Maintenance	12/11/2019	1/14/2020	Furnish, install, and maintain bicycle parking racks and bicycle parking corrals at various locations citywide.	\$110,000 per year for three years (pending available funding), total amount not to exceed \$330,000	\$180,000 from 338-54-622-668-0000-000-431-665110-PWTRBP2001 \$80,000 from 135-54-622-668-0000-000-431-665110-PWTRBP2001 The additional \$70,000 will be budgeted from Fund 338, 131, or 135 as needed for this on-call contract.	PW/ Transportation	Beth Thomas 981-7068
20-11374-C	Southside Complete Streets	12/17/2019	1/16/2020	Conceptual design, alternatives analysis, preliminary engineering, environmental study, and plans, specifications and estimates for pedestrian, bicycle and transit facilities on streets in the Southside area, including Bancroft from Piedmont Ave to Milvia, and Telegraph, Dana and Fulton between Dwight and Bancroft.	\$893,252	\$790,796 from 305-54-622-668-0000-000-431-612310-PWTRCS2001 \$102,456 from 147-54-622-668-0000-000-431-612310PWTRCS2001	PW/ Transportation	Beth Thomas 981-7068
<b>DEPT. TOTAL</b>					<b>\$1,453,252</b>			

DATE SUBMITTED: December 10, 2019

SPECIFICATION NO.	DESCRIPTION OF GOODS / SERVICES BEING PURCHASED	APPROX. RELEASE DATE	APPROX. BID OPENING DATE	INTENDED USE	ESTIMATED COST	BUDGET CODE TO BE CHARGED	DEPT. / DIVISION	CONTACT NAME & PHONE
20-11372-C	Berkeley Tuolumne Camp Reconstruction Special Inspection & Testing Services	12/15/2019	1/7/2020	Special Inspections and Materials Testing Services for Berkeley Tuolumne Camp	\$250,000	125-52-543-583-0000-000-461-612990  PRWCP19001	PRW / Capital	Liza McNulty 981-6437
20-11375-C	Bus Transportation for Summer Day Camps	1/16/2019	2/6/2019	Local transportation services to and from Berkeley Day Camp location sites. *Berkeley Day Camp  Bus Transportation Services For Recreation Division Programs  (3 yr contract for approximately \$116,667/yr.)	\$250,000  \$100,000 \$350,000	Day Camp: 125-52-543-584-0000-000-461-625120-  Other RecDiv Programs: 011-52-543-570-0000-000-461-625120-	PRW / Recreation	Craig Veramay 981-6717
<b>DEPT. TOTAL</b>					<b>\$600,000</b>			
20-11376-C	Ashby and North Berkeley BART Station zoning standards and EIR	12/11/2019	1/7/2020	Creation of zoning standards for Ashby and North Berkeley BART stations.	\$560,000	011-53-584-622-0000-000-441-612990-	Planning and Development/ Land Use	Justin Horner 981-7476  Nishil Bali 981-7462
<b>DEPT. TOTAL</b>					<b>\$560,000</b>			

DATE SUBMITTED: December 10, 2019

SPECIFICATION NO.	DESCRIPTION OF GOODS / SERVICES BEING PURCHASED	APPROX. RELEASE DATE	APPROX. BID OPENING DATE	INTENDED USE	ESTIMATED COST	BUDGET CODE TO BE CHARGED	DEPT. / DIVISION	CONTACT NAME & PHONE
20-11372-C	Labor Relations Consulting Services – Police and Fire Associations	12/11/2019	1/14/2020	Labor Relations Consultant to participate in bargaining, perform research and support to City staff, prepare reports and contract language, and make presentations to Council.	\$200,000	011-34-343-000-0000-000-412-612990-	Human Resources	LaTanya Bellow 981-6807  David White 981-7012
<b>DEPT. TOTAL</b>					<b>\$200,000</b>			
20-11377-C	AVAYA Voice Over IP (VoIP) Phone System Support	11/16/2019	1/14/2020	Annual support and maintenance for the City's existing Voice over IP (VoIP) phone system	\$100,000	502-35-363-380-0000-000-412-613130-	Information Technology/ Enterprise Applications	Savita Chaudhary 981-6525
<b>DEPT. TOTAL</b>					<b>\$100,000</b>			
<b>GRAND TOTAL</b>					<b>\$2,913,252</b>			



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee-Williams Ridley, City Manager  
 Submitted by: Henry Oyekanmi, Director, Finance  
 Subject: Contract: First Alarm Security & Patrol, Inc. for Citywide Security Services

RECOMMENDATION

Adopt a Resolution authorizing the City Manager, or her designee, to execute a contract and any amendments with First Alarm Security & Patrol, Inc. dba First Security Services to provide unarmed security guard staffing services at various City locations and facilities in an amount not to exceed \$2,100,000 for 36-months, commencing on or about March 1, 2020 through to February 28, 2023, and including the option to extend for two additional 1-year periods for a total of 5 years at a total not-to-exceed amount of \$3,550,000, subject to the City's annual budget appropriation process.

FINANCIAL IMPLICATIONS

Funding will be provided for by the individual departments in their annual budget appropriations during the life of the contract.

Public Works facilities: 1947 Center Street, 2180 Milvia Street, Corporation Yard – 1326 Allston Street, Zero Waste Management Center – 1201 2<sup>nd</sup> Street., 2939 Ellis Street, 1900 Sixth Street, and 1901 Hearst Avenue.

Parks, Recreation and Waterfront facilities: Waterfront Marina – 201 University Avenue.

Health, Housing, and Community Services facilities: 1521 University Avenue, 1890 Alcatraz Avenue, and 2640 Martin Luther King, Jr. Way.

This contract will be entered into the City's ERMA contract database upon approval and execution.

CURRENT SITUATION AND ITS EFFECTS

Unarmed security guard services are contracted by the City to perform routine patrol and access control duties at various City facilities on a regularly scheduled basis and occasionally on an ad-hoc basis. The existing Contract (ERMA: 103580-1) for such services has been extended to expire on February 29, 2020. Contract 103580-1, issued to First Security Services began on January 1, 2015 and originated from the 2014 release of Request for Proposals (RFP) Specification No. 14-10839-C.

On April 4, 2019, General Services released RFP Specification No. 19-11316-C; of which ultimately a contract did not result due to unexpected staff turnover at the time of the solicitation and the extended duration that elapsed for interim staffing to be put in place.

A second solicitation was released as RFP Specification No. 19-11316-C-Reissued on July 22, 2019. The reissued solicitation closed on August 29, 2019 and garnered six proposal responses. All responses were deemed as qualifying and presented for evaluation to a selection panel representing Public Works, Parks, Recreation and Waterfront, Health, Housing, and Community Services, and the Library. Each response was individually evaluated then compared against the group yielding a group of three finalists. The finalist selections were further reviewed with enhanced emphasis regarding pricing, qualifications and relevancy of references. At the conclusion of this process, First Security was selected as the most responsive proposer with the highest level of qualification and best value to meet the City's needs. The Library, while a co-participant to the RFP, will enter into a separate contract with First Security.

#### BACKGROUND

RFP Specification No. 20-11316-C was originally issued on April 4, 2019 seeking unarmed security guard services to perform routine patrol and access control duties at various City facilities on a regularly scheduled basis and occasionally on an ad-hoc basis. This issuance did not result in a contract due to unexpected staff turnover at the time of the solicitation and the extended duration of time that elapsed for interim staffing to be put in place. A follow-up reissuance as RFP Specification No. 20-11316-C-Reissued was released on July 22, 2019. The reissued RFP closed with six proposals being received and all responses subsequently evaluated by an interdepartmental committee established to select the proposal best meeting the criteria and scope of services stated in the RFP.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

#### RATIONALE FOR RECOMMENDATION

First Alarm Security & Patrol, Inc. best met all City specifications provided for in the Request for Proposals solicitation when evaluating for overall value in consideration of demonstrated experience and references, and pricing.

#### ALTERNATIVE ACTIONS

None.

#### CONTACT PERSON

Dennis Dang, Acting General Services Manager, Finance, 981-7329

#### Attachments:

1: Resolution



RESOLUTION NO. ##,##-N.S.

CONTRACT: FIRST ALARM SECURITY & PATROL, INC. FOR CITYWIDE SECURITY SERVICES

WHEREAS, unarmed security guard services are contracted by the City to perform routine patrol and access control duties at 1947 Center Street, 2180 Milvia Street, Zero Waste Management Center, and the Berkeley Harbor Marina on a regularly scheduled basis and occasionally on an ad-hoc basis; and

WHEREAS, the City does not have qualified available staff to perform security services; and

WHEREAS, the existing contract for Citywide security services will expire on February 29, 2020, and Request for Proposals Specification No. 19-11316-C was issued on April 4, 2019, and subsequently reissued on July 22, 2019 due to unexpected staff turnover at the time of the initial issuance; and

WHEREAS, RFP Specification No. 19-11316-C-Reissued closed on Thursday, August 29, 2019 and received six qualified proposals; and

WHEREAS, the interdepartmental evaluation committee reviewed the proposals and selected the proposal best meeting the criteria and scope of services stated in the RFP; and

WHEREAS, funding is appropriated by the managing departments' in their fiscal year 2020 budget and will be included in their future budgets through the term of the contract; and

WHEREAS, First Alarm Security & Patrol, Inc. dba First Security Services was selected as the preferred vendor when evaluating for overall value in consideration of demonstrated experience and references, and pricing.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the proposal by First Alarm Security & Patrol, Inc. is accepted by the Council of the City of Berkeley and that the City Manager, or her designee, is authorized to execute a contract and any amendments with First Alarm Security & Patrol, Inc. for Citywide unarmed security services at various City locations and facilities for an amount not to exceed \$2,100,000 for 36-months, commencing on or about March 1, 2020 through to February 28, 2023, and including the option to extend for two additional 1-year periods for a total of 5 years at a total not-to-exceed amount of \$3,550,000, subject to the City's annual budget appropriation process.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Kelly Wallace, Interim Director, Health, Housing and Community Services Department

Subject: Revenue Contract: Community Services Block Grant for Calendar Year 2020

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or her designee to accept the Community Services Block Grant (CSBG) Contract Number 20F-3001, estimated to be \$266,863 to provide services for low-income people for the period January 1, 2020 to December 31, 2020.

FISCAL IMPACTS OF RECOMMENDATION

Berkeley's Community Services Block Grant (CSBG) allocation for the period January 1, 2020 through December 31, 2020 is currently estimated at \$266,863 (Community Action Program Fund - 334-51-504-530-0000-000-000-431110-). The CSBG allocation amount is included in the City's anti-poverty Community Action Fund and supports delivery and oversight of anti-poverty funds within the Health, Housing and Community Services Department. Should the CSBG 2020 award differ from the above-mentioned anticipated amount, the City will adjust the program delivery cost category. Program costs to the subcontractor are fixed at \$160,000 through the Community Agency Request for Proposal process that concluded in June of 2019.

CURRENT SITUATION AND ITS EFFECTS

The City of Berkeley is a Community Action Agency (CAA) and therefore receives Community Services Block Grant funds (CSBG) to support anti-poverty programs. CSBG funds are part of the federal Department of Health and Human Services budget passed through the state to local CAAs. Historically, the City of Berkeley has awarded Community Services Block Grant funds to community service programs.

The Human Welfare and Community Action Commission (HWCAC) acts as the tri-partite advisory Board for CSBG funding. As such, it is responsible for reviewing performance of funded programs, reviewing compliance with the implementation of the community action program, providing public participation in the administration of the CSBG funds and advising Council on CSBG funding decisions. CSBG funds complement General Funds which are used for other critical community services that

address low-income needs, including disability and senior services, medical care, child care and additional homeless services. The Berkeley City Council is responsible for all final CSBG funding decisions.

The State of California Department of Community Services and Development has issued a notice to the City of Berkeley indicating both the contract number and the anticipated amount for Berkeley.

At its November 20, 2019 meeting, the Human Welfare and Community Action Commission (HWCAC) took action, M/S/C (Deyhim/Romo), to recommend that Council approve the 2020 CSBG funding contract. Vote: Ayes – Dunner, Sood, Kohn, Behm-Steinberg, Bookstein, Deyhim, Romo; Noes – None; Abstain – Omodele; Absent – Smith, Sim.

#### BACKGROUND

Community Services Block Grant (CSBG) supports the City of Berkeley's anti-poverty efforts at a minimum funded level. Over the years the funds have fluctuated, but have remained relatively steady for a number of years. The City received \$160,000 until December of 2005. In 2006 the award for minimum-funded agencies was increased to \$173,556. In 2008, the award for minimum-funded agencies increased to \$259,646 annually; in 2013 the award was reduced to \$244,908. In 2016 and 2017, the annual award was increased to \$265,577. In 2018 there was a slight reduction to an award of \$263,217. In 2019 the award slightly increased to \$266,863, which is the same award for 2020.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

#### RATIONALE FOR RECOMMENDATION

The Community Services Block Grant is necessary to support the provision of services for residents living in poverty in Berkeley.

#### ALTERNATIVE ACTIONS CONSIDERED

Rejecting CSBG funding would reduce funding for services to low-income Berkeley residents and HHCS staffing. This would negatively impact low-income services in Berkeley.

#### CONTACT PERSON

Mary-Claire Katz, Associate Management Analyst, HHCS, (510) 981-5414

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

REVENUE CONTRACT: 2019 COMMUNITY SERVICES BLOCK GRANT (CSBG)

WHEREAS, the City of Berkeley is a Community Action Agency and receives CSBG funds as the Berkeley Community Action Agency to support anti-poverty programs; and

WHEREAS, the Human Welfare and Community Action Commission (HWCAC) acts as an advisory tri-partite Board to the Council providing public participation in the governing process; and

WHEREAS, at the November 20, 2019 the HWCAC voted to recommend that Council approve the 2020 CSBG funding contract; and

WHEREAS, this CSBG revenue contract covers the calendar year 2020 (January 1, 2020 through December 31, 2020) for a contract amount of \$266,863 (334-51-504-530-0000-000-444); and

WHEREAS, the funds have historically been used to support anti-poverty services and to support City of Berkeley oversight and management of anti-poverty programs (budget code (334-51-504-530-0000-000-444-Various to 334-51-504-535-0000-000-444-Various).

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager or her designee is authorized to accept Community Service Block Grant Contract Number 20F-3001 for an amount estimated to be \$266,863, and execute any resultant agreements and amendments to provide low-income services for the time period January 1, 2020 to December 31, 2020.

BE IT FURTHER RESOLVED that should the anticipated \$266,863 award amount change, the City will continue to fund the subcontractor at the fixed amount of \$160,000 as determined by the Community Agency Request for Proposal process that concluded in June 2019, and adjust the budgeted amount for the City's program delivery costs. A record signature copy of said agreement and any amendments shall be on file in the office of the City Clerk.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Kelly Wallace, Interim Director, Health, Housing & Community Services

Subject: Memorandum of Understanding for a Winter Relief Program

RECOMMENDATION

Adopt a Resolution authorizing the City Manager or her designee to execute a memorandum of understanding (MOU) between Alameda County and the City of Berkeley for a Winter Relief Program, consisting of \$75,000 allotted from Alameda County to the City, which will provide homeless people on the streets of Berkeley housing respite through May 31, 2020.

FISCAL IMPACTS OF RECOMMENDATION

The County has allocated \$75,000 to be spent on Winter Relief Program activities in Berkeley. The funds will be deposited in revenue account 421-4445-331.27-01, and will be appropriated as part of the Second Amendment to the FY 2020 Annual Appropriations Ordinance. Funds will be used to purchase nightly lodging in area motels and will be administered by the Mental Health Division. The Contract Management System number for this contract is CMS No. SPCAL.

CURRENT SITUATION AND ITS EFFECTS

The unsheltered homeless population in Berkeley, Emeryville and Albany exceeds the number of available shelter beds in North County. Alameda County ("County") has allocated funding to support winter relief programs across the county. This funding will be used to provide homeless people in Berkeley additional temporary housing options (such as motel stays) between October 15, 2019 and May 31, 2020. It will be used to improve the health and safety of residents who would otherwise remain unsheltered during this winter season. The City's Homeless Outreach and Treatment Team (HOTT) staff will have access to these funds and place high need and vulnerable homeless people in temporary lodging, allowing them a respite from the streets while support services staff assess needs and develop a long-term housing plan.

BACKGROUND

Annually, the County allocates funding to cities and non-profit agencies to mitigate the impact of inclement weather on people who are literally homeless living on the streets. This year, the funds will be used by the City's Homeless Outreach and Treatment Team, to temporarily house high need and vulnerable people, allowing them a respite

from the streets while support services staff assess needs and develop a long-term housing plan. Last year's Winter Relief program, with less than a third of this year's funding, provided motel stays for eleven separate individuals, more than half of whom were disabled, resulting in one hundred eighty-seven nights of safety and serenity.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the action recommended in this report.

RATIONALE FOR RECOMMENDATION

This funding will allow more homeless people to quickly move into temporary housing during this winter season while working with housing navigators to move into longer term shelter options.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Conor Murphy, Assistant Management Analyst, HHCS, 510-981-7611

Steven Grolnic-McClurg, Manager of Mental Health Services, HHCS, 510-981-5249

Attachments:

1: Resolution

2: Memorandum of Understanding



RESOLUTION NO. ##,###-N.S.

MEMORANDUM OF UNDERSTANDING BETWEEN THE COUNTY OF ALAMEDA AND THE CITY OF BERKELEY WHICH OUTLINES THE SERVICES TO BE PROVIDED AND THE RESPONSIBILITIES OF THE COUNTY AND CITY IN THE WINTER RELIEF PROGRAM

WHEREAS, the County of Alameda (“COUNTY”) has allocated a total of \$75,000 for respite from the elements for literally homeless people living on the streets of Berkeley during the period of October 15, 2019 through May 31, 2020; and

WHEREAS, the parties acknowledge that there is a lack of available shelter space to provide shelter for the homeless populations of Berkeley, Albany, and Emeryville; and

WHEREAS, the COUNTY and the City of Berkeley further acknowledge that funding for motel stays for unsheltered homeless individuals during the typically cold and rainy winter season will improve health and safety outcomes for residents who would otherwise remain unsheltered during inclement weather; and

WHEREAS, the City’s Homeless Outreach and Treatment Team (HOTT) staff will utilize these funds and place high need and vulnerable homeless people in temporary lodging, allowing them a respite from the streets while support services staff assess needs and develop a long-term housing plan; and

WHEREAS, the funds will be deposited in revenue account 421-4445-331.27-01 and this contract has been entered in the Citywide contract database and assigned CMS No. SPCAL.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to receive funds in the amount of \$75,000 and negotiate and execute a memorandum of understanding (MOU) with the County of Alameda that outlines the services to be provided and the responsibilities of the County and the City in the Winter Relief Program. A record signature copy of said MOU and any amendments to be on file with the Office of the City Clerk.

**COUNTY OF ALAMEDA  
STANDARD SERVICES AGREEMENT**

This Agreement, dated as of October 29, 2019, is by and between the County of Alameda, hereinafter referred to as the "COUNTY", and the City of Berkeley, hereinafter referred to as the "CONTRACTOR".

**WITNESSETH**

Whereas, COUNTY desires winter relief services which are more fully described in Exhibit A, attached hereto; and

Whereas, CONTRACTOR is professionally qualified to provide such services and is willing to provide same to COUNTY; and

Now, therefore it is agreed that COUNTY does hereby retain CONTRACTOR to provide winter relief services, and CONTRACTOR accepts such engagement, on the General Terms and Conditions hereinafter specified in this Agreement, the Additional Provisions attached hereto, and the following described exhibits, all of which are incorporated into this Agreement by this reference:

- Exhibit A Definition of Services
- Exhibit B Payment Terms
- Exhibit C Insurance Requirements

The term of this Agreement shall be from October 15, 2019 through May 31, 2020.

The compensation payable to CONTRACTOR hereunder shall not exceed *Seventy-Five thousand dollars (\$75,000)* for the term of this Agreement.

**IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.**

COUNTY OF ALAMEDA

CITY OF BERKELEY

By: \_\_\_\_\_  
Signature

By: \_\_\_\_\_  
Signature

Name: \_\_\_\_\_  
(Printed)

Name: \_\_\_\_\_  
(Printed)

Title: President, Board of Supervisors

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Approved as to Form:

By: \_\_\_\_\_  
County Counsel Signature

By signing above, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement

## GENERAL TERMS AND CONDITIONS

1. **INDEPENDENT CONTRACTOR:** No relationship of employer and employee is created by this Agreement; it being understood and agreed that CONTRACTOR is an independent Contractor. CONTRACTOR is not the agent or employee of the COUNTY in any capacity whatsoever, and COUNTY shall not be liable for any acts or omissions by CONTRACTOR nor for any obligations or liabilities incurred by CONTRACTOR.

CONTRACTOR shall have no claim under this Agreement or otherwise, for seniority, vacation time, vacation pay, sick leave, personal time off, overtime, health insurance medical care, hospital care, retirement benefits, social security, disability, Workers' Compensation, or unemployment insurance benefits, civil service protection, or employee benefits of any kind.

CONTRACTOR shall be solely liable for and obligated to pay directly all applicable payroll taxes (including federal and state income taxes) or contributions for unemployment insurance or old age pensions or annuities which are imposed by any governmental entity in connection with the labor used or which are measured by wages, salaries or other remuneration paid to its officers, agents or employees and agrees to indemnify and hold COUNTY harmless from any and all liability which COUNTY may incur because of CONTRACTOR's failure to pay such amounts.

In carrying out the work contemplated herein, CONTRACTOR shall comply with all applicable federal and state workers' compensation and liability laws and regulations with respect to the officers, agents and/or employees conducting and participating in the work; and agrees that such officers, agents, and/or employees will be considered as independent contractors and shall not be treated or considered in any way as officers, agents and/or employees of COUNTY.

CONTRACTOR does, by this Agreement, agree to perform his/her said work and functions at all times in strict accordance with currently approved methods and practices in his/her field and that the sole interest of COUNTY is to insure that said service shall be performed and rendered in a competent, efficient, timely and satisfactory manner and in accordance with the standards required by the COUNTY agency concerned.

Notwithstanding the foregoing, if the COUNTY determines that pursuant to state and federal law CONTRACTOR is an employee for purposes of income tax withholding, COUNTY may upon two week's notice to CONTRACTOR, withhold from payments to CONTRACTOR hereunder federal and state income taxes and pay said sums to the federal and state governments.

2. INDEMNIFICATION: To the fullest extent permitted by law, CONTRACTOR shall hold harmless, defend and indemnify the County of Alameda, its Board of Supervisors, employees and agents from and against any and all claims, losses, damages, liabilities and expenses, including but not limited to attorneys' fees, arising out of or resulting from the performance of services under this Agreement, provided that any such claim, loss, damage, liability or expense is attributable to bodily injury, sickness, disease, death or to injury to or destruction of property, including the loss therefrom, or to any violation of federal, state or municipal law or regulation, which arises out of or is any way connected with the performance of this agreement (collectively "Liabilities") except where such Liabilities are caused solely by the negligence or willful misconduct of any indemnitee. The COUNTY may participate in the defense of any such claim without relieving CONTRACTOR of any obligation hereunder. The obligations of this indemnity shall be for the full amount of all damage to COUNTY, including defense costs, and shall not be limited by any insurance limits.

In the event that CONTRACTOR or any employee, agent, or subcontractor of CONTRACTOR providing services under this Agreement is determined by a court of competent jurisdiction or the Alameda County Employees' Retirement Association (ACERA) or California Public Employees' Retirement System (PERS) to be eligible for enrollment in ACERA and PERS as an employee of COUNTY, CONTRACTOR shall indemnify, defend, and hold harmless COUNTY for the payment of any employee and/or employer contributions for ACERA and PERS benefits on behalf of CONTRACTOR or its employees, agents, or subcontractors, as well as for the payment of any penalties and interest on such contributions, which would otherwise be the responsibility of COUNTY.

3. INSURANCE AND BOND: CONTRACTOR shall at all times during the term of the Agreement with the COUNTY maintain in force, at minimum, those insurance policies and bonds as designated in the attached Exhibit C, and will comply with all those requirements as stated therein. The COUNTY and all parties as set forth on Exhibit C shall be considered an additional insured or loss payee if applicable. All of CONTRACTOR's available insurance coverage and proceeds in excess of the specified minimum limits shall be available to satisfy any and all claims of the COUNTY, including defense costs and damages. Any insurance limitations are independent of and shall not limit the indemnification terms of this Agreement. CONTRACTOR's insurance policies, including excess and umbrella insurance policies, shall include an endorsement and be primary and non-contributory and will not seek contribution from any other insurance (or self-insurance) available to COUNTY. CONTRACTOR's excess and umbrella insurance shall also apply on a primary and non-contributory basis for the benefit of the COUNTY before COUNTY's own insurance policy or self-insurance shall be called upon to protect it as a named insured.

4. **PREVAILING WAGES:** Pursuant to Labor Code Sections 1770 et seq., CONTRACTOR shall pay to persons performing labor in and about Work provided for in Contract not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the Work is performed, and not less than the general prevailing rate of per diem wages for legal holiday and overtime work in said locality, which per diem wages shall not be less than the stipulated rates contained in a schedule thereof which has been ascertained and determined by the Director of the State Department of Industrial Relations to be the general prevailing rate of per diem wages for each craft or type of workman or mechanic needed to execute this contract.
5. **WORKERS' COMPENSATION:** CONTRACTOR shall provide Workers' Compensation insurance, as applicable, at CONTRACTOR's own cost and expense and further, neither the CONTRACTOR nor its carrier shall be entitled to recover from COUNTY any costs, settlements, or expenses of Workers' Compensation claims arising out of this Agreement.
6. **CONFORMITY WITH LAW AND SAFETY:**
  - a. In performing services under this Agreement, CONTRACTOR shall observe and comply with all applicable laws, ordinances, codes and regulations of governmental agencies, including federal, state, municipal, and local governing bodies, having jurisdiction over the scope of services, including all applicable provisions of the California Occupational Safety and Health Act. CONTRACTOR shall indemnify and hold COUNTY harmless from any and all liability, fines, penalties and consequences from any of CONTRACTOR's failures to comply with such laws, ordinances, codes and regulations.
  - b. **Accidents:** If a death, serious personal injury, or substantial property damage occurs in connection with CONTRACTOR's performance of this Agreement, CONTRACTOR shall immediately notify the Alameda County Risk Manager's Office by telephone. CONTRACTOR shall promptly submit to COUNTY a written report, in such form as may be required by COUNTY of all accidents which occur in connection with this Agreement. This report must include the following information: (1) name and address of the injured or deceased person(s); (2) name and address of CONTRACTOR's sub-Contractor, if any; (3) name and address of CONTRACTOR's liability insurance carrier; and (4) a detailed description of the accident and whether any of COUNTY's equipment, tools, material, or staff were involved.

- c. CONTRACTOR further agrees to take all reasonable steps to preserve all physical evidence and information which may be relevant to the circumstances surrounding a potential claim, while maintaining public safety, and to grant to the COUNTY the opportunity to review and inspect such evidence, including the scene of the accident.
7. DEBARMENT AND SUSPENSION CERTIFICATION: (Applicable to all agreements funded in part or whole with federal funds and contracts over \$25,000).
    - a. By signing this agreement and Exhibit D, Debarment and Suspension Certification, Contractor/Grantee agrees to comply with applicable federal suspension and debarment regulations, including but not limited to 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.
    - b. By signing this agreement, CONTRACTOR certifies to the best of its knowledge and belief, that it and its principals:
      - (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any federal department or agency;
      - (2) Shall not knowingly enter into any covered transaction with a person who is proposed for debarment under federal regulations, debarred, suspended, declared ineligible, or voluntarily excluded from participation in such transaction.
  8. PAYMENT: For services performed in accordance with this Agreement, payment shall be made to CONTRACTOR as provided in Exhibit B hereto.
  9. TRAVEL EXPENSES: CONTRACTOR shall not be allowed or paid travel expenses unless set forth in this Agreement.
  10. TAXES: Payment of all applicable federal, state, and local taxes shall be the sole responsibility of the CONTRACTOR.
  11. OWNERSHIP OF DOCUMENTS: CONTRACTOR hereby assigns to the COUNTY and its assignees all copyright and other use rights in any and all proposals, plans, specification, designs, drawings, sketches, renderings, models, reports and related documents (including computerized or electronic copies) respecting in any way the subject matter of this Agreement, whether prepared by the COUNTY, the CONTRACTOR, the CONTRACTOR's sub-Contractors or third parties at the request of the CONTRACTOR (collectively, "Documents and

Materials”). This explicitly includes the electronic copies of all above stated documentation.

CONTRACTOR also hereby assigns to the COUNTY and its assignees all copyright and other use rights in any Documents and Materials including electronic copies stored in CONTRACTOR’s Information System, respecting in any way the subject matter of this Agreement.

CONTRACTOR shall be permitted to retain copies, including reproducible copies and computerized copies, of said Documents and Materials. CONTRACTOR agrees to take such further steps as may be reasonably requested by COUNTY to implement the aforesaid assignment. If for any reason said assignment is not effective, CONTRACTOR hereby grants the COUNTY and any assignee of the COUNTY an express royalty – free license to retain and use said Documents and Materials. The COUNTY’s rights under this paragraph shall apply regardless of the degree of completion of the Documents and Materials and whether or not CONTRACTOR’s services as set forth in Exhibit “A” of this Agreement have been fully performed or paid for.

In CONTRACTOR’s contracts with other Contractors, CONTRACTOR shall expressly obligate its Sub-Contractors to grant the COUNTY the aforesaid assignment and license rights as to that Contractor’s Documents and Materials. CONTRACTOR agrees to defend, indemnify, and hold the COUNTY harmless from any damage caused by a failure of the CONTRACTOR to obtain such rights from its Contractors and/or Sub-Contractors.

CONTRACTOR shall pay all royalties and license fees which may be due for any patented or copyrighted materials, methods or systems selected by the CONTRACTOR and incorporated into the work as set forth in Exhibit “A”, and shall defend, indemnify and hold the COUNTY harmless from any claims for infringement of patent or copyright arising out of such selection. The COUNTY’s rights under this Paragraph 11 shall not extend to any computer software used to create such Documents and Materials.

12. CONFLICT OF INTEREST; CONFIDENTIALITY: The CONTRACTOR covenants that it presently has no interest, and shall not have any interest, direct or indirect, which would conflict in any manner with the performance of services required under this Agreement. Without limitation, CONTRACTOR represents to and agrees with the COUNTY that CONTRACTOR has no present, and will have no future, conflict of interest between providing the COUNTY services hereunder and any other person or entity (including but not limited to any federal or state wildlife, environmental or regulatory agency) which has any interest adverse or potentially adverse to the COUNTY, as determined in the reasonable judgment of the Board of Supervisors of the COUNTY.



The CONTRACTOR agrees that any information, whether proprietary or not, made known to or discovered by it during the performance of or in connection with this Agreement for the COUNTY will be kept confidential and not be disclosed to any other person. The CONTRACTOR agrees to immediately notify the COUNTY by notices provided in accordance with Paragraph 13 of this Agreement, if it is requested to disclose any information made known to or discovered by it during the performance of or in connection with this Agreement. These conflict of interest and future service provisions and limitations shall remain fully effective five (5) years after termination of services to the COUNTY hereunder.

- 13. NOTICES: All notices, requests, demands, or other communications under this Agreement shall be in writing. Notices shall be given for all purposes as follows:

Personal delivery: When personally delivered to the recipient, notices are effective on delivery.

First Class Mail: When mailed first class to the last address of the recipient known to the party giving notice, notice is effective three (3) mail delivery days after deposit in a United States Postal Service office or mailbox. Certified Mail: When mailed certified mail, return receipt requested, notice is effective on receipt, if delivery is confirmed by a return receipt.

Overnight Delivery: When delivered by overnight delivery (Federal Express/Airborne/United Parcel Service/DHL WorldWide Express) with charges prepaid or charged to the sender’s account, notice is effective on delivery, if delivery is confirmed by the delivery service. Telex or facsimile transmission: When sent by telex or facsimile to the last telex or facsimile number of the recipient known to the party giving notice, notice is effective on receipt, provided that (a) a duplicate copy of the notice is promptly given by first-class or certified mail or by overnight delivery, or (b) the receiving party delivers a written confirmation of receipt. Any notice given by telex or facsimile shall be deemed received on the next business day if it is received after 5:00 p.m. (recipient’s time) or on a non-business day.

Addresses for purpose of giving notice are as follows:

To COUNTY: COUNTY OF ALAMEDA  
Housing and Community Development Department  
224 West Winton Avenue, 108  
Hayward, CA 94544  
Attn: Director Housing and Community Development

To CONTRACTOR:

City of Berkeley  
Health, Housing & Community Services Department  
Mental Health Division/Compliance Unit  
3282 Adeline Street  
Berkeley, CA 94703  
Attn: Conor Murphy

Any correctly addressed notice that is refused, unclaimed, or undeliverable because of an act or omission of the party to be notified shall be deemed effective as of the first date that said notice was refused, unclaimed, or deemed undeliverable by the postal authorities, messenger, or overnight delivery service.

Any party may change its address or telex or facsimile number by giving the other party notice of the change in any manner permitted by this Agreement.

14. USE OF COUNTY PROPERTY: CONTRACTOR shall not use COUNTY property (including equipment, instruments and supplies) or personnel for any purpose other than in the performance of his/her obligations under this Agreement.
15. EQUAL EMPLOYMENT OPPORTUNITY PRACTICES PROVISIONS: CONTRACTOR assures that he/she/it will comply with Title VII of the Civil Rights Act of 1964 and that no person shall, on the grounds of race, creed, color, disability, sex, sexual orientation, national origin, age, religion, Vietnam era Veteran's status, political affiliation, or any other non-merit factor, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under this Agreement.
  - a. CONTRACTOR shall, in all solicitations or advertisements for applicants for employment placed as a result of this Agreement, state that it is an "Equal Opportunity Employer" or that all qualified applicants will receive consideration for employment without regard to their race, creed, color, disability, sex, sexual orientation, national origin, age, religion, Vietnam era Veteran's status, political affiliation, or any other non-merit factor.
  - b. CONTRACTOR shall, if requested to so do by the COUNTY, certify that it has not, in the performance of this Agreement, discriminated against applicants or employees because of their race, creed, color, disability, sex, sexual orientation, national origin, age, religion, Vietnam era Veteran's status, political affiliation, or any other non-merit factor.
  - c. If requested to do so by the COUNTY, CONTRACTOR shall provide the COUNTY with access to copies of all of its records pertaining or relating to

its employment practices, except to the extent such records or portions of such records are confidential or privileged under state or federal law.

- d. CONTRACTOR shall recruit vigorously and encourage minority - and women-owned businesses to bid its subcontracts.
  - e. Nothing contained in this Agreement shall be construed in any manner so as to require or permit any act, which is prohibited by law.
  - f. The CONTRACTOR shall include the provisions set forth in paragraphs A through E (above) in each of its subcontracts.
16. DRUG-FREE WORKPLACE: CONTRACTOR and CONTRACTOR's employees shall comply with the COUNTY's policy of maintaining a drug-free workplace. Neither CONTRACTOR nor CONTRACTOR's employees shall unlawfully manufacture, distribute, dispense, possess or use controlled substances, as defined in 21 U.S. Code § 812, including, but not limited to, marijuana, heroin, cocaine, and amphetamines, at any COUNTY facility or work site. If CONTRACTOR or any employee of CONTRACTOR is convicted or pleads nolo contendere to a criminal drug statute violation occurring at a COUNTY facility or work site, the CONTRACTOR within five days thereafter shall notify the head of the COUNTY department/agency for which the contract services are performed. Violation of this provision shall constitute a material breach of this Agreement.
17. AUDITS; ACCESS TO RECORDS: The CONTRACTOR shall make available to the COUNTY, its authorized agents, officers, or employees, for examination any and all ledgers, books of accounts, invoices, vouchers, cancelled checks, and other records or documents evidencing or relating to the expenditures and disbursements charged to the COUNTY, and shall furnish to the COUNTY, its authorized agents, officers or employees such other evidence or information as the COUNTY may require with regard to any such expenditure or disbursement charged by the CONTRACTOR.

The CONTRACTOR shall maintain full and adequate records in accordance with COUNTY requirements to show the actual costs incurred by the CONTRACTOR in the performance of this Agreement. If such books and records are not kept and maintained by CONTRACTOR within the County of Alameda, California, CONTRACTOR shall, upon request of the COUNTY, make such books and records available to the COUNTY for inspection at a location within COUNTY or CONTRACTOR shall pay to the COUNTY the reasonable, and necessary costs incurred by the COUNTY in inspecting CONTRACTOR's books and records, including, but not limited to, travel, lodging and subsistence costs. CONTRACTOR shall provide such assistance as may be reasonably required in the course of such inspection. The COUNTY further reserves the right to examine

and reexamine said books, records and data during the three (3) year period following termination of this Agreement or completion of all work hereunder, as evidenced in writing by the COUNTY, and the CONTRACTOR shall in no event dispose of, destroy, alter, or mutilate said books, records, accounts, and data in any manner whatsoever for three (3) years after the COUNTY makes the final or last payment or within three (3) years after any pending issues between the COUNTY and CONTRACTOR with respect to this Agreement are closed, whichever is later.

18. DOCUMENTS AND MATERIALS: CONTRACTOR shall maintain and make available to COUNTY for its inspection and use during the term of this Agreement, all Documents and Materials, as defined in Paragraph 11 of this Agreement. CONTRACTOR's obligations under the preceding sentence shall continue for three (3) years following termination or expiration of this Agreement or the completion of all work hereunder (as evidenced in writing by COUNTY), and CONTRACTOR shall in no event dispose of, destroy, alter or mutilate said Documents and Materials, for three (3) years following the COUNTY's last payment to CONTRACTOR under this Agreement.
19. TIME OF ESSENCE: Time is of the essence in respect to all provisions of this Agreement that specify a time for performance; provided, however, that the foregoing shall not be construed to limit or deprive a party of the benefits of any grace or use period allowed in this Agreement.
20. TERMINATION: The COUNTY has and reserves the right to suspend, terminate, or abandon the execution of any work by the CONTRACTOR without cause at any time upon giving to the CONTRACTOR prior written notice. In the event that the COUNTY should abandon, terminate, or suspend the CONTRACTOR's work, the CONTRACTOR shall be entitled to payment for services provided hereunder prior to the effective date of said suspension, termination, or abandonment. Said payment shall be computed in accordance with Exhibit B hereto, provided that the maximum amount payable to CONTRACTOR for its winter relief Services shall not exceed \$75,000 payment for services provided hereunder prior to the effective date of said suspension, termination or abandonment.
21. SMALL LOCAL AND EMERGING BUSINESS (SLEB) PARTICIPATION: CONTRACTOR has been approved by COUNTY to participate in contract without SLEB participation. As a result, there is no requirement to subcontract with another business in order to satisfy the COUNTY's Small and Emerging Locally owned Business provision.

**However, if circumstances or the terms of the contract should change,** CONTRACTOR may be required to immediately comply with the COUNTY's Small and Emerging Local Business provisions, including but not limited to:

- a. CONTRACTOR must be a certified small or emerging local business(es) or subcontract a minimum 20% with a certified small or emerging local business(es).
- b. SLEB subcontractor(s) is independently owned and operated (i.e., is not owned or operated in any way by Prime), nor do any employees of either entity work for the other.
- c. Small and/or Emerging Local Business participation and current SLEB certification status must be maintained for the term of the contract. CONTRACTOR shall ensure that their own certification status and/or that of participating subcontractors (as is applicable) are maintained in compliance with the SLEB Program.
- d. CONTRACTOR shall not substitute or add any small and/or emerging local business(s) listed in this agreement without prior written approval from the COUNTY. Said requests to substitute or add a small and/or emerging local business shall be submitted in writing to the COUNTY department contract representative identified under Item #13 above. CONTRACTOR will not be able to substitute the subcontractor without prior written approval from the Alameda County Auditor Controller Agency, Office of Contract Compliance (OCC).
- e. All SLEB participation, except for SLEB prime contractor, must be tracked and monitored utilizing the Elation compliance System.

COUNTY will be under no obligation to pay CONTRACTOR for the percent committed to a SLEB (whether SLEB is a prime or subcontractor) if the work is not performed by the listed small and/or emerging local business.

For further information regarding the Small Local Emerging Business participation requirements and utilization of the Alameda County Contract Compliance System contact OCC via e-mail at [ACSLEBcompliance@acgov.org](mailto:ACSLEBcompliance@acgov.org).

22. FIRST SOURCE PROGRAM: For contracts over \$100,000, CONTRACTOR shall provide COUNTY ten (10) working days to refer to CONTRACTOR, potential candidates to be considered by CONTRACTOR to fill any new or vacant positions that are necessary to fulfill their contractual obligations to the COUNTY that CONTRACTOR has available during the contract term before advertising to the general public.
23. CHOICE OF LAW: This Agreement shall be governed by the laws of the State of California.

24. **WAIVER:** No waiver of a breach, failure of any condition, or any right or remedy contained in or granted by the provisions of this Agreement shall be effective unless it is in writing and signed by the party waiving the breach, failure, right, or remedy. No waiver of any breach, failure, right or remedy shall be deemed a waiver of any other breach, failure, right or remedy, whether or not similar, nor shall any waiver constitute a continuing waiver unless the writing so specifies.
25. **ENTIRE AGREEMENT:** This Agreement, including all attachments, exhibits, and any other documents specifically incorporated into this Agreement, shall constitute the entire agreement between COUNTY and CONTRACTOR relating to the subject matter of this Agreement. As used herein, Agreement refers to and includes any documents incorporated herein by reference and any exhibits or attachments. This Agreement supersedes and merges all previous understandings, and all other agreements, written or oral, between the parties and sets forth the entire understanding of the parties regarding the subject matter thereof. The Agreement may not be modified except by a written document signed by both parties.
26. **HEADINGS** herein are for convenience of reference only and shall in no way affect interpretation of the Agreement.
27. **ADVERTISING OR PUBLICITY:** CONTRACTOR shall not use the name of COUNTY, its officers, directors, employees or agents, in advertising or publicity releases or otherwise without securing the prior written consent of COUNTY in each instance.
28. **MODIFICATION OF AGREEMENT:** This Agreement may be supplemented, amended, or modified only by the mutual agreement of the parties. No supplement, amendment, or modification of this Agreement shall be binding unless it is in writing and signed by authorized representatives of both parties.
29. **ASSURANCE OF PERFORMANCE:** If at any time COUNTY believes CONTRACTOR may not be adequately performing its obligations under this Agreement or that CONTRACTOR may fail to complete the Services as required by this Agreement, COUNTY may request from CONTRACTOR prompt written assurances of performance and a written plan acceptable to COUNTY, to correct the observed deficiencies in CONTRACTOR's performance. CONTRACTOR shall provide such written assurances and written plan within ten (10) calendar days of its receipt of COUNTY's request and shall thereafter diligently commence and fully perform such written plan. CONTRACTOR acknowledges and agrees that any failure to provide such written assurances and written plan within the required time is a material breach under this Agreement.

30. **SUBCONTRACTING/ASSIGNMENT:** CONTRACTOR shall not subcontract, assign, or delegate any portion of this Agreement or any duties or obligations hereunder without the COUNTY's prior written approval.
- a. Neither party shall, on the basis of this Agreement, contract on behalf of or in the name of the other party. Any agreement that violates this Section shall confer no rights on any party and shall be null and void.
  - b. CONTRACTOR shall use the subcontractors identified in Exhibit A and shall not substitute subcontractors without COUNTY's prior written approval.
  - c. CONTRACTOR shall require all subcontractors to comply with all indemnification and insurance requirements of this agreement, including, without limitation, Exhibit C. CONTRACTOR shall verify subcontractor's compliance.
  - d. CONTRACTOR shall remain fully responsible for compliance by its subcontractors with all the terms of this Agreement, regardless of the terms of any agreement between CONTRACTOR and its subcontractors.
31. **SURVIVAL:** The obligations of this Agreement, which by their nature would continue beyond the termination on expiration of the Agreement, including without limitation, the obligations regarding Indemnification (Paragraph 2), Ownership of Documents (Paragraph 11), and Conflict of Interest (Paragraph 12), shall survive termination or expiration.
32. **SEVERABILITY:** If a court of competent jurisdiction holds any provision of this Agreement to be illegal, unenforceable, or invalid in whole or in part for any reason, the validity and enforceability of the remaining provisions, or portions of them, will not be affected, unless an essential purpose of this Agreement would be defeated by the loss of the illegal, unenforceable, or invalid provision.
33. **PATENT AND COPYRIGHT INDEMNITY:** CONTRACTOR represents that it knows of no allegations, claims, or threatened claims that the materials, services, hardware or software ("Contractor Products") provided to COUNTY under this Agreement infringe any patent, copyright or other proprietary right. CONTRACTOR shall defend, indemnify and hold harmless COUNTY of, from and against all losses, claims, damages, liabilities, costs expenses and amounts (collectively, "Losses") arising out of or in connection with an assertion that any Contractor Products or the use thereof, infringe any patent, copyright or other proprietary right of any third party. COUNTY will: (1) notify CONTRACTOR promptly of such claim, suit, or assertion; (2) permit CONTRACTOR to defend, compromise, or settle the claim; and, (3) provide, on a reasonable basis,

information to enable CONTRACTOR to do so. CONTRACTOR shall not agree without COUNTY's prior written consent, to any settlement, which would require COUNTY to pay money or perform some affirmative act in order to continue using the Contractor Products.

- a. If CONTRACTOR is obligated to defend COUNTY pursuant to this Section 33 and fails to do so after reasonable notice from COUNTY, COUNTY may defend itself and/or settle such proceeding, and CONTRACTOR shall pay to COUNTY any and all losses, damages and expenses (including attorney's fees and costs) incurred in relationship with COUNTY's defense and/or settlement of such proceeding.
  - b. In the case of any such claim of infringement, CONTRACTOR shall either, at its option, (1) procure for COUNTY the right to continue using the Contractor Products; or (2) replace or modify the Contractor Products so that that they become non-infringing, but equivalent in functionality and performance.
  - c. Notwithstanding this Section 33, COUNTY retains the right and ability to defend itself, at its own expense, against any claims that Contractor Products infringe any patent, copyright, or other intellectual property right.
34. OTHER AGENCIES: Other tax supported agencies within the State of California who have not contracted for their own requirements may desire to participate in this contract. The CONTRACTOR is requested to service these agencies and will be given the opportunity to accept or reject the additional requirements. If the CONTRACTOR elects to supply other agencies, orders will be placed directly by the agency and payments made directly by the agency.
35. EXTENSION: This agreement may be extended for additional time needed to complete the scope of work by mutual agreement of the COUNTY and the CONTRACTOR.
36. SIGNATORY: By signing this agreement, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement

[END OF GENERAL TERMS AND CONDITIONS]



**ADDITIONAL PROVISIONS**

- 37. COUNTERPARTS: This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.
  
- 38. CONTRACTOR is exempt from item 21, SMALL, LOCAL AND EMERGING BUSINESS (SLEB) PARTICIPATION, because CONTRACTOR is a government agency.

County Counsel Signature: \_\_\_\_\_

## EXHIBIT A

### DEFINITION OF SERVICES

1. CONTRACTOR will provide a Winter Relief Program in the form of vouchers for short-term motel stays for vulnerable, high-needs, unsheltered homeless individuals staying in Berkeley, Albany, and Emeryville.
2. CONTRACTOR shall ensure that the motels that the vouchers are used in are in acceptable condition and that participants are assessed for Coordinated Entry during their motel stay.
3. Services
  - (a) CONTRACTOR, through its Housing Resource Center (HRC), shall provide vouchers for short-term motel stays for vulnerable, high needs unsheltered homeless individuals staying in Berkeley, Albany, or Emeryville.
  - (b) CONTRACTOR shall prioritize for short-term motel stays vulnerable and high-needs individuals, as determined by CONTRACTOR, which determination may be based on outreach and referral via CONTRACTOR's Homeless Outreach & Treatment Team (HOTT).
  - (c) CONTRACTOR shall perform Coordinated Entry assessments during the short-term motel stays, using the County's prioritization tool to identify high-needs, long-term unsheltered homeless individuals.
  - (d) CONTRACTOR shall ensure that the motels that the vouchers are used in are in acceptable physical condition and are accessible for clients with disabilities.
  - (e) The length of stay for each participant shall be determined by CONTRACTOR based on the needs of the client and the availability of other appropriate shelter options. The maximum stay for any participant shall not exceed 29 days.
4. Reporting Requirements
  - a. CONTRACTOR shall submit monthly reports no later than 15 days after the end of the month being reported on during the contract term.
  - b. CONTRACTOR shall submit a final narrative within thirty (30) days at the end of the contract period, in a format approved by COUNTY containing, at a minimum, the information in Exhibit A. The report shall include a narrative accounting of the progress achieved toward the Scope of Work objectives, and the following unsheltered individual information using aggregate reporting.
  - c. CONTRACTOR will make best efforts to collect and input data included in Reporting Requirements Section 4.e. at 100% data quality.
  - d. The HUD definition of "homeless" shall be used for reporting purposes. "Homeless" as defined by HUD, means an individual or family with a primary nighttime residence that

is a public or private place not designed for or ordinarily used as a regular sleeping accommodation for human beings, including a car, park, abandoned building, bus or train.

e. MONTHLY REPORT SUMMARY

i. Number of Individuals Served:

1. Unduplicated clients served
2. The following demographic characteristics of clients served
  - a. Age, gender, race, ethnicity, city of last residence
  - b. Residence prior to entry

ii. Program Impact and Outcomes:

1. Number and percentage of unsheltered individuals who have exited the winter shelter into year-round shelter or other interim housing
2. Number and percentage of unsheltered individuals who have exited the winter shelter into permanent housing
3. Number and percentage of unsheltered individuals who have been connected to employment assistance, full or part-time employment, general assistance, food stamps, or other mainstream supports.

**EXHIBIT B**

**PAYMENT TERMS**

1. COUNTY approves the following budget for services performed by CONTRACTOR:

Line Item	Amount
A.1. Administration	\$7,500
A.2. Motel Payments for Vouchers	\$67,500
<b>Total Amount Requested:</b>	<b>\$75,000</b>

2. Once the line item budget has been approved through the execution of the Contract, there can be no more than four (4) requests of adjustments to budget line item amounts during the contract period, including any final adjustments done at the end of the program year unless approved by the Community Development Agency’s Director of the Housing and Community Development Department or the Director’s designee.
3. Invoices shall be reviewed by the liaison assigned to monitor this contract and shall be approved by the Community Development Agency’s Director of the Housing and Community Development Department or the Director’s designee. COUNTY will use its best efforts to make payment to CONTRACTOR upon successful completion and acceptance of the following services listed within thirty (30) days upon receipt and approval of invoice.
4. Total payment under the terms of this Agreement will not exceed the total amount of \$75,000. This cost includes all taxes and all other charges.
5. Upon award of this Agreement by COUNTY, COUNTY and CONTRACTOR shall forthwith jointly create a schedule governing the timely performance of CONTRACTOR’s services hereunder. The agreed upon schedule shall be incorporated into this Agreement upon its adoption by the parties and thereafter CONTRACTOR shall perform all services under this Agreement in conformance with the schedule.
6. All requests for reimbursement will be in a format approved by the COUNTY and shall be submitted to the COUNTY on a monthly basis with supporting documentation of actual costs incurred. Requests for reimbursement should be received within 30 days of the end of each claim month. Requests received after 30 days may be delayed in processing.

7. Any adjustments made by the fiscal auditors at the year-end audit, under the AICPA guidelines and other relevant federal regulations should be brought to the attention of the COUNTY for staff reconciliation.

EXHIBIT C

**COUNTY OF ALAMEDA MINIMUM INSURANCE REQUIREMENTS**

Without limiting any other obligation or liability under this Agreement, the Contractor, at its sole cost and expense, shall secure and keep in force during the entire term of the Agreement or longer, as may be specified below, the following minimum insurance coverage, limits and endorsements:

	TYPE OF INSURANCE COVERAGES	MINIMUM LIMITS
A	<b>Commercial General Liability</b> Premises Liability; Products and Completed Operations; Contractual Liability; Personal Injury and Advertising Liability	\$1,000,000 per occurrence (CSL) Bodily Injury and Property Damage
B	<b>Commercial or Business Automobile Liability</b> All owned vehicles, hired or leased vehicles, non-owned, borrowed and permissive uses. Personal Automobile Liability is acceptable for individual contractors with no transportation or hauling related activities	\$1,000,000 per occurrence (CSL) Any Auto Bodily Injury and Property Damage
C	<b>Workers' Compensation (WC) and Employers Liability (EL)</b> Required for all contractors with employees	WC: Statutory Limits EL: \$1,000,000 per accident for bodily injury or disease
D	<p><b>Endorsements and Conditions:</b></p> <ol style="list-style-type: none"> <li><b>ADDITIONAL INSURED:</b> All insurance required above with the exception of Commercial or Business Automobile Liability, Workers' Compensation and Employers Liability, shall be endorsed to name as additional insured: County of Alameda, its Board of Supervisors, the individual members thereof, and all County officers, agents, employees, volunteers, and representatives. The Additional Insured endorsement shall be at least as broad as ISO Form Number CG 20 38 04 13.</li> <li><b>DURATION OF COVERAGE:</b> All required insurance shall be maintained during the entire term of the Agreement. In addition, Insurance policies and coverage(s) written on a claims-made basis shall be maintained during the entire term of the Agreement and until 3 years following the later of termination of the Agreement and acceptance of all work provided under the Agreement, with the retroactive date of said insurance (as may be applicable) concurrent with the commencement of activities pursuant to this Agreement.</li> <li><b>REDUCTION OR LIMIT OF OBLIGATION:</b> All insurance policies, including excess and umbrella insurance policies, shall include an endorsement and be primary and non-contributory and will not seek contribution from any other insurance (or self-insurance) available to the County. The primary and non-contributory endorsement shall be at least as broad as ISO Form 20 01 04 13. Pursuant to the provisions of this Agreement insurance effected or procured by the Contractor shall not reduce or limit Contractor's contractual obligation to indemnify and defend the Indemnified Parties.</li> <li><b>INSURER FINANCIAL RATING:</b> Insurance shall be maintained through an insurer with a A.M. Best Rating of no less than A:VII or equivalent, shall be admitted to the State of California unless otherwise waived by Risk Management, and with deductible amounts acceptable to the County. Acceptance of Contractor's insurance by County shall not relieve or decrease the liability of Contractor hereunder. Any deductible or self-insured retention amount or other similar obligation under the policies shall be the sole responsibility of the Contractor.</li> <li><b>SUBCONTRACTORS:</b> Contractor shall include all subcontractors as an insured (covered party) under its policies or shall verify that the subcontractor, under its own policies and endorsements, has complied with the insurance requirements in this Agreement, including this Exhibit. The additional Insured endorsement shall be at least as broad as ISO Form Number CG 20 38 04 13.</li> <li><b>JOINT VENTURES:</b> If Contractor is an association, partnership or other joint business venture, required insurance shall be provided by one of the following methods: <ul style="list-style-type: none"> <li>Separate insurance policies issued for each individual entity, with each entity included as a "Named Insured" (covered party), or at minimum named as an "Additional Insured" on the other's policies. Coverage shall be at least as broad as in the ISO Forms named above.</li> <li>Joint insurance program with the association, partnership or other joint business venture included as a "Named Insured".</li> </ul> </li> <li><b>CANCELLATION OF INSURANCE:</b> All insurance shall be required to provide thirty (30) days advance written notice to the County of cancellation.</li> <li><b>CERTIFICATE OF INSURANCE:</b> Before commencing operations under this Agreement, Contractor shall provide Certificate(s) of Insurance and applicable insurance endorsements, in form and satisfactory to County, evidencing that all required insurance coverage is in effect. The County reserves the rights to require the Contractor to provide complete, certified copies of all required insurance policies. The required certificate(s) and endorsements must be sent as set forth in the Notices provision.</li> </ol>	



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Kelly Wallace, Interim Director, Health, Housing & Community Services  
 Subject: Jointly Apply for Infill Infrastructure Grant Funding for Projects Seeking City Funding through the 2019 Housing Trust Fund Request for Proposals

RECOMMENDATION

Adopt two Resolutions that enable affordable housing development projects that applied for City funding through the 2019 Housing Trust Fund Request for Proposals to access State of California Infill Infrastructure Grant (IIG) funds by:

1. Authorizing the City Manager to prepare and submit a joint application with each of the following developers proposing to use IIG funds:
  - a. Satellite Affordable Housing Associates (for Blake Apartments at 2527 San Pablo);
  - b. BRIDGE Housing Corporation (for 1740 San Pablo);
  - c. Resources for Community Development (for Maudelle Miller Shirek Community at 2001 Ashby); and
2. Authorizing the City Manager to take actions needed for the City's participation in the IIG program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents.

FISCAL IMPACTS OF RECOMMENDATION

There are no direct fiscal impacts for being a joint applicant for IIG funds. However, as a joint applicant, the City may share responsibility for completing the affordable housing development. Staff will evaluate the requirements and risks, and if needed, enter into side agreements with project sponsors to clarify responsibilities and mitigate risk to the City.

CURRENT SITUATION AND ITS EFFECTS

The City issued a Request for Proposals for affordable housing developments to allocate available Measure O funds and Housing Trust Funds, and received four applications for funding. Three applicants proposed new construction developments that may include financing through the IIG program, in the current or future funding rounds:

- BRIDGE Housing Corporation for 1740 San Pablo Avenue
- Resources for Community Development for 2001 Ashby Avenue (Maudelle Miller Shirek Community)
- Satellite Affordable Housing Associates for 2527 San Pablo (Blake Apartments)

The IIG Notice of Funding Availability (NOFA) and final program guidelines were released on October 30, 2019, and include a requirement for developers to apply jointly with a jurisdiction. Applications are due in January. Housing staff recommend that Council adopt the attached resolution so that the City can take timely action to support potential IIG applications. The IIG NOFA did not include specific resolution language, so the attached resolution is based on language required for a joint application for a different state funding program.

Jointly applying for IIG funds is a Strategic Plan Priority Project, advancing our goal to create affordable housing and housing support service for our most vulnerable community members.

#### BACKGROUND

IIG promotes infill housing development and funds infrastructure improvements related to site preparation or demolition, utility service, pedestrian and bicycle infrastructure, environmental remediation, and other improvements related to the affordable housing development.

Other state funding programs have required joint applications between the City and developer, and the City submitted successful joint applications for Affordable Housing and Sustainable Communities funds (for Grayson Apartments at 2748 San Pablo) and No Place Like Home funds (for Berkeley Way). Joint applicants are typically required to accept joint liability, but the City and joint applicant may enter into a side agreement that establishes project responsibilities and indemnifies the City. Joint applications also demonstrate the City's commitment to advancing affordable housing locally.

#### ENVIRONMENTAL SUSTAINABILITY

There are no environmental sustainability effects directly associated with the recommendations in this report.

#### RATIONALE FOR RECOMMENDATION

Council has identified housing affordability as a critical issue facing the City. Pursuing all available sources of affordable housing funding is consistent with City priorities.

#### ALTERNATIVE ACTIONS CONSIDERED

The City could decline to jointly apply to the State for housing funds, making local projects ineligible for IIG funds unless the County agreed to serve as a joint applicant. This could delay each project and would not be consistent with the City's Strategic Plan goal; it is therefore not recommended.



Jointly Apply for Infill Infrastructure Grant Funding for Projects  
Seeking City Funding through the 2019 Housing Trust Fund  
Request for Proposals

CONSENT CALENDAR  
December 10, 2019

CONTACT PERSON

Jenny Wyant, Community Development Project Coordinator, HHCS, 510-981-5228

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

JOINT APPLICATION FOR INFILL INFRASTRUCTURE FUNDS FOR PROJECTS  
FUNDED THROUGH THE 2019 HOUSING TRUST FUND REQUEST FOR  
PROPOSALS

WHEREAS, the City of Berkeley (City) issued a Request for Proposals (RFP) for affordable housing developments on July 18, 2019, and subsequently received four applications for City funding; and

WHEREAS, on October 21, 2019 the Measure O Bond Oversight Committee approved motions recommending funding reservations for Satellite Affordable Housing's Blake Apartments (2527 San Pablo Avenue), BRIDGE Housing Corporation's 1740 San Pablo Avenue, Northern California Land Trust's Anti-Displacement Project (2321-2323 10<sup>th</sup> Street), and Resources for Community Development's Maudelle Miller Shirek Community (2001 Ashby Avenue); and

WHEREAS, Satellite Affordable Housing Associates, BRIDGE Housing Corporation, and Resources for Community Development (each, a "Developer") indicated an interest in pursuing Infill Infrastructure Grant (IIG) funding from the State of California's Housing and Community Development Department (HCD); and

WHEREAS, on October 30, 2019, HCD released a Notice of Funding Availability and program guidelines for IIG funds, which require applicants to jointly apply for IIG funds with the jurisdiction in which the project is located; and

WHEREAS, the City may be required to accept a portion of the project's liability as a condition of the joint application, though the risk may be mitigated by a side agreement negotiated between the City and Developer.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that it approves the submission of a joint application with Developer, or Developer's affiliates for the IIG application in the upcoming round or future IIG funding rounds.

BE IT FURTHER RESOLVED that the City Manager shall work to mitigate risk to the City from serving as a joint applicant, including negotiating an agreement with Developer regarding mutual responsibilities.

BE IT FURTHER RESOLVED that the City Manager, or her designee, is authorized to execute in the name of Developer the IIG Program Application Package and the IIG Program Documents as required by HCD for participation in the IIG program.

BE IT FURTHER RESOLVED that the City Manager, or her designee, is hereby authorized to execute all original or amended documents or agreements to effectuate this

December 10, 2019

action; a signed copy of said documents, agreements, and any amendments will be kept on file in the Office of the City Clerk.

December 10, 2019

RESOLUTION NO. ##,###-N.S.

AUTHORIZATION TO PARTICIPATE IN THE INFILL INFRASTRUCTURE GRANT PROGRAM

WHEREAS, the State of California, Department of Housing and Community Development (“Department”) issued a Notice of Funding Availability for Infill Infrastructure Grant Program funds dated October 30, 2019, as may be amended from time to time, (“NOFA”), under the Infill Infrastructure Grant Program (“IIG” or “Program”) authorized by Assembly Bill 101 (Stats. 2019, ch. 159, § 20) and Part 12.5 (commencing with section 53559) of Division 31 of the Health and Safety Code.

WHEREAS, the NOFA relates to the availability of approximately \$194 million in funds for projects located in Large Jurisdictions under the IIG Program; and

WHEREAS, the City of Berkeley (“City”) is an Eligible Applicant within the meaning of Section 302(j) of the IIG Program Guidelines, dated October 30, 2019 (“Guidelines”).

NOW, THEREFORE, BE IT RESOLVED, that the City Council does hereby determine and declare as follows:

SECTION 1. That City is hereby authorized and directed to apply for and if awarded, accept the IIG Program funds, as detailed in the NOFA, up to the amount authorized by the Guidelines and applicable state law.

SECTION 2. That the City Manager, or his or her designee, is hereby authorized and directed to act on behalf of City in connection with an award of IIG Program funds, and to enter into, execute, and deliver any and all documents required or deemed necessary or appropriate to evidence the loan of IIG Program funds, the City’s obligations related thereto, and the Department’s security therefore. These documents may include, but are not limited to, a State of California Standard Agreement (“Standard Agreement”), a regulatory agreement, a promissory note, a deed of trust and security agreement, and any and all other documents required or deemed necessary or appropriate by the Department as security for, evidence of, or pertaining to the IIG Program funds, and all amendments thereto (collectively, the “IIG Program Documents”).

SECTION 3. That City shall be subject to the terms and conditions that are specified in the Standard Agreement; that the application in full is incorporated as part of the Standard Agreement; that any and all activities funded, information provided, and timelines represented in the application are enforceable through the Standard Agreement; and that City will use the IIG Program funds in accordance with the Guidelines, other applicable rules and laws, the IIG Program Documents, and any and all IIG Program requirements.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Kelly Wallace, Interim Director, Health, Housing & Community Services  
 Subject: Jointly Apply for No Place Like Home Funding for Maudelle Miller Shirek Community at 2001 Ashby Avenue

RECOMMENDATION

Adopt two Resolutions that enable the proposed Maudelle Miller Shirek Community project to access State of California No Place Like Home program funds by:

1. Authorizing the City Manager to prepare and submit a joint application for Maudelle Miller Shirek Community at 2001 Ashby.
2. Authorizing the City Manager to take actions needed for the City's participation in the No Place Like Home program by adopting state-required terms about submitting applications, entering into the State's Standard Agreement and other documents, and providing mental health services for tenants of the resulting housing.

FISCAL IMPACTS OF RECOMMENDATION

There are no direct fiscal impacts for being a joint applicant for No Place Like Home (NPLH) funds. However, as a joint applicant, the City may share responsibility for completing the affordable housing development. Staff will evaluate the requirements and risks, and if needed, enter into side agreements with project sponsors to clarify responsibilities and mitigate risk to the City.

The City will be required to provide mental health services to tenants of the twelve NPLH units. Berkeley Mental Health already provides mental health services to qualifying people with serious mental illness who reside in Berkeley. In addition, the City of Berkeley funds services provided by contractors to homeless individuals who have a mental illness.

CURRENT SITUATION AND ITS EFFECTS

The proposed Maudelle Miller Shirek Community includes 87 residential units that will be affordable to households earning from 20% of the area median income (AMI) to 80% AMI. Twelve units will be set aside for people who were homeless and have a mental illness.

Resources for Community Development (RCD) requested \$17M in development funding through the City's 2019 Housing Trust Fund Request for Proposals. City Council reserved predevelopment funds on April 23, 2019 and October 29, 2019 totaling \$1,568,000.

RCD is pursuing NPLH through the California Department of Housing and Community Development's (HCD) current Notice of Funding Availability (NOFA). RCD is only eligible to apply for NPLH funding if they jointly apply with a county. Because the City has its own mental health department, the City is considered a 'small county' and is an eligible applicant for the purposes of NPLH. The first attached resolution authorizes a joint application by the project and the City to HCD. The second attached resolution includes terms required by the State for the City's participation in the program, and does not reference a specific project. It commits the City to providing services to tenants in the resulting units, as required by NPLH, and authorizes the City Manager to take the actions necessary to apply for and receive the funds.

Tenants for the resulting units will be selected through the Countywide Coordinated Entry System (CES) which will prioritize people who are homeless and have a qualifying mental health disability and a Berkeley connection. Berkeley Mental Health is already charged with providing services to people in Berkeley with a serious mental illness.

In order for the project to receive the State funds, the City will be required to enter into the State's Standard Agreement for the project but will not receive any funds directly. In 2016, the City submitted a joint application for Affordable Housing and Sustainable Communities funding with Satellite Affordable Housing Associates (SAHA) for Grayson Apartments development, and was required to enter into the same Standard Agreement. The City entered into a side agreements with SAHA that passed responsibilities and liabilities from the City to SAHA as the sponsor. The City will enter into a similar agreement clarifying responsibilities between BRIDGE Housing Corporation and the City for the 2018 joint application for NPLH funds. Staff recommend doing the same thing for Maudelle Miller Shirek Community's funds, and the first attached resolution will provide the City Manager with the authority to do so.

Jointly applying for NPLH funds and committing to services is a Strategic Plan Priority Project, advancing our goal to create affordable housing and housing support service for our most vulnerable community members.

#### BACKGROUND

On July 1, 2016, Governor Brown signed legislation enacting the NPLH program to dedicate up to \$2 billion in bond proceeds to invest in the development of permanent supportive housing for persons who are in need of mental health services and are experiencing homelessness, chronic homelessness, or who are at risk of chronic homelessness. In this program, the State requires a local mental health jurisdiction (in this case, the City) to apply itself, if acting as a developer, or jointly with an affordable housing developer. The state issued approximately \$178 million in its first competitive NPLH round, and expects to award a similar amount in the current round.

The City submitted a joint application for Berkeley Way during the first round of NPLH funding. Joint applicants are typically required to accept joint liability, but the City and joint applicant may enter into a side agreement that establishes project responsibilities and indemnifies the City. Joint applications also demonstrate the City's commitment to advancing affordable housing locally.

#### ENVIRONMENTAL SUSTAINABILITY

There are no environmental sustainability effects directly associated with the recommendations in this report.

#### RATIONALE FOR RECOMMENDATION

The NPLH competitive funds can only be used for affordable housing developments targeted for people who are homeless with a serious mental illness. In addition to development funds, NPLH would provide operating support for the project's homeless units. There are very few sources for operating funds, which can help sustain the project and ensure adequate support for the higher needs households.

#### ALTERNATIVE ACTIONS CONSIDERED

The City could request that RCD jointly apply with Alameda County. Alameda County is part of the large county pool, which was oversubscribed in the first round of NPLH funding. RCD's application may be more competitive in the small county pool.

#### CONTACT PERSON

Jenny Wyant, Community Development Project Coordinator, HHCS, (510) 981-5228

#### Attachment:

- 1: Resolution (Joint Application for No Place Like Home Funds for Maudelle Miller Shirek Community at 2001 Ashby Avenue)
- 2: Resolution (Authorization to Participate in the No Place Like Home Program)

RESOLUTION NO. ##,###-N.S.

JOINT APPLICATION FOR NO PLACE LIKE HOME FUNDS FOR MAUELLE MILLER  
SHIREK COMMUNITY AT 2001 ASHBY AVENUE

WHEREAS, the City of Berkeley (City) and Resources for Community Development (RCD) entered into a predevelopment loan agreement dated May 1, 2019 to support predevelopment activities for Maudelle Miller Shirek Community at 2001 Ashby Avenue (contract number 32000049) as authorized by Resolution No. 68,824-N.S. adopted on April 23, 2019 and amended by Resolution No. 69,163-N.S. adopted on October 29, 2019; and

WHEREAS, on September 27, 2019, the California Department of Housing and Community Development issued a Notice of Funding Availability for competitive No Place Like Home (NPLH) program funds; and

WHEREAS, in order for RCD to pursue funding through the NPLH program, RCD must submit a joint application with either the City or Alameda County; and

WHEREAS, RCD determined that a joint application with the City would be more competitive in the current NPLH funding round; and

WHEREAS, the City may be required to accept a portion of the project's liability as a condition of the joint application, though the risk may be mitigated by a side agreement negotiated between the City and RCD.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that it approves the submission of a joint application with RCD or their affiliate for the NPLH application for Maudelle Miller Shirek Community.

BE IT FURTHER RESOLVED that the City Manager shall work to mitigate risk to the City from serving as a joint applicant, including negotiating an agreement with RCD regarding mutual responsibilities.

BE IT FURTHER RESOLVED that the City Manager, or her designee, is authorized to execute in the name of Applicant the NPLH Program Application Package and the NPLH Program Documents as required by the Department for participation in the NPLH program.

BE IT FURTHER RESOLVED that the City Manager, or her designee, is hereby authorized to execute all original or amended documents or agreements to effectuate this action; a signed copy of said documents, agreements, and any amendments will be kept on file in the Office of the City Clerk.



RESOLUTION NO. ##,###-N.S.

AUTHORIZATION TO PARTICIPATE IN THE NO PLACE LIKE HOME PROGRAM

WHEREAS, the State of California, Department of Housing and Community Development (“Department”) issued a Notice of Funding Availability for Round 2 funds dated September 27, 2019, as may be amended from time to time, (“NOFA”), under the No Place Like Home Program (“NPLH” or “Program”) authorized by Government Code section 15463, Part 3.9 of Division 5 (commencing with Section 5849.1) of the Welfare and Institutions Code, and Welfare and Institutions Code section 5890;

WHEREAS, the NOFA relates to the availability of approximately \$622 million in Competitive Allocation funds under the NPLH Program; and

WHEREAS, the City of Berkeley (“City”) is an Applicant within the meaning of Section 101(c) of the NPLH Program Guidelines, dated September 2019 (“Guidelines”).

NOW, THEREFORE, BE IT RESOLVED, that the City Council does hereby determine and declare as follows:

SECTION 1. That City is hereby authorized and directed to apply for and if awarded, accept the NPLH Program funds, as detailed in the NOFA, up to the amount authorized by the Guidelines and applicable state law.

SECTION 2. That the City Manager, or his or her designee, is hereby authorized and directed to act on behalf of City in connection with an award of NPLH Program funds, and to enter into, execute, and deliver any and all documents required or deemed necessary or appropriate to evidence the loan of NPLH Program funds, the City’s obligations related thereto, and the Department’s security therefore. These documents may include, but are not limited to, a State of California Standard Agreement (“Standard Agreement”), a regulatory agreement, a promissory note, a deed of trust and security agreement, and any and all other documents required or deemed necessary or appropriate by the Department as security for, evidence of, or pertaining to the NPLH Program funds, and all amendments thereto (collectively, the “NPLH Program Documents”).

SECTION 3. That City shall be subject to the terms and conditions that are specified in the Standard Agreement; that the application in full is incorporated as part of the Standard Agreement; that any and all activities funded, information provided, and timelines represented in the application are enforceable through the Standard Agreement; and that City will use the NPLH Program funds in accordance with the Guidelines, other applicable rules and laws, the NPLH Program Documents, and any and all NPLH Program requirements.

SECTION 4. That City will make mental health supportive services available to each project’s NPLH tenants for at least 20 years, and will coordinate the provision of or referral to other services (including, but not limited to, substance use services) in accordance with

the City's relevant supportive services plan, and as specified in Section 202(n)(1) of the Guidelines.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: LaTanya Bellow, Director of Human Resources  
 Subject: 2020 Health Plan Changes

RECOMMENDATION

Adopt two Resolutions:

1) Approving rates for the Kaiser Health Maintenance Organization (HMO) health plans as follows:

- (a) 2.58% increase for Kaiser S1 Group #60 (Active Group);
- (b) 2.07% increase for the HSA-Qualified Deductible HMO Plan (Active Group)
- (c) 6.01% increase for Pre-Medicare Eligible Retirees (Retiree Group); and
- (d) -0.004% decrease for Post-65 Senior Advantage (Retiree Group)

2) Approving rates for the Sutter Health Plus health plans as follows:

- (a) 5.37% increase for the Active HMO ML30 group; and
- (b) 5.41% increase for the Pre-Medicare retiree group.

The health plan premium rates will be effective for the period of January 1, 2020 through December 31, 2020.

FISCAL IMPACTS OF RECOMMENDATION

Health care premiums are quoted on a calendar year based on standard industry practices. The City budgets are on a fiscal year basis so half of the premium cost is known and the remainder is estimated based on Budget procedures and trends in medical premium costs.

Funding for the health plan premium increases is included in the Fiscal Year (FY) 2020 adopted budget. Premiums are paid one (1) month in advance; e.g., the January 2020 premium is paid in December 2019.

**Active Employees:** In FY 2019, actual health insurance premium costs totaled \$21,869,109 (\$19,853,039 for Kaiser and \$2,016,070 for Sutter Health Plus). The December 4, 2018, staff report estimated that the health care cost for FY 2019 would be \$21,879,927

(\$19,863,547 for Kaiser and \$2,016,380 for Sutter Health Plus), so the actual cost was actually \$10,818 below projections.

The estimated expenditures for the first half of FY 2020 (July 1, 2019 to December 31, 2019) will total approximately \$11,100,574 (\$10,011,686 for Kaiser and \$1,088,888 for Sutter Health Plus). The estimated expenditures for the second half of FY 2020 (January 1, 2020 to June 30, 2020) will total approximately \$11,417,348 (\$10,269,987 for Kaiser and \$1,147,361 for Sutter Health Plus), for a total FY 2020 projected cost of \$22,517,922. This represents an approximate increase of \$648,813 above FY 2019 actual premium costs.

	<b>Fiscal Year 2020 First Half (July 1, 2019 to December 31, 2019)</b>	<b>Fiscal Year 2020 Second Half (January 1, 2020 to June 30, 2020)</b>	<b>Fiscal Year 2020 Total</b>
Kaiser	\$10,011,686	\$10,269,987	\$20,281,673
Sutter Health Plus	\$1,088,888	\$1,147,361	\$2,236,249
<b>Totals</b>	<b>\$11,100,574</b>	<b>\$11,417,348</b>	<b>\$22,517,922</b>

Funding for the health premium increases for Active Employees from January 1 to June 30, 2019 was included as part of the Council authorized expenditures included in the FY 2020 adopted budget.

The estimated cost for the first half of fiscal year 2021 (July 1 to December 31, 2020) will total approximately \$11,417,348 (\$10,269,987 for Kaiser and \$1,147,361 for Sutter Health Plus). Funding for July 1 to December 31, 2020 will be included in the FY 2021 adopted budget.

**The Payroll Deduction Trust Fund, budget code 930-9701-410-2011, provides for these premiums.**

**Retired Employees:** The City’s Retiree Health Premium Assistance Plan benefit contribution is capped at an annual increase of 4.5% for Miscellaneous and Berkeley Fire Fighters Association retirees, and 6% for Berkeley Police Association (BPA) retirees. Any premium increase above the City’s premium assistance cap is borne by the retirees as an out-of-pocket expense.

Retirees represented by the Berkeley Police Association who retired prior to September 19, 2012 and have a minimum of 10 years of City service (up to a maximum of 20 years of City service) are paid a pro-rated amount equal to the Active two-party Kaiser Plan rate (Berkeley Police Supplemental Retirement Plan). Currently there are 148 participants receiving this benefit at a cost to the City of \$199,570 per month, or \$2,394,840 per year. The rate increase of 2.58% for the Kaiser Health Plan Active Employee group will result in an increase of approximately \$5,149 per month, or \$61,788 per year. The Berkeley Police Supplemental Retirement Plan is a closed group; members retiring on or after

September 19, 2012 are eligible for the Retiree Health Premium Assistance Plan as noted above.

Funding for retiree health premium assistance plan benefits comes from trust funds established for this purpose. The City has established separate retiree health premium assistance plans and trust agreements for the various Unions and unrepresented employees. The City has established a practice to pre-fund each of these trust funds for the purpose of having assets available to pay for the benefit.

#### CURRENT SITUATION AND ITS EFFECTS

The City has contracts with Kaiser and Sutter Health Plus to provide health benefits for all benefited employees, with 1,126 employees in the Kaiser HMO plan and 124 employees in the Sutter Health Plus plan. There are 188 employees receiving cash in lieu benefits.

In September 2019, Kaiser and Sutter Health Plus provided the City with insurance premium rate quotes for calendar year 2020. Kaiser quoted an increase of 3.09% for the Kaiser S1 Group. The City is required to pay up to the Kaiser S1 Group plan for all active benefitted City employees, thus this represented a significant impact to the City. Staff and Keenan & Associates (Keenan), the City's benefits broker, were able to reduce the increase to the Kaiser S1 Group to 2.58% by renegotiating the 1% load for specialty benefits down to a 0.5% load.

The final rates for all the Kaiser plans are as follows:

- 2.58% increase for the Kaiser S1 Active Group;
- 2.07% increase for Kaiser HSA-Qualified Deductible HMO Active Group Plan;
- 6.01% increase for the Pre-Medicare Retiree Group; and
- 0.004% decrease for the Post-65 Senior Advantage Retiree Group.

The final rates for the Sutter Health Plus plans are as follows:

- 5.37% increase for the Active HMO ML30 group; and
- 5.41% increase for the Pre-Medicare retiree group.

The health plan rates are based primarily on service utilization and claims experience. So these factors, along with rising medical costs, are the reasons given for the premium increases.

The 2020 rates for Active Employees will be:

Active Employees	Coverage Level	2019 Monthly Premium Rate	2020 Monthly Premium Rate	City Pays	Employee Pays
Kaiser HMO S1 Group	Single	\$776.53	\$796.55	\$796.55	\$0
	Two Party	\$1,553.07	\$1,593.09	\$1,593.09	\$0
	Family	\$2,065.58	\$2,118.81	\$2,118.81	\$0
Sutter Health Plus	Single	\$766.90	\$808.11	\$796.55	\$11.56
	Two Party	\$1,534.01	\$1,616.35	\$1,593.09	\$23.26
	Family	\$2,041.55	\$2,151.09	\$2,118.81	\$32.28

Employees enrolled in a health plan with premiums higher than Kaiser's rates must pay the difference in premium costs, so employees enrolled with Sutter Health Plus will have to pay the difference.

The Affordable Care Act (ACA) requires employers to offer health insurance that is affordable and provides minimum essential coverage to at least 95% of eligible employees. An eligible employee is anyone who works an average of 30 hours per week within a 12-month period (the City of Berkeley's 12-month period is November 1 through October 31). Employers are required to offer health coverage, regardless of whether the employee would normally not be eligible for health insurance benefits under the employer's own rules. These employees are considered full-time equivalent for the purpose of the ACA.

Although the ACA only requires employers to offer health coverage to 95% of eligible employees, the City offers health coverage to 100% of all ACA eligible employees. This ensures that all ACA eligible employees have the opportunity to receive health insurance coverage.

The plan offered by the City that meets the requirements under the ACA (affordable and provides minimum essential coverage) is the Kaiser HSA-Qualified Deductible HMO Plan. The 2019 monthly premium rates for this plan will be:

ACA Qualified Plan – Active Employees	Coverage Level	2020 Monthly Premium Rate
Kaiser HSA-Qualified Deductible HMO Plan	Single	\$545.76
	Two Party	\$1,091.52
	Family	\$1,544.51

The City is required to pay 50% of the employee single monthly premium, and the difference is paid by the employee. City staff completed a census, and as of October 18,

2019, four (4) employees will be eligible for this plan. The additional annual cost to the City would be \$17,610 if all four (4) eligible employees enrolled in this plan.

Retiree Group Plans 2020 Rates:

<b>Pre-Medicare Retirees</b>	<b>Coverage Level</b>	<b>2019 Monthly Premium Rate</b>	<b>2020 Monthly Premium Rate</b>
Kaiser HMO	Single	\$1,322.61	\$1,402.07
	Two Party	\$2,645.23	\$2,804.15
	Family	\$3,742.99	\$3,967.87
Sutter Health Plus HMO	Single	\$1,029.57	\$1,085.27
	Two Party	\$2,059.38	\$2,170.71
	Family	\$2,740.47	\$2,888.58

<b>Post 65 Retirees</b>	<b>Coverage Level</b>	<b>2019 Monthly Premium Rate</b>	<b>2020 Monthly Premium Rate</b>
Kaiser Senior Advantage	Single	\$427.53	\$425.63
	Two Party	\$855.06	\$851.26

Currently, Sutter Health Plus does not offer a Medicare coordinated plan. Retirees bear most of the health plan rate increases as an out-of-pocket expense because the benefits from the City's Retiree Health Premium Assistance Plan Trust is capped at a 4.5% annual increase (6% for BPA retirees).

**BACKGROUND**

The City has two (2) group health plans for employees: 1) a Kaiser HMO plan and 2) a Sutter Health Plus HMO plan. The City has a contractual obligation to pay the equivalent of the basic Kaiser rates, including eligible dependents, for all benefited employees. Employees enrolled in a health plan with premiums higher than Kaiser's rates must pay the difference in cost of the premium. Therefore employees who enroll in the Sutter Health Plus HMO plan will be responsible for the difference.

Separately, the City offers two (2) group health plans for retirees: 1) a Kaiser HMO plan and 2) a Sutter Health Plus HMO plan. Employees who retired prior to July 1, 1998 pay the full cost of the health insurance premium. Employees who retired after July 1, 1998, who meet certain eligibility criteria, are eligible for benefits under the City's Retiree Health Premium Assistance Plan.

Under the City's Retiree Health Premium Assistance Plan, the City pays a portion of the employee's health insurance premiums. The amount is prorated based on the employee's years of service. The City's annual contribution increase is capped at 4.5% (6% for BPA retirees). The retiree pays the difference between the City's monthly contribution and the

actual monthly insurance premium charged by the health plan he or she has elected for retiree medical coverage.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

RATIONALE FOR RECOMMENDATION

Health insurance is an employee benefit required under various collective bargaining agreements with the City.

ALTERNATIVE ACTIONS CONSIDERED

Staff and Keenan were satisfied with the rate decrease from Kaiser, Sutter Health Plus came in with a higher increase in their rates, which will cause employees enrolled in this plan to be responsible for the difference in cost. Full-time benefited employees are able to enroll in the Kaiser plan at no cost.

CONTACT PERSON

LaTanya Bellow, Director of Human Resources, Human Resources, (510) 981-6807.

Attachments:

1. Resolution to authorize rate changes for Kaiser
2. Resolution to authorize rate changes for Sutter Health Plus



RESOLUTION NO. -N.S.

AUTHORIZING RATE CHANGES FOR THE KAISER HEALTH PLANS  
EFFECTIVE JANUARY 1, 2020 THROUGH DECEMBER 31, 2020

WHEREAS, the City pays for the full health insurance premiums for all employees enrolled under the Kaiser Health Maintenance Organization (HMO) health plan.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that a rate increase of 2.58% for the Active Employee Kaiser HMO Group; a 2.07% rate increase for the HSA-Qualified Deductible HMO Group; a 6.01% rate increase for the Pre-Medicare Retiree Group; and a 0.004% rate decrease for the Post-65 Retiree Senior Advantage group, all effective January 1, 2020, through December 31, 2020, as follows:

Active Group	City Pays	Employee Pays	Total
<b>Kaiser S1 (HMO) Group #60 (\$0 office visits, \$5 RX)</b>			
Single	\$796.55	-0-	\$796.55
Two Party	\$1,593.09	-0-	\$1,593.09
Family	\$2,118.81	-0-	\$2,118.81
<b>HSA-Qualified Deductible HMO Plan (Deductible - \$2,700 single, \$5,450 family)</b>			
Single	\$272.88	\$272.88	\$545.76
Two Party	\$272.88	\$818.64	\$1,091.52
Family	\$272.88	\$1,271.63	\$1,544.51

Retiree Groups	City Pays	Employee Pays	Total
<b>Early Retiree (Pre-Medicare) Retiree Group (\$5 office visits, \$5 RX)</b>			
Single	Varies	Varies	\$1,402.07
Two Party	Varies	Varies	\$2,804.15
Family	Varies	Varies	\$3,967.87
<b>Senior Advantage (Post-65 Retiree) Group (\$5 office visits, \$5 RX)</b>			
Single	Varies	Varies	\$425.63
Two Party	Varies	Varies	\$851.26

BE IT FURTHER RESOLVED that a record signature copy of said contract and any amendments reflecting these rate increases to be on file in the Office of the City Clerk.

RESOLUTION NO. -N.S.

AUTHORIZING RATE CHANGES FOR SUTTER HEALTH PLUS HEALTH PLANS  
EFFECTIVE JANUARY 1, 2020 THROUGH DECEMBER 31, 2020

WHEREAS, the City pays for the health insurance premiums for the Sutter Health Plus Health Maintenance Organization (HMO) plans up to the equivalent of the Kaiser HMO plan rate for all employees except employees.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that a rate increase of 5.37% for the Sutter Health Plus HMO for Active Employees, and a rate increase of 5.41% for the Early Retiree Sutter Health Plus HMO group plan, all effective January 1, 2020 through December 31, 2020.

Active Group	City Pays	Employee Pays	Total
<b>Sutter Health Plus HMO Group #116006 (\$10 office visit, \$10/\$30/\$60 RX)</b>			
Single	\$796.55	\$11.56	\$808.11
Two Party	\$1,593.09	\$23.26	\$1,616.35
Family	\$2,118.81	\$32.28	\$2,151.09

Retiree Group	City Pays	Employee Pays	Total
<b>Pre-Medicare Retiree Sutter Health Plus HMO (Group #116006 - \$10 office, \$10/\$30/\$60 RX)</b>			
Single	Varies	Varies	\$1,085.27
Two Party	Varies	Varies	\$2,170.71
Family	Varies	Varies	\$2,888.58

BE IT FURTHER RESOLVED that a record signature copy of said contract and any amendments reflecting these rate increases to be on file in the Office of the City Clerk.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: LaTanya Bellow, Director of Human Resources  
 Subject: Contract No. 31900092 Amendment: Basic Pacific, Third-Party Administrator for COBRA Administration and Retiree Health Premium Assistance Plan Administration

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute a contract amendment to Contract No. 31900092 with BASIC Pacific (BASIC) for COBRA Plan administration and administration of the Retiree Health Premium Assistance Plan for non-sworn retirees and other retiree medical programs for sworn Fire and Police, for the period covering October 1, 2018, through December 31, 2022; for a total cost not to exceed \$405,000.

FISCAL IMPACTS OF RECOMMENDATION

The total estimated cost for this contract is \$405,000; an estimated \$60,000 expenditure from the start of the contract through calendar year 2019, and an estimated \$115,000 for each calendar year of 2020, 2021, and 2022. Costs are predicated on the number of retirees.

BASIC will administer the Plans at the following rates:

Cobra Administration

COBRA Administration	\$.35 PEPM
COBRA Direct Pay	\$140.00 per month
CalCOBRA Administration/Direct Bill	\$1000.00 per month

Retiree Billing Administration

Retiree Billing Administration	\$12.50 PRPM
Retiree Direct Pay	\$1000.00 per month
Retiree Out of Area Admin/Direct Bill	\$2500.00 per month (includes additional checks)

Funding is available for this contract in allocations from the following budget codes:

<b>Budget Code</b>	<b>Retiree Medical Programs</b>	<b>Costs</b>
731-99-900-900-0000-000-412-612990-	Berkeley Police Association	\$16,000
736-99-900-900-0000-000-412-612990-	Berkeley Fire Fighters Association	\$74,000
722-99-900-900-0000-000-412-612990-	International Brotherhood of Electrical Workers	\$5,000
723-99-900-900-0000-000-412-612990-	Public Employees Union, Local One	\$70,000
724-99-900-900-0000-000-412-612990-	Unrepresented Unit Z1-Department Head	\$13,000
725-99-900-900-0000-000-412-612990-	Unrepresented Unit Z2	\$33,000
726-99-900-900-0000-000-412-612990-	Service Employees International Union, Local 1021 Community Services Unit/Part-Time Recreation Leaders Association	\$87,000
727-99-900-900-0000-000-412-612990-	Service Employees International Union, Local 1021 Maintenance and Clerical Chapter	\$107,000
<b>Total</b>		<b>\$405,000</b>

### CURRENT SITUATION AND ITS EFFECTS

The City is required by the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) to offer continuation coverage rights to its employees. The City also has contractual obligations under the various Memoranda of Understanding/Agreements with non-sworn employees and sworn Fire and Police Associations that specify the amount the City contributes towards post-employment retiree medical benefits. Therefore, the City has a contract with BASIC to assist with COBRA duties and responsibilities and to administer the various post-employment retiree medical benefits. Responsibilities include: furnishing all required COBRA notifications, enrolling the eligible retirees into the City's retirement health plans, calculating and collecting the fees owed by each retiree through their CalPERS pension benefit, coordinating the benefit with the City's contribution on the employee's behalf, reconciling and paying the health carrier bills, and issuing 1099 tax forms to eligible retirees. BASIC also administers the annual Open Enrollment for participating retirees. Currently, there are 325 participating non-sworn, Fire, and Police retirees.

### BACKGROUND

As part of various union contract negotiations, the City agreed to provide assistance in the payment of retiree medical premiums for all sworn Police employees (1989), sworn Fire employees, (1997), and non-sworn employees (1998). In 1998, a joint union-management committee (Retiree Medical Committee) was formed consisting of representatives of each of the affected non-sworn unions and staff from the Human Resources and Finance Departments. An actuarial valuation was requested from the firm of Milliman Consultants and Actuaries to provide cost projections for various benefit

scenarios. The Retiree Medical Committee reached mutual agreement on a benefit plan and named it the Retiree Health Premium Assistance Plan (RHPAP).

In 1999, the City issued a request for proposal (RFP) to administer the RHPAP. The Retiree Medical Committee reviewed five administrators and unanimously agreed to award the contract to The Lipman Company (TLC), who administered the RHPAP until December 2018, when the privately owned company announced their closure due to retirement.

BASIC had just been contracted by the City in October 2018 to administer COBRA benefits when they were approached to administer the RHPAP as well. BASIC agreed to take on the additional duties and, after a quick learning period, have settled into the duties of this very unique City benefit.

The original contract BASIC had agreed to, not to exceed \$40,000, was only to cover the cost of COBRA administration. Now that they have taken on the RHPAP duties their estimated annual costs will be \$115,000. In comparison, TLC annual costs were \$117,000 and they did not handle COBRA administration, as a result, BASIC's handling of both programs will save the City an estimated \$46,000 over the life of the contract.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

#### RATIONALE FOR RECOMMENDATION

COBRA continuation of coverage rights is required by Federal regulations, and The Retiree Health Premium Assistance Plan and sworn retiree benefits are employee benefits required under various collective bargaining agreements with the City. Contracting with the Third Party Administrator, BASIC, is the most efficient and cost effective way to administer these benefits.

#### ALTERNATIVE ACTIONS CONSIDERED

The City sent out a request for proposals through its benefits broker, Keenan and Associates, and no companies are familiar enough with the unique benefits of the City's RHPAP than the current administrator. Accordingly, the best option would be to amend the contract with BASIC.

#### CONTACT PERSON

LaTanya Bellow, Director of Human Resources 981-6807

#### Attachments:

1. Resolution

RESOLUTION NO. -N.S.

EXECUTE A CONTRACT AMENDMENT TO CONTRACT NO. 31900092 WITH BASIC PACIFIC FOR COBRA ADMINISTRATION AND THE ADMINISTRATION OF THE RETIREE HEALTH PREMIUM ASSISTANCE PLAN AND OTHER RETIREE MEDICAL PROGRAMS

WHEREAS, the City of Berkeley would like BASIC Pacific to provide administrative services for COBRA and for the Retiree Health Premium Assistance Plan and other retiree medical programs; and

WHEREAS, funds are available and will be budgeted in future years in an amount not to exceed \$405,000 through December 31, 2022;

NOW THEREFORE, BE IT RESOLVED that the Council authorizes the City Manager to approve An amended contract and any subsequent amendments with BASIC Pacific for administration of COBRA and of the Retiree Health Premium Assistance Plan for non-sworn retirees and other retiree medical programs for sworn Fire and Police not to exceed \$405,000, for the period covering October 1, 2018, through December 31, 2022.

BE IT FURTHER RESOLVED that a record signature copy of said contract and any amendments to be on file in the Office of the City Clerk.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Savita Chaudhary, Director, Information Technology  
Subject: Contract No. 10542 Amendment: ServiceNow, Inc. for Information Technology Service Management, Project Management, and Government Risk and Compliance Software Licenses

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10542 with ServiceNow, Inc., for the extension of software licenses of the IT Service Management, Business Management, and Governance Risk and Compliance (GRC) modules, for an additional amount not-to-exceed \$266,076 and a total not-to-exceed amount of \$527,832 from February 14, 2017 to June 30, 2022.

FISCAL IMPACTS OF RECOMMENDATION

This amendment will extend the hosting and access of the ServiceNow portal through June 30, 2022. Funding for this extension in the amount of \$266,076 will be provided by the Department of Information Technology’s IT Cost Allocation Fund, General Fund, and the Sanitary Sewer Fund.

Spending for this amendment in future fiscal years is subject to Council approval of the proposed city-wide budget and Annual Appropriation Ordinances.

	FY 20 - Software Licenses for ServiceNow Service Management, Project Management, and GRC
\$88,692	Budget Codes: 680-35-363-380-0000-000-472-613130- (\$87,252) 011-35-363-380-0000-000-472-613130- (\$1,440) 611-35-363-380-0000-000-472-613130- (\$240)
\$88,692	FY 21 - Software Licenses for ServiceNow Service Management, Project Management, and GRC

Budget Codes:

- 680-35-363-380-0000-000-472-613130- (\$87,252)
- 011-35-363-380-0000-000-472-613130- (\$1,440)
- 611-35-363-380-0000-000-472-613130- (\$240)

FY 22 - Software Licenses for ServiceNow Service Management, Project Management, and GRC

\$88,692

Budget Codes:

- 680-35-363-380-0000-000-472-613130- (\$87,252)
- 011-35-363-380-0000-000-472-613130- (\$1,440)
- 611-35-363-380-0000-000-472-613130- (\$240)

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*\$266,076 Total NTE FY 20-22 Amendment 10542A for Software Licenses*

CURRENT SITUATION AND ITS EFFECTS

The Department of Information Technology’s Help Desk is the ‘face of IT’ and is highly dependent on the incident and service request fulfillment processes. Staff are currently using ServiceNow’s Incident Management, Change Management, Service Request, and Problem Management modules to assist with their service request fulfillment process. These modules integrates with other software tools, automates workflows, and provides online self-service management in addition to providing knowledge base for shared articles across all IT divisions.

The Department of Information Technology’s projects team is using ServiceNow’s Project Management module to centralize project tracking, tasks, and resource management for the City’s technology project. The Project Management module also provides a wide range of reports and dashboards to help make informed decisions for utilizing our resources effectively in alignment with Digital Strategic Plan and City’s Strategic Goals to serve the City of Berkeley community.

BACKGROUND

The Department of Information Technology previously utilized a custom home-grown software application to manage requests for service since 2001, called DoIT. DoIT lacked asset management and project management capabilities, as well as the ability to track service level agreements (SLAs) with other departments and vendors.

In 2015 the Department of Information Technology began looking at replacement solutions that would serve both the daily needs of a service management and asset management solution, as well as the longer term needs of managing IT projects and IT resources.

In September 2016, the City released a Request for Proposal (RFP) Specification No. 16-11072-C for an Information Technology Service Management and Asset Management



solution. The City received three qualified vendor responses. In November 2016, the review committee selected the top two vendors to participate in two rounds of demos.

In January 2018, Staff launched ServiceNow's Incident Management, Change Management, Service Request, and Problem Management modules and in August 2018 launched went live with the Project Management modules.

#### RATIONALE FOR RECOMMENDATION

In addition to meeting the City's operational and business requirements, ServiceNow meets all security compliance standards for HIPAA (Health Information), Payment Card Industry (PCI) and Department of Justice (DOJ) and is meets the federal standards for FEDRAMP Certification. Furthermore, Staff do not currently have the capacity to implement a new service management tool.

Continuing the use of ServiceNow allows Staff to maintain and expand resource management and project tracking with advanced workflows, and reporting capabilities thus resulting in efficient and effective implementation of IT projects to serve the City of Berkeley Community.

#### ALTERNATIVE ACTIONS CONSIDERED

An alternative consideration is to revert back to the old home-grown DoIT application. This will be cost prohibitive due to the significant staff time requirements to develop, troubleshoot as well as to provide maintenance and support of the application. The goal of the Digital Strategic plan is to eliminate custom built software where feasible and go with Commercial off the Shelf (COTS) solution to provide modern technological solutions to serve the City of Berkeley community.

#### ENVIRONMENTAL SUSTAINABILITY

ServiceNow Corporation will conduct some of their work remotely, and when they do come on-site for face to face meetings, they will be working exclusively over multiple days with the IT Department to minimize both travel costs and greenhouse gas emissions related to travel. Migrating the system from on-premise to cloud based will also reduce the server and storage computing needs as well as ongoing maintenance needed to maintain the equipment. In addition, although not directly related to the deployment of the IT Service Management and Asset Management project, the results of the project will enable the IT Department to input, track, and complete requests for services via web-based tools for CoB staff, which will reduce travel associated with on-site visits to City offices.

#### CONTACT PERSON

Savita Chaudhary, Director, Information Technology, 510-981-6541

Attachments:

1: Resolution - ServiceNow Corporation

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 10542 AMENDMENT: SERVICENOW, INC. FOR IT SERVICE  
MANAGEMENT, ASSET MANAGEMENT, AND PROJECT MANAGEMENT LICENSES

WHEREAS, on September 23, 2016, the City issued a Request for Proposals (RFP) for an Information Technology Service Management and Information Technology Asset Management (Specification No.16-11072-C) and received three qualifying vendor responses; and

WHEREAS, the RFP review committee evaluated each proposal and determined that the ServiceNow Corporation's proposal best met the City's operational, technological, and fiscal requirements; and

WHEREAS, in 2018, Staff went live with ServiceNow's Incident Management, Change Management, Service Request, and Problem Management modules to assist with their service request fulfillment process and Project Management modules; and

WHEREAS, in addition to meeting the City's operational and business requirements, ServiceNow meets all security compliance standards for HIPAA (Health Information), Payment Card Industry (PCI) and Department of Justice (DOJ) and is meets the federal standards for FEDRAMP Certification; and

WHEREAS, funds have been allocated Fiscal Year 2020-2022's IT Cost Allocation, General Fund, and Sanitary Sewer Fund, and funding in future fiscal years is subject to council approval of the proposed city-wide budget and annual appropriation ordinances.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 10542 with ServiceNow, Inc., for the extension of software licenses of the IT Service Management, Business Management, and Governance Risk and Compliance (GRC) modules, for an additional amount not-to-exceed \$266,076 and a total not-to-exceed amount of \$527,832 from February 14, 2017 to June 30, 2022.



Office of the City Manager

CONSENT CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Scott Ferris, Director, Parks Recreation & Waterfront

Subject: Waiver of City Ordinance No. 7650-N.S. for Berkeley Tuolumne Camp Reconstruction Contracts

RECOMMENDATION

Adopt a Resolution authorizing a waiver of City Ordinance No. 7,650-N.S. (which adds Chapter 13.105 to the Berkeley Municipal Code to Adopt a Sanctuary Contracting Ordinance) for Berkeley Tuolumne Camp Reconstruction Project contracts.

FISCAL IMPACTS OF RECOMMENDATION

There are no fiscal impacts associated with the recommended action. If the requested waiver is not granted, up to \$35 Million in Federal grant funding for the Project may be rescinded.

CURRENT SITUATION AND ITS EFFECTS

The City of Berkeley Tuolumne Camp Reconstruction Project is partially funded by a Federal Emergency Management Agency (FEMA) Public Assistant Grant. To be eligible for this funding, all procurement activities must comply with federal regulations to maximize free and open competition. If the federal government determines that the City's procurement process for any particular Berkeley Tuolumne Camp Reconstruction Project contract is not compliant with federal regulations, it may rescind funding for all costs incurred under the non-compliant contract.

On May 14, 2019, the Council adopted Ordinance No. 7,650-N.S, which requires all public works, construction bids, requests for information, requests for proposals or any other solicitation issued by the City to include notice of the prohibition on use of City resources with any Person or Entity that provides the United States Immigration and Customs Enforcement, and any subdivision thereof, with any "Data Broker" or "Extreme Vetting" services, unless a waiver is granted.

The Berkeley Tuolumne Camp Reconstruction Project budget is \$60 Million. The City has received \$25 Million from its insurance provider to-date. The City's FEMA grant will cover eligible Project costs not paid for by insurance. At this time, the difference between the Project budget and insurance proceeds is \$35 Million.

City ordinance No. 7,650-N.S. allows for a waiver based on a specific determination that no reasonable alternative exists, taking into consideration the following:

1. The intent and purpose of the ordinance;
2. The availability of alternative services, goods and equipment; and
3. Quantifiable additional costs resulting from use of available alternatives.

Each of these factors is discussed below.

1. If the waiver is granted, Berkeley Tuolumne Camp contracts would not include notice of the prohibition in qualification, proposal, or bid solicitations. Once the preferred contractor is selected, however, they will be asked to voluntarily complete the "Sanctuary City Compliance Statement". As such, the intent and purpose of the ordinance will be applied to the maximum extent feasible while still complying with federal procurement guidelines. Through this voluntary process, it is possible that all contracts for the Berkeley Tuolumne Camp Project will be in full compliance with Ordinance No. 7650-N.S.

2. Rejection of a qualified contractor or vendor based solely on their inability to comply with Ordinance No. 7650-N.S. would be in clear violation of federal guidelines that require maximum free and open competition, and prohibit the placement of unreasonable requirements on firms in order to qualify them to do business (Code of Federal Regulations §200.319).

3. If the waiver is not granted, FEMA may rescind up to \$35 Million in grant funding.

#### BACKGROUND

Berkeley Tuolumne Camp, established in 1922, is a 30-acre property operated under a Special Use Permit with the USFS. The camp has served primarily as a family camp, but also offered teen leadership programs, adult hiking camps, and private group rental opportunities. Prior to the fire, BTC had the capacity to host approximately 280 campers, 60 staff members, and 10 counselors-in-training at one time, and served over 4,000 campers each year. The major facilities at the Camp included a Dining Hall; a Recreation Hall, 77 small single-story wood-frame camper tent cabins; staff cabins; maintenance and storage structures; a bridge across the river; parking and loading areas, and electric, water supply, and wastewater utilities.

In August of 2013, the Rim Fire destroyed Berkeley Tuolumne Camp (BTC) and in December was declared a federal disaster. The majority of structures at BTC were destroyed by the fire. The property was covered by the City's insurance policy, and insurance proceeds will be the primary source of reconstruction funds. The City was also been awarded a Public Assistance Grant from the Federal Emergency Management Agency (FEMA) and California Office of Emergency Services (CalOES) to partially fund reconstruction.

The City has been working in partnership with the U.S. Forest Service (USFS), FEMA, Cal OES and Tuolumne County to stabilize and remove debris and hazardous trees from the site, to complete National Environmental Protection Act (NEPA) and California Environmental Quality Act (CEQA) compliance, to develop Project Plans and to acquire Project permits for the re-building of Berkeley Tuolumne Camp. The Project is currently in the final design stage, and is anticipated to be advertised for bidding in January 2020.

The total budget for the Berkeley Tuolumne Camp Project is \$60M. This cost will be covered largely by insurance, FEMA and state Public Assistance Grant funding, along with City funds approved by Resolution 67,889-N.S. (April 4, 2017). The City has received a total of \$25 Million to date from insurance. City staff is negotiating with insurance providers regarding additional cost recovery. FEMA and Cal OES will pay for the majority (93.25%) of eligible costs not covered by insurance proceeds. City staff currently project that the total FEMA grant at Project completion will be between \$6 Million to \$35 Million. On April 4, 2017, City Council allocated \$3.3M of City funds from the Catastrophic Reserve for the Project to cover the required local match (Resolution No. 67,889-N.S.).

#### ENVIRONMENTAL SUSTAINABILITY

The City approved the Project CEQA documents on January 22, 2019. The construction of the Berkeley Tuolumne Camp facilities will involve appropriate restoration of forest landscapes in order to achieve sustainable riverine and upland ecosystems that provide a broad range of benefits to humans and the ecosystem. All construction activities will implement Best Management Practices (BMPs) to encourage biodiversity, preserve resources, and maintain riparian and other natural habitats. Revegetation and reforestation activities will emphasize native vegetative cover and minimize exposed bare soil and erosion. This project will comply with the City's Climate Action Plan in the following ways: increased energy efficiency in public buildings, and providing a public resource for community outreach and empowerment.

#### RATIONALE FOR RECOMMENDATION

Up to \$35 Million in Project funding may be rescinded if no waiver is granted. The City does not have sufficient funds to allocated complete the Project without federal funding.

#### ALTERNATIVE ACTIONS CONSIDERED

None. The City cannot complete the Project without federal funding.

#### CONTACT PERSON

Scott Ferris, Director, PRW, 981-6700  
Liza McNulty, Project Manager, PRW, 981-6437

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

WAIVER OF ORDINANCE NO. 7,650-N.S. FOR BERKELEY TUOLUMNE CAMP CONTRACTS

WHEREAS, the City operated the Berkeley Tuolumne Camp, a residential family camp, since 1922 on United States Forest Service land pursuant to a special use permit; and

WHEREAS, in August 2013, the Berkeley Tuolumne Camp was destroyed by the California Rim Fire; and

WHEREAS, in December, 2013, the City received a Federal Emergency Management Agency (FEMA) Public Assistance Grant for the reconstruction of Berkeley Tuolumne Camp; and

WHEREAS, rejection of a qualified contractor or vendor based solely on their inability to comply with Ordinance No. 7,650-N.S. would be in violation of federal guidelines that require maximum free and open competition, and prohibit the placement of unreasonable requirements on firms in order to qualify them to do business (Code of Federal Regulations §200.319); and

WHEREAS, if the waiver of Ordinance No. 7,650-N.S. is not granted, FEMA may rescind up to \$35 Million in grant funding for the Berkeley Tuolumne Camp Reconstruction Project; and

WHEREAS, if the waiver is granted, Berkeley Tuolumne Camp contracts would not include notice of the prohibition in qualification, proposal, or bid solicitations. Once the preferred contractor is selected, however, they will be asked to voluntarily complete the "Sanctuary City Compliance Statement". As such, the intent and purpose of the ordinance will be applied to the maximum extent feasible while still complying with federal procurement guidelines. Through this voluntary process, it is possible that all contracts for the Berkeley Tuolumne Camp Project will be in full compliance with Ordinance No. 7650-N.S.; and

WHEREAS, the City does not have sufficient funds allocated to complete the Berkeley Tuolumne Camp Project without federal funding.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that Ordinance No. 7,650-N.S. is waived for Berkeley Tuolumne Camp Project contracts.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Scott Ferris, Director, Parks Recreation & Waterfront

Subject: Contract No. 32000082 Amendment: Mar Con Builders, Inc. for Live Oak Community Center Seismic Upgrade Project

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 32000082 with Mar Con Builders, Inc. for the Live Oak Community Center Seismic Upgrade Project, increasing the contract amount by \$241,451 plus a 20% contingency in the amount of \$48,290 for a total amount not to exceed of \$5,705,668.

FISCAL IMPACTS OF RECOMMENDATION

Funding for this contract amendment is available in the Measure T1 Fund (511-52-545-000-0000-000-461-663110-PRWT119005) and will be included in the second annual appropriations ordinance of FY20. No other funding is required, and no other projects will be delayed due to this expenditure.

CURRENT SITUATION AND ITS EFFECTS

The existing community center at Live Oak Park is in need of renovation and is one of the City's identified care and shelter facilities. The scope for the existing contract with Mar Con Builder's Inc. includes seismic upgrades to the foundations, roofing, and wall systems, upgrades to current building codes, ADA accessibility improvements, and various energy upgrades. The contract did not include the renovation and remodel of the kitchen, which includes electrification and building code upgrades. This work was an additive alternate and was not included in this contract due to funding constraints.

Staff determined that the kitchen remodel for Live Oak Community Center meets several priorities expressed by Council. It is work that could be completed in a timely manner, while being consistent with the City's Climate Action Plan and Resiliency Plan by reducing the City's reliance on natural gas and making improvements to one of the City's care and shelter sites. As various other projects have progressed and become more defined, Staff has been able to identify funding within T1 to be used for this work.

BACKGROUND

On September 24, 2019, Council adopted Resolution No. 69,112-N.S., authorizing the City Manager to execute a contract and any amendments with Mar Con Builders Inc. for the seismic upgrade of the Live Oak Community Center. The total contract was for \$5,415,927, which included a contingency in the amount of \$492,357.

The renovations at Live Oak Community Center incorporated as many energy efficiency upgrades as feasible within the allotted budget. The kitchen remodel, which includes electrification and building code upgrades, was an additive alternate and was not included in the contract at the time of award.

ENVIRONMENTAL SUSTAINABILITY

Transitioning buildings away from natural gas to clean electricity offers significant health, safety and resiliency benefits and supports the goals of the City's Climate Action Plan.

RATIONALE FOR RECOMMENDATION

The renovation and electrification of the kitchen helps meet the City's Climate Action Plan, resiliency and sustainability goals. Contracted services are required for this work as the City does not have the in-house expertise to complete this specialized work.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Scott Ferris, Director, Parks Recreation & Waterfront, 981-6700

Taylor Lancelot, Associate Civil Engineer, Parks Recreation & Waterfront, 981-6421

Attachments:

1: Resolution



RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 32000082 AMENDMENT: MAR CON BUILDERS, INC., FOR LIVE OAK COMMUNITY CENTER SEISMIC UPGRADE

WHEREAS, the community center at Live Oak Park is in need of renovation; and

WHEREAS, the City has neither the labor nor the equipment necessary to undertake this project; and

WHEREAS, an invitation for bids was duly advertised on July 22, 2019, bids were opened on August 29, 2019, and the City received eight bids; and

WHEREAS, Mar Con Builders, Inc. was determined to be the lowest responsive and responsible bidder, and references for Mar Con Builders, Inc. were provided and checked out satisfactorily; and Mar Con Builders, Inc. was awarded Contract No. 32000082; and

WHEREAS, funding is available in the Measure T1 Fund (Fund 511); and

WHEREAS, the renovation of the kitchen is work that could be completed in a timely manner, while being consistent with the City's Climate Action Plan and Resiliency Plan by reducing the City's reliance on natural gas and making improvements to one of the City's care and shelter sites.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 32000082 with Mar Con Builders Inc. for the Live Oak Community Center Seismic Upgrade project, increasing the amount by \$289,741, for a total amended amount not to exceed \$5,705,668. A record signature copy of the any amendments to be on file in the Office of the City Clerk.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Scott Ferris, Director, Parks Recreation & Waterfront  
 Subject: Contract No. 10793 Amendment: Siegel & Strain Architects for  
 Construction Administration for the Berkeley Tuolumne Camp Project

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to amend Contract No. 10793 with Siegel & Strain Architects for Construction Support Services for the Berkeley Tuolumne Camp Project, increasing the contract by \$2,900,000 for a total amount not to exceed \$7,200,000, and extending the term of the contract to July 1, 2022.

FISCAL IMPACTS OF RECOMMENDATION

Funds for the contract are available in the Camps Fund. The amendment amount of \$2,900,000 will be included in the Second Amendment to FY 2020 Annual Appropriations Ordinance and budgeted in the Camps Fund budget code 125-52-543-583-0000-000-461-612310-PRWCP19001.

The cost of this contract is covered in large part by a combination of expected insurance payments (partially received) and expected FEMA/CalOES grant payments, along with \$3.3M of City funds from the Catastrophic Reserve to fund the City cost share of the reconstruction project per Resolution No. 67,889-N.S.)

CURRENT SITUATION AND ITS EFFECTS

In August 2013, the California Rim Fire destroyed the Berkeley Tuolumne Camp (BTC), a 19-acre residential family camp located within the Stanislaus National Forest.

Since the Rim Fire, the City has working in partnership with the U.S. Forest Service and Tuolumne County to stabilize and remove debris and hazardous trees from the site, to complete National Environmental Protection Act (NEPA) and California Environmental Quality Act (CEQA) compliance, and to develop Project Plans and acquire Project permits to authorize the re-building of Berkeley Tuolumne Camp.

Siegel & Strain Architects is providing design services for the Project. The contract amendment will fund the Construction Support services task in the Siegel & Strain contract to provide construction support services during the construction phase of the Berkeley Tuolumne Camp Project (Project). Services will include providing design reviews and

clarification as needed to support the City's construction management team. The Siegel & Strain team includes the design architect and engineer of record. The contract amendment will also extend the duration of this contract, as construction of the Project is anticipated to be complete in late spring, 2022.

### BACKGROUND

Berkeley Tuolumne Camp, established in 1922, is a 30-acre property operated under a Special Use Permit with the US Forest Service (USFS). The camp has served primarily as a family camp, but also offered teen leadership programs, adult hiking camps, and private group rental opportunities. Prior to the fire, BTC had the capacity to host approximately 280 campers, 60 staff members, and 10 counselors-in-training at one time, and served over 4,000 campers each year. The major facilities at the Camp included a Dining Hall; a Recreation Hall, 77 small single-story wood-frame camper tent cabins; staff cabins; maintenance and storage structures; a bridge across the river; parking and loading areas, and electric, water supply, and wastewater utilities.

In August of 2013, the Rim Fire destroyed Berkeley Tuolumne Camp (BTC) and in December was declared a federal disaster. The majority of structures at BTC were destroyed by the fire. The property was covered by the City's insurance policy, and insurance proceeds will be the primary source of reconstruction funds. The City has also been awarded a Public Assistance Grant from the Federal Emergency Management Agency (FEMA) and California Office of Emergency Services (CalOES) to partially fund reconstruction.

On October 17, 2017, the Council authorized the City Manager to execute a contract with Siegel & Strain Architects for design of the Project for an amount not to exceed \$4,300,000 (Resolution No. 68,188-N.S.). On September 30, 2019 the USFS executed a 30-year Special Use Permit which authorizes the City to construct and manage Berkeley Tuolumne Camp. An amendment extending the contract term from December 31, 2019 to April 1, 2020 was executed by the City Manager on [DATE].

The total cost estimate for the Berkeley Tuolumne Camp Rebuild Project is \$60M. This cost will be covered largely by insurance and FEMA and state grant funding, along with City funds identified by Resolution No. 67,889-N.S. The City currently anticipates beginning construction in 2020, with a goal to re-open camp in 2022.

### ENVIRONMENTAL SUSTAINABILITY

The City approved the Project CEQA documents on January 22, 2019. The construction of the Berkeley Tuolumne facilities will demonstrate appropriate restoration of forest landscapes in order to achieve sustainable riverine and upland ecosystems that provide a broad range of benefits to humans and the ecosystem. All construction activities will implement Best Management Practices (BMPs) to encourage biodiversity, preserve resources, and maintain riparian and other natural habitats. Revegetation and reforestation activities will emphasize enhancing native vegetative cover and minimizing exposed bare soil and erosion. This project will comply with the City's Climate Action

Plan in the following ways: increased energy efficiency in public buildings, and providing a public resource for community outreach and empowerment.

RATIONALE FOR RECOMMENDATION

Successful completion of the Project requires contracted construction support services, as the City does not possess the necessary specific technical expertise.

ALTERNATIVE ACTIONS CONSIDERED

The City does not have the expertise required to complete the tasks covered by this contract. Therefore no alternative actions were considered.

CONTACT PERSON

Scott Ferris, Director, PRW, 981-6700  
Liza McNulty, Project Manager, PRW, 981-6437

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 10793 AMENDMENT: SIEGEL & STRAIN ARCHITECTS FOR CONSTRUCTION SUPPORT SERVICES FOR THE BERKELEY TUOLUMNE CAMP

WHEREAS, the City operated the Berkeley Tuolumne Camp, a residential family camp, since 1922 on United States Forest Service land pursuant to a special use permit; and

WHEREAS, in August 2013, the Berkeley Tuolumne Camp was destroyed by the California Rim Fire; and

WHEREAS, Council authorized the City Manager to enter into a contract with Siegel & Strain Architects for Design Services for the Berkeley Tuolumne Camp Project in the amount of \$4,300,000 on October 17, 2017 (Resolution No. 68,188-N.S.); and

WHEREAS, City Manager extended the contract with Siegel & Strain Architects from December 31, 2019 to April 1, 2020; and

WHEREAS, on September 30, 2019, the U.S. Forest Service executed a 30-Year Special Use Permit authorizing the City to reconstruct and operate Berkeley Tuolumne Camp; and

WHEREAS, Siegel & Strain Architects and their sub-consultants has the requisite knowledge and background to provide construction support services which are necessary in order for the City to efficiently manage the construction of the Project; and

WHEREAS, funds are available in the Camps Fund, and \$2,900,000 will be included in the second amendment to FY20 Annual Appropriations Ordinance and budgeted in the Camps Fund (budget code 125-52-543-583-0000-000-461-612310 PRWCP19001; and

WHEREAS, the construction of the Berkeley Tuolumne Camp Project is anticipated to be complete in late Spring, 2022.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is hereby authorized to execute an amendment to Contract No. 10793 with Siegel & Strain Architects for Construction Support Services for the Berkeley Tuolumne Camp Project, increasing the contract by \$2,900,000 for a total not to exceed \$7,200,000, and extending the term of the contract to July 1, 2022.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Scott Ferris, Director, Parks, Recreation and Waterfront  
 Phil Harrington, Director, Public Works  
 Subject: Adjustments to the Measure T1 Phase 1 Project List

RECOMMENDATION

Adopt a Resolution authorizing the following adjustments to the Measure T1 Phase 1 project list with no additional funding:

1. Removal of the following projects:
  - Transfer Station Conceptual Master Plan;
  - West Berkeley Service Center conceptual design;
2. Change of phase from *construction* to *planning* for the following projects:
  - Berkeley Health Clinic;
  - Public Safety Building;
  - Hopkins Street – San Pablo to the Alameda;
  - Bancroft Way – Milvia to Shattuck;
3. Change of phase from *design* to *planning* for the following projects:
  - Berkeley Municipal Pier;
  - Tom Bates (Gilman) Fields North Field House / Restroom;
4. Addition of the following projects and funding to supplement existing T1 projects at the same site:
  - San Pablo Park – Additional Play Structure Replacement (ages 2-5)
  - Strawberry Creek Park – Play Structure Replacement
  - Codornices Creek at Kains Avenue

## INTRODUCTION

The purpose of this item is to revise the Measure T1 Phase 1 list to comply with Section 4.5 of the Measure T1 Policies and Procedures manual. This is not a request for additional funds.

Per Section 4.5 of the Measure T1 Bond Policies and Procedures Manual<sup>1</sup>, “When changes need to be made at the program-level, such as adding/removing a project or changing the project’s level of completion, staff will review these options with the Lead Commissions and seek Council’s approval to revise the approved list. This process is intended to ensure that any change to the approved Measure T1 project list is made with community input, Commission oversight, and Council approval.”

The recommended changes presented in this report were reviewed and approved by the Public Works Commission on November 7, 2019 and the Parks and Waterfront Commission on November 13, 2019.

## FISCAL IMPACTS OF RECOMMENDATION

No fiscal impacts to Measure T1.

The funding from projects that have been removed or changed in phase will be reallocated to existing T1 projects on the approved Phase 1 project list.

## CURRENT SITUATION AND ITS EFFECTS

For various reasons such as alternate funding sources received, project and timeline feasibility, and the addition of project scope, the Measure T1 Phase 1 project list should be modified as follows:

### 1. Removal of the following projects:

- **Transfer Station Master Plan:** This project is ongoing and has been funded by the Zero Waste Enterprise Fund. The \$500,000 in T1 funds originally allocated to this project was a part of the identified reductions to close the funding gap that was approved by Council on [March 26, 2019](#)<sup>2</sup> (See page 2- Table 1) (Resolution 68,802-N.S.).
- **West Berkeley Service Center:** On May 28, 2019, Council approved<sup>3</sup> developing the West Berkeley Service Center for affordable senior housing. Measure O is the appropriate funding source for affordable housing, should that project ultimately be selected for development. The

<sup>1</sup> See [https://www.cityofberkeley.info/uploadedFiles/Parks\\_Rec\\_Waterfront/Level\\_3\\_-\\_General/T1%20Policies%20and%20Procedures%20Manual%20January%202019.pdf](https://www.cityofberkeley.info/uploadedFiles/Parks_Rec_Waterfront/Level_3_-_General/T1%20Policies%20and%20Procedures%20Manual%20January%202019.pdf)

<sup>2</sup> See [https://www.cityofberkeley.info/Clerk/City\\_Council/2019/03\\_Mar/Documents/2019-03-26\\_Item\\_20a\\_Providing\\_direction\\_on\\_closing\\_funding\\_gap.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2019/03_Mar/Documents/2019-03-26_Item_20a_Providing_direction_on_closing_funding_gap.aspx)

<sup>3</sup> See [https://www.cityofberkeley.info/Clerk/City\\_Council/2019/05\\_May/Documents/2019-05-28\\_Item\\_23\\_Development\\_of\\_the\\_West\\_Berkeley.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2019/05_May/Documents/2019-05-28_Item_23_Development_of_the_West_Berkeley.aspx)



\$150,000 in T1 funds originally allocated was a part of the identified reductions to close the funding gap which was approved by Council on [March 26, 2019](#)<sup>4</sup> (See page 2 – Table 1) (Resolution 68,802-N.S.).

2. Change of phase from *construction* to *planning* for the following projects:
  - **Berkeley Health Clinic and Public Safety Building:** The funding allocated was \$979,208 for four citywide safety improvement projects (Electrical improvements for the Berkeley Health Clinic, City Corporation Yard, Marina Corporation Yard and HVAC improvements for the Public Safety Building). After developing the scope for these projects, staff determined that this funding was not sufficient to complete planning, design, and construction for all four projects. Staff evaluated these projects and determined that the City Corporation Yard and Marina Corporation Yard had significant need and prioritized these projects to be completed for Phase 1. An assessment and cost estimate was completed for both the Berkeley Health Clinic and Public Safety Building projects.
  - **Hopkins Street – San Pablo to the Alameda and Bancroft Way – Milvia to Shattuck:** A total of \$9.2 million was allocated to street projects for Phase 1. It was determined that there was not enough funding to complete all approved streets through construction. Since these two street projects needed additional analysis and could not be completed within the Phase 1 timeframe, the project phase was moved back to planning. The additional analysis includes a Traffic and Placemaking Study for Hopkins Street and utility work and a study to evaluate parking needs for Bancroft Way. The design and construction for both projects will be funded by other baseline street funding in FY2023-FY2024.
3. Change of phase from *design* to *planning* for the following projects:
  - **Berkeley Municipal Pier:** The design phase cannot be completed within the Measure T1 Phase 1 timeline. The planning phase has been expanded to undergo a study to determine the feasibility of a potential ferry facility and public recreation on a shared pier. This study is anticipated to be completed by December 2020 and submitted to the Water Emergency Transportation Authority (WETA) Board and City Council for approval by June 2021. The remaining funding in the amount of \$639,741 from this project will be reallocated to the Live Oak Community Center renovation project for electrification of the kitchen and

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<sup>4</sup> See [https://www.cityofberkeley.info/Clerk/City\\_Council/2019/03\\_Mar/Documents/2019-03-26\\_Item\\_20a\\_Providing\\_direction\\_on\\_closing\\_funding\\_gap.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2019/03_Mar/Documents/2019-03-26_Item_20a_Providing_direction_on_closing_funding_gap.aspx)

the University Avenue, Marina Boulevard, and Spinnaker Way Streets project to fully fund the project.

- **Tom Bates (Gilman) Fields North Field House / Restroom:** Conceptual design has been completed. The extension of the sewer main from east of I-80 freeway to in front of the facility will happen as a part of the Alameda County Transportation Commission (ACTC) Gilman St. at I-80 Interchange project. The remaining \$232,025 will be paid to ACTC to complete this work. The development of a restroom at this site is not financially feasible without this work being performed as a part of this project.

4. Addition of the following projects:

By combining funding sources of related projects and the effort expended on public process, design & construction, staff is able to be more efficient and achieve direct savings in overhead and soft. These additional funds and additional scopes enhance the existing T1 projects. Because scope, bids, and construction costs cannot be clearly delineated among the combined funding sources, additions of the following project scopes and funding to supplement existing T1 projects is explained below for transparency. There is no change to the existing T1 project scope nor a need for additional T1 funding for these projects:

- **San Pablo Park – Additional Play Structure Replacement (ages 2-5):** T1 funding was allocated for play equipment replacement in the Age 5-12 Play Area and renovation of the tennis courts. An additional \$200,000 from Parks Tax and \$300,000 from the Capital Improvement Fund was allocated in the FY2020 & FY2021 Capital Improvement Budget to replace the Age 2-5 play equipment and make additional site improvements. T1 funds are being used for the Age 2-5 and Age 5-12 Play Area and the tennis courts at San Pablo Park.
- **Strawberry Creek Park – Play structure replacement:** T1 funding was allocated to replace an existing restroom at Strawberry Creek Park. In the FY2018 & FY2019 Adopted Capital Improvement Budget, \$100,000 in Parks Tax and \$400,000 in the Capital Improvement Fund had been allocated for improvements at Strawberry Creek Park. T1 funds are being used for both the restroom and play structure replacement at Strawberry Creek Park.
- **Codornices Creek at Kains Avenue:** The Rose Garden drainage project involves repairing erosion of the Codornices Creek channel with a combination of rock boulders and concrete. Since the construction impacts to the creek cannot be mitigated on-site due to the steep slope and limited work area, the California State Regional Water Quality Control

Board is requiring off-site mitigation for the work near the Rose Garden as a permit condition. The proposed site for the off-site mitigation is the on-going creek restoration project on Codornices Creek at Kains Avenue, which is also scheduled for construction in the summer of 2020. Incorporating the off-site mitigation for the Rose Garden project into the Kains project allows the Rose Garden work to move forward and also allows for additional creek restoration at a more suitable location as part of the Kains project. In the FY2018 & FY2019 Adopted Capital Improvement Budget, \$167,949 in State Transportation Tax and \$400,000 from the Urban Streams Restoration grant program administered by the Department of Water Resources were allocated to the Codornices Creek at Kains Avenue project.

Given these changes, an updated list for Phase 1 is attached in Exhibit A.

## BACKGROUND

In November 2016, Berkeley voters approved [Measure T1](#)<sup>5</sup> – a \$100 million dollar general obligation bond to repair, renovate, replace or reconstruct the City’s aging existing infrastructure, including facilities, streets, sidewalks, storm drains, and parks. Measure T1 passed with 86.5% of the vote.

From December 2016 through June 2017, the City undertook a robust public process to gather input on the proposed projects. In addition to three Measure T1 Workshops for the general public, the Parks & Waterfront and Public Works Commissions invited and received input from the public and other City Commissions. They submitted a [joint report to Council in June 2017](#)<sup>6</sup> detailing their recommendations. The City Manager incorporated this input and submitted a [final recommended list of projects](#)<sup>7</sup>. Council adopted this list and proposed plan for implementing Phase 1 of the T1 bond program on June 27, 2017.

On January 23, 2018, Council approved Resolution No. 68,290-N.S., authorizing \$2 million from Measure T1 Phase 1 funds to be allocated to the Adult Mental Health Clinic located at 2640 Martin Luther King Jr. Way.

On March 26, 2018, Council approved Resolution No. 68,802-N.S. authorizing \$5.3 million in additional funding to complete Measure T1 Phase 1 projects.

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<sup>5</sup> See <https://www.cityofberkeley.info/MeasureT1/>

<sup>6</sup> See [https://www.cityofberkeley.info/uploadedFiles/Parks\\_Rec\\_Waterfront/Level\\_3\\_-\\_General/Measure%20T1%20-%20Joint%20Commission%20Report%20-%20June%202017%20w%20attachments.pdf](https://www.cityofberkeley.info/uploadedFiles/Parks_Rec_Waterfront/Level_3_-_General/Measure%20T1%20-%20Joint%20Commission%20Report%20-%20June%202017%20w%20attachments.pdf)

<sup>7</sup> See [https://www.cityofberkeley.info/Clerk/City\\_Council/2017/06\\_June/Documents/2017-06-27\\_Item\\_49\\_Implementing\\_Phase\\_1.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2017/06_June/Documents/2017-06-27_Item_49_Implementing_Phase_1.aspx)

On July 23, 2019, Council approved Resolution No. 69,051-N.S., authorizing the removal of the King School Park Bioswale project and the addition of 12 alternate green infrastructure projects to the Measure T1 Phase 1 project list.

ENVIRONMENTAL SUSTAINABILITY

Measure T1 projects include environmentally sustainable elements, such as electrification for facilities projects, permeable pavers or bioswales for street projects, and energy saving lighting in parks.

RATIONALE FOR RECOMMENDATION

The project list needs to be revised to provide community members with an accurate and up-to-date project list and to comply with the Measure T1 Policies and Procedures Manual.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Scott Ferris, Director, Parks, Recreation and Waterfront, 510-981-6700

Phil Harrington, Director, Public Works, 510-981-6300

Attachments:

1: Resolution

Exhibit A: City Manager Phase 1 Measure T1 Revised List of Projects

RESOLUTION NO. ##,###-N.S.

ADJUSTMENTS TO THE MEASURE T1 PHASE 1 PROJECT LIST

WHEREAS, on June 27, 2017, Council adopted resolution 68,076-N.S., approving a list of projects for Measure T1 Phase 1; and

WHEREAS, on January 23, 2018, Council approved Resolution No. 68,290-N.S., authorizing \$2 million from Measure T1 Phase 1 funds to be allocated to the Adult Mental Health Clinic located at 2640 Martin Luther King Jr. Way; and

WHEREAS, on July 23, 2019, Council approved Resolution No. 69,051-N.S., authorizing the removal of the King School Park Bioswale project and the addition of 12 alternate green infrastructure projects to the Measure T1 Phase 1 project list; and

WHEREAS, existing T1 projects were added, changed level of completion or removed due to funding availability and/or project feasibility; and

WHEREAS, since the Phase 1 list was approved by Council on June 27, 2017, the list has not been revised to reflect the above changes; and

WHEREAS, the Measure T1 Phase 1 list must be revised to comply with Section 4.5 of the Measure T1 Bond Policies and Procedures Manual, which states “When changes need to be made at the program-level, such as adding/removing a project or changing the project’s level of completion, staff will review these options with the Lead Commissions and seek Council’s approval to revise the approved list. This process is intended to ensure that any change to the approved Measure T1 project list is made with community input, Commission oversight, and Council approval.”; and

WHEREAS, the revised list was reviewed by the Public Works Commission on November 7, 2019 and the Parks and Waterfront Commission on November 13, 2019.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Measure T1 Phase 1 project list be revised as seen in Exhibit A.

Exhibit

A: City Manager Phase 1 Measure T1 Revised List of Projects

## Exhibit A

## City Manager Phase 1 Measure T1 Revised List of Projects (December 10, 2019)

<b>Facilities/Buildings</b>
<b>Adult Mental Health Services Center</b> - Planning, Design, and Construction
<b>Frances Albrier Community Center</b> - Planning and Design
<b>Live Oak Community Center</b> - Planning, Design and Construction
<b>North Berkeley Senior Center</b> - Planning, Design and Construction
<b>Old City Hall, Veterans Building and Civic Center Park</b> - Planning
<b>Restrooms - Citywide Needs Assessment</b>
<b>Restrooms - Strawberry Creek Park Restroom Replacement</b> - Planning, Design, and Construction
<b>Tom Bates (Gilman) Fields North Field House / Restroom</b> - Planning
<b>Willard Club House Renovation</b> - Planning and Design
<b>City Wide Safety Improvements</b>
<b>Berkeley Health Clinic - Electrical</b> - Planning
<b>Corporation Yard - Roof &amp; Electrical</b> - Design and Construction
<b>Marina Corp Yard - Electrical</b> - Design and Construction
<b>Public Safety Bldg - Mechanical + HVAC</b> - Planning
<b>Parks Improvement Projects</b>
<b>Aquatic Park Tide Tubes</b> - Planning
<b>Berkeley Municipal Pier</b> - Planning
<b>Berkeley Rose Garden Drainage</b> - Planning, Design and Construction
<b>Berkeley Rose Garden Pathways, Tennis Courts</b> - Planning, Design and Construction
<b>Citywide Irrigation System</b> - Planning, Design and Construction
<b>Codornices Creek at Kains Avenue</b> - Planning, Design and Construction
<b>Grove Park Phase 2 - Field Improvements</b> - Planning, Design and Construction
<b>Play Structure Replacement - George Florence Park (2)</b> - Planning, Design, and Construction
<b>Play Structure Replacement (Ages 5-12) - San Pablo Park (1)</b> - Planning, Design, and Construction
<b>Play Structure Replacement (Ages 2-5) - San Pablo Park (1)</b> - Planning, Design, and Construction
<b>Play Structure Replacement (Ages 5-12) - Strawberry Creek Park (1)</b> - Planning, Design, and Construction
<b>San Pablo Park Tennis Courts</b> - Planning, Design and Construction
<b>Tom Bates (Gilman) Fields Artificial Turf Replacement</b> - Planning, Design, and Construction
<b>Green Infrastructure</b>
<b>Page Street - near RR Tracks</b> - Planning, Design and Construction
<b>Jones Street - near RR Tracks</b> - Planning
<b>Channing Way near RR Tracks</b> - Planning, Design and Construction
<b>Heinz Avenue near RR Tracks</b> - Planning
<b>Dwight Way - near RR Tracks</b> - Planning, Design and Construction
<b>Grayson Street near RR Tracks</b> - Planning, Design and Construction
<b>Tenth Street at Codornices Creek</b> - Planning
<b>Ninth Street at Codornices Creek</b> - Planning
<b>Piedmont Avenue Median and Traffic Circle</b> - Planning, Design and Construction
<b>Ward Street</b> - Planning, Design and Construction
<b>Sacramento Street Center Median</b> - Planning
<b>Street asphalt repaving segments</b>
<b>2nd Street - Delaware to Addison</b> - Planning, Design, and Construction
<b>Adeline Street -Derby to Ashby</b> - Planning, Design, and Construction
<b>Bancroft Way - Milvia to Shattuck</b> - Planning
<b>Hearst Street - Milvia to Henry</b> - Planning, Design, and Construction
<b>Hopkins Street - San Pablo to The Alameda</b> - Planning
<b>Monterey Avenue - Alameda to Hopkins</b> - Planning, Design, and Construction
<b>Ward Street - San Pablo to Acton</b> - Planning, Design, and Construction
<b>Lower University Ave / Marina Blvd / Spinnaker Way Renovation</b> - Planning, Design, and Construction



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Phillip L. Harrington, Director, Department of Public Works  
 Subject: Referral Response: Telegraph Avenue Loading Zone and Customer Parking Pilot Project Evaluation and Next Steps

RECOMMENDATION

Adopt a Resolution marking the successful completion of the Telegraph Avenue Loading Zone and Customer Parking pilot project, making the pilot parking changes permanent, and authorizing the City Traffic Engineer to establish similar loading zone and/or customer parking regulations in all parking meter districts citywide, based on staff parking demand analysis, at the request of adjacent merchants, and/or in consultation with local business associations.

FISCAL IMPACTS OF RECOMMENDATION

Future meter revenue is expected to remain at the level collected from June 30 through October 31, 2018 totaling \$16,842, although demand and resulting parking revenue may fluctuate if meter rates are adjusted as part of goBerkeley Program pricing adjustments. Effectively managed loading zones and the addition of general metered parking increases access to adjacent businesses for deliveries and for customers, which could also lead to increased sales tax revenue. Enabling metered loading zones elsewhere in the City could extend these benefits accordingly.

CURRENT SITUATION AND ITS EFFECTS

This report responds to referral #2016-58, which originally appeared on the April 1, 2014 Council meeting agenda and was sponsored by then-Mayor Tom Bates, and unanimously approved on consent.<sup>1</sup> Council also unanimously passed Resolution No. 68,256-N.S. on December 5, 2017, authorizing staff to implement a pilot project to evaluate the use of parking meters in loading zones to improve parking availability and regulatory compliance on Telegraph Avenue between Bancroft Way and Dwight Way.<sup>2</sup>

<sup>1</sup> April 1, 2014 – Consent Calendar: Conversion of Loading Zones on Telegraph Avenue between Bancroft Avenue and Dwight Way into Regular Metered Parking with Morning Commercial-Loading Hours <http://bit.ly/2xDQV8R>

<sup>2</sup> December 5, 2017 – Referral Response: Conversion of Loading Zones on Telegraph Avenue between Bancroft Way and Dwight Way into Regular Metered Parking with Morning Commercial Loading Hours; Amending BMC Title 14 <https://bit.ly/2T8POGa>

### Pilot Project Implementation Cost

The pilot project was implemented in June 2018. The pilot project cost \$66,320 expending from the University of California, Berkeley Long-Range Development Plan (LRDP) settlement agreement fund.

### Pilot Project Changes

Prior to the pilot project, commercial loading zones on Telegraph Avenue between Bancroft Way and Dwight Way were unpaid and signed for loading only between 6 a.m. and 6 p.m., Monday through Saturday. No parking was allowed between 10 p.m. and 6 a.m.

Under the pilot, twenty-seven single-space parking meters were installed in these areas. New parking meters were included under the goBerkeley parking program, which already manages parking in the Southside/Telegraph commercial area. These parking spaces are available for:

- Commercial loading only from 6 a.m. to 11 a.m., with a 20-minute limit and payment required from 9 a.m. to 11 a.m.; and
- General parking from 11 a.m. to 10 p.m., with a two-hour limit and payment required from 11 a.m. to 6 p.m.

Additionally, as included in Council's authorizing resolution, two closely spaced bus stops were consolidated into one location at the existing bus bay on the east side of Telegraph Avenue at Haste Street.

### Pilot Results

Field observations were conducted in August 2017 and September 2018, prior to and during the pilot project, to evaluate the effects of the parking changes. In general, the pilot changes were effective in improving parking availability and compliance with posted regulations, resulting in:

- 194% increase in overall compliance (i.e., rules governing parking and loading activity and adherence to posted time limits);
- 50% increase in commercial loading activity when such activity was allowed (6 a.m. to 11 a.m.); and
- 40% increase in use of curbside parking when general parking was allowed (11 a.m. to 10 p.m.).

In particular, the increase in parking use indicates that more customers are able to find parking, and that the addition of parking meters and/or time limits encourage turnover. The increase in loading activity during the window of time reserved for commercial loading indicates that the shift to a morning loading time supports increased use of these parking spaces by non-loading uses later in the day.

A more detailed summary of pilot findings is provided as Attachment 2: Summary of Pilot Program Results.



### Next Steps

Based on the results summarized above and in Attachment 2, the Telegraph Avenue Loading Zone and Customer Parking Pilot has been successful. In addition to reducing illegal parking and loading behavior, it increased parking availability. Staff therefore recommend that the new parking meters and restrictions introduced as part of the pilot remain in place to continue to manage parking demand in this area.

These results suggest that paid loading zones can be an effective tool in the City's parking management toolbox. Under BMC Section 14.44.010, which was modified to enable the pilot project, the City Traffic Engineer is authorized to "determine and mark loading zones in metered or unmetered areas..." As warranted by staff analysis of need, the request of adjacent merchants, and/or the request of business or merchant association leadership, staff recommend that the City Traffic Engineer install additional paid loading zones in existing meter districts to more effectively manage parking and loading activity.

### BACKGROUND

On April 1, 2014, Mayor Tom Bates submitted a referral for the City Manager to "examine the costs and time associated with yellow-zone [sic] conversion" to regular metered parking with morning commercial loading hours. Primary goals of this action were increasing the supply of parking in the Telegraph area, and to alleviate visitors' perceptions of parking shortages while continuing to allow vehicle loading and unloading for businesses. The referral also sought to improve traffic flow and safety for bicyclists and drivers by reducing the number of double-parked vehicles during peak business hours.

The Telegraph Avenue Loading Zone and Customer Parking pilot project is a Strategic Plan Priority Project, advancing our goals to provide well-maintained infrastructure and to foster a dynamic, sustainable, and locally-based economy.

### ENVIRONMENTAL SUSTAINABILITY

The conversion of unmetered commercial loading to metered commercial and general parking has led to increased parking and loading activity, indicating that drivers may be finding parking more easily, thus reducing vehicle miles traveled and emissions caused by circling for a spot. This shift from all-day commercial loading to morning commercial loading may decrease freight traffic in the area at other times, potentially reducing emissions and congestion from this activity overall.

### RATIONALE FOR RECOMMENDATION

Evaluation of the pilot program shows that parking activity increased, as did overall compliance with parking regulations. Making the pilot parking changes permanent would continue to deliver these positive benefits in the Telegraph area. This recommendation

Referral Response:  
Telegraph Avenue Loading Zone and Customer Parking Pilot Project  
Evaluation and Next Steps

CONSENT CALENDAR  
December 10, 2019

satisfies a number of City of Berkeley 2011 Southside Plan objectives<sup>3</sup> including improving customer and visitor parking and access to the Telegraph Avenue commercial district and ensuring the most efficient use of existing parking.

#### ALTERNATIVE ACTIONS CONSIDERED

Council could choose not to approve making the pilot parking changes permanent. This would require staff time to uninstall the meters and replace parking signage with previous signage, reverting on-street parking on Telegraph Avenue between Dwight Way and Bancroft Way to non-metered commercial loading only 6 a.m. to 6 p.m. Monday through Saturday. This would likely reduce parking availability and customer access to businesses in the area.

#### CONTACT PERSON

Farid Javandel, Transportation Manager, Department of Public Works, (510) 981-7061  
Danette Perry, Parking Services Manager, (510) 981-7057  
Gordon Hansen, Senior Planner, (510) 981-7064

#### Attachments:

- 1: Resolution
- 2: Summary of Telegraph Avenue Loading Zone and Customer Parking Pilot Program Results

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<sup>3</sup> City of Berkeley 2011 Southside Plan: <https://www.cityofberkeley.info/southsideplan>

## RESOLUTION NO. ##,###-N.S.

AFFIRMING THE SUCCESS OF THE TELEGRAPH AVENUE LOADING ZONE AND CUSTOMER PARKING PILOT PROJECT, MAKING THE PARKING CHANGES PERMANENT, AND ENABLING METERED LOADING ZONES IN PARKING METER DISTRICTS CITYWIDE

WHEREAS, Mayor Tom Bates submitted City Council Referral #2016-58 at the April 1, 2014 council meeting, requesting that staff analyze restrict loading zone times and adding metered parking for the general public on Telegraph Avenue between Bancroft Way and Dwight Way; and

WHEREAS, the City Council unanimously passed Resolution 68,256-N.S. at the December 5, 2017 Council Meeting directing staff to initiate the Telegraph Avenue Loading Zone and Customer Parking Pilot Project on Telegraph Avenue between Dwight Way and Bancroft Way, including the installation of parking meters, signage, and curb painting at existing parking bays; and

WHEREAS, Council further directed staff to consolidate two existing bus stops on Telegraph Avenue at Haste Street and Durant Avenue into one bus stop; and to install metered loading zones at the former bus bays at Haste Street and Durant Avenue, as necessary per the City Traffic Engineer; and

WHEREAS, following direction from Council, staff installed twenty-seven goBerkeley parking meters on Telegraph Avenue between Bancroft Way and Dwight Way, and installed signage stating that up to twenty-minute commercial loading activity would be allowed between 6 a.m. and 11 a.m., with payment required for loading from 9 a.m. to 11 a.m.; and two-hour general metered parking would be allowed from 11 a.m. to 10 p.m., with payment required from 11 a.m. to 6 p.m.; and

WHEREAS, in coordination with AC Transit, staff consolidated the two bus stops at Haste Street and Durant Avenue into one stop at Telegraph Avenue and Haste Street; and

WHEREAS, staff collected data prior to and during the pilot project, and found that parking and loading activity that complied with Berkeley Municipal Code (BMC) requirements increased 194%, and that use of the curbs increased, reflecting an increase in parking availability and turnover; and

WHEREAS, these findings indicate that implementing paid commercial loading in the morning and new general metered parking from midday to the evening increased the effectiveness of loading zones and reduced instances of BMC non-compliance (i.e., unlawful parking and loading activity); and

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley, that the Telegraph Avenue Loading Zone and Customer Parking Pilot Project shall hereby be concluded with successful results, and that parking meters and associated restrictions put in place under the pilot project shall remain in place to manage parking and loading activity in this area.

BE IT FURTHER RESOLVED that staff shall continue to manage parking pricing and general metered parking time limits at the new Telegraph Avenue parking meters under existing goBerkeley Program guidelines; and that parking signage in this area may be revised for improved comprehension if warranted per customer and merchant feedback.

BE IT FURTHER RESOLVED that the City Traffic Engineer shall be authorized to implement further paid commercial loading zones in existing parking meter districts citywide under BMC Section 14.44.010, based on staff parking demand analysis, at the request of adjacent merchants, and/or in consultation with local business associations. .

## Summary of Telegraph Avenue Loading Zone and Customer Parking Pilot Project Results

### Introduction & Methodology

Evaluation of the pilot project took place in stages, with staff and volunteers recording observations of parking and loading activity August 2017 and September 2018, prior to and during the pilot project. Observations covered a day of parking activities from 8 a.m. to 5 p.m. for both the before and during data collection periods. This timeframe covers the majority of the workday, including much of the activity expected to occur in the project area. Changes in parking behavior were analyzed based on the number of instances of parking activity observed that met certain criteria, e.g., use of parking areas for passenger loading; parking for up to two hours; possession of valid permit to use a loading zone, etc.

Prior to the pilot project, commercial loading zones on Telegraph Avenue between Bancroft Way and Dwight Way were unpaid and signed for loading only between 6 a.m. and 6 p.m., Monday through Saturday. No parking was allowed between 10 p.m. and 6 a.m.

Under the pilot, twenty-seven single-space parking meters were installed in these areas. New parking meters were included under the goBerkeley parking program, which already manages parking in the Southside/Telegraph commercial area. These parking spaces are available for:

- Commercial loading only from 6 a.m. to 11 a.m., with a 20-minute limit and payment required from 9 a.m. to 11 a.m.; and
- General parking from 11 a.m. to 10 p.m., with a two-hour limit and payment required from 11 a.m. to 6 p.m.

During times when only commercial loading is permitted, only vehicles with a commercial license plate, a valid City of Berkeley Business License bumper permit, or vehicles with commercial logo or lettering may use the area for up to twenty minutes, and must be actively loading or unloading. Passenger loading may take place for up to three minutes only. During general parking times, parking and/or loading activity may take place within the posted time limit, with payment required for this activity when posted.

### Overall Compliance

“Overall compliance” refers to parking and loading behavior that adheres to requirements as set forth in the Berkeley Municipal Code, including:

- Commercial loading of twenty minutes or less by commercial vehicles and vehicles with Berkeley business license decals between 8 a.m. and 11 a.m. at designated loading zone areas; and

- Parking for two hours or less between 11 a.m. and 5 p.m. at designated general parking areas.<sup>4</sup>

After the pilot was implemented, there was an increase in 20% of curbside parking use, reflecting increased parking availability and turnover. Of that activity Overall compliance increased from 29% in 2017 to 67% in 2018 during the pilot, a 194% change.

#### Loading Zone Activity & Findings

During the window of time when loading activity was permitted, use of the commercial loading zone by permitted vehicles that were not double parked increased by 17%. However, while commercial loading activity at the curb increased 50%, there was a 129% increase in double-parking of vehicles commercial loading, possibly owing to the new limited loading zone hours.

#### General Parking Activity & Findings

During times when general parking is allowed, instances of parking, commercial loading, and/or passenger loading increased by 48% over the study period. Regulatory compliance by these vehicles, defined as activity that does not involve double parking, increased by 16%.

The proportion of commercial loading out of all parking activity during this time is small, and decreased slightly from 16% to 13%. While the proportion of passenger loading activity remained relatively constant both before and during the pilot project, double-parking among this activity group increased by 89%. This may be due to increased use of ride-hailing services as well as more limited parking spots due to compliant parking users.

#### Instances of Double Parking

While double parking activities accounted for approximately one quarter of all observations both before and during the pilot, there was a 45% increase in observed instances of double parking in 2018. However, the proportion of very short double parking sessions increased in 2018, with half of instances of double parking in the study area observed to last less than one minute.

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<sup>4</sup> Note: Compliance analysis did not include meter payment because mobile payment options are difficult to track by manual observers.

**Telegraph Avenue Loading Zone and Customer Parking Pilot Project  
Before (2017) and During (2018) Pilot Data**

	Observed Instances		Percent of Total Instances		Change from 2017 to 2018	
	2017	2018	2017	2018	Instances	Percentage Change
<b>Total number of observed instances of parking:</b>	<u>623</u>	<u>785</u>	100%	100%	162	26%
Vehicles parked 20 minutes or less	515	687	83%	88%	172	33%
Vehicles parked 21-120 minutes	97	81	16%	10%	-16	-16%
Vehicles parked for longer than 120 minutes	10	17	2%	2%	7	70%
<b>Compliance**</b>	179	526	29%	67%	347	<b>194%</b>
<b>Parking Use during Loading Zone time</b>	171	206	27%	26%	35	20%
Commercial loading	36	54	21%	26%	18	50%
<i>Double-parked</i>	7	16	19%	30%	9	129%
Passenger loading	88	95	51%	46%	7	8%
<i>Double-parked</i>	46	33	52%	35%	-13	-28%
General parking	47	57	27%	28%	10	21%
<i>Double-parked</i>	8	6	17%	11%	-2	-25%
<b>Compliance (Loading &amp; Not Double-Parked)</b>	71	100	42%	49%	29	<b>17%</b>
<b>Parking Use during General Parking time</b>	452	579	73%	74%	127	28%
Commercial loading	74	73	16%	13%	-1	-1%
<i>Double-parked</i>	33	29	45%	40%	-4	-12%
Passenger loading	145	161	32%	28%	16	11%
<i>Double-parked</i>	44	83	30%	52%	39	89%
General parking	233	345	52%	60%	112	48%
<i>Double-parked</i>	18	53	8%	15%	35	194%
<b>Compliance (Not Double-Parked)</b>	357	414	79%	72%	57	<b>16%</b>
<b>Parking (Curbside) - Use</b>						
Commercial loading	74	82	12%	10%	8	11%
Passenger loading	143	140	23%	18%	-3	-2%
General parking	254	343	41%	44%	89	35%
Parking (Curbside) - Total:	471	565	76%	72%	94	<b>20%</b>
<b>Double Parking - Use</b>						
Commercial loading	36	45	6%	6%	9	25%
Passenger loading	90	116	14%	15%	26	29%
General parking	26	59	4%	8%	33	127%
Double Parking - Total:	152	220	24%	28%	68	<b>45%</b>
<b>Double Parking - Duration</b>						
Less than 1 minute	59	110	39%	50%	51	86%
1 to 6 minutes	59	74	39%	34%	15	25%
7 minutes or longer	34	36	22%	16%	2	6%







Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip L. Harrington, Director, Department of Public Works

Subject: Purchase Order: National Auto Fleet Group for Nine Ford F-Series Pickup Trucks with Various Service Body Configurations

RECOMMENDATION

Adopt a Resolution satisfying requirements of City Charter Article XI Sections 67.2 allowing the City to participate in Sourcewell contract bid procedures, and authorizing the City Manager to execute a purchase order for nine (9) Ford Super Duty F-Series Pickup Trucks with varying service body configurations with National Auto Fleet Group in an amount not to exceed \$492,284, and a subsequent purchase order for the conversion of the nine (9) Ford Super Duty F-Series Pickup Trucks to plug in hybrid vehicles in an amount not to exceed \$245,000 using XL Fleet technology when it becomes commercially available.

FISCAL IMPACTS OF RECOMMENDATION

The purchase of nine (9) Ford F-Series Pickup Trucks with various Service Body configurations will not exceed \$492,284 and includes CA tire fees, delivery to City of Berkeley and sales tax. The vehicles being replaced by have fully paid the amortization for their replacement. Funding for this purchase is available in the FY 2020 baseline budget for Parks, Recreation & Waterfront (PRW) Fund will be added to the Equipment Replacement Fund (671) in the second Annual Adjustment to the Appropriations Ordinance; and Fund amounts will be distributed as follows:

<b>Fund</b>	<b>Amount</b>
671-54-626-723-0000-000-473-664120	\$ 392,284
138-52-542-567-0000-000-461-664120 PRWPK20001	\$ 100,000
<b>Total</b>	<b>\$ 492,284</b>

The estimated price will be between \$25,000 to \$27,000 per vehicle not including installation. This amount is an estimate based on projected cost as it is not yet possible to get a quote from National Auto Fleet Group for this product. Funding for the conversion to plug in hybrid is requested from the General Fund (011) in the amount not to exceed \$245,000. As part of the FY2020 & FY 2021 Adopted Biennial Budget, the baseline transfer from the General Fund to the Equipment Replacement Fund was increased by \$300,000 to address the increased cost tied to replacing the existing smaller fleet vehicles, scheduled for replacement during the biennial period, with an alternative fuel or electric option. This allocation has already been programmed. While funding is available in the Equipment Replacement Fund to purchase nine (9) Ford Super Duty F-Series Pickup Trucks with varying service body configurations with National Auto Fleet Group, the Equipment Replacement Fund does not have sufficient budget to make the full purchase of upfitting the new vehicles with these new technologies, which is estimated not to exceed \$245,000.

The replacement purchase of the identified vehicles will be made with the funding identified above. The \$245,000 subsequent upfitting funding will be requested from the General Fund in the FY 2021 Mid-Cycle Budget Process. The support of this allocation is critical in supporting the conversion of the fleet to becoming Fossil Fuel Free.

**CURRENT SITUATION AND ITS EFFECTS**

This purchase will replace nine existing vehicles that have exceeded the end of their useful lifecycle. The Parks, Recreation and Waterfront Department staff need these vehicles to transport staff, supplies and equipment to, within, and from City parks, the Marina, and street medians. These vehicles are critical in supporting the operational needs of the staff and to provide necessary services to the community. These vehicles will also be used to remove debris and green waste from parks and street medians.

Vehicles being replaced include the following:

<b>Current Vehicle #s</b>	<b>Year</b>	<b>Make/Model</b>
263	1996	GMC 3500 Pickup Truck
266	1994	GMC 3500 Dump Truck
295	1998	Ford F250 Pickup Truck
1001	1999	Ford F350 Pickup Truck
3125	2001	Dodge 2500 Utility
3201	2003	Ford F250 Pickup Truck
3202	2003	Ford F250 Pickup Truck
3203	2003	Ford F250 Pickup
3242	2001	Ford F250 Utility

***Hybrid Electric / Electric Evaluation***

For every fleet purchase, Public Works staff researches the feasibility and availability of fully electric vehicles and hybrid-electric powertrains to support the City’s transition off of

fossil fuels. Fully electric heavy duty pick up vehicles that meet the service needs are not commercially available at this time. However, the authorized Ford Electric Conversion Company XL Fleet<sup>1</sup> anticipates that the plug-in hybrid conversion of F250 pickups will be available in the third quarter of 2020. As soon as the conversion is available from XL Fleet, the City will work with National Auto Fleet Group to have the purchased vehicles converted to plug-in hybrids.

Currently, there is no electric vehicle charging infrastructure at the Corporation Yard, but Public Works staff are working closely with the East Bay Community Energy's consultant to complete a fleet assessment to evaluate overall fleet needs, alternative fuel and feasible electric vehicle options, fleet right-sizing, and siting electric vehicle charging infrastructure. In addition to the City Council's plan to accelerate the electrification of municipal fleet vehicles, the City's Electric Mobility Roadmap, the first draft of which was completed in October 2019, provides strategies and tools to achieve the vision of a fossil fuel-free transportation system that integrates with and supports the City's ongoing efforts to increase walking, biking, and public transportation use in the City, and ensures equitable access to the benefits of clean transportation.<sup>2</sup>

This purchase will support the City's Strategic Plan Goal of Creating a resilient, safe, connected, and prepared City.

#### BACKGROUND

Throughout the year, Department of Public Works purchases vehicles and equipment for City's operating departments that are paid through the Equipment Replacement fund. City departments that use fleet vehicles pay into the equipment replacement fund, which funds vehicle replacement as they reach the end of their life. If a purchase request exceeds \$25,000, the Department of Finance, General Services Division, solicits bids or "piggybacks" off competitively bid contracts to ensure the City's departments receive the best pricing.

The City of Berkeley has been a no-cost member of Sourcewell formerly National Joint Powers Alliance (NJPA), a municipal contracting agency operation under the legislative authority of Minnesota Statute 123A.21.<sup>3</sup> The original 1978 statute was revised in 1995 to allow government clients to better meet their specific needs through participation in a service cooperative, rather than paying the higher cost associated with individual procurement. Sourcewell allows participating municipal agencies to leverage the benefits of cooperative purchasing and reduces procurement costs. Sourcewell serves all educational, government, and non-profit agencies nationwide, and offers cooperatively contracted products, equipment and service opportunities to government entities throughout the U.S.

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<sup>1</sup> <https://www.xlfleet.com/content/technology/>

<sup>2</sup> Berkeley Electric Mobility Roadmap, October 2019: <http://bit.ly/2JQnXI3>

<sup>3</sup> <https://sourcewell-mn.gov/>

All Sourcewell contracts have been competitively solicited nationwide. On October 21, 2016 Sourcewell released Request for Proposal No. 120716 for Vehicles, Cars, Vans, SUV's, and Light Trucks with Related Equipment, Accessories, and Services. The solicitation was released for approximately forty-nine days and four proposals were submitted. Upon their review, Sourcewell selected National Auto Fleet Group as the best most responsive proposer to meet the specifications thusly awarding Contract No. 120716-NAF.

For all contracts, Sourcewell charges an administrative fee based upon a percentage of the sales, and that fee is paid by the Sourcewell. In this instance, an additional fee 1% will be paid by Sourcewell Contract holder National Auto Fleet Group and this cost will not be passed on to the City.

#### ENVIRONMENTAL SUSTAINABILITY

Public Works Equipment Maintenance works to procure the most fuel-efficient vehicles and equipment that are suitable for the required tasks. It is anticipated that the conversion to plug-in hybrid will be completed by the end of 2020, and until then, the vehicles will be powered by 100% renewable diesel<sup>4</sup> that meet 2018 EPA and California Air Resources Board (CARB) requirements.

#### RATIONALE FOR RECOMMENDATION

All city vehicles are due for replacement at the end of their recognized economic lives. This purchase will assist in the goal of fleet standardization by reducing the number of manufactures from three (Ford, GMC, Dodge) to one (Ford), the vehicles will be state of the art supporting operational needs and employee safety, and will allow the City to implement the first conversions of renewable diesel vehicles to plug-in hybrids.

#### ALTERNATIVE ACTIONS CONSIDERED

None. Listed vehicles have reached the end of their useful service life and replacement vehicles are urgently needed to provide safe and efficient vehicles to support services.

Greg Ellington, Equipment Superintendent, Department of Public Works (510) 981-6469

Attachment:  
1: Resolution

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<sup>4</sup> [https://www.cityofberkeley.info/Clerk/City\\_Council/2016/10\\_Oct/Documents/2016-10-18\\_Item\\_44\\_Use\\_of\\_Renewable\\_Diesel.aspx](https://www.cityofberkeley.info/Clerk/City_Council/2016/10_Oct/Documents/2016-10-18_Item_44_Use_of_Renewable_Diesel.aspx)

RESOLUTION NO. ##,###-N.S.

PURCHASE ORDER: NATIONAL AUTO FLEET GROUP FOR NINE FORD F-SERIES PICKUP TRUCKS WITH VARYING SERVICE BODY CONFIGURATIONS

WHEREAS, nine (9) Ford-F-Series Pickup Trucks with varying service body configurations are needed by the Parks Recreation & Waterfront Department (PRW) for transporting staff, supplies and equipment to, within, and from City parks, waterfront, and street medians; and

WHEREAS, the vehicles have reached the end of their useful service life; and

WHEREAS, vehicles must be replaced based upon a reasonable schedule that allows city employees to efficiently, safely, and effectively carry out their duties; and

WHEREAS, City Charter XI Section 67.2 allows the City to purchase goods without undergoing a competitive bid process if the City uses pricing obtained by another entity through a competitive bid process; and

WHEREAS, on October 21, 2016 Sourcewell released Request for Proposal No. 120716 for Vehicles, Cars, Vans, SUV's, and Light Trucks with Related Equipment, Accessories, and Services. The solicitation was released for approximately forty-nine days and four proposals were submitted. Upon their review Sourcewell selected National Auto Fleet Group as the best most responsive proposer to meet the specifications, thusly awarding Contract No. 120716-NAF; and

WHEREAS, Sourcewell contract bid procedures satisfy the procurement requirements of the City of Berkeley; and

WHEREAS, funds in the amount of \$492,284 are available in the FY 2020 PRW Fund (138) and the in the Equipment Replacement Fund (671) pending approval of the second Amendment to the Annual Appropriations Ordinance; and

WHEREAS, funds in the amount of \$245,000 will be requested from the General Fund (011) in the FY 2021 Mid-Cycle Budget Process to support the electrification of the City Fleet.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute a purchase order for nine (9) Ford F-Series Pickup Trucks with varying Service Body Configurations with National Auto Fleet Group in an amount not to exceed \$492,284 and a subsequent purchase order with National Auto Fleet Group for nine (9) XL Fleet Plug-In conversions in an amount not to exceed \$245,000 when they are available for purchase.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: Phillip L. Harrington, Director, Public Works  
 Subject: Contract Nos. 31900080 and 31900205 Amendments: Edgeworth Integration, LLC for Server Storage

RECOMMENDATION

Adopt two Resolutions authorizing the City Manager to execute:

- Amendment to Contract No. 31900080 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$36,587.54 for a total not to exceed amount of \$71,587.54.
- Amendment to Contract No. 31900205 with Edgeworth Integration, LLC for server storage, increasing the current contract by \$17,971.63 for a total not to exceed amount of \$35,028.00.

FISCAL IMPACTS OF RECOMMENDATION

One time funding of \$36,587.54, for the proposed contract amendment of Contract No. 31900080, is available in General Fund 011.

Fiscal Year 2020	Amount
Original Authorized Contract NTE Amount	\$35,000.00
This Amendment amount	\$36,587.54
Total Authorized Contract NTE Amount	\$71,587.54

This contract Amendment is entered in the City's contract management system Y7BVW.

One time funding of \$17,971.63, for the proposed contract amendment of Contract No. 31900205, is available in Zero Waste Fund 601.

Fiscal Year 2020	Amount
Original Authorized Contract NTE Amount	\$16,000.00
This Amendment amount	\$17,971.63
Total Authorized Contract NTE Amount	\$35,028.00

This contract Amendment is entered in the City's contract management system TFUVF.

### CURRENT SITUATION AND ITS EFFECTS

As part of a multi-pronged approach to deter and reduce crime in and around San Pablo Park, the City's Public Works Department (Public Works), in conjunction with the City's Police Department (PD), installed a video surveillance system on existing infrastructure within the park. Video from the cameras is currently being stored on a local device protected within the City's network and physically secured on City property.

As a separate project, the City of Berkeley Transfer Station installed cameras to support a more thorough load check program of incoming loads, to ensure that the vehicles are properly positioned on the scales, and as a response to an internal Cash Handling Audit which found it necessary for the Transfer Station to develop Cash Handling Policies and Procedures, and to include video footage of incoming and outgoing vehicles as a theft deterrent.

The original data storage devices must be replaced by more robust storage devices with the data retention capacity of one year. The current servers are not compliant with California Government Code Section 34090.6 as they do not have the requisite one year of storage capacity. Section 34090.6 states:

The head of a department of a city or city and county, after one year, may destroy recordings of routine video monitoring and after 100 days may destroy recordings of telephone and radio communications maintained by the department. This destruction shall be approved by the legislative body and the written consent of the agency attorney shall be obtained. In the event that the recordings are evidence in any claim filed or any pending litigation, they shall be preserved until pending litigation is resolved.

Amending the contracts to increase the NTE amounts provides contract authority to purchase and install the upgraded storage device.

These contract amendments support the City's Strategic Plan Goals of creating a resilient, safe, connected, and prepared City and providing an efficient and financially-healthy City government.

### BACKGROUND

Pursuant to the August 18, 2018 shooting in San Pablo Park in which three people, including two innocent bystanders, were injured, the subsequent August 28, 2018 Community Meeting with Mayor Arreguin and Councilmember Davila, and constituent communications indicating a strong desire to move expeditiously to install cameras; On October 16, 2018 City Council approved the expedient installation of cameras in San Pablo Park as part of a multi-pronged approach to addressing community concerns about escalating violence in the area. Cameras on city property are exempted by the surveillance ordinance Berkeley Municipal Code Section 2.99.020.

The City's Public Works Department (Public Works) contracted with Edgeworth Integration, LLC for the purchase and installation of an exterior mounted Video



Surveillance System to be installed on existing infrastructure within the boundaries of San Pablo Park.

At the Transfer Station, the installation of the cameras has assisted the Scalehouse staff by simplifying the load check process and acting as a theft deterrent.

#### ENVIRONMENTAL SUSTAINABILITY

This contract has no environmental effects or opportunities.

#### RATIONALE FOR RECOMMENDATION

Gun violence and crime in and around San Pablo Park area presents an imminent potential danger of injury or death to persons using the park. The community's response on the City Manager's *Berkeley Considers*<sup>1</sup> survey was a majority 82.9% approval rating for the installation of cameras at the park and a 2011 study by the Urban Institute's Justice Policy Center concluded that video surveillance systems are effective at reducing crime. Along with the deployment of two additional police officers to patrol San Pablo Park and the surrounding area, use of the video surveillance system is a crucial part of the City's efforts to deter and reduce crime in this area.

The camera system at the Transfer Station supports the safety of the Scalehouse and supports more efficient operations.

Authorizing the purchase and installation of a server with sufficient capacity to retain video data captured by the cameras is necessary to continued use of the video surveillance system already in place at San Pablo Park and the Transfer Station.

#### ALTERNATIVE ACTIONS CONSIDERED

In addition to the installation of a video surveillance system, additional police officers have been deployed to patrol the park. No alternatives action for the Transfer Station were considered.

#### CONTACT PERSON

Phil Harrington, Director, Department of Public Works, 510-981-6300

#### Attachments:

- 1: Resolution (Contract No. 31900080)
- 2: Resolution (Contract No. 31900205)

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<sup>1</sup> <http://www.ci.berkeley.ca.us/considers/>

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 31900080 AMENDMENT: EDGEWORTH INTEGRATION, LLC FOR  
SERVER STORAGE

WHEREAS, on August 18<sup>th</sup>, 2018, there was a shooting in San Pablo Park which resulted in injury to three people, including two innocent bystanders; and

WHEREAS, on October 16, 2018, the City Council approved the installation of cameras in San Pablo Park; and

WHEREAS, on January 28, 2019, the City and Edgeworth Integration, LLC entered into Contract No. 31900080 for the purchase and installation of a video surveillance system at San Pablo Park; and

WHEREAS, California Government Code Section 34090.6 that the data captured by the cameras installed at San Pablo Park must be retained on the system's server for one year; and

WHEREAS, one time funding of \$36,587.54 for the purchase of a more robust data retention server is available in the General Fund 011; and

WHEREAS, this contract amendment has been entered into the citywide contract database with CMS No. Y7BVW.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 31900080 with Edgeworth Integration, LLC, for the purchase and installation of a server with sufficient storage capacity to retain up to one year's worth of video data, increasing the contract by \$36,587.54 for a total not to exceed contract amount of \$71,587.54. A record copy of the contract and amendment to be on file with the City Clerk.

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 31900205 AMENDMENT: EDGEWORTH INTEGRATION, LLC FOR  
SERVER STORAGE

WHEREAS, on June 1, 2019, the City and Edgeworth Integration, LLC entered into Contract No. 31900205 for the purchase and installation of a video surveillance system at the City's Transfer Station to support incoming load check and the cash handling process; and

WHEREAS, California Government Code Section 34090.6 that the data captured by the cameras installed at the Transfer Station must be retained on the system's server for one year; and

WHEREAS, one time funding of \$17,971.63 for the purchase of a more robust data retention server is available in the Zero Waste Fund 601; and

WHEREAS, this contract amendment has been entered into the citywide contract database with CMS No. TFUVF.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 31900205 with Edgeworth Integration, LLC, for the purchase and installation of a server with sufficient storage capacity to retain up to one year's worth of video data, increasing the contract by \$17,971.63 for a total not to exceed contract amount of \$35,028.00. A record copy of the contract and amendment to be on file with the City Clerk.





Office of the City Manager

CONSENT CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip Harrington, Director, Public Works

Subject: Contract No. 9893B Amendment: ABM Industries for Expanding Electric Vehicle Charging Station Operations and Extended Maintenance Program

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 9893B with ABM Industries to extend the term by three years, purchase additional Electric Vehicle (EV) charging stations, and provide network operations and maintenance, including extended warranty services, in the amount of \$131,556 for a total Contract not to exceed \$557,552 through June 30, 2026.

FISCAL IMPACTS OF RECOMMENDATION

Funding of \$72,450 for the purchase and installation of ten new EV charging stations is available in the FY 2020 budget from the Capital Improvement Fund (501-54-623-677-0000-000-444-663110-PWENEN2001) which is included in the first amendment to the FY2020 Annual Appropriations Ordinance. Remaining funding of \$59,106 is subject to appropriation in the FY 2021 through FY 2026 budgets in the General Fund, Marina Operations/Maintenance Fund, Off-Street Parking Fund, and Parking Meter Fund.

CURRENT SITUATION AND ITS EFFECTS

Currently, the City of Berkeley's municipal fleet consists of approximately 480 vehicles that include a variety of passenger vehicles, SUVs, light, heavy-duty, and long-haul trucks, and fire engines. Larger city fleet vehicles are maintained at the City's Corporation Yard and the Transfer Station. The Center Street Garage houses thirty-seven City fleet vehicles (cars, vans, and light trucks) assigned to City Departments in the Downtown Berkeley area. Twenty-one of these vehicles (56%) are alternative fuel vehicles.

On June 25, 2019, the City Council directed the City Manager and the Department of Public Works to create an Action Plan by June 2020 to aggressively accelerate the implementation of the electrification of the City's municipal fleet.<sup>1</sup> The current contract with ABM Industries (Contract No. 9893B) was intended to facilitate the incremental expansion of EV charging stations in the Center Street Garage over a four-year span. At

<sup>1</sup> June 25, 2019 Council Meeting: <http://bit.ly/334Uf9u>

the direction of Council, these planned stations are being installed more quickly, and new stations are also planned for other City facilities, including the North Berkeley Senior Center, the Corporation Yard, the Civic Center building, and the Mental Health building on Martin Luther King Jr. Way. Meanwhile, the City is procuring more electric fleet vehicles, which will use the fifty-seven total EV charging spaces located in Center Street Garage and other City locations (as they are installed) to recharge.

Due to this acceleration in fleet electrification, the current contract does not have sufficient funding and must be increased to facilitate these activities. The increase of \$131,556 will fund a total of ten new double-sided EV stations with the capacity to charge twenty vehicles at five new locations, and expand the service and maintenance plan to cover all City EV charging stations for a five-year period.

Accelerating the electrification of the City's municipal fleet by installing additional EV charging stations is a Strategic Plan Priority Project, advancing our goal to be a global leader in addressing climate change, advancing environmental justice, and protecting the environment.

#### BACKGROUND

In 2006, Berkeley voters overwhelmingly approved Measure G, which called for reducing the community's greenhouse gas (GHG) emissions by 80% below year 2000 levels by 2050. As a result, the Berkeley Climate Action Plan (CAP) was developed through a community-wide process and adopted by the City Council in 2009. The city achieved 15% reduction in GHG emissions from 2000 to 2016.

In addition to the City Council's plan to accelerate the electrification of municipal fleet vehicles, the City's Electric Mobility Roadmap, the first draft of which was completed in October 2019, provides strategies and tools to achieve the vision of a fossil fuel-free transportation system that integrates with and supports the City's ongoing efforts to increase walking, biking, and public transportation use in the City, and ensures equitable access to the benefits of clean transportation.<sup>2</sup>

#### ENVIRONMENTAL SUSTAINABILITY

Purchasing and using electric vehicle chargers supports the goals of the City's Climate Action Plan, Electric Mobility Roadmap, and Fossil Free Berkeley Report.

#### RATIONALE FOR RECOMMENDATION

On June 25, 2019, the City Council directed the City Manager to collaborate with the Department of Public Works (who is responsible for purchases and maintenance of City vehicles), to create an Action Plan to aggressively accelerate the electrification of the City municipal fleet and phase out fossil fuel use in municipal vehicles by 2030. This

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<sup>2</sup> Berkeley Electric Mobility Roadmap, October 2019: <http://bit.ly/2JQnXI3>

contract amendment allows Public Works to install and maintain additional EV charging stations in support of this directive.

ALTERNATIVE ACTIONS CONSIDERED

None. Replacing city fleet gas-powered vehicles with electric vehicles will require EV Charging stations.

CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works, 981-7061  
Danette Perry, Parking Services Manager, Public Works, 981-7057

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 9893B AMENDMENT: ABM INDUSTRIES FOR EXPANDING ELECTRIC VEHICLE CHARGING STATION OPERATIONS AND EXTENDED MAINTENANCE PROGRAM

WHEREAS, the City has an existing Contract No. 9893B with ABM Industries to provide electric vehicle (EV) charging stations and extended maintenance for these stations; and

WHEREAS, under this Contract the City planned to increase the number of EV charging stations available for public use over the span of four years, particularly in the Center Street Garage; and

WHEREAS, on June 25, 2019, the City Council directed the City Manager and the Department of Public Works to create an Action Plan by June 2020 to aggressively accelerate the implementation of the electrification of the City's municipal fleet; and

WHEREAS, the Department of Public Works has begun to purchase electric vehicles in response to this directive, and speed the installation of additional EV charging stations in the Center Street Garage and at other City facilities; and

WHEREAS, the existing Contract does not include sufficient funding to meet the demands of the accelerated electrification efforts; and

WHEREAS, subject to approval of the contract amendment, and appropriation in the FY 2020 through FY 2026 budgets from the Capital Improvement Fund 501, the General Fund 011, Marina Operations/Maintenance Fund 608, Off-Street Parking Fund 627, and Parking Meter Fund 631. , ABM Industries' services will include extension of the term by three years, purchase additional Electric Vehicle (EV) charging stations, and provide network operations and maintenance, including extended warranty services.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 9893B with ABM Industries in the amount of \$131,556 for a total Contract not to exceed of \$557,552 through June 30, 2026.





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Department of Public Works  
Subject: Contract: Pacific Trenchless, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations

RECOMMENDATION

Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Dwight Way, Fourth Street, Camelia Street, Seventh Street, Heinz Avenue, University Avenue, Dana Street, Ward Street, Dover Street, Haskell Street, and Seawall Drive; accepting the bid of the lowest responsive and responsible bidder, Pacific Trenchless, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,821,569 which includes a 10% contingency of \$347,415.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the FY 2020 Sanitary Sewer Fund 611-54-623-676-0000-000-473-665130-PWENSR2003.

Low bid by Pacific Trenchless .....	\$3,474,154
10% Contingency .....	\$347,415
<b>Total construction cost .....</b>	<b>\$3,821,569</b>

The contract has been entered into the Contract Management System (CMS) as CMS No. K35GK.

CURRENT SITUATION AND ITS EFFECTS

This sanitary sewer project is part of the City's ongoing program to rehabilitate or replace its aging sanitary sewer system, and to eliminate potential health hazards to the public. The project will be sited at various locations throughout the City as shown on the Location Map (Attachment 2). The sanitary sewer collection system in these areas needs immediate rehabilitation to prevent impending pipe failures, sewer blockages, and leakage problems. Field investigations performed using a closed circuit television camera revealed deteriorated piping and pipe defects in the existing sanitary sewer mains. These conditions are similar to problems previously found in other sanitary sewer mains prior to their replacement.

Planned work entails replacement or rehabilitation of approximately 6,363 linear feet of sanitary sewer mains ranging in size from 4-inch to 27-inch diameter; maintenance hole construction; replacement of 4-inch and 6-inch diameter sanitary sewer laterals; and other related work. To reduce traffic impacts, minimize inconvenience to residents, and reduce cost, a majority of this sanitary sewer rehabilitation work will be performed using the pipe bursting method. This trenchless method allows replacement of pipelines buried below street level (such as sewer or water pipes) without the need for a traditional open trench construction. This method of pulling a new high-density polyethylene pipe (HDPE) through the existing clay pipe with a cone-shaped hammerhead to "burst" the surrounding clay pipe, allows for cost savings, and avoids street closures and traffic disruptions caused by open trenches.

The scope of work also includes provisions for urgent/emergent actions related to acute sewer defects that will be undertaken at other citywide locations on an as-needed basis. As required by the United States Environmental Protection Agency (EPA) and Regional Water Quality Control Board Consent Decree, acute defects must be addressed no later than one year after they are identified. The 135 working day contract term includes a 90 working day performance period and an additional 45 working days for project closeout. Finally, a 10% contract contingency of \$347,415 is included to pay for related unexpected future construction events.

#### BACKGROUND

To remain compliant with the September 22, 2014 Consent Decree, the City has implemented a long-term mandated Sanitary Sewer Capital Improvement Program to eliminate sanitary sewer overflows (SSOs) and reduce storm water infiltration and inflow into the sanitary sewer system. Under this program, the City utilizes a comprehensive asset management approach based on complex and evolving hydrologic and hydraulic modeling and condition assessments to repair, replace, or upgrade the City's portion of the sanitary sewer system. Ultimately, these actions will assist East Bay Municipal Utility District (EBMUD) in their goal of eliminating discharges from their wet weather facilities by the end of 2035.

This is the sixth year of the twenty-two-year Consent Decree program, which stipulates the City shall perform collection system repair and rehabilitation to control infiltration and inflow.<sup>1</sup> This is in support of and in addition to ongoing work previously identified in the City's Sanitary Sewer Management Plan (SSMP) and Asset Management Implementation Plan (AMIP).

This project advances a Strategic Plan Priority Goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

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<sup>1</sup> At an average annual rate of no less than 22,120 feet of sanitary sewer mains on a three-fiscal-year rolling average.

An Invitation for Bids (Specification. No. 20-11353-C) was released on October 4, 2019 and 6 non-local bids were received, ranging from a low of \$3,474,154 to a high of \$4,112,671 (Attachment 3, Bid Results). The engineer's estimate for the project was \$4,150,000. Pacific Trenchless of Oakland, CA was the lowest responsive and responsible bidder with a bid of \$3,474,154. Previous work and references of Pacific Trenchless proved satisfactory, thus staff recommends award of the contract to Pacific Trenchless.

The Living Wage Ordinance does not apply to this project as Department of Public Works construction contracts are subject to State prevailing wage laws. Pacific Trenchless has submitted a Certification of Compliance with the Equal Benefits Ordinance. Because the project's estimated value exceeds \$500,000, the Department of Public Works intends to continue honoring the Community Workforce Agreement (CWA) and will apply its terms to this agreement. As a result, the successful bidder and all subcontractors must agree to be bound by the terms of the CWA.

#### ENVIRONMENTAL SUSTAINABILITY

Improvements to the City's sanitary sewer system will help protect water quality by reducing the frequency of SSOs, and infiltration and inflows into the City's sanitary sewer system that can negatively affect the San Francisco Bay.

#### RATIONALE FOR RECOMMENDATION

Contracted services are required for these large projects, as the City lacks in-house resources needed to complete scheduled sanitary sewer rehabilitation and replacement projects. Further, the City must take timely action to address urgent/emergent sewer repairs without delay. Finally, subject to fines and stipulated penalties, the Consent Decree demands the City to repair acute defects within one year of discovery, and complete sanitary sewer main rehabilitation and replacement at a three-year annual average minimum of 22,120 feet per fiscal year. The City will have a three year annual average of approximately 23,220 linear feet of replaced or rehabilitated sewer mains after completing the FY 2020 work by June 30, 2020.

#### ALTERNATIVE ACTIONS CONSIDERED

No reasonable alternative exists as the City's sanitary sewer pipelines are in poor condition and in need of timely rehabilitation to prevent an increased probability of infiltration and inflows, sanitary sewer leakages, and backup problems in the sanitary sewer system.

#### CONTACT PERSON

Andrew Brozyna, Deputy Director, Public Works, (510) 981-6396  
Nisha Patel, Manager of Engineering, Public Works, (510) 981-6406  
Ricardo Salcedo, Assistant Civil Engineer, Public Works, (510) 981-6407

Contract: Pacific Trenchless, Inc. for Sanitary Sewer Rehabilitation  
and Replacement at Various Locations

CONSENT CALENDAR  
December 10, 2019

Attachments:

- 1: Resolution
- 2: Location Map
- 3: Bid Results

RESOLUTION NO. ##,###-N.S.

CONTRACT: PACIFIC TRENCHLESS, INC. FOR SANITARY SEWER REHABILITATION AND REPLACEMENT – DWIGHT WAY, FOURTH STREET, CAMELIA STREET, SEVENTH STREET, HEINZ AVENUE, UNIVERSITY AVENUE, DANA STREET, WARD STREET, DOVER STREET, HASKELL STREET, AND SEAWALL DRIVE

WHEREAS, the Sanitary Sewer Project is part of the City's on-going Sanitary Sewer Capital Improvement Program to rehabilitate or replace the aging and deteriorated sanitary sewer system; and

WHEREAS, the Capital Improvement Program is a requirement of compliance with the National Pollution Discharge Elimination System Permit and California Regional Water Quality Control Board Consent Decree; and

WHEREAS, the City has neither the staff nor the equipment necessary to undertake this Sanitary Sewer Rehabilitation and Replacement Project and other urgent/emergent sewer repairs; and

WHEREAS, on October 4, 2019 the City released an Invitation for Bids (Specification No. 20-11353-C) for sanitary sewer rehabilitation and replacement; and

WHEREAS, the City received 6 submissions, and Pacific Trenchless, Inc. was found to be the lowest responsive and responsible bidder; and

WHEREAS, funds are available in the FY 2020 budget Sanitary Sewer Fund 611 and the contract has been entered as CMS No. K35GK.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 20-11353-C for the Sanitary Sewer Rehabilitation and Replacement Project are approved.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments with Pacific Trenchless, Inc., until completion of the project in accordance with the approved specifications for the Sanitary Sewer Rehabilitation and Replacement Project located on Dwight Way, Fourth Street, Camelia Street, Seventh Street, Heinz Avenue, University Avenue, Dana Street, Ward Street, Dover Street, Haskell Street, and Seawall Drive, in an amount not to exceed \$3,821,569 which includes a 10% contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments will be on file in the Office of the City Clerk.

# LOCATION MAP

## SANITARY SEWER REHABILITATION AND REPLACEMENT

DWIGHT WAY, FOURTH STREET, CAMELIA STREET, SEVENTH STREET, HEINZ AVENUE, UNIVERSITY AVENUE, DANA STREET, WARD STREET, DOVER STREET, HASKELL STREET, AND SEAWALL DRIVE  
SPECIFICATION NO. 20-11353-C

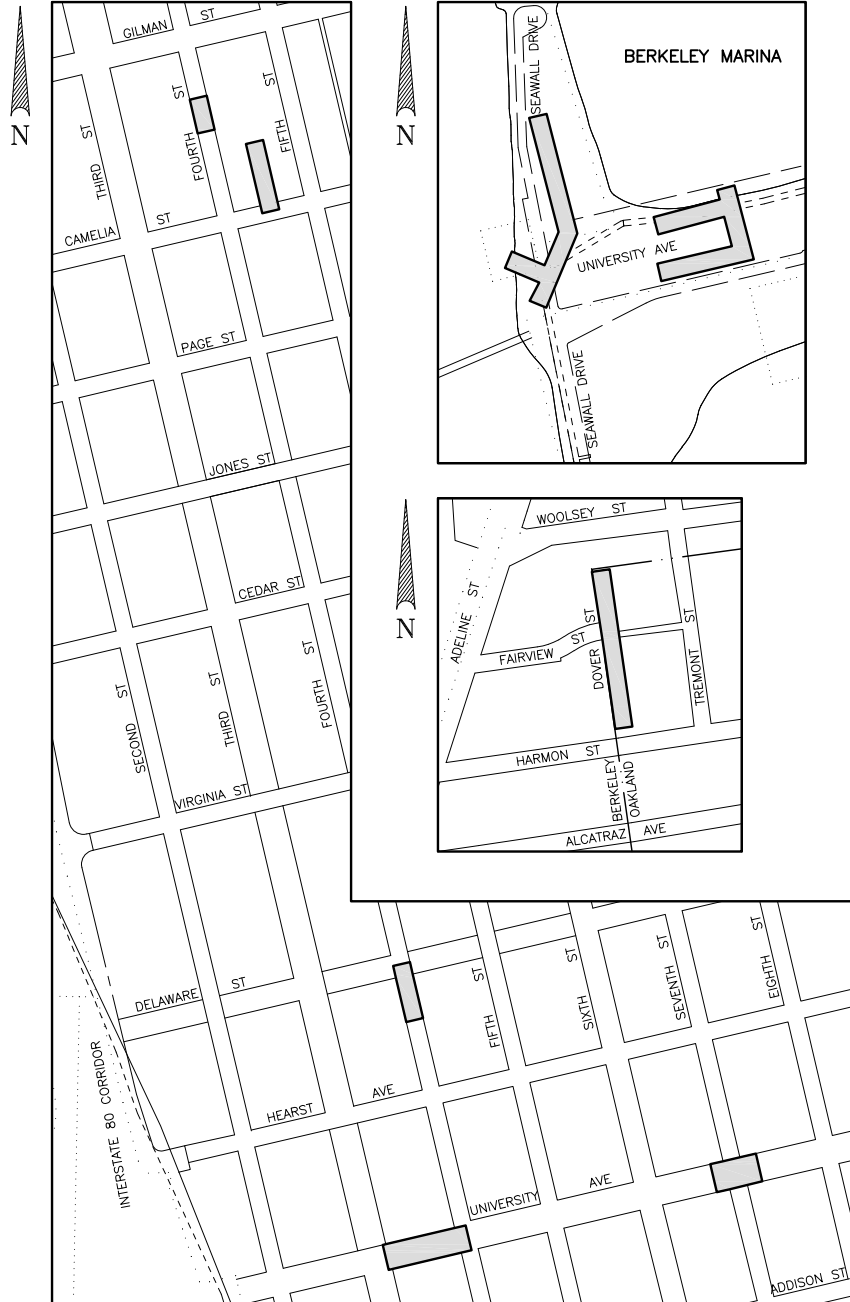


— CONSTRUCTION AREA

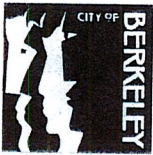
# LOCATION MAP

## SANITARY SEWER REHABILITATION AND REPLACEMENT

DWIGHT WAY, FOURTH STREET, CAMELIA STREET, SEVENTH STREET,  
HEINZ AVENUE, UNIVERSITY AVENUE, DANA STREET, WARD STREET,  
DOVER STREET, HASKELL STREET, AND SEAWALL DRIVE  
SPECIFICATION NO. 20-11353-C



█ — CONSTRUCTION AREA



City of Berkeley  
Abstract of Bids Worksheet

Finance Department  
General Service Division

For: SANITARY SEWER REHABILITATION SEAWALL DR

Specification#: 20-11353-C

Engineer's Estimate:

Bid Date: 10/24/2019

	Bidders	Base Bid	Nuc Free	Work Force Comp	Opp. States	Living Wage	EBO	Bid Bond	Addendum
1	CEATUS INC.	3,794,644.00	✓		✓		✓	✓	✓
2	PACIFIC TRENCHLESS INC.	3,474,154.00	✓		✓		✓	✓	✓
3	K.J. WOODS CONSTRUCTION INC.	3,838,000.00	✓		✓		✓	✓	✓
4	ANDES CONSTRUCTION INC.	3,474,552.00	✓		✓		✓	✓	✓
5	WESTLAND CONTRACTORS INC	3,870,576.00	✓		✓		✓	✓	✓
6	PRECISION ENGINEERING	4,112,671.00	✓		✓		✓	✓	✓
7									
8									
9									
10									

Bid Recorder: FC/p. R hmn 10/24/19

Bid Opener: SD 10/24/19

Project Manager: David [Signature] 10/24/19





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Department of Public Works  
Subject: Contract: Precision Engineering Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations

RECOMMENDATION

Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on San Pablo Avenue at University Avenue, Parker Street, Carleton Street, Derby Street, and from Grayson Street to South City Limit; accepting the bid of the lowest responsive and responsible bidder, Precision Engineering Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$2,246,219, which includes a 10% contingency of \$204,202.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the FY 2020 Sanitary Sewer Fund 611-54-623-676-3013-000-473-665130-PWENSR2001.

Low bid by Precision Engineering Inc. \$2,042,017  
10% Contingency \$204,202  
**Total construction cost .....\$2,246,219**

The contract has been entered into the Contract Management System (CMS) as CMS No. MMVJV.

CURRENT SITUATION AND ITS EFFECTS

This sanitary sewer project is part of the City's ongoing program to rehabilitate or replace its aging sanitary sewer system, and to eliminate potential health hazards to the public. The project will be sited at various locations on San Pablo Avenue as shown on the Location Map (Attachment 2). The sanitary sewer collection system in these areas needs immediate rehabilitation to prevent impending pipe failures, sewer blockages, and leakage problems. Field investigations performed using a closed circuit television camera revealed deteriorated piping and pipe defects in the existing sanitary sewer mains. These conditions are similar to problems previously found in other sanitary sewer mains prior to their replacement.

Planned work entails replacement or rehabilitation of approximately 4,135 linear feet of sanitary sewer mains varying in size from 6-inch to 12-inch diameter; maintenance hole construction; replacement of 4-inch and 6-inch diameter sanitary sewer laterals; and other related work. To reduce traffic impacts, minimize inconvenience to residents, and reduce cost, a majority of this sanitary sewer rehabilitation work will be performed using the pipe bursting method. This trenchless method allows replacement of pipelines buried below street level (such as sewer or water pipes) without the need for a traditional open trench construction. This method of pulling a new high-density polyethylene pipe (HDPE) through the existing clay pipe with a cone-shaped hammerhead to "burst" the surrounding clay pipe, allows for cost savings, and avoids street closures and traffic disruptions caused by open trenches.

The scope of work also includes provisions for urgent/emergent actions related to acute sewer defects that will be undertaken at other citywide locations on an as-needed basis. As required by the United States Environmental Protection Agency (EPA) and Regional Water Quality Control Board Consent Decree, acute defects must be addressed no later than one year after they are identified. The 125 working day contract term includes an 80 working day performance period and an additional 45 working days for project closeout. Finally, a 10% contract contingency of \$204,202 is included to pay for related unexpected future construction events.

This recommendations supports the Citywide Strategic Goal of providing state-of-the-art, well-maintained infrastructure, amenities, and facilities.

### BACKGROUND

To remain compliant with the September 22, 2014 Consent Decree, the City has implemented a long-term mandated Sanitary Sewer Capital Improvement Program to eliminate sanitary sewer overflows (SSOs) and reduce storm water infiltration and inflow into the sanitary sewer system. Under this program, the City utilizes a comprehensive asset management approach based on complex and evolving hydrologic and hydraulic modeling and condition assessments to repair, replace, or upgrade the City's portion of the sanitary sewer system. Ultimately, these actions will assist East Bay Municipal Utility District (EBMUD) in their goal of eliminating discharges from their wet weather facilities by the end of 2035.

This is the sixth year of the twenty-two-year Consent Decree program, which stipulates the City shall perform collection system repair and rehabilitation to control infiltration and inflow.<sup>1</sup> This is in support of and in addition to ongoing work previously identified in the City's Sanitary Sewer Management Plan (SSMP) and Asset Management Implementation Plan (AMIP). This project advances a Strategic Plan Priority Goal to provide state-of-the-art, well-maintained infrastructure, amenities, and facilities.

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<sup>1</sup> At an average annual rate of no less than 22,120 feet of sanitary sewer mains on a three-fiscal-year rolling average.

An Invitation for Bids (Specification. No. 20-11351-C) was released on September 20, 2019 and eight non-local bids were received, ranging from a low of \$2,042,017 to a high of \$3,437,505 (Attachment 3, Bid Results). The engineer's estimate for the project was \$2,700,000. Precision Engineering Inc. of San Francisco, CA was the lowest responsive and responsible bidder with a bid of \$2,042,017. Previous work and references of Precision Engineering Inc. proved satisfactory, thus staff recommends award of the contract to Precision Engineering Inc.

The Living Wage Ordinance does not apply to this project as Department of Public Works construction contracts are subject to State prevailing wage laws. Precision Engineering Inc. has submitted a Certification of Compliance with the Equal Benefits Ordinance. Because the project's estimated value exceeds \$500,000, the Department of Public Works intends to continue honoring the Community Workforce Agreement (CWA) and will apply its terms to this agreement. As a result, the successful bidder and all subcontractors must agree to be bound by the terms of the CWA.

#### ENVIRONMENTAL SUSTAINABILITY

Improvements to the City's sanitary sewer system will help protect water quality by reducing the frequency of SSOs, and infiltration and inflows into the City's sanitary sewer system that can negatively affect the San Francisco Bay.

#### RATIONALE FOR RECOMMENDATION

Contracted services are required for these large projects, as the City lacks in-house resources needed to complete scheduled sanitary sewer rehabilitation and replacement projects. Further, the City must take timely action to address urgent/emergent sewer repairs without delay. Finally, subject to fines and stipulated penalties, the Consent Decree demands the City to repair acute defects within one year of discovery, and complete sanitary sewer main rehabilitation and replacement at a three-year annual average minimum of 22,120 feet per fiscal year. The City will have a three year annual average of approximately 23,220 linear feet of replaced or rehabilitated sewer mains after completing the FY 2020 work by June 30, 2020.

#### ALTERNATIVE ACTIONS CONSIDERED

No reasonable alternative exists as the City's sanitary sewer pipelines are in poor condition and in need of timely rehabilitation to prevent an increased probability of infiltration and inflows, sanitary sewer leakages, and backup problems in the sanitary sewer system.

#### CONTACT PERSON

Andrew Brozyna, Deputy Director, Public Works, (510) 981-6396  
Nisha Patel, Manager of Engineering, Public Works, (510) 981-6406  
Adadu Yemane, Associate Civil Engineer, Public Works, (510) 981-6413

Attachments:

- 1: Resolution
- 2: Location Map
- 3: Bid Results

RESOLUTION NO. ##,###-N.S.

CONTRACT: PRECISION ENGINEERING INC. FOR SANITARY SEWER REHABILITATION AND REPLACEMENT - SAN PABLO AVENUE AT UNIVERSITY AVENUE, PARKER STREET, CARLETON STREET, DERBY STREET, AND FROM GRAYSON STREET TO SOUTH CITY LIMIT.

WHEREAS, the Sanitary Sewer Project is part of the City's on-going Sanitary Sewer Capital Improvement Program to rehabilitate or replace the aging and deteriorated sanitary sewer system; and

WHEREAS, the Capital Improvement Program is a requirement of compliance with the National Pollution Discharge Elimination System Permit and California Regional Water Quality Control Board Consent Decree; and

WHEREAS, the City has neither the staff nor the equipment necessary to undertake this Sanitary Sewer Rehabilitation and Replacement Project and other urgent/emergent sewer repairs; and

WHEREAS, on September 20, 2019 the City released an Invitation for Bids (Specification No. 20-11351-C) for sanitary sewer rehabilitation and replacement; and

WHEREAS, the City received eight submissions, and Precision Engineering Inc. was found to be the lowest responsive and responsible bidder; and

WHEREAS, funds are available in the FY 2020 budget for Sanitary Sewer Fund 611 and the contract has been entered as CMS No. MMVJV.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 20-11351-C for the Sanitary Sewer Rehabilitation and Replacement Project are approved.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments with Precision Engineering Inc., until completion of the project in accordance with the approved specifications for the Sanitary Sewer Rehabilitation and Replacement Project located on San Pablo Avenue at University Avenue, Parker Street, Carleton Street, Derby Street, and from Grayson Street to South City Limit, in an amount not to exceed \$2,246,219 which includes a 10% contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments will be on file in the Office of the City Clerk.

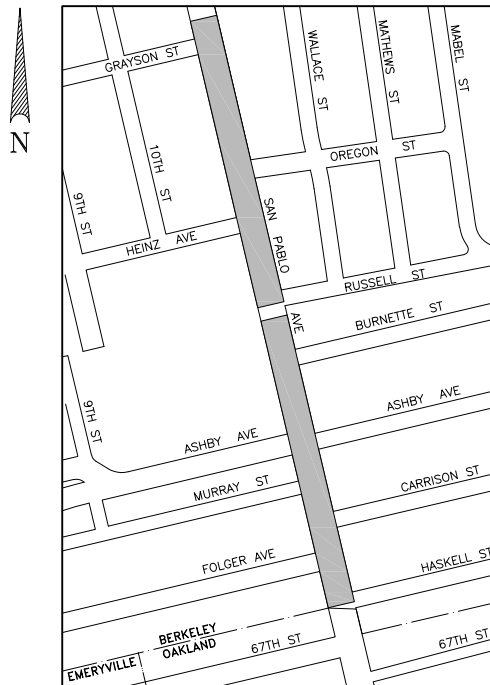
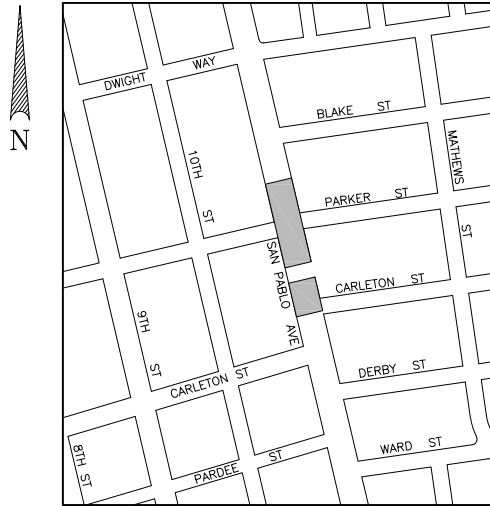
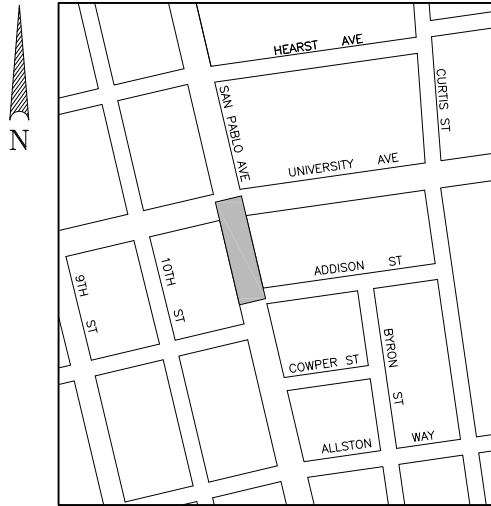
# LOCATION MAP

## SANITARY SEWER REHABILITATION AND REPLACEMENT

### SAN PABLO AVENUE

AT UNIVERSITY AVENUE, PARKER STREET, CARLETON STREET,  
AND FROM GRAYSON STREET TO SOUTH CITY LIMIT

SPECIFICATION NO. 20-11351-C



## ATTACHMENT 2

 - CONSTRUCTION AREA



Finance Department  
General Service Division

City of Berkeley  
Abstract of Bids Worksheet

BID  
BOND

For: SANITARY SEWER REHABILITATION PROJECT

Specification#: 20-11351-C

Bid Date: 10/17/2019

	Bidders	Base Bid	Nuc Free	Work Force Comp	Opp. States	Living Wage	EBO
1	WESTLAND CONTRACTORS INC	2,574,710.00	✓		✓		✓
2	DARCY & HARDY CONSO. INC	3,366,380.00	✓		✓		✓
3	CRATUS INC	2,504,440.00	✓		✓		✓
4	PRECISION ENGINEERING	2,042,017.00	✓		✓		✓
5	PACIFIC TRENCHERS INC	2,971,867.00	✓		✓		✓
6	BAY PACIFIC PIPELINES INC	2,672,765.00	✓		✓		✓
7	ANDES CONSTRUCTION INC	3,437,505.00	✓		✓		✓
8							
9							
10							

ADD

Bid Recorder:

*[Signature]*

Bid Opener:

*[Signature]*

Project Manager:

*[Signature]*



City of Berkeley  
Abstract of Bids Worksheet

Finance Department  
General Service Division

For: SANITARY SEWER REHABILITATION PROJECT

Specification#: 20-11351-C

Engineer's Estimate:

Bid Date: 10/18/2019

	Bidders	Base Bid	Nuc Free	Work Force Comp	Opp. States	Living Wage	EBO	Bid Bond	Addendum
1	KEEEX ENGINEERING INC	3,107,175.00	✓		✓		✓	✓	✓
2									
3									
4									
5									
6									
7									
8									
9									
10									

Bid Recorder: [Signature] 10/18/19

Bid Opener: [Signature] 10/18/19

Project Manager: [Signature]





Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Department of Public Works  
Subject: Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation and Replacement at Various Locations

RECOMMENDATION

Adopt a Resolution approving plans and specifications for the Sanitary Sewer Project, located on Neilson Street Backline, Thousand Oaks Boulevard Backline, Portland Avenue Backline, Peralta Avenue, San Lorenzo Avenue/Washington Avenue, Capistrano Avenue, Miramar Avenue Backline, The Alameda Backline, Arlington Avenue Backline, Michigan Avenue Backline, Alamo Avenue Backline, San Diego Road and Backline, Santa Barbara Road and Backline, San Luis Road Backline, Henry Street Backline, Berryman Street and Backline, Grizzly Peak Boulevard and Backline, Cypress Street/Buena Avenue, Rose Street, Grant Street, Edith Street, and Milvia Street Backline; accepting the bid of the lowest responsive and responsible bidder, Cratus, Inc.; and authorizing the City Manager to execute a contract and any amendments, extensions, or other change orders until completion of the project in accordance with the approved plans and specifications, in an amount not to exceed \$3,654,358, which includes a 10% contingency of \$332,214.

FISCAL IMPACTS OF RECOMMENDATION

Funding is available in the FY 2020 Sanitary Sewer Fund 611-54-623-676-0000-000-473-665130-PWENSR2002.

Low bid by Cratus .....	\$3,322,144
10% Contingency .....	\$332,214
<b>Total construction cost .....</b>	<b>\$3,654,358</b>

CURRENT SITUATION AND ITS EFFECTS

This sanitary sewer project is part of the City's ongoing program to rehabilitate or replace its aging sanitary sewer system, and to eliminate potential health hazards to the public. The project will be sited at various locations throughout the City as shown on the Location Map (Attachment 2). The sanitary sewer collection system in these areas needs immediate rehabilitation or replacement to prevent impending pipe failures, sewer blockages, and leakage problems. Field investigations performed using a closed circuit television camera revealed deteriorated piping and pipe defects in the existing sanitary sewer mains. These conditions are similar to

problems previously found in other sanitary sewer mains prior to their replacement.

Planned work entails rehabilitation or replacement of approximately 7,578 linear feet sanitary sewer mains varying in size from 4-inch to 12-inch diameter; maintenance holes construction; replacement of 4-inch and 6-inch diameter sanitary sewer laterals; and other related work. To reduce traffic impacts, minimize inconvenience to residents, and reduce cost, a majority of this sanitary sewer rehabilitation work will be performed using the pipe bursting method. This trenchless method allows replacement of pipelines buried below street level (such as sewer or water pipes) without the need for a traditional open trench construction. This method of pulling a new high-density polyethylene pipe (HDPE) through the existing clay pipe with a cone-shaped hammerhead to "burst" the surrounding clay pipe, allows for cost savings, and avoids street closures and traffic disruptions caused by open trenches.

The scope of work also includes provisions for urgent/emergent actions related to acute sewer defects that will be undertaken at other citywide locations on an as-needed basis. As required by the United States Environmental Protection Agency (EPA) and Regional Water Quality Control Board Consent Decree, acute defects must be addressed no later than one year after they are identified. The 125 working day contract term includes an 80 working day performance period and an additional 45 working days for project closeout. Finally, a 10% contract contingency of \$332,214 is included to pay for related unexpected future construction events.

## BACKGROUND

To remain compliant with the September 22, 2014 Consent Decree, the City has implemented a long-term mandated Sanitary Sewer Capital Improvement Program to eliminate sanitary sewer overflows (SSOs) and to reduce storm water infiltration and inflow into the sanitary sewer system. Under this program, the City utilizes a comprehensive asset management approach based on complex and evolving hydrologic and hydraulic modeling and condition assessments to repair, replace, or upgrade the City's portion of the sanitary sewer system. Ultimately, these actions will assist East Bay Municipal Utility District (EBMUD) in their goal of eliminating discharges from their wet weather facilities by the end of 2035.

This is the sixth year of the twenty-two-year Consent Decree program, which stipulates the City shall perform collection system repair and rehabilitation to control infiltration and inflow.<sup>1</sup> This is in support of and in addition to ongoing work previously identified in the City's Sanitary Sewer Management Plan (SSMP) and Asset Management Implementation Plan (AMIP). This project advances a Strategic Plan Priority Goal, by providing state-of-the-art, well-maintained infrastructure, amenities, and facilities.

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<sup>1</sup> At an average annual rate of no less than 22,120 feet of sanitary sewer mains on a three-fiscal-year rolling average.

An Invitation for Bids (Specification. No. 20-11352-C) was released on October 11, 2019 and six non-local bids were received, ranging from a low of \$3,322,144 to a high of \$4,778,543 (Attachment 3, Bid Results). The engineer's estimate for the project was \$4,200,000. Cratus of San Francisco, California was the lowest responsive and responsible bidder with a bid of \$3,322,144. Previous work and references of Cratus proved satisfactory, thus staff recommends award of the contract to Cratus.

The Living Wage Ordinance does not apply to this project as Department of Public Works construction contracts are subject to State prevailing wage laws. Cratus has submitted a Certification of Compliance with the Equal Benefits Ordinance. Because the project's estimated value exceeds \$500,000, the Department of Public Works intends to continue honoring the Community Workforce Agreement (CWA) and will apply its terms to this agreement. As a result, the successful bidder and all subcontractors must agree to be bound by the terms of the CWA.

ENVIRONMENTAL SUSTAINABILITY

Improvements to the City's sanitary sewer system will help protect water quality by reducing the frequency of SSOs, and infiltration and inflow into the City's sanitary sewer system that can negatively affect the San Francisco Bay.

RATIONALE FOR RECOMMENDATION

Contracted services are required for these large projects, as the City lacks in-house resources needed to complete scheduled sanitary sewer rehabilitation and replacement projects. Further, the City must take timely action to address urgent/emergent sewer repairs without delay. Finally, subject to fines and stipulated penalties, the Consent Decree demands the City to repair acute defects within one year of discovery, and complete sanitary sewer mains rehabilitation and replacement at an average annual rate of no less than 22,120 feet on a three-fiscal-year rolling average. The City will have a three-year annual average of approximately 23,220 linear feet of replaced or rehabilitated sewer mains after completing the FY 2020 work by June 30, 2020.

ALTERNATIVE ACTIONS CONSIDERED

No reasonable alternative exists as the City's sanitary sewer pipelines are in poor condition and in need of timely rehabilitation to prevent an increased probability of infiltration and inflows, sanitary sewer leakages, and backup problems in the sanitary sewer system.

CONTACT PERSON

Andrew Brozyna, Deputy Director, Public Works, (510) 981-6396  
Nisha Patel, Manager of Engineering, Public Works, (510) 981-6406  
Tiffany Pham, Associate Civil Engineer, Public Works, (510) 981-6427

Contract: Cratus, Inc. for Sanitary Sewer Rehabilitation  
and Replacement at Various Locations

CONSENT CALENDAR  
December 10, 2019

Attachments:

- 1: Resolution
- 2: Location Map
- 3: Bid Results

RESOLUTION NO. ##,###-N.S.

CONTRACT: CRATUS, INC. FOR SANITARY SEWER REHABILITATION AND REPLACEMENT – NEILSON ST BACKLINE, THOUSAND OAKS BLVD BACKLINE, PORTLAND AVE BACKLINE, PERALTA AVE, SAN LORENZO AVE /WASHINGTON AVE, CAPISTRANO AVE, MIRAMAR AVE BACKLINE, THE ALAMEDA BACKLINE, ARLINGTON AVE BACKLINE, MICHIGAN AVE BACKLINE, ALAMO AVE BACKLINE, SAN DIEGO RD AND BACKLINE, SANTA BARBARA RD AND BACKLINE, SAN LUIS RD BACKLINE, HENRY ST BACKLINE, BERRYMAN ST AND BACKLINE, GRIZZLY PEAK BLVD AND BACKLINE, CYPRESS ST/BUENA AVE, ROSE ST, GRANT ST, EDITH ST, AND MILVIA ST BACKLINE

WHEREAS, the Sanitary Sewer Project is part of the City's on-going Sanitary Sewer Capital Improvement Program to rehabilitate or replace the aging and deteriorated sanitary sewer system; and

WHEREAS, the Capital Improvement Program is a requirement of compliance with the National Pollution Discharge Elimination System Permit (NPDES) and California Regional Water Quality Control Board Consent Decree; and

WHEREAS, the City has neither the staff nor the equipment necessary to undertake this Sanitary Sewer Rehabilitation and Replacement Project and other urgent/emergent sewer repairs; and

WHEREAS, on October 11, 2019 the City released an Invitation for Bids (Specification No. 20-11352-C) for sanitary sewer rehabilitation and replacement; and

WHEREAS, the City received six submissions, and Cratus, Inc. was deemed to be the lowest responsive and responsible bidder; and

WHEREAS, funds are available in the FY 2020 budget Sanitary Sewer Fund 611.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Plans and Specifications No. 20-11352-C for the Sanitary Sewer Rehabilitation and Replacement Project are approved.

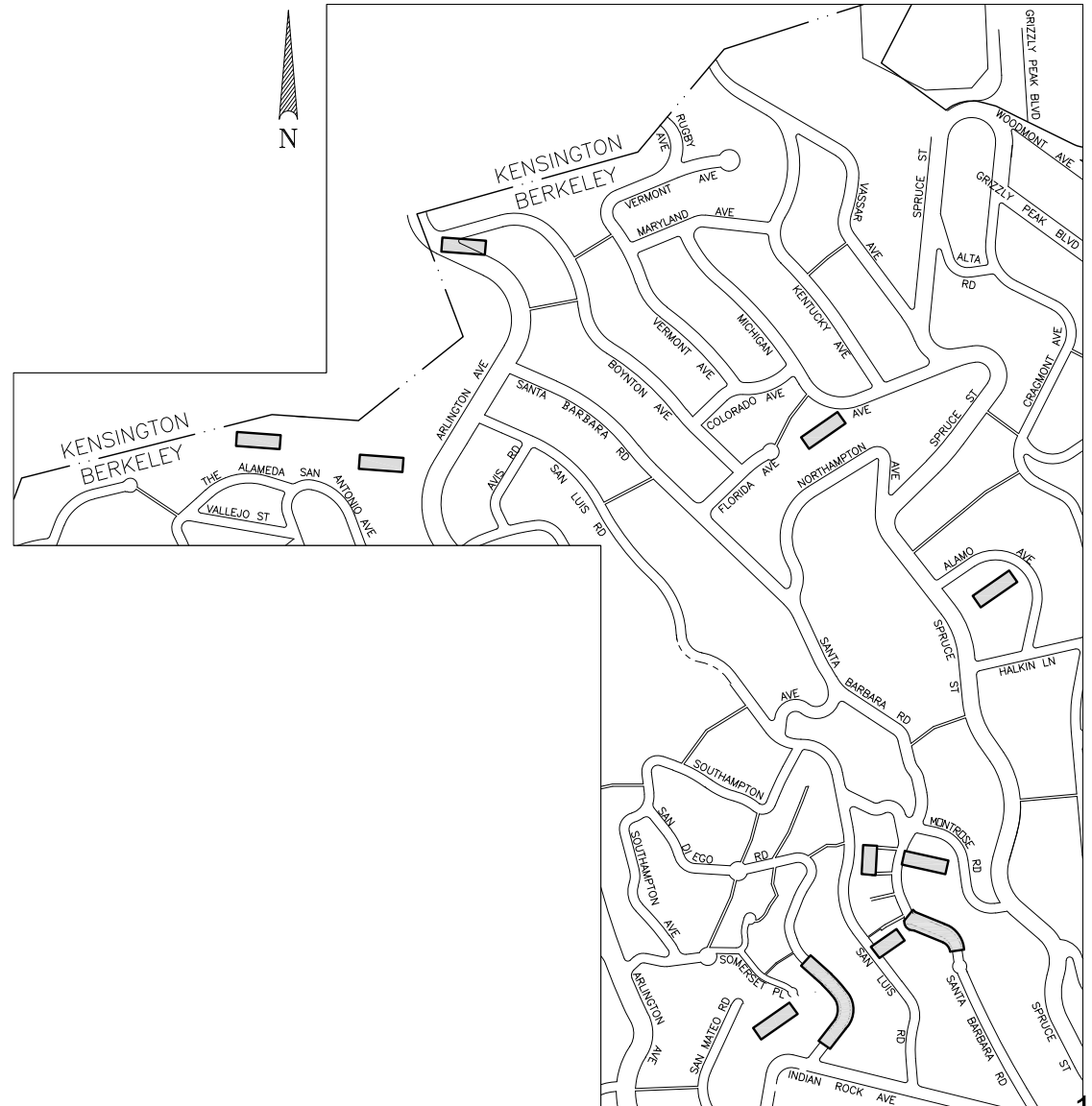
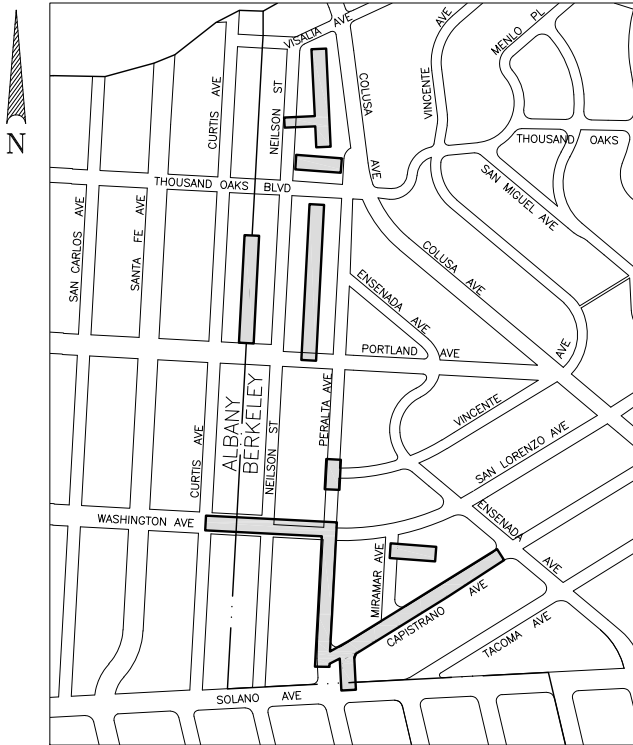
BE IT FURTHER RESOLVED that the Council of the City of Berkeley authorizes the City Manager to execute a contract and any amendments with Cratus, Inc., until completion of the project in accordance with the approved specifications for the Sanitary Sewer Rehabilitation and Replacement Project located on Neilson Street Backline, Thousand Oaks Boulevard Backline, Portland Avenue Backline, Peralta Avenue, San Lorenzo Avenue/Washington Avenue, Capistrano Avenue, Miramar Avenue Backline, The Alameda Backline, Arlington Avenue Backline, Michigan Avenue Backline, Alamo Avenue Backline, San Diego Road and Backline, Santa Barbara Road and Backline, San Luis Road Backline, Henry Street Backline, Berryman Street and Backline, Grizzly Peak Boulevard and Backline, Cypress Street/Buena Avenue, Rose Street, Grant Street, Edith

Street, and Milvia Street Backline, in an amount not to exceed \$3,654,358 which includes a 10% contingency for unforeseen circumstances. A record signature copy of said agreement and any amendments will be on file in the Office of the City Clerk.

# LOCATION MAP

## SANITARY SEWER REHABILITATION AND REPLACEMENT

NEILSON ST BACKLINE, THOUSAND OAKS BLVD BACKLINE, PORTLAND AV BACKLINE, PERALTA AV, SAN LORENZO AV/WASHINGTON AV, CAPISTRANO AV, MIRAMAR AV BACKLINE, THE ALAMEDA BACKLINE, ARLINGTON AV BACKLINE, MICHIGAN AV BACKLINE, ALAMO AV BACKLINE, SAN DIEGO RD & BACKLINE, SANTA BARBARA RD & BACKLINE, SAN LUIS RD BACKLINE  
SPECIFICATION NO. 20-11352-C



ATTACHMENT 2 (SHEET A)

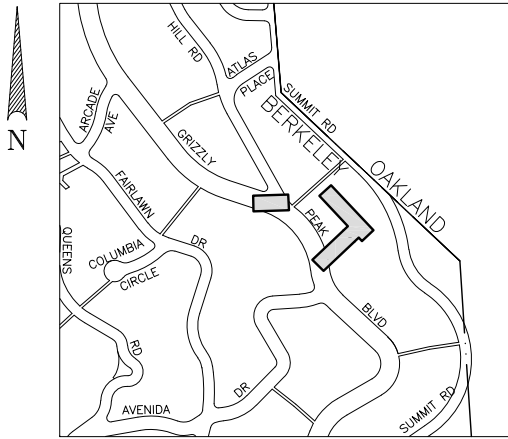
■ - CONSTRUCTION AREA

# LOCATION MAP

## SANITARY SEWER REHABILITATION AND REPLACEMENT

HENRY ST BACKLINE, BERRYMAN ST & BACKLINE, THE ALAMEDA BACKLINE, GRIZZLY PEAK BLVD & BACKLINE, CYPRESS ST/BUENA AV, ROSE ST, GRANT ST, EDITH ST, MILVIA ST BACKLINE

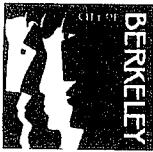
SPECIFICATION NO. 20-11352-C



### ATTACHMENT 2 (SHEET B)

— CONSTRUCTION AREA





City of Berkeley  
Abstract of Bids Worksheet

Finance Department  
General Service Division

For: Sanitary Sewer Rehabilitation - Neilson St, Thousand Oaks Blvd, et al

Specification#: 20-11352-C

Engineer's Estimate:

Bid Date:

	Bidders	Base Bid	Nuc Free	Work Force Comp	Opp. States	Living Wage	EBO	Bid Bond	Addendum
1	Cratus, Inc.	\$3,822,144.00	/		/		/	/	1
2	K.J. Woods Construction, Inc.	\$3,768,000.00	/		/		/	/	/
3	Ranger Pipelines, Inc.	\$3,564,433.00	/		/		/	/	/
4	Precision Engineering	\$4,778,543.00	/		/		/	/	/
5	Darcy Harely Construction, Inc.	\$3,832,681.00	/		/		/	/	/
6									
7									
8									
9									
10									

Bid Recorder: [Signature] 11/7/19

Bid Opener: [Signature] 11/7/19

Project Manager: [Signature] 11/7/19



City of Berkeley  
Abstract of Bids Worksheet

Finance Department  
General Service Division

For: Sanitary Sewer Rehabilitation-Neilson St, Thousand Oaks Blvd, et al

Specification#: 20-11352-C

Engineer's Estimate:

Bid Date:

	Bidders	Base Bid	Nuc Free	Work Force Comp	Opp. States	Living Wage	EBO	Bid Bond	Addendum
1	Andes Construction	\$3,731,744.00	/		/		/	/	1
2									
3									
4									
5									
6									
7									
8									
9									
10									

Bid Recorder:

11/7/19

Bid Opener:

11/7/19

Project Manager:

11/7/19



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Department of Public Works  
Subject: Contract No. 10396A Amendment: Du-All Safety, LLC for Safety Consulting and Training Services

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to execute an amendment to Contract No. 10396 with Du-All Safety, LLC for continued safety training and consulting services up to \$100,000 for a total contract amount not to exceed \$300,000, and to extend the contract term through December 31, 2022.

FISCAL IMPACTS OF RECOMMENDATION

The future annual estimate is \$30,000 expenditure which increase or decrease depending upon Department of Public Works' (Public Works) training and safety program needs. Funding is subject to appropriation in the FY 2021 through FY 2023 budgets in various Funds, and for the estimated annual amounts listed below:

Sanitary Sewer Fund 611.....	\$7,000
Zero Waste Fund 601.....	\$7,000
Facilities Maintenance Fund 673 .....	\$3,000
Street Light 142.....	\$3,000
Equipment Maintenance Fund 672 .....	\$5,000
Used Oil Payment Fund 329 .....	\$5,000
Estimated Total Annual Expenditures	\$30,000

The contract amendment has been entered into the Contract Management System as CMS No. KZDQS.

CURRENT SITUATION AND ITS EFFECTS

Public Works employs over 300 staff in the following divisions: Zero Waste, Engineering, Transportation, Administration and Finance, Equipment Maintenance, Facilities, Streets and Utilities. Many of these divisions require job-specific safety training to comply with certain OSHA regulations including Blood Borne Pathogen, Confined Space Awareness, and Fall Protection. Du-All Safety has updated written safety programs to support the City's in-house safety program; provides ongoing site inspections; provides staff augmentation, and identifies areas for improvement.

Public Works is in the process of hiring an Occupational Health and Safety Officer who will be responsible for managing this contract and will undertake the majority of the responsibilities that Du-All Safety is currently providing.

The current contract will also be amended to include language to allow for other Departments such as Parks, Recreation and Waterfront to utilize the contract as necessary to support critical safety training needs. Additionally, Du-All Safety provides Safety Data Sheet electronic management which Public Works may pursue to support safety compliance efforts.

Authorizing this contract amendment support the City's Strategic Goal of creating a resilient, safe, connected, and prepared City.

### BACKGROUND

The City issued a June 2016 Request for Proposals for safety training and support services, received two proposals, and selected Du-All Safety as the most responsive and qualified vendor to meet the needs of the Public Works safety program. On October 24, 2016, the City Manager entered into a contract with Du-All Safety to provide these services in an amount not to exceed \$50,000 (Contract No. 10396).

On May 30, 2017, City Council adopted Resolution No. 68,005-N.S. which authorized the amendment of the contract for an amount not to exceed \$200,000 and extend the contract term through December 31, 2020.

Du-All Safety is a Bay Area business that works with many municipalities to support and improve their safety programs, and ensure employees are trained appropriately.

Du-All Safety completed a Health and Safety Compliance Assessment that identified critical programs needed to support operations safety including Confined Space Entry Program, Site Specific Emergency Action Plan, Fall Protection Program, Heat Illness Prevention Program, and a Hot Work Program. In addition, Du-All Safety performs routine safety inspections and has provided staff Occupational Safety and Health Administration (OSHA) required training including Blood Borne Pathogen, Hot Work, and Portable Ladder Safety. Du-All Safety continues to provide ongoing support in implementation of these written programs.

### ENVIRONMENTAL SUSTAINABILITY

Du-All Safety provides training to City staff in hazardous materials handling, spill response, and asbestos management. When staff are properly prepared for these occurrences, City employees and citizens are protected, and the environment is safeguarded from the further release of toxic substances.

### RATIONALE FOR RECOMMENDATION

City staff do not currently have in-house capacity or expertise to provide all OSHA training required for Public Works staff. Public Works is in the process of hiring an

Contract No. 10396A Du-All Safety, LLC.  
for Safety Consulting and Training Services

CONSENT CALENDAR  
December 10, 2019

Occupational Health and Safety Officer who will be able to provide in-house expertise but will still need to utilize the services of Du-All Safety for the training and implementation of the many OSHA required safety programs and plans.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Phillip L. Harrington, Director, Department of Public Works (510) 981-6300  
Joy Brown, Senior Management Analyst, Public Works, (510) 981-6629

Attachment:  
1: Resolution

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 10396A AMENDMENT: DU-ALL SAFETY, LLC FOR SAFETY CONSULTING AND TRAINING SERVICES

WHEREAS, Du-All Safety, LLC has provided excellent safety training and written safety program improvements during the contract term and requires additional funding to provide required trainings; and

WHEREAS, in 2016 the Department of Public Works requested proposals for safety training and consulting services and Du-All Safety, LLC was selected as the most qualified firm to provide these services; and

WHEREAS, on October 24, 2016, the City Manager authorized Contract No. 103996 with Du-All Safety, LLC for safety training and consulting services, in an amount not to exceed \$50,000 for the period of August 5, 2016 through June 30, 2019; and

WHEREAS, on May 30, 2017, City Council adopted Resolution No. 68,005-N.S. which authorized the amendment of the contract for an amount not to exceed \$200,000 and extend the contract term through December 31, 2020; and

WHEREAS, City staff do not have the capacity to perform the services provided by Du-All Safety, LLC; and

WHEREAS, funds have been identified from each participating division to support an estimated annual expenditure of \$30,000 subject to appropriation in the FY 2021 through FY 2023 budgets, and the contract amendment has been entered into the Citywide contract database as CMS No. KXDQS.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 10396 with Du-All Safety, LLC for on-going safety training and consulting services, increasing the contract amount by \$100,000 for a total amount not to exceed \$300,000, and extending the term of the contract to December 31, 2022. A record signature copy of the contract and any amendments to be on file in the City Clerk Department.



Office of the City Manager

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
From: Dee Williams-Ridley, City Manager  
Submitted by: Phillip L. Harrington, Director, Public Works  
Subject: Amendment to Contract No. 31900124: B Bros Construction Inc. for Adult Mental Health Services Center Renovations Project at 2640 Martin Luther King Jr Way

RECOMMENDATION

Adopt a Resolution authorizing the City Manager to amend Contract No. 31900124 with B Bros Construction, Inc. to complete renovation and seismic upgrade work at the Adult Mental Health Services Center (Center), increasing the current contract amount of \$4,886,293 by \$500,000 for a total amount not-to-exceed (NTE) of \$5,386,293.

FISCAL IMPACTS OF RECOMMENDATION

Funding for this contract amendment is available in the T1 Fund (511). The T1 allocation for this project is \$1,500,000. The overall project budget will not increase.

No other funding is required and no other projects will be delayed due to this expenditure.

Original Contract (NTE).....	\$4,886,293
This Amendment .....	\$500,000
Amended Contract Amount (NTE)	\$5,386,293

This contract amendment has been assigned CMS No. GPKU7.

CURRENT SITUATION AND ITS EFFECTS

Prior to construction, the design team conducted extensive due-diligence activities to assess the condition of the Center. Available construction drawings and documentation of the existing building were reviewed. In addition, engineering investigations were conducted to evaluate the facility’s structural system, the building foundation and underlying soils, and presence of hazardous material. However, despite these efforts, this project is experiencing more unforeseen conditions than initially estimated. The extent of which only became apparent when B Bros Construction, Inc. commenced with the renovation of the Center on April 4, 2019. This is largely due to the size and age of the facility which experienced a number of poorly documented building additions spanning over decades.

A list of the major unforeseen conditions, revealed to date include:

- Discovery of excessive amounts of asbestos and lead, requiring adequate disposal. Asbestos removal is very labor intensive and expensive.
- Missing concrete foundation footings. Some areas of the building were previously constructed without footings or inadequate footings, increasing the risk of failure during an earthquake.
- Discovery of an unknown, asbestos contaminated room, containing an old boiler system. The remediation of this room was complicated by having limited access through the crawl space. The existence of this room was not shown on any record drawings.
- Demolition of an existing oversized security safe, embedded in a large amount of concrete. The extent of concrete removal only became apparent during construction.
- The structural system was significantly different from existing record drawings, requiring additional design and framing of walls and ceilings.

Although the contract includes a contingency of \$737,343 (15%), \$455,953 of this amount has already been encumbered. Yet, the construction phase for this project is estimated to be only around 30% complete.

Due to the history, size, and complexity of this facility project and considering that it is still within the earlier stages of construction, additional unforeseen conditions are expected. Potential future change orders include but are not limited to further asbestos and lead removal, crawl space improvements in the basement, additional structural deficiencies, roof drain and perimeter drainage improvements, and City requested improvements.

This amendment, if approved, will supplement the current contingency amount and only be used as needed to address improvements or unforeseen conditions for the completion of this project.

The provided services will support the Strategic Plan goals of creating a resilient, safe, connected, and prepared city and providing state-of-the-art, well-maintained facilities

#### BACKGROUND

The City of Berkeley Mental Health Services Center provides invaluable mental health and related social services to Berkeley and Albany community members and their families living with serious and persistent mental illness. Program efforts include case management and support services, coordination and consultation with other agencies and groups, providing linkages and referrals to community resources, assessments and crisis response. Some of the work of Mental Health staff is conducted in the field when staff meets clients in the community for service provision. There have been significant



problems with the Center for many years. The building did not have a layout conducive to a welcoming environment for consumers, nor was it properly configured for safety. In 2015 and 2016, these long standing issues were exacerbated by additional issues including air quality problems, water intrusion, and an ongoing infestation of vermin, raccoons, and rodents. Although the building had many treatments, the problems were ultimately deemed so systemic that the building was closed in June 2016, pending the long planned major rehabilitation.

The current rehabilitation work being performed is significant and will provide interior and exterior improvements, roof improvements, new mechanical and electrical systems, net zero energy efficient equipment, and a building layout conducive to client and staff needs. The project will result in a welcoming, inviting, clean, durable, energy efficient, and secure facility that will be used to help seriously mentally ill residents in Berkeley and Albany to live better lives.

It will also provide comprehensive services that maintain personal and community stability, supporting over 350 adults with ongoing clinical case management services per year.

ENVIRONMENTAL SUSTAINABILITY

A goal of the new mental health facility is to incorporate as many net zero energy facility improvements as is feasible. A net zero energy facility has a positive environmental impact and has economic advantages over the long-term. Some net-zero features in this project include solar panels, heat pumps, and low flow fixtures.

RATIONALE FOR RECOMMENDATION

The additional funding is necessary for the completion of a code compliant and secure mental health facility. The seriously mentally ill adult clients of Berkeley and Albany deserve a dedicated and functional clinic from which to receive care.

ALTERNATIVE ACTIONS CONSIDERED

None.

CONTACT PERSON

Andrew Brozyna, Deputy Director, Public Works, (510) 981-6396  
Elmar Kapfer, Supervising Civil Engineer, Public Works, (510) 981-6435

Attachments:

1: Resolution

RESOLUTION NO. ##,###-N.S.

CONTRACT NO. 31900124 AMENDMENT: B BROS CONSTRUCTION INC. FOR ADULT MENTAL HEALTH SERVICES CENTER RENOVATIONS PROJECT AT 2640 MARTIN LUTHER KING JR WAY

WHEREAS, the project consists of interior and exterior renovations and seismic upgrade of the Adult Mental Health Services Center; and

WHEREAS, The City has neither the labor nor the equipment necessary to undertake this renovation and seismic upgrade project; and

WHEREAS, an invitation for bids (Plans and Specifications No. 19-11267-C) was duly advertised, and B-Bros Construction Inc. was determined to be the lowest responsive and responsible bidder; and

WHEREAS, Resolution No. 68,752-N.S. authorized the City Manager to execute a contract and any amendments, extensions or change orders, until completion of the project in accordance with the approved plans and specifications with B-Bros Construction Inc. for the Mental Health Services Center Renovation Project at 2640 Martin Luther King, Jr Way, in an amount not to exceed \$4,886,293; and

WHEREAS, due to unforeseen conditions and City requested improvements an increase of \$500,000 to the not to exceed amount is required for the complete renovation and seismic upgrade work; and

WHEREAS, funds are available in the \$1,500,000 T1 Fund (511), allocated to the project.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City Manager is authorized to execute an amendment to Contract No. 31900124 with B Bros Construction, Inc. for renovation and seismic upgrade work at the Adult Mental Health Services Center increasing the current contract amount of \$4,886,293 by \$500,000 for a total contract amount not to exceed \$5,386,293.



Measure O Bond Oversight Committee

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Measure O Bond Oversight Committee  
 Submitted by: Joshua Daniels, Chairperson, Measure O Bond Oversight Committee  
 Subject: 2019 Housing Trust Fund Request for Proposals Funding Reservations

### RECOMMENDATION

Adopt a Resolution to:

1. Reserve Measure O bond revenues and other available funds for the following proposals at the following levels, for a total reservation of \$36,002,640:
  - a. Satellite Affordable Housing Associates' Blake Apartments development (2527 San Pablo) at \$11,500,000; and
  - b. BRIDGE Housing Corporation's 1740 San Pablo Avenue development at \$7,500,000; and
  - c. Northern California Land Trust's (NCLT) Anti-Displacement Project (2321-2323 10th Street) at \$1,570,640; and
  - d. Resources for Community Development's (RCD) Maudelle Miller Shirek Community (2001 Ashby) at \$15,432,000.
2. Fund the projects in the priority order listed above. If the available funds are insufficient to support all four proposals in full, forward commit funds from the next planned issuance of Measure O funds.
3. Consider funding 2321-2323 10<sup>th</sup> Street/Anti-Displacement Project (NCLT) using general funds such as those received pursuant to Measure U1.
4. For the NCLT Project at 2321-2323 10<sup>th</sup> Street:
  - a. Waive the HTF Guidelines requirements listed below to allow funding for this project:
    - i. Threshold for developer experience; and
    - ii. City subsidy limit equal to 40% of total development costs.
  - b. Condition this new funding on NCLT's demonstrated compliance with the Council-mandated requirements of its 2017 development loan agreement.
  - c. Apply Small Sites Program development and operating budget standards to NCLT's project.
5. Authorize the City Manager to execute all original or amended documents or agreements to effectuate this action.

### SUMMARY

Council authorized a Request for Proposals (RFP) on June 11, 2019 to solicit applications for affordable housing projects to be funded through the City's Housing Trust Fund (HTF) program with the first tranche of Measure O bond funds. The RFP was intended to allocate Measure O bond funds remaining after existing City funding reservations to the Berkeley Way and 1601 Oxford affordable housing developments are fulfilled.

The City received four applications. On October 21, 2019, the Measure O Bond Oversight Committee (MOBOC) considered a report from Health, Housing, and Community Services staff and the MOBOC's RFP Subcommittee evaluating the projects based on criteria identified in the RFP: developer capacity, feasibility, local needs and priorities, and readiness. The recommended actions in the attached resolution will effectuate the MOBOC's recommendations.

### FISCAL IMPACTS OF RECOMMENDATION

Applicants requested a total of \$38,120,640 through this RFP. Three of the four applicants previously sought predevelopment funding from the City and have since been awarded predevelopment funds for the projects represented.

- On April 23, 2019, the City reserved \$368,000 for 2001 Ashby (Resolution 68,824-N.S.).
- On October 29, 2019 Council recommended predevelopment funding for the following projects (Resolution 69,163-N.S.):
  - 2527 San Pablo (\$500,000); and
  - 2321-2323 10<sup>th</sup> Street (\$50,000); and
  - 2001 Ashby (an additional \$1,200,000).

All predevelopment funding will be general funds generated pursuant to Measure U1. Less the previously reserved predevelopment funds, the funding requested through this RFP for all four projects totals \$36,002,640.

Staff estimated that approximately \$15-\$20 million could be allocated through this RFP, after available funding was used to fulfill existing obligations to Berkeley Way and 1601 Oxford. The MOBOC's recommendation would reserve all available Measure O funding, allocate some general funds generated pursuant to Measure U1 to the NCLT project, and forward commit the remaining reservation to be paid through the second issuance of Measure O bond funds.

### CURRENT SITUATION AND ITS EFFECTS

The City issued an RFP on July 18, 2019, which included a Council priority for projects demonstrating readiness to start construction, as well as HTF Guidelines priorities for projects providing units for the formerly homeless and households with incomes at or below 30% of the area median income (AMI). The City received four applications by the August 14, 2019 due date.

The MOBOC hosted a public hearing for projects seeking funding at their September 16, 2019 meeting. Members of the public spoke out in broad support of all four projects. At their October 21, 2019 meeting, the MOBOC recommended funding all four proposals, including a forward commitment of Measure O bond funds as needed.

Reserving funds for affordable housing projects is a Strategic Plan Priority Project, advancing our goal to create affordable housing and housing support service for our most vulnerable community members.

### BACKGROUND

Staff and the MOBOC's RFP Subcommittee evaluated the applications according to the following criteria identified in the RFP:

- Developer Capacity,
- Project Feasibility,
- Local Needs and Priorities, and
- Readiness to Proceed.

At its October 21, 2019 meeting, the MOBOC took the following actions:

Action: M/S/C (Lewis/Lustig) to recommend that Council:

1. Fund the following proposals at the following levels, less any predevelopment funds awarded by the City through separate processes:
  - a. Satellite Affordable Housing Associates' Blake Apartments development (2527 San Pablo) at \$12M
  - b. BRIDGE Housing Corporation's 1740 San Pablo Avenue development at \$7.5M
  - c. Northern California Land Trust's (NCLT) Anti-Displacement Project (2321-2323 10<sup>th</sup> Street) at \$1,620,640
2. Fund the projects in the priority order listed above, if the available funds are insufficient to support all three proposals in full.
3. Consider funding 2321-2323 10<sup>th</sup> Street/Anti-Displacement Project (Northern California Land Trust) using general funds such as those received pursuant to Measure U1.
4. For the NCLT project at 2321 10<sup>th</sup> Street:
  - a. Waive the HTF Guidelines requirements listed below to allow funding for this project:
    - i. Threshold for developer experience; and
    - ii. City subsidy limit equal to 40% of total development costs.
  - b. Condition this new funding on NCLT's demonstrated compliance with the Council-mandated requirements of its 2017 development loan agreement
  - c. Apply Small Sites Program development and operating budget standards to NCLT's project.

Vote: Ayes: Calavita, Carr, Daniels, Lewis, Lustig, Marthinsen, Sharenko, Smith, and Tregub. Noes: None. Abstain: None. Absent: Cutler (approved).

Action: M/S/C (Lewis/Calavita) to recommend that Council forward commit funds from the next planned issuance of Measure O funds to 2001 Ashby and to note the Committee's qualms about forward committing funds. However, if funds aren't available to fully fund 2527 San Pablo, 1740 San Pablo, and 2321-2323 10<sup>th</sup> Street, Council should fund those projects in the priority order listed in the prior action before funding 2001 Ashby.

Vote: Ayes: Calavita, Carr, Lewis, Lustig, Marthinsen, Sharenko, Smith, and Tregub. Noes: Daniels. Abstain: None. Absent: Cutler (approved).

### **Satellite Affordable Housing Associates (SAHA)**

SAHA requested \$12M for the development of Blake Apartments, located at 2527 San Pablo Avenue.

SAHA purchased the fully entitled property in May 2019. SAHA plans to demolish the existing, vacant structure and develop 63 units of housing affordable at 30% to 60% AMI. This includes units set aside for formerly homeless residents and residents with intellectual or developmental disabilities (I/DD). The units would be a mix of studios, one-bedrooms, and two-bedrooms. The project includes ground floor commercial space that will not be supported with City funds. The space would not be legally separated from the residential space, but commercial costs will be accounted for separately.

SAHA's proposed financing includes a bank loan, Federal Home Loan Bank (FHLB) Affordable Housing Program funds, California Housing and Community Development (HCD) Multifamily Housing Program funds, California HCD Infill Infrastructure Grant funds, and 4% tax credits.

### **BRIDGE Housing Corporation (BRIDGE)**

BRIDGE requested \$7.5M for the development of 1740 San Pablo Avenue.

1740 San Pablo is a fully entitled property. BRIDGE entered into a purchase and sale agreement in May 2019, and intends to demolish the existing, vacant structures, and develop the 51-unit project for households with incomes ranging from under 30% AMI to 90% AMI. The project would include three live-work units for lower income artists. The remaining units would be a mix of studios, one-bedrooms, and two-bedrooms.

BRIDGE's proposed financing includes a bank loan, 4% tax credits, funding through CalHFA's new Mixed-Income Program, and project-based Section 8 vouchers from the Berkeley Housing Authority.

**Northern California Land Trust (NCLT)**

NCLT proposes to acquire and renovate 2321-2323 10<sup>th</sup> Street, an occupied property with eight residential units. In its initial application, NCLT requested \$975,629, but subsequently increased its request to \$1,620,640 based on a capital needs assessment completed by a third party. NCLT submitted its RFP application the day after the organization entered into a purchase and sale agreement to acquire the property.

The property has two, two-story buildings with four units each. Both buildings are suffering from deferred maintenance, and the renovation scope would prioritize health and safety issues and energy upgrades.

Seven of the eight units are occupied, and NCLT estimates the resident incomes at 30%-80% AMI. NCLT is in the process of income-certifying all residents. Four current residents hold Section 8 vouchers from the Berkeley Housing Authority, and are presumed to have incomes at or below 50% AMI. The units are a mix of one-bedrooms and two-bedrooms. NCLT will explore whether the residents are interested in forming a cooperative.

NCLT's proposed financing includes a bank loan, a short-term seller loan, a City of Berkeley Seismic Retrofit Grant, and Affordable Multifamily Energy Efficiency Financing Program funding through the state.

NCLT does not meet the HTF Guidelines threshold for developer experience, and would require a Council waiver of that requirement. Staff believe the scope of the project is similar to a recently completed NCLT project, and the MOBOC supports the waiver in order to fund this project. The project also requires a higher subsidy than is permitted by the HTF Guidelines, which caps the City's contribution at 40% of the project's total cost. There are limited sources of financing available to smaller, non-tax credit projects.

The MOBOC supports staff's recommendation to condition an award to NCLT on the organization's compliance with Council-mandated conditions of the 2017 Development Loan Agreement for the Scattered Sites Rehab. There are no compliance issues in terms of NCLT's management of the properties, but Council required that NCLT hire a consultant to work with residents at 1340-1348 Blake Street and 2425 California Street to assess the feasibility of converting the properties to cooperatives, and Council required NCLT to update its governing documents to reflect a tripartite structure consistent with community land trust standards. Staff continue to work with NCLT on complying with those requirements.

The MOBOC also agrees with staff's recommendation that the City apply its Small Sites Program standards to NCLT's project, in terms of development and operating budget requirements. The Small Sites Program supports the acquisition and renovation of small, multifamily properties, and includes conditions specifically designed to support the ongoing operations of projects with limited cash flow, including averaging incomes

at 80% AMI (Low-Income, a variance from the HTF requirements) as well as funding reserves at certain levels. Council provided \$1 million in City general funds associated with Measure U1 to fund the first Small Sites project, but there are currently no funds allocated to the program.

### **Resources for Community Development (RCD)**

RCD requested \$17M for the development of the Maudelle Miller Shirek Community located at 2001 Ashby Avenue.

RCD was selected by the current site owner, Cooperative Center Federal Credit Union (CCFCU), to develop the property as affordable housing. RCD and CCFCU entered into an MOU and a purchase and sale agreement for RCD's acquisition of the site which is expected in November 2019. RCD is pursuing expedited entitlement under SB35.

RCD is proposing to develop 86 units of housing affordable to households earning between 20% and 80% AMI plus one manager's unit. The units are a mix of studios, one-bedrooms, two-bedrooms, and three-bedrooms. Approximately half are two- or three-bedroom units, making the project well suited for families. Twelve units would be set aside for formerly homeless and disabled residents, consistent with the State's No Place Like Home program.

The project will also include commercial space for the nonprofit Healthy Black Families, which would help keep their services in this historically African American neighborhood and alleviate concerns of the organization's displacement due to rising costs.

RCD's proposed financing includes a bank loan, California HCD Multifamily Housing Program funds, California HCD No Place Like Home funds, California HCD Infill Infrastructure Grant funds, FHLB Affordable Housing Program funds, and 4% tax credits.

The schedule for Maudelle Miller Shirek Community estimates construction start and financing in June 2021, which aligns with the projected second issuance of Measure O bond funds.

### ENVIRONMENTAL SUSTAINABILITY

All four projects addressed environmental sustainability in their project design and scope. The three new construction projects would be built to third-party green building standards and seek certification (either LEED Gold or GreenPoint Gold). NCLT's Anti-Displacement Project would address years of deferred maintenance to preserve an existing building and increase the energy efficiency of the buildings.

### RATIONALE FOR RECOMMENDATION

All four projects meet local needs and priorities by adding 198 new affordable housing units to the City's inventory and preventing displacement of eight lower income



households. Blake Apartments will provide units for the formerly homeless and for individuals with intellectual or developmental disabilities. 1740 San Pablo will offer three live-work units for lower-income artists, and provide moderate income units (up to 90% AMI). The Anti-Displacement Project will protect vulnerable tenants, address significant deferred maintenance, and add long-term affordability restrictions. Maudelle Miller Shirek Community will provide units for the formerly homeless, and will provide commercial space for the nonprofit Healthy Black Families.

#### ALTERNATIVE ACTIONS CONSIDERED

The Committee considered making a recommendation that did not include a forward commitment of Measure O Bond funds to 2001 Ashby. Commissioners were concerned about limiting funding and therefore options for the second tranche of bond funds. However, Commissioners also recognized the benefits of reserving funds for 2001 Ashby now, allowing the applicant to pursue other funding commitments and moving the project forward. Without a reservation of City funds, the project would not be as competitive for state funding and would likely be delayed up to two years.

#### CITY MANAGER

The City Manager concurs with this recommendation. All four proposals have technical strengths and will help achieve the City's affordable housing goals. Together Blake Apartments, 1740 San Pablo, and Maudelle Miller Shirek Community will create nearly 200 units of new affordable housing. The projects will also set aside units for vulnerable, special needs populations such as the apartments for people with intellectual or developmental disabilities at Blake Apartments. The 1740 San Pablo project proposes an innovative model with a new funding source which will result in some moderate income and live-work apartments. The Anti-Displacement Project will protect lower-income tenants at risk of displacement and improve long-neglected buildings, as well as build the City's portfolio of Small Sites program-type projects.

Consistent with Council's direction, staff rated all projects on readiness to proceed. If funded, the new construction projects estimate construction starts ranging from late 2020 to mid-2021. The renovation project could start in early to mid-2020. The proposed forward commitment of funds to 2001 Ashby will allow that project to start competing for state funds right away so that it can be ready to proceed when City funds are available. The project was highly rated on its technical merits and only slightly less ready to proceed than others; RCD has applied for land use entitlements under the expedited SB35 process and the City is currently in its 90 day review window. Reserving the funds now will help deliver these homes on a faster timeline and lower cost (due to continuing cost escalation).

Projects could be funded with a combination of Measure O bond funds and general funds generated pursuant to Measure U1. Council previously reserved funding for two affordable housing developments: \$23,500,000 for Berkeley Way (June 26, 2018 with Resolution 68,494-N.S. and December 4, 2018 with Resolution 68,693-N.S.) and

\$6,000,000 for 1601 Oxford (October 16, 2018). Measure O, general funds generated pursuant to Measure U1, the City’s current balance of HOME funds, and fee revenue in the Housing Trust Fund will first be used to fund Berkeley Way and 1601 Oxford. With a first issuance of \$37,000,000 in early 2020 it will be possible to fund all of the projects currently in the pipeline.

The following table shows a draft plan for funding the projects currently in the pipeline. The City Manager may modify this plan based on the availability of funds, federal requirements, project needs, and the timing of projects.

	Units	Previously committed funds	Measure O: 1st issuance	Measure O: 2nd issuance	HOME	HTF	Measure U1	Total
BRIDGE & BFHP/ 2012 Berkeley Way*	186	3,967,548	13,820,909			3,655,726	6,023,365	27,467,548
SAHA/ 1601 Oxford	35	25,000	4,179,091		1,795,909			6,000,000
SAHA/ Blake Apts./ 2527 San Pablo Ave.	63	500,000	11,500,000					12,000,000
BRIDGE/ 1740 San Pablo Ave.	51	-	7,500,000					7,500,000
NCLT/ 10th Street	8	50,000					1,570,640	1,620.640
RCD/Maudelle Shirek /2001 Ashby	87	1,568,000		15,432,000				17,000,000
	<b>430</b>	<b>10,103,096</b>	<b>37,000,000</b>	<b>15,432,000</b>	<b>1,795,909</b>	<b>3,655,726</b>	<b>7,496,165</b>	<b>71,490,348</b>

\*Berkeley Way unit count includes 89 affordable apartments, 53 permanent supportive housing units, 12 transitional beds, and 32 shelter beds.

A forward commitment of \$15.4 million in Measure O bond funds for 2001 Ashby will result in less money available in the second issuance, currently estimated at \$30-\$40,000,000 in 2021.

**CONTACT PERSON**

Jenny Wyant, Community Development Project Manager, HHCS, 510-981-5228

Attachments:  
1: Resolution

RESOLUTION NO. ##,###-N.S.

APPROVAL OF THE 2019 HOUSING TRUST FUND REQUEST FOR PROPOSALS  
RESERVATIONS

WHEREAS, the City Council established a Housing Trust Fund (HTF) program to assist in the development and expansion of housing affordable to low and moderate income persons who either work or reside within the City of Berkeley, and authorized the City Manager to implement the HTF program; and

WHEREAS, there is a great need for affordable and special needs housing in the City of Berkeley as stated in the General Plan Housing Element and the City of Berkeley's Consolidated Plan; and

WHEREAS, the City Council identified the BRIDGE Housing Corporation's Berkeley Way project as the funding priority for Housing Trust Funds, and with Resolutions 68,494-N.S. (dated June 26, 2018) and 68,693-N.S. (dated December 4, 2018) reserved a total of \$23.5 million for the project; and

WHEREAS, on October 16, 2018, the City Council reserved \$6 million for Satellite Affordable Housing Associates' 1601 Oxford project; and

WHEREAS, on November 6, 2018, Berkeley voters passed Measure O, a \$135 million bond measure to support the development and preservation of affordable housing; and

WHEREAS, on June 11, 2019 the City Council approved issuing a Request for Proposals (RFP) through the HTF program to allocate the first issuance of Measure O bond funds; and

WHEREAS, the City issued an RFP on July 18, 2019 and announced acceptance of applications for funding from the Housing Trust Fund until August 14, 2019, and subsequently received four responses; and

WHEREAS, the Measure O Bond Oversight Committee held a meeting on October 21, 2019 and considered a report from Health, Housing and Community Services staff and the RFP Subcommittee regarding funding; and

WHEREAS, on October 21, 2019 the Measure O Bond Oversight Committee approved motions recommending funding reservations for Satellite Affordable Housing's Blake Apartments (2527 San Pablo Avenue), BRIDGE Housing Corporation's 1740 San Pablo Avenue, Northern California Land Trust's Anti-Displacement Project (2321-2323 10<sup>th</sup> Street), and Resources for Community Development's Maudelle Miller Shirek Community (2001 Ashby Avenue); and

WHEREAS, the Measure O Bond Oversight Committee's motions included recommendations to waive certain sections of the Housing Trust Fund Guidelines in order to fund Northern California Land Trust's Anti-Displacement Project; and

WHEREAS, the Measure O Bond Oversight Committee's motions included a recommendation to apply the City's Small Sites Program standards to Northern California Land Trust's Anti-Displacement Project, since that program includes development budget and operating budget requirements designed to support the long-term feasibility of smaller multifamily projects with limited cash flow.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Council approves the following funding reservations:

- Satellite Affordable Housing Associates' Blake Apartments (2527 San Pablo Ave) for \$11,500,000; and
- BRIDGE Housing Corporation's 1740 San Pablo for \$7,500,000; and
- Northern California Land Trust's Anti-Displacement Project (2321-2323 10<sup>th</sup> Street) for \$1,570,640; and
- Resources for Community Development's Maudelle Miller Shirek Community (2001 Ashby Ave) for \$15,432,000.

BE IT FURTHER RESOLVED that if funds are not available to fully fund Blake Apartments (2527 San Pablo), 1740 San Pablo, the Anti-Displacement Project (2321-2323 10<sup>th</sup> Street), and Maudelle Miller Shirek Community (2001 Ashby), the City will fund them in that priority order.

BE IT FURTHER RESOLVED that Council approves the forward commitment of funds from the second issuance of Measure O bond funds, if the four projects cannot be funded with available Measure O bond funds from the first issuance and general funds generated pursuant to Measure U1 not otherwise allocated to Berkeley Way and 1601 Oxford.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley waives the requirements of Section III.A.1 of the Housing Trust Fund Guidelines and approves Northern California Land Trust as an eligible developer with demonstrated capacity to complete the Anti-Displacement Project, though it has not completed the number of projects required by the developer eligibility criteria.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley waives the requirements of Section V.B.7 of the Housing Trust Fund Guidelines and approves HTF funds in excess of 40% for Northern California Land Trust's Anti-Displacement Project due to the nature of the development and the unavailability of alternative financing.

BE IT FURTHER RESOLVED that the Council of the City of Berkeley conditions its funding reservation for Northern California Land Trust's Anti-Displacement Project on the organization demonstrating compliance with the Council-mandated conditions of the 2017

Development Loan Agreement for the Scattered Site Rehab project, including hiring a consultant to assess the feasibility of converting 1340-1348 Blake Street and 2425 California Street to cooperatives, and updating organizing documents to reflect a tripartite structure consistent with community land trust standards.

BE IT FURTHER RESOLVED that Small Sites Program operating and development budget standards will be applied to Northern California Land Trust's Anti-Displacement Project.

BE IT FURTHER RESOLVED that loan funds shall be reserved for 2527 San Pablo Avenue, 1740 San Pablo Avenue, and 2321-2323 10<sup>th</sup> Street a period of no more than 24 months from the date of this Resolution, contingent on the developer's obtaining all required land use approvals and securing commitments for full project funding that the City Manager or her designee deems sufficient within the reservation period.

BE IT FURTHER RESOLVED that loan funds shall be reserved for 2001 Ashby a period of no more than 36 months from the date of this Resolution, contingent on the developer's obtaining all required land use approvals and securing commitments for full project funding that the City Manager or her designee deems sufficient within the reservation period.

BE IT FURTHER RESOLVED that all funding reservations are conditioned upon the completion of the environmental review process, except as authorized by 24 CFR, Part 58, and that should HOME and/or CDBG funds constitute a portion of the funding for any project, a final commitment of HOME and/or CDBG funds shall occur only upon the satisfactory completion of the appropriate level of environmental review and also upon the receipt of approval of the request for release of funds and related certification from the U.S. Department of Housing and Urban Development, when applicable. The funding reservation for any of the HOME and/or CDBG funded projects is conditioned upon the City of Berkeley's determination to proceed with, modify, or cancel the project based on the results of subsequent environmental review under the National Environmental Policy Act.

BE IT FURTHER RESOLVED that the making of each loan shall be contingent on and subject to such other appropriate terms and conditions as the City Manager or her designee may establish.

BE IT FURTHER RESOLVED that the City Manager may incorporate each project's predevelopment loan into a permanent loan resulting from this resolution.

BE IT FURTHER RESOLVED the City Manager, or her designee, is hereby authorized to execute all original or amended documents or agreements to effectuate this action; a signed copy of said documents, agreements and any amendments will be kept on file in the Office of City Clerk.





Peace and Justice Commission

CONSENT CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Peace and Justice Commission  
 Submitted by: Igor Tregub, Chairperson, Peace and Justice Commission  
 Subject: Support for Non-Violent Activists and Protections of Animals in Commercial Operations

RECOMMENDATION

Adopt a resolution supporting non-violent activists and protecting animals in commercial operations.

SUMMARY

Berkeley residents currently face felony charges for conducting non-violent investigations and animal rescues involving factory farms in Sonoma County. We urge the Berkeley City Council to adopt a resolution supporting those activists diverting resources to protecting animals in commercial operations.

FISCAL IMPACTS OF RECOMMENDATION

Minimal to negligible.

CURRENT SITUATION AND ITS EFFECTS

At its September 9, 2019 meeting, the Peace and Justice Commission approved the attached resolution with an amendment including, as a footnote, the text of California Penal Code Section 597e. The action taken was as follows:

**M/S/C:** Meola, Tregub

**Ayes:** al-Bazian, Bohn, Lippman, Maran, Meola, Morizawa, Pancoast, Pierce, Rodriguez, Tregub

**Noes:** None

**Abstain:** Gussman, Han

**Absent:** Askary

**Excused:** None

Five Berkeley residents – Almira Tanner, Cassie King, Wayne Hsiung, Priya Sawhney, and Jon Frohnmayr – and an Oakland resident – Rachel Ziegler – all of whom are members of the international grassroots activist network Direct Action Everywhere (DxE), presently face seven or eight felonies each in Sonoma County in connection with three

demonstrations by DxE in that county. The defendants have strong legal defenses, and the case draws attention to the significant animal cruelty in commercial operations; however, the case also poses significant risks to the defendants' freedom and professional futures. The Peace and Justice Commission requests of the Berkeley City Council to pass a resolution disavowing the prosecution, urging the Sonoma County District Attorney and other authorities to address the underlying issues of animal cruelty motivating the activists' actions, and affirming Berkeley's commitment to addressing the suffering of innocent animals everywhere.

## BACKGROUND

### **A. California has strict animal cruelty laws that protect animals in commercial operations.**

California has one of the strongest animal cruelty laws in the United States. Penal Code (PC) Section 597 makes it a crime to intentionally and maliciously maim, mutilate, torture, wound, or kill an animal. Examples of punishable conduct are overworking, torturing, depriving of necessary food, water or shelter, and subjecting an animal to needless suffering. PC Section 599b clarifies that such cruelty includes "every act, omission, or neglect whereby unnecessary or unjustifiable physical pain or suffering is caused or permitted." Unlike similar statutes in other states, PC Section 597 does not contain an animal husbandry exemption; therefore, the statute protects animals raised in commercial operations.

Furthermore, PC Section 597e makes it a crime to hold a domestic animal in confinement without providing the animal with sufficient food and water. This same section provides a legal defense against the claim of trespass to anyone who enters the area where the domestic animal is confined for the purpose of providing food and water.

### **B. DxE investigated commercial operations and reported animal cruelty law violations, and officials took no action.**

Prior to any of the actions leading to the present prosecution, DxE extensively investigated commercial operations in California. DxE drafted a letter (see Attachment 1) that documents animal cruelty at fourteen different facilities in California. For example, the letter links to a video taken at Sunrise Farms (an egg farm in Sonoma County, California, that shows chickens caught in wire cages, chickens with large untreated sores, and chickens whose dead bodies were left rotting among the living chickens.<sup>1</sup> There is a strong argument that these conditions violate PC Section 597, insofar as allowing animals to endure pain and suffering from injuries and disease to the point of death, without sufficient (or, apparently, any) veterinary intervention, constitutes an omission wherein "unnecessary or unjustifiable physical pain or suffering is caused or permitted."

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<sup>1</sup> <https://www.dropbox.com/s/royue4eqdxvfa6z/B-Roll.mov?dl=0>



DxE circulated that letter to the California Department of Public Health, the California Department of Food and Agriculture (CDFA), the California Attorney General, the Sonoma County Sheriff, Petaluma Animal Control, Sonoma County Animal Services, the Petaluma Police Department, and the District Attorney in eight counties, among others, and followed up with each agency on numerous occasions. None responded to DxE's requests to meet or otherwise took any action to address the cruelty DxE documented.

In addition, agencies appear confused regarding which is responsible for reporting and investigating animal cruelty in commercial operations. To wit, the Sonoma Sheriff stated that it relies on the CDFA to report such animal cruelty; however, DxE submitted requests for any reports by the CDFA of animal cruelty shared with law enforcement for the last five years, and no such records exist. It is antithetic that, while California law strongly protects animals in commercial operations, no clear enforcement command for that law appears to exist. A letter DxE sent to the California Attorney General (see Attachment 2) provides additional color.

### **C. On the advice of counsel, DxE activists took action to address animal cruelty and rescued animals from dire circumstances.**

In early May 2018, Hadar Aviram, a Professor of Criminal Law at UC Hastings College of Law, provided DxE a legal opinion asserting that, pursuant to the doctrine of legal necessity and PC Section 597e, a person could remove sick or injured animals in immediate need of medical care from a commercial facility. Bonnie Klapper, a former Assistant United States Attorney, provided a concurring opinion in May 2019. (See Attachment 3.) Based on those opinions, DxE conducted three mass actions.

On May 29, 2018, approximately 500 activists traveled to Sunrise Farms in Sonoma County. (Prior whistleblower footage from that facility is linked to in Section B above and in this footnote.)<sup>2</sup> While most remained on public property, others entered sheds and removed thirty-seven (37) birds and gave them veterinary care. The Sonoma County Sheriff arrived and removed the activists. Afterward, DxE, the Sheriff, and the owners of the farm attempted to negotiate a walk-through with all parties wherein the parties would identify and remove additional sick and injured birds. However, the farm owner refused to allow any cameras or media to be present. As a result, DxE decided against the walkthrough, and another forty (40) activists attempted to cross the Sheriff line. All were arrested. Videos of the entire action are included in these footnotes.<sup>3,4</sup>

On September 29, 2018, approximately 120 activists traveled to McCoy's Poultry Services in Sonoma County, which supplies Perdue Foods and Amazon. (Prior

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<sup>2</sup> <https://www.dropbox.com/s/royue4eqdxfv6z/B-Roll.mov?dl=0>

<sup>3</sup> <https://www.facebook.com/directactioneverywhere/videos/1954095344620805/>

<sup>4</sup> <https://www.facebook.com/directactioneverywhere/videos/1954369307926742/>

whistleblower footage from that facility is in this footnote).<sup>5</sup> Fifty-eight (58) activists walked onto the property, approximately half of whom entered sheds, while the other half remained outside. The activists identified ten (10) birds who needed immediate medical attention and attempted to remove them, but the Sonoma Sheriff detained the activists. During the ensuing negotiation, a Sheriff lieutenant asked which bird was the sickest. The activists identified one, and the Sheriff allowed that bird and the activist carrying her to leave the property. The officers then arrested all fifty eight (58) other activists and confiscated the other nine (9) birds, ultimately delivering them to Sonoma County Animal Services.

The subsequent case report from Animal Services concluded that all nine (9) of the chickens were in poor health and unable to stand on their own. It noted numerous injuries, including one chicken with exposed muscle tissue and bone and listed the owner of the farm as a suspect in violation of California's animal cruelty statute.<sup>6</sup> The full report is available as Attachment 4, and videos of the entire action are contained in the following footnotes.<sup>7,8</sup>

On June 3, 2019, approximately 600 activists traveled to Reichardt Duck Farm in Sonoma County, California. (Prior whistleblower footage from that facility is in this footnote).<sup>9</sup> A number of activists chained themselves to the front gate to temporarily halt slaughter operations, while others entered the facility and removed thirty-two (32) ducks they identified as injured. Eighty (80) activists were arrested. A video of the entire action is in this footnote.<sup>10</sup>

As a result of the above three actions, the Sonoma County District Attorney filed felony charges against six activists, ostensibly because it identified them as leaders of DxE, and misdemeanor charges against a number of other activists. The felony complaints for Ms. Ziegler and Mr. Frohnmayr are available as Attachment 5. (The complaint for the other four defendants is substantially similar.)

## ENVIRONMENTAL SUSTAINABILITY

There are no direct identifiable opportunities for environmental sustainability associated with this item. However, the factory farming industry has been identified as one of the highest contributors of carbon emissions in the nation. The opportunity for consumers to be informed about the sourcing of their food may contribute to their ability to make

<sup>5</sup> <https://www.dropbox.com/s/xg8albxnuacmghk/PP B-Roll v1.mp4?dl=0>

<sup>6</sup> <https://www.dropbox.com/s/v3l307tviu6vptv/Condition of bird.png?dl=0>

<sup>7</sup> <https://www.facebook.com/directactioneverywhere/videos/2198428473767005/>

<sup>8</sup> <https://www.facebook.com/directactioneverywhere/videos/310795646317833/>

<sup>9</sup> <https://www.dropbox.com/s/paflmw1n8hy0ur0/RDF VE 1.mp4?dl=0>

<sup>10</sup> <https://facebook.com/directactioneverywhere/videos/308313510101155/>

consumer decisions that steer away from more carbon-intensive to more sustainable sources of food.<sup>11</sup>

### RATIONALE FOR RECOMMENDATION

The Peace and Justice Commission recommends adopting the resolution for a number of reasons.

The activists' actions raise fundamental questions regarding both the care of animals in commercial facilities and the enforcement (or lack thereof) of the state's animal cruelty laws, the consideration of which such questions are clearly in the public's interest. The actions received significant positive coverage among journalists; see, for example, Pulitzer-Prize winning journalist Glenn Greenwald discussing the Sunrise Farm Action on *Democracy Now!* in this footnote<sup>12</sup> and an interview by that outlet with two activists following the Reichardt action in this footnote.<sup>13</sup> Beyond animal cruelty, furthermore, the actions raise other questions relevant for the public, such as the fact that, as noted in the above-mentioned Animal Services report, some of the deceased birds from DxE's second action were infected with reovirus. (For information on public health issues related to commercial animal operations generally, see Attachment 6.) The activists' actions were entirely nonviolent and caused relatively nominal economic damage. The activists have strong defenses outlined in the above-mentioned legal opinions, and they should not have to face felony charges and the possibility of significant harm to their futures to assert those defenses in court. The animal agriculture industry is a powerful interest group, and political considerations undoubtedly influenced the District Attorney's prosecutorial decisions.

For those reasons, the Peace and Justice Commission urges the Berkeley City Council to support the activists by adopting this resolution.

### ALTERNATIVE ACTIONS CONSIDERED

A slightly different version of the resolution was previously sent to the Berkeley City Council. The resolution was modified following discussion with the Mayor and some members of the City Council.

### CITY MANAGER

The City Manager takes no position.

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<sup>11</sup> <https://insideclimateneews.org/news/22052017/factory-farms-cafos-threaten-climate-change-world-health-organization>

<sup>12</sup> <https://facebook.com/directactioneverywhere/videos/308313510101155/>

<sup>13</sup> <https://facebook.com/directactioneverywhere/videos/308313510101155/>

CONTACT PERSON

Erin Steffen, Secretary, Peace and Justice Commission, (510) 981-7000

Attachments:

1. Resolution
2. 2018.03.18 DxE Letter to Authorities
3. 2019.07.09 DxE Letter to Attorney General
4. 2019.09.29 Animal Services Report
5. 2019.08.04 *NYT* Tainted Pork Article

Resolution in Relation to the Attempted Prosecution of Non-Violent Activists Who Attempt to Expose the Conditions of Animals in Factory Farms

- Whereas, it is a well-established scientific fact, as supported by 2,500 studies exploring animal cognition, that nonhuman animals have emotions, personalities, and the ability to feel pain, fear, and stress<sup>1</sup>; and

- Whereas, an international group of prominent neurological scientists issued the Cambridge Declaration of Consciousness in 2012, stating that nonhuman animals are conscious beings capable of feeling emotional states such as pain, stating:

“The weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Nonhuman animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates<sup>2</sup>; and

- Whereas, the public in California cares deeply about nonhuman animals raised in commercial operations, as evidenced by, among other things, the overwhelming passage of Proposition 12 in 2018, which established new standards for confinement of farm animals and banned noncomplying products; and

- Whereas, California’s animal cruelty statute, California Penal Code Section 597 et seq., does not contain an animal husbandry exemption and thus covers cruelty inflicted on nonhuman animals raised in commercial operations (“factory farms”); and

- Whereas, California Penal Code Section 597e makes it a crime to hold a domestic animal in confinement without providing the animal with sufficient food and water, and also provides a legal defense against the claim of trespass to anyone who enters the area where the domestic animal is confined for the purpose of providing food and water<sup>3</sup>; and

- Whereas, factory farms routinely violate California’s animal cruelty statute in numerous ways, including forcing nonhuman animals to live their whole lives in dirty,

<sup>1</sup> <https://www.livescience.com/39481-time-to-declare-animal-sentience.html>

<sup>2</sup> <http://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf>

<sup>3</sup> “Any person who impounds, or causes to be impounded in any pound, any domestic animal, shall supply it during such confinement with a sufficient quantity of good and wholesome food and water, and in default thereof, is guilty of a misdemeanor.”  
[https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?lawCode=PEN&sectionNum=597e](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PEN&sectionNum=597e)

overcrowded sheds, and allowing them to die of thirst or hunger when they are too sick or injured to reach food or water; and

- Whereas, factory farms pose a significant threat to human health, including by cultivating antibiotic-resistant bacteria that contaminate the food supply; and
- Whereas, factory farms pose a significant threat to the environment, including by emitting significant quantities of greenhouse gases and producing large amounts of manure that seep into waterways and threaten ecosystems; and
- Whereas, consumers care deeply about nonhuman animals and are often willing to pay a significant premium to purchase animal products from suppliers they believe have treated animals humanely; and
- Whereas, companies that supply animal products routinely portray their treatment of nonhuman animals in a substantially more favorable light than the reality; and
- Whereas, little or no enforcement of California's animal cruelty statute occurs with respect to nonhuman animals raised in commercial operations; and
- Whereas, peaceful activists have attempted to bring violations by factory farms of California's animal cruelty statute to the attention of the public as well as law and regulatory enforcement agencies, including video and photographic evidence of animals caught in wire cages and left with large, untreated sores; and
- Whereas, those activists have been arrested while trying to document the conditions of factory farms and rescue nonhuman animals therein from disease, thirst, and starvation; and
- Whereas, six activists, including five Berkeley residents, presently face felony charges in Sonoma County in connection with those investigations and rescues; and
- Whereas, investigating the conditions of factory farms and exposing abuses to the public and to law enforcement, and rescuing nonhuman animals who are diseased, starving, and thirsty, raises consciousness regarding the plight of nonhuman animals as well as the impact of factory farms on human health and the environment;

*Now, therefore, be it resolved, that the Berkeley City Council*

- (1) holds that the six individuals being prosecuted in Sonoma County are non-violent activists who were investigating and attempting to expose the abuses of nonhuman animals in factory farms;
- (2) encourages the Sonoma County District Attorney to dismiss such prosecution or exercise leniency, and to devote the resources that could be saved from these actions to instead investigate and prosecute animal cruelty in commercial animal operations in Sonoma County;
- (3) encourages law and regulatory enforcement agencies in California, including the California Attorney General and the California Department of Food and Agriculture, to investigate and prosecute animal cruelty in commercial animal operations that supply stores throughout California;
- (4) urges the California State Legislature to pass laws expanding the protection of nonhuman animals raised in commercial operations from abuse; and
- (5) affirms the commitment of the Berkeley City Council to the protection from all suffering and harm of all animals both within Berkeley and around the world.

March 19, 2018

Re. Violations of CPC Section 597 and Division 20, Chapter 13.8

To Whom it May Concern:

I am writing to you as a concerned resident of California representing hundreds of others who feel similarly. We have documented a pattern of criminal animal abuse at concentrated animal feeding operations (CAFO) across the state of California. Veterinary experts have reviewed our documentation and concluded that our findings do, in fact, constitute a violation of law, including California Penal Code Section 597 and Division 20, Chapter 13.8 of the state Health and Safety Code.

The following are some of the findings that substantiate our concerns:

- Animals routinely denied necessary sustenance, drink, or shelter
  - [An investigation into Zonneveld dairy farm](#), a Land O'Lakes supplier in Fresno County, revealed that calves were routinely left isolated in small hutches without protection from the elements
  - Hens found starving and unable to reach food at a [cage-free egg farm](#) in Stanislaus County
  - Animals held inside small cages without food or water at an [Alameda County slaughterhouse](#)
  - Animals collapsed on the ground in transports cages at [Petaluma Poultry in Sonoma County](#)
- Animals cruelly beaten, mutilated, killed, and subjected to other practices causing needless suffering
  - [Debeaking of birds](#) as well as [birds who are never given outdoor access](#) at many farms, including at Pitman Family Farms ("Mary's Chicken") in Fresno County, Kings County, Tulare County and Madera County despite false-claims of "free-range environments".
  - Untreated injuries and disease, intensive confinement and tail docking at [Hormel's Farmer John](#) pig farm in Kings County
  - Calves left untreated while suffering from pneumonia and [covered in feces and maggots](#) in Fresno County
  - [Improper stunning and inhumane handling](#) of pigs at Clougherty Packing LLC in Los Angeles County
- Egg farms from numerous counties confining animals in manners that prevent them from lying down, standing up, fully extending their limbs, and turning around freely.
  - Single barns housing over [34,000 birds](#) at [Rainbow Farms](#) in Stanislaus County
  - Hens [caught in wire cages](#) at [Sunrise Farms](#) in Sonoma County
  - Birds trampled to death at [Pleasant Valley Farms](#) in San Joaquin County
  - Continued use of intensely confining cages at [JS West](#) in Stanislaus County
  - Hens piled on top of each other at [Petaluma Farms](#) in Sonoma County



- While many of these facilities are nominally cage-free, if animals are not able to spread their wings for the majority of each day, the facility is in violation of California law.
- These findings have been covered by mainstream media including [The Wall Street Journal](#), [The New York Times](#), and [ABC News](#).

This is only a sampling of the criminal animal cruelty we have documented and we are able to provide more evidence upon request. Based on the frequency of these incidents, it is reasonable to believe many more violations go unnoticed and unreported. The vast majority of Californians do not want to harm animals. Consumers are being misled into purchasing products that do not reflect their values. Our aim is to give citizens of California right to know what is currently happening in the animal agriculture industry to make informed decisions for ourselves and our families.

We respectfully request action to end these documented violations of law and a commitment to greater transparency in both the enforcement of these provisions and in the cruelty that occurs in CAFOs across the state. Please let us know if you can meet to discuss our findings.

Sincerely,

Almira Tanner, on behalf of  
Compassionate Bay  
[www.compassionatebay.org](http://www.compassionatebay.org)

July 9, 2019



Jonathan D. Frohnmayer  
Organizer and Counsel  
Direct Action Everywhere  
P.O. Box 4782  
Berkeley, California, 94704

*Via Electronic Transmission and In-Person Delivery*

The Honorable Xavier Becerra  
Attorney General, State of California  
1300 I Street  
Sacramento, CA 95814

*With a Copy to:*

The Honorable Gavin Newsom  
Governor, State of California  
1303 10th Street, Suite 1173  
Sacramento, CA 95814

**Re: Systemic Non-Enforcement of Violations of California Penal Code Section 597**

Dear Attorney General Becerra:

California's animal cruelty laws broadly protect animals raised in commercial operations. However, Direct Action Everywhere (DxE), a non-profit organization dedicated to advancing the interests of all animals, as well as its affiliated entities and individuals, including Compassionate Bay, have documented longstanding and systemic criminal animal cruelty. We have attempted for over a year to engage law and regulation enforcement agencies to address it, and those agencies responsible have failed to take any action against the abusers. We implore the California Attorney General to effectuate the will of the people to protect animals from cruelty.

This letter summarizes (A) California's animal cruelty statute; (B) our findings of animal cruelty and unsuccessful efforts to bring those findings to the attention of appropriate law and regulatory enforcement agencies; (C) an instance where, as a result of actions by DxE, a county veterinarian documented animal cruelty by a commercial animal operation in a report that was forwarded to the District Attorney, who then began prosecuting DxE activists rather than the commercial animal operation; (D) correspondence with government officials, as well as the results of public records requests, that demonstrate a lack of internal clarity or procedures among agencies on how animal cruelty in commercial operations is investigated or enforced; and (E) our

recommendations to the Attorney General to begin addressing the foregoing issues, which we hope to discuss in person.

We do not intend for this letter to shame or embarrass the agencies and individuals discussed herein. We recognize that systemic issues involving the under-enforcement of animal cruelty laws have existed for a significant length of time and cannot be reasonably attributed to the level of competence or character of any agency or individual. Rather, we intend to illustrate those issues with the sincere hope that California's executive branch can deliver accountability as well as equal protection and enforcement of the law, perhaps with assistance from animal advocates.

**A. California law broadly prohibits animal cruelty.**

California Penal Code Section 597 addresses various forms of animal cruelty. It makes criminal conduct on the part of a person who intentionally and maliciously maims, mutilates, tortures, wounds, or kills an animal. Examples of punishable conduct are overdriving, overloading, overworking, torturing, depriving of necessary food, water or shelter, and subjecting an animal to needless suffering or inflicting unnecessary cruelty upon an animal. PC Section 599b clarifies that “the words ‘torment,’ ‘torture,’ and ‘cruelty’ include every act, omission, or neglect whereby unnecessary or unjustifiable physical pain or suffering is caused or permitted.”

Further, California Health and Safety Code Section 25990, added after California voters approved Proposition 2, criminalizes conduct in which a person tethers or confines a farm animal for all or the majority of any day in any manner that prevents the animal from lying down, standing up, fully extending his or her limbs and turning around freely.

Finally, California Penal Code Section 597e makes it a crime to engage in conduct on the part of a person who holds a domestic animal in confinement without providing the animal with sufficient food and water. This same section provides a legal defense against the claim of trespass to anyone who enters the area where the domestic animal is confined for the purpose of providing food and water. In essence, PC Section 597e provides a justification defense to a charge of trespass if the reason for the trespass is to provide care in the way of food and water to animals who need it.

Unlike in other states, California's animal cruelty statute does not contain an animal husbandry exemption. While California Penal Code Section 599c states that PC Section 597 should not be construed “to interfere with the right to kill all animals used for food,” PC 599c does not affect the general prohibition of unnecessary cruelty to animals. California's animal cruelty statute therefore differs substantially from the animal cruelty statutes of many other states that do so for farmed animals. By contrast, see, for example, Utah Criminal Code Section 76-9-301(1)(b)(ii)(C), which states, “‘Animal’ [as used in the section of the Utah Criminal Code dealing with cruelty to animals] does not include livestock, if the conduct toward the creature, and the care provided to the creature, is in accordance with accepted animal husbandry practices or customary farming practices.”

**B. DxE has delivered evidence of violations of California’s animal cruelty statute by commercial animal operations to enforcement agencies that have taken no action in response.**

Since 2013, DxE has investigated commercial animal operations throughout California (and elsewhere) and documented instances of conduct that violate PC Section 597. We drafted a letter (see [Attachment 1 - AC Letter](#)) that documents animal cruelty at fourteen different commercial facilities in California, noting that those were only a sample of the instances of cruelty we documented. For example, the letter links to a video taken at Sunrise Farms (available [here](#)), an egg farm in Sonoma County, California, that shows chickens caught in wire cages, chickens with large untreated sores, and chickens whose dead bodies were left rotting among the living chickens. There is a strong argument that these conditions violate PC 597, insofar as allowing animals to endure pain and suffering from injuries and disease to the point of death, without sufficient (or, apparently, any) veterinary intervention, constitutes an omission wherein “unnecessary or unjustifiable physical pain or suffering is caused or permitted.”

On or closely following March 19, 2018, we delivered that letter to, among others, the following agencies:

- The California Department of Public Health - Food and Drug Division,
- The district attorney in eight counties, including Sonoma County,
- The California Attorney General,
- The Sonoma County Sheriff,
- Petaluma Animal Control,
- Sonoma County Animal Services, and
- The Petaluma Police Department.

We then followed up with those agencies on a number of occasions but never received any commitment to investigate animal cruelty. For example:

- We wrote to the **Sonoma County Sheriff** on April 10, 2018 and April 23, 2018. On September 6, 2018, we met with representatives of the Sonoma County Agricultural Commissioner, the Sonoma County Counsel, Sonoma County Animal Services, the Agricultural Crimes Unit, and the Sonoma County Sheriff to discuss our findings. The representatives of those agencies stated that it was their understanding that local commercial animal operations were regulated and followed industry standards. We responded, however, that industry standards were not dispositive on the question of legality. We requested that the county inspect commercial animal operations and allow a representative from DxE familiar with animal care to accompany them to ensure compliance with California’s animal cruelty laws. However, the representatives stated that while they appreciated our perspective, they would not be able to take any action. See [Attachment 2 - DxE and Sheriff](#).

Subsequent interactions with the Sonoma County Sheriff are described in **Section D** below.

- We wrote to the **Sonoma County District Attorney** on March 19, 2018, April 6, 2018, July 26, 2018, and October 17, 2018, in each case without receiving a commitment to address our concerns. On January 31, 2019, Doug Moeller, a long-time Sonoma County resident, wrote to the DA to request a meeting to discuss animal cruelty matters. He did not receive a response, and he resent his request on February 4, 2019. He also visited the DA's office but was turned away. Having still not received a response, Mr. Moeller wrote again on February 8, 2019, expressing dissatisfaction, and again visited the DA's Office. Later that day, the DA wrote back, stating, "I have reviewed your emails, and requests for a meeting. I don't discuss pending cases with anyone other than the attorneys representing those who are charged. I am aware of your concerns regarding animal abuse and can assure you that we are looking at all aspects of this matter." Mr. Moeller responded on February 11, 2019 clarifying that he was not asking about any ongoing criminal cases, but rather about animal cruelty in Sonoma County and collusion between government and local agribusiness. He did not receive a response. DxE reached out further on April 10, 2019, and May 4, 2019, noting that we had obtained additional evidence about animal cruelty, again without receiving a reply. See [Attachment 3 - DxE and DA](#).
- We wrote to the **California Department of Food and Agriculture** on March 19, 2018. On March 29, 2018, the CDFA responded, "the Shell Egg Food Safety program reviewed its records and found that all five of the organizations you referenced are inspected annually and have been in compliance with California Code of Regulations since 2015." The CDFA also noted, "the [Health and Safety Code] requirements are enforced by local enforcement agencies." (But see discussion in **Section D** below, which summarizes a conversation where the Sonoma County Sheriff states that they "need to rely on the CDFA to report anything they see" to investigate animal cruelty.) Furthermore, while DxE's letter explicitly stated that it concerned violations of both the California Penal Code and the Health and Safety Code, the CDFA's response letter mentioned only the latter and did not address our concerns regarding violations of PC 597. See [Attachment 4 - DxE and CDFA](#).
- We wrote to **Petaluma Animal Shelter** on April 11, 2018 and April 23, 2018 without receiving a response. On May 8, two members of DxE visited Petaluma Animal Shelter in person and hand-delivered the March 19, 2018 letter referred to above to a senior staff member there. Petaluma Animal Shelter later redirected us to North Bay Animal Services, which we contacted on July 26, 2018. On August 10th, 2018, we contacted Kevin Davis, an officer of **Sonoma County Animal Services**, directly. On August 15, 2018, we sent video evidence to Mr. Davis in response to his request for the same and did not receive a response. On May 25, 2019, we again contacted Mr. Davis and again did not receive a response. See [Attachment 5 - DxE and SCAS](#).
- We wrote to the **Petaluma Police Department** on April 10, 2018. The department responded that it had no records of animal cruelty reports in commercial operations: "[I]n the City of Petaluma, Animal Control is not organizationally within the Petaluma Police Department. The Petaluma Animal Services Foundation employs the Animal Control

Officers, who are responsible for inspecting properties where livestock are maintained and issuing permits to those businesses. I've searched our police reports for the past five years and found no 597PC reports involving livestock." See [Attachment 6 - DxE and Police](#).

**C. As a result of DxE actions pursuant to PC 597e, a veterinarian from Sonoma County Animal Services documented cruelty at a commercial animal operation, and no government action was taken in response.**

On September 29, 2018, DxE activists attempted to provide care to nine sick and injured hens at McCoy's Poultry Services in Sonoma County, California, which included removing hens who did not have the ability to stand to reach food and water on their own. Sonoma County authorities arrested 58 individuals. All of the birds were ripped from activists' arms with one exception, as police gave explicit permission for activists to take out "the worst one." This one hen was carried out by an activist who was not arrested. DxE's actions were supported by a legal opinion by Hadar Aviram, a Professor of Criminal Law at UC Hastings College of Law; earlier this year, Bonnie Klapper, a former Assistant United States Attorney, offered another opinion concurring with Professor Aviram's opinion. See [Attachment 7 - Legal Opinions](#).

The case report from Sonoma County Animal Services concluded that all nine of the chickens who were taken from activists were in poor health and unable to stand on their own. It [noted](#) numerous injuries, including one chicken with exposed muscle tissue and bone and another with a severely deformed leg. For six chickens, the report stated, "Bird vocalizes in distress with manipulation of hocks and stifles." The case report [listed](#) Robert Shawn McCoy as a suspect in violation of PC 597(b) ("Person having charge or custody of any animal, either as owner or otherwise, and subjects such animal to needless suffering and fails to provide proper care and attention.") See [Attachment 8 - Report](#).

Sherstin Rosenberg, a licensed veterinarian in California and founder of Happy Hen Animal Rescue in California, where she has provided individualized care to hundreds of chickens, reviewed the case report and explained the significance of its findings, in particular that the birds' empty crops and low gait scores suggest these birds did not have access to food or water in the barn. See [Attachment 9 - Exam of Report](#).

Despite the fact that the report was forwarded to the Sonoma County District Attorney, no action has been taken to investigate the farm, to the best of our knowledge.

**D. Public records and inter-agency discussions demonstrate lack of clarity among state officials concerning animal cruelty law enforcement.**

We have also inquired whether and how government agencies investigate animal cruelty in commercial operations. Those efforts have demonstrated that (1) confusion exists among law enforcement and regulatory authorities regarding where responsibility for reporting and investigating animal cruelty lies; and (2) to the extent any policy exists, it has apparently not yielded a single investigation of animal cruelty in commercial operations.

Mr. Moeller, the Sonoma County resident mentioned in **Section B** above, met with the Sonoma County Sheriff on March 14, 2019 to discuss reporting procedures. Mr. Moeller was told that the CDFA was the appropriate agency to which animal cruelty should be reported and was the agency charged with enforcing animal cruelty laws, not the Sheriff. The Sheriff promised to follow up to provide a reporting procedure. However, Mr. Moeller subsequently contacted the CDFA, which told him that they had no jurisdiction over animal welfare and would not commit to reporting animal abuse if they themselves saw it.

On April 11, 2019, Assistant Sheriff Jim Naugle emailed Mr. Moeller following his conversation with the CDFA. Assistant Sheriff Naugle noted that confusion existed regarding which agency is responsible for investigating animal cruelty reports on farms, saying, “In regards to the investigation itself, it is clear the state believes Animal Control is the proper authority, which is our position as well. However, I know there has been some conflicting information in this regard, so I have set a meeting with them in early May.”

On May 13, 2019, Assistant Sheriff Naugle again emailed Mr. Moeller following his conversation with Animal Control. He clarified that the reporting procedure is as follows: “If the CDFA Animal Welfare inspectors find evidence of animal cruelty, they will report it to the local Animal Control Office. Our Animal Control officers will then reach out to us to assist them with the investigation. . . . Because of the heavily regulated nature of these facilities, we will still need to rely on the CDFA to report anything they see.” See [Attachment 10 - Sheriff Emails](#).

Recall, however, the discussion in **Section B** above of the letter the CDFA sent to DxE, where the CDFA stated, “[Health and Safety Code] requirements are enforced by local enforcement agencies.” The Sonoma County Sheriff and the CDFA have both appeared to task the other with responsibility for this issue, and we speculate that a similar diffusion of responsibility exists with law enforcement in other counties. Furthermore, we subsequently sent public records requests to the CDFA for any reports of animal cruelty shared with any animal control office, any district attorney, or the Attorney General. The CDFA informed us that they had no record of any such reports. See [Attachment 11 - CDFA Records](#).

Therefore, not only has confusion existed among local law enforcement and the CDFA regarding animal cruelty in commercial operations, but the current stated procedure has not yielded a single instance of an investigation of the same. It is antithetic that California voters passed laws to criminalize animal abuse, yet there is no clear enforcement command, and not a single sanction has occurred to date.

**E. We recommend the Attorney General take specific actions to address these issues.**

Based on the foregoing, we respectfully ask the Attorney General to (1) study the conditions in which animals in California’s commercial operations are held and make recommendations as to how to improve those conditions, including enforcement mechanisms, inspections, and timelines; (2) establish an inter-agency task force to clarify and streamline reporting mechanisms for animal cruelty violations in commercial operations; and (3) establish a

department whose mission is to protect animals in commercial operations and investigate and prosecute cruelty and mistreatment allegations, either by itself or in concert with other agencies.

We would like to discuss these recommendations in person and hereby renew our request for an audience with the Attorney General or another member of the California Department of Justice. We believe that any policy regarding animals in commercial animal operations should be made in consultation with veterinarians who do not have financial ties to any such operations, and we are eager to facilitate such consultation with the Attorney General.

Finally, we note that animal advocates have worked successfully with law enforcement in other states to implement solutions to this issue. For example, since 2013, the Animal Legal Defense Fund has funded an Animal Cruelty Deputy District Attorney in Oregon that represents that state in animal cruelty cases. We would be eager to work in concert with the Attorney General and other animal advocacy organizations to fashion a similar position, or class of positions, in California.

Thank you very much for your consideration.

Sincerely,

Jonathan D. Frohnmayer



**CASE REPORT****SONOMA COUNTY ANIMAL SERVICES**

1247 Century Court, Santa Rosa, CA 95403 (707) 565-7100 Fax: (707) 565-7112

Classification: California Penal Code 597 – Cruelty Against an Animal.  
(Felony/Misdemeanor)

California Penal Code 597.1 – Not Providing Property Care and Attention  
to an Animal (Misdemeanor)

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Case No.: 18-09-15

Date of Incident: 09/29/18

Location of Incident: 120 Jewett Road, Petaluma, CA, 94952

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Investigating Department: Sonoma County Sheriff Department

Business Address: 2796 Ventura Avenue, Santa Rosa, CA, 95403

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Suspect: Robert Shawn McCoy

Residence Address: 120 Jewett Road, Petaluma, CA 94952

Driver's License: N7987462

DOB: 10/21/1960

Breed: 15 Chickens (9 live and 6 dead)

---

Narrative: On 09/29/18 at approximately 1400 hours, I, Officer Dengler, received a call from Supervising Animal Control Officer Davis. He stated that the Sheriff's Department is requesting assistance at 120 Jewett Road, Petaluma, pertaining to a protest at a chicken farm.

At approximately 1410 hours, I arrived at 120 Jewett Road, Petaluma. I was met by Sonoma County Sheriff Sergeant Buchignani. Sergeant Buchignani stated that there are 2 groups of protesters that have entered the property and removed some chickens. Sergeant Buchignani also stated that there are about a dozen chickens (some alive and some dead) that were removed from the facility and the protesters are holding most of the chickens.

I observed 2 groups of protesters (one at the base of the driveway and one about a 100 yards up the driveway). There were numerous protesters across the street from the property.

I contacted Officer Foster and requested his assistance. Officer Foster arrived at about 1445 hours. Officer Foster pulled his truck into the driveway.

Officer Foster and I were advised by Sergeant Buchignani that, as the deputies place the protester in custody, we were to take custody of the chickens that some of the

protesters were holding. Although the protesters were asking what is going to happen to the chickens and did not willingly relinquish the chickens, the only conversation between myself and the protesters was to request that the protester hand me the chicken. Officer Foster and I took custody of the chickens and loaded them into Officer Foster's truck.

I went to the top of the driveway (where the group of protesters were standing) and located 5 dead chickens on towels. I took custody of the dead chickens and loaded them into Officer Foster's truck.

It should be noted that neither Officer Foster nor myself did not entered the property or any structure on the property. I also did not observe any other chickens on the property, other than the chickens that the protesters were holding and the dead chickens on the towel.

Officer Foster completed a notice of impound and obtained the property owner's signature (Robert McCoy). On the notice of impound, Officer Foster had a count of 8 live chickens and 6 dead chickens.

I contacted Supervising Animal Control Officer Davis. He stated that a veterinarian would meet us at the shelter to examine the chickens.

At approximately 1645 hours, we arrived at the Sonoma County Animal Shelter. About 15 minutes later, DVM [REDACTED] arrived with a veterinarian technician.

One at a time, I removed each of the live chickens from Officer Foster's truck. I took a picture of each bird and placed the bird into individual carriers. The carriers were placed in a manner that the chicken's picture would be matched to DVM [REDACTED] examination notes (Pictures are on the attached CD). Upon removing the chickens from Officer Foster's truck, I realized that there were 9 live chickens and 6 dead chickens.

After DVM [REDACTED] examination, she spoke to Sonoma County Animal Shelter [REDACTED] on the telephone. According to DVM [REDACTED] they agreed that, due to the condition of the chickens, all but one of the chickens are to be humanely euthanized.

Two Sonoma County Veterinarian Technicians placed the one chicken in the veterinarian room at the shelter. They then humanely euthanized the other 8 chickens.

Officer Foster removed the dead chickens and took pictures of them (Pictures are on the attached CD). DVM [REDACTED] did an examination of the dead chickens.

The 6 dead chickens and the 8 euthanized chickens were individually bagged, marked, and placed into the freezer as evidence.

On 10/04/18, I called DVM [REDACTED]. She stated that she has completed her report and that it could be picked up at [REDACTED]. I arrived at [REDACTED] and obtained DVM [REDACTED] report (See attached report).

According to Supervising Animal Control Officer Davis, the Sonoma County Animal Care and Control Veterinarian (DVM [REDACTED]) examined the chickens (See attached report).

According to Supervising Animal Control Officer Davis, all of the chickens were transported to University of California, Davis (UC Davis). The UC Davis Veterinary Medicine Department performed a necropsy on all of the chickens (See attached report).

Recording Officer: R. Dengler	Badge No.: 509	Date: 09/29/18
Supervisor Approving: K. Davis <i>K. DAVIS</i>	Badge No.: 512 <i>#512</i>	Date: 09/29/18 <i>10-18-18</i>

### Supporting Evidence:

Attachments Include:

1. Copy of the Notice of Impound completed by Officer Foster, signed by Mr. McCoy.
2. CD with the pictures of the chickens.
3. Copy of DVM [REDACTED] examination report.
4. Copy of DVM [REDACTED] examination report.
5. Copy of the UC Davis Preliminary report.

SONOMA COUNTY  
ANIMAL CARE AND CONTROL  
1247 Century Court  
Santa Rosa, CA 95403-2810  
Phone (707) 565-7100, Fax (707) 565-7112

**NOTICE OF IMPOUNDMENT**

On 9-29-18 at 1550 a 8 live chickens, 6 dead chickens Lic. # \_\_\_\_\_  
Date Time Description

was impounded from property at 120 Jewett Rd, Petaluma CA  
Address or Location

If this animal belongs to you or is in your custody, it can be redeemed at the Sonoma County Animal Shelter,

**Note:**  This animal will be held for four working days. If not claimed, it may be put up for adoption or humanely destroyed.

The above described animal(s) was/were impounded for the following:

- To protect the public health, safety and welfare.
- To protect an animal which is injured, sick or starving and must be cared for.
- To protect an animal from injury which has strayed onto public property or right-of-way.
- To protect domestic animals.

If you feel the animal(s) was/were impounded in error, or you disagree with the impoundment, you may request a hearing by personally delivering a written request, within seventy two (72) hours after this notice was served, to the address above.

Robert Shawn McCoy J. Foster #520  
Accepted by Animal Care and Control Officer  
 9/30/08 Robert Shawn McCoy DL# N7987462

**Poultry examined 9/29/2018** (251-3) Sonoma County Animal Services (251) (707)  
565-7100

POULTRY CHICKEN 8 Wks. 5 Days Undetermined 3.1 pounds (9/29/2018)

BRIEF EXAM/ NOTES:

BRIEF EXAM/ NOTES:

To Whom It May Concern:

I [REDACTED] was called to examine several chickens that were brought into the Sonoma County Animal Shelter by Animal Control Officers on Saturday afternoon of 09/29/2018 on an emergency basis. I am not a boarded Avian and Exotics Specialist or a Food Animal/Poultry Specialist. I am a general practitioner in Sonoma County who sees chickens as patients on a regular basis. I agreed to examine these birds for humane reasons as the staff veterinarian was unavailable.

A general summary of presented birds: There are nine living chickens which appear to be white broilers of around 7-8 weeks old, presented in single carriers. None are able to stand on their own and all are wet and soiled. All of these 9 birds appear stressed and are panting. There are 6 deceased birds which also appear to be white broilers in various states of decay presented in plastic bags. Each carrier or bag is labeled with a case number.

Individual exams of living birds following:

A377133 3.1lb White broiler, appears male. Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. BCS 5+/9 and unable to stand/bear weight on either leg with bilateral painful and widened hocks. Bird vocalizes in distress with manipulation of hocks and stifles. Ventral recumbent and unable to walk. Bilateral perosis. Ventrums are erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377134 4.0lb White broiler, appears male. Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. BCS 5+/9 and unable to stand more than briefly. Ventral recumbent and unable/unwilling to walk. Bilateral widened and painful hocks, worse on the left. Left leg is deviating/rotating laterally at the hock and stifle. Bird vocalizes in distress with manipulation of hocks and stifles. Bilateral wing tip trauma, purple bruising and broken blood feathers. Left wing: most of ventral aspect is missing skin and there is exposed muscle tissue and bone. This area is soiled, darkened, appears infected, and has necrotic smell. This wing is painful on exam. Ventrums are erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377135 4.9lb White broiler, appears male. Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. BCS 5+/9 and unable to stand or walk. Right lateral recumbency. Unable to maintain sternal position. Right leg underneath bird, left leg extends laterally and caudally. Bilateral widened and painful hocks, worse on the left. Bilateral perosis. Bird vocalizes in distress with manipulation of hocks and stifles. Purple bruising and open sore on left wing tip. Ventrums and right side are erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377136 1.3lb White broiler, unknown gender. Lethargic and depressed. Debris on head and face. Eyes clear when briefly opened. Empty crop. Pale comb. BCS 1/9 Emaciated. Left lateral recumbency. Unable to maintain sternal position. Severely deformed and twisted right leg. Right leg is held caudally and laterally. Bilateral widened and painful hocks. Bilateral perosis. Right stifle feels deranged. Ventrums and left side are erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377137 3.2lb White broiler, unknown gender. BCS 4/9. Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. Sternal recumbency. Unable to stand/bear weight on either leg with bilateral painful and widened hocks. Bird vocalizes in distress with manipulation of hocks and stifles. Bilateral perosis. Bilateral wing tip bruising/purple discoloration on dorsal surface, with broken blood feathers. Ventrums are

**Poultry examined 9/29/2018 (251-3) Sonoma County Animal Services (251) (707)**

565-7100

POULTRY CHICKEN 8 Wks. 5 Days Undetermined 3.1 pounds (9/29/2018)  
erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377138 1.1lb White broiler, unknown gender. BCS 1/9. Depressed and lethargic. Eyes/ears/nares/oral cavity clear. Empty crop. Eyes are shut unless bird directly stimulated. Hunched posture with tail down. Ruffled feathers. Able to stand briefly and able to maintain ventral recumbent position. Appears to weak to walk. Biliary diarrhea, fecal staining under vent/tail. Possible coelomic mass (coelomic mass effect). Ventrums is erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A277139 3.7lb White broiler, appears male. BCS 5+/9 Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. Sternal recumbency. Unable to stand/bear weight on either leg with bilateral painful and widened hocks. Bird vocalizes in distress with manipulation of hocks and stifles. Bilateral perosis. Right wing is broken or dislocated at carpal joint. Right wing deviates ventrally and hangs loosely. Bird is painful in this area (vocalizes). Ventrums is erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377140 3.1lb White broiler, unknown gender. BCS 5/9 Alert and responsive. Eyes/ears/nares/oral cavity clean. Empty crop. Sternal recumbency. Unable to stand/bear weight on either leg with bilateral painful and widened hocks. Right side much more painful than left, though appear grossly symmetrical. Bird vocalizes in distress with manipulation of hocks and stifles. Bilateral perosis. Left leg has deep full thickness scratches/lacerations on dorsal surface of left thigh. Wings appear normal. Ventrums is erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

A377147 3.1lb White broiler, appears male. BCS 5+/9 Alert and responsive. Left side of face is soiled. Eyes/ears/nares/oral otherwise clean. Empty crop. Left lateral recumbency. Both legs are fully extended stiffly and caudally. Minimal to no ROM hocks/stifles. Unable to stand or remain sternal. Bilateral painful and widened hocks. Bird vocalizes in distress with manipulation of hocks and stifles. Bilateral perosis and possible stifle derangement. Wings appear normal. Ventrums and left side is erythematous and wet. No open ulcers/lesions noted on feet or keel. NCC Animal Welfare Guidelines Gait Scoring #2

All of living birds are in poor health and are in distress.

Individual exams of DOA birds following. Deceased birds were not weighed. Birds in advanced states of decay were not removed from bags due to gas and fluid accumulation within bag and contamination concerns.

A377146 White broiler. Unknown gender. Thin, BCS 2/9 Very thin. In rigor. Legs extended caudally. Green discoloration (appears to be biliary fecal contamination) on head. Body appears intact. Feathers and skin wet and erythematous. Appears recently deceased with no obvious external signs of decay.

A377142 White broiler. Unknown gender. Skin and musculature missing from almost entire ventrum. Bones of wings, keel, femurs exposed. Appears cannibalized or predated upon. Coelom appears intact. Advanced decay with purple to black tissues with significant drying of tissues. Likely deceased for several days.

A377145 White broiler. Appears male. Advanced decay with gaseous bloat. Body appears overall intact but has bones protruding through skin at stifles and wings on ventrum. Body is markedly distended with gas and is green and purple in color.

A377143 White broiler. Appears male. Appears recently deceased with intact body. BCS 5+/6 in rigor with legs caudally extended. Right eye is missing and ears, eyes, oral cavity is caked with debris (litter/feces). Green bruising on head and neck. Entire body is erythematous and wet.

Poultry examined 9/29/2018 (251-3) Sonoma County Animal Services (251) (707)

565-7100

POULTRY CHICKEN 8 Wks. 5 Days Undetermined 3.1 pounds (9/29/2018)

A377141 White broiler. Unknown gender. Advanced state of decay. Gaseous bloat with distended skin and extensive green/purple discoloration. Body appears grossly intact.

A377144 Unknown chicken breed. Extensive missing skin/musculature. Missing 1/2 of neck and entire head. Missing coelomic contents. Appears heavily cannibalized or predated. Remaining tissues are darkened, necrotic appearing and somewhat dry. Appears to have been deceased for many days.

[REDACTED]

10/2/2018 Brief Exam/Notes

[REDACTED] Final - 10/3/2018

[REDACTED]

*Sonoma County Animal Services – Shelter Veterinarian –*

**Case Report – Animal # 377134**

**Agency: Sonoma County Animal Services**

Address: 1247 Century Ct

Santa Rosa, CA 95403-8236

Phone: 707 565-7110

**Officer: Justin Foster**

**Examining Veterinarian: Dr. [REDACTED]**

**Sonoma County Animal Care Veterinarian**

Address: 1247 Century Ct

Santa Rosa, CA 95403-8236

Phone: [REDACTED]

Email: [REDACTED]

**Subject of Exam: Animal # 377134**

**Date of Exam:** 10/01/18

**Route of Delivery:** Brought in alive by animal control officer Roger Denglar

**Materials Provided/Reviewed:** Medical records of Dr. [REDACTED] who first examined this bird on 9/29/18. Necropsy Report from UC Davis.

**History:** On 9/29/2018, a group of animal rights protesters broke into a commercial poultry ranch in Petaluma, CA. The protesters removed approximately 15 chickens from the buildings/houses. The protestors were arrested by sheriff's deputies and our agency took





*Sonoma County Animal Services – Shelter Veterinarian –*

**Eyes:** Clean and clear, no obvious discharge nor irritation of the corneal surface seen.

**Ears:** Clean and clear, no evidence of ectoparasites or discharge seen.

**Beak:** Intact, nares clean and clear, with no evidence of discharge seen.

**Choana:** Clean and clear.

**Crop:** Moderately full.

**Auscultation:** Heart - Heart rate is approximately 280 bpm with regular rhythm sounds.

Respiratory (Lungs and airsacs) - Respiration rate is within normal limits. The respiratory sounds are clear.

**Abdominal Palpation:** The abdomen is soft on palpation. There is no palpable masses/organomegally/free fluid.

**Cloaca:** Appears moist, slightly inflamed, some dried droppings is noted to be stuck to the surrounding feathers but is relatively clean. Suspected to be female, on exam of cloaca.

**Musculoskeletal:**

- **Neck/Spine/Pelvis** – regular anatomy on palpation, no obvious pain, able to hold head up well. The spine is prominent, but palpable pain or instability is apparent.
- **Pectoral muscle** - fair condition with BCS 2/3, a moderate fat layer between the muscle and skin layers is noted. The keel is prominent.
- **Wings** – the left wing is noted to be broken at the radial metacarpal joint, with bone exposure through the skin ventrally. The fracture(s) appear chronic in nature with secondary infection associated with exposure through the skin. The fracture appears very painful on palpation. Further wounds are noted on both shoulders dorsally with full thickness puncture wounds/abrasions. Trauma to both wing tips are also noted.
- **Legs** – Mild muscle atrophy is noted with both legs, both hocks are noted to be thickened and painful on palpation. The left leg more so than the right leg. While the chicken is able to walk, it is noted that it is ataxic and to spend the majority of time in kennel in a sternal sitting/laying position. **Gait scoring is noted as 1/2.**
- **Feet/Toes** – The ventral paws are slightly discolored with mild to moderate hyperkeratosis (thickening of the skin) and mild to moderate lesions/scabs noted on the footpads. **Broiler Paw Scoring is 1/2.**

**Plumage (feather) / Skin Condition:** The ventral plumage is absent symmetrically on either side of the sternum/midline. The remaining plumage there is broken, moist and covered with organic debris. The plumage around the cloaca is also coated with organic debris and the

*Sonoma County Animal Services – Shelter Veterinarian –*

[REDACTED]  
[REDACTED]  
[REDACTED]

associated skin is moist and inflamed. Feathers are also noted missing on the ventral and lateral neck and both thighs medially. Trauma to the wing feathers and skin are described above in the musculoskeletal section of this report.

**Parasites:** No evidence of ectoparasites are seen.

**Treatment Plan Initiated:** Physical exam findings discussed with [REDACTED] [REDACTED] of Sonoma County Animal Services. Given the chronic trauma to the left wing and associated pain, as well as the poor body condition and thickening of the both hocks and associated pain, the decision is made to humanely euthanize. The chicken was euthanized on 10/01/18 at ~4.25pm by Animal Health Technician and Registered Veterinary Technician [REDACTED] [REDACTED]

**Samples Collected/Further Diagnostic Tests Ordered:** Complete necropsy through UC Davis.

**Necropsy Report:**

Performed at UC Davis California Animal Health and Food Safety Laboratory. Received there on 10/02/18. Coordinator [REDACTED] DVM, PhD, Dipl. ACVP.

Gross Pathological Findings – Left inner wing open wound at the radial metacarpal joint which is ulcerative and is noted to have dark red-black crusting (likely hemorrhage and necrosis of the epidermis) surrounding the ulceration exposing the dermis. Tenosynovitis. Prominent Bursa of Fabricius. There is a small amount of crop and ventriculus contents composed of mash corn. Female with small inactive ova. Pale enlarged spleen. The liver is dark mahogany. On the dorsal capsule, there are 3 pale, gray-tinged irregularly-shaped foci measuring about 4x8 and 2x3 mm. These foci do not extend to the parenchyma. The cranial lobes of the kidneys are pale.

Histology Findings – Mild to moderate lymphocytic plasmacytic histiocytic epiraditis with occasional myocarditis. Severe necroulcerative dermatitis with dermal perforation (perforating injury presumptive). No significant infection is seen on histopathology.

**Cultures:**

**Splenic swab** - Staph. Hominis, considered a contaminant.



*Sonoma County Animal Services – Shelter Veterinarian –*

**Summary of findings:**

Physical examination of the patient known as A 377134, was performed by myself, Dr [REDACTED] [REDACTED] BVSc, at Sonoma County Animal Services on 10/01/18. The patient is a white broiler hen of 9 weeks of age. The patients was found to have chronic painful fracture(s) and secondary infection to the left wing and thickened painful hock joints, both legs. The chicken was unable to walk properly. A 377134's body condition was 2/3, (as described in Appendix 2). A 377134's gait score was 1/2, (as described in Appendix 3). A 377134's broiler paw score was 1/2, (as described in Appendix 4).

The overall prognosis and quality of life for this chicken was found to be poor. The case was discussed with [REDACTED] who elected to proceed with humane euthanasia. The chicken was euthanized on 10/01/18 at ~4.25pm by Animal Health Technician and Registered Veterinary Technician [REDACTED]

The bird, along with 14 other chickens from same commercial poultry ranch in Petaluma, CA, were then sent to UC Davis California Animal Health and Food Safety Laboratory for necropsy (post mortem examinations).

Necropsy findings of A 377134 suggest infection with Reovirus as a likely cause of the inflammation and swelling in the legs and associated difficulty with walking. The abnormal findings in this bird's heart muscle are also suggestive of Reovirus.

*Sonoma County Animal Services – Shelter Veterinarian –*

**Conclusions:**

In order to reach a conclusion in this case involving the patient known as A 377134, all the evidence collected during physical examinations, necropsy examination and previous medical records is taken into account. The Five Freedoms of Animal Welfare found in the Guidelines for Standard of Care in Shelter Animals, Body Condition Scoring System for Layer Hens by the International managers of the Livestock Production Programme, the US NCC Gait Scoring System for Broiler Chickens and the AAAP Broiler Paw Scoring Guide are also utilized.

The suspected Reovirus infection is known to be common in commercial poultry ranches. There is no cure, but live and killed vaccines are available. No information as been provided to me at this time as to whether or not the commercial poultry ranch these chickens came from vaccinate against this virus.

Of the Five Freedoms for Animal Welfare.

Freedom from discomfort and freedom to express normal behavior have not been assessed by myself.

No evidence of gross starvation/dehydration/malnutrition is seen. Nor is evidence of ectoparasites seen. This suggests that the freedom from hunger and thirst is likely met.

The associated pain of the chronic trauma to the left wing and the associated pain and difficulties with gait is most concerning. With no evidence of treatment of the broken wing and associated infection the freedom from pain, injury or disease and freedom from fear and distress are both considered unmet.

**Date:** 10/17/18

*Sonoma County Animal Services – Shelter Veterinarian –*

[REDACTED]

[REDACTED]

[REDACTED]

**Appendix One - The Five Freedoms for Animal Welfare**

- **Freedom from Hunger and Thirst**  
By ready access to fresh water and diet to maintain health and vigor.
- **Freedom from Discomfort**  
By providing an appropriate environment including shelter and a comfortable resting area.
- **Freedom from Pain, Injury or Disease**  
By prevention or rapid diagnosis and treatment.
- **Freedom to Express Normal Behavior**  
By providing sufficient space, proper facilities and company of the animal's own kind.
- **Freedom from Fear and Distress**  
By ensuring conditions and treatment which avoid mental suffering.

Newberry, S., M.K.Blinn, P.A. Busby, C. Barker Cox, J.D. dinnage, K.F. Hurley, N. Isaza, W. Jones, L. Miller, J. O'Quin, G.J. Patronek, M. Smith-Blackmore, and M. Spindel. 2010. Guidelines for Standard of Care in Shelter Animals, p.10. Association of Shelter Veterinarians.

Sonoma County Animal Services – Shelter Veterinarian –

**Appendix Two – Body Condition Scoring System for Layer Hens by the International managers of the Livestock Production Programme**

**Body Condition Scoring System for Layer Hens**

The chicken is held by the legs in one hand, usually upside down. The palm of the other hand is then used for palpating and grading the protuberance of the keel (ie breast bone), the development of the breast muscles immediately alongside the ventral ridge of the keel, and the convexity or concavity of the breast muscle contour. A study by Gregory and Robins has demonstrated that this system of scoring has a good relationship with the bird's fat and muscle reserves.

Score	Characteristics
0	Prominent ridge on the keel with limited overall breast muscle and a concavity of the breast muscle alongside the keel
1	Greater development of breast muscle which is not concave and feels more or less flat. Keel still prominent.
2	Moderately developed convex breast muscle. Keel less prominent.
3	Well developed relatively plump breast. Smooth over the keel.

© copyright 2006, NR International managers of the Livestock Production Programme (LPP) funded by DFID



Sonoma County Animal Services – Shelter Veterinarian –

**Appendix Three – US NCC Gait Scoring System for Broiler Chickens**

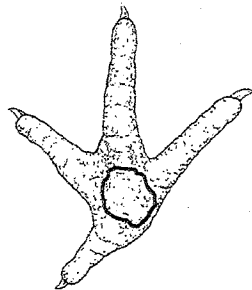
For most audits, the auditor will only watch the broiler and their movement. However if a “gait score” is required, the U.S. Gait Scoring technique is recommended (Gait Scoring in the Commercial Broiler. Office of Agricultural Communications, Box 9625, Mississippi State, MS 39762. (662) 325-2262).	No obvious signs of problems	Balance
Broilers may need to be gently encouraged to walk. If the broilers become stressed, especially in hot weather, discontinue scoring immediately	Obvious signs	Clear limp, awkward but can walk 5ft
<b>Score 0</b> – Bird should walk at least 5 feet, and while the bird may appear ungainly, there are no visible signs of lameness.	Severe signs	Will not walk 5ft

- Refer to: <https://www.nationalchickencouncil.org/wp-content/uploads/2017/07/NCC-Welfare-Guidelines-Broilers.pdf>

**Appendix Four - AAAP Broiler Paw Scoring Guide**



**Broiler Paw Scoring Guide**



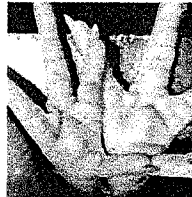
Paw scoring is an important part of welfare audits for broiler flocks. To optimize scoring accuracy & to minimize welfare concerns with handling broilers in the field, broiler paws should be evaluated in the processing plant to more precisely and efficiently assess the bottom of the foot. The paw includes the broiler foot pad (red circled area) and the toes.

At the processing plant, broiler paws should be assessed after the removal of the cuticle, or alternatively after paw cleaning. A random sample of 200 paws (representing 100 broilers) should be evaluated per flock and a pass or failure score should be assigned to each paw.

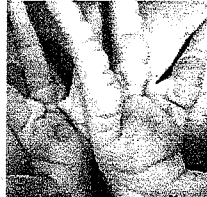
A result of 90% (or greater) of paws with a pass score is considered to be acceptable for animal welfare when evaluating broiler paws.

**PASS (Score Criteria)**

- Normal color\* and skin  
(\*note, skin color may vary from yellow to white due to breed or diet)
- Slight discoloration or darkened skin
- Hyperkeratosis (thickening of skin)
- Lesion covering less than 1/2 of foot pad



Pass (washed paws with no lesions & normal skin color)



Pass (paws with no cuticle and normal skin color)



Pass (washed, post-scald paws with scab covering less than 1/2 the area of the foot pad)



Pass (paws with no cuticle & some color variation, healed skin and no ulcerations)

**FAIL (Score Criteria)**

- Erosions, ulceration, or scab formation that covers more than 1/2 of foot pad and may include the toes
- Hemorrhages or swelling of foot pad



Fail (washed paws)  
Ulceration is present and lesion is more than 1/2 the area of the foot pad; lesions are also present on the toes

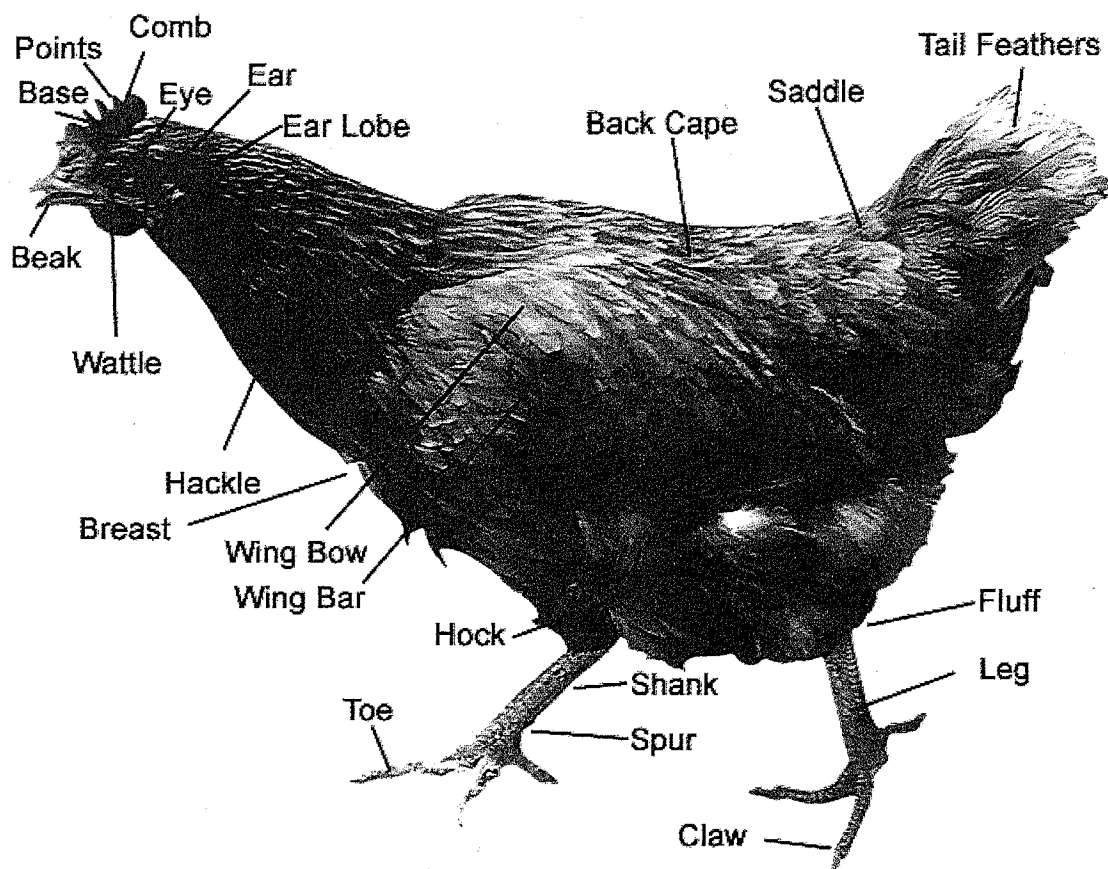


Fail (paws without cuticle)  
Ulceration is present and the lesion is more than 1/2 the area of the foot pad. Swelling of the foot pad is also visible.

Produced by the AAAP Animal Welfare & Mgmt Committee, 2015

Refer to: <https://www.nationalchickencouncil.org/wp-content/uploads/2017/07/NCC-Welfare-Guidelines-Broilers.pdf>

Appendix Five – Anatomy of a chicken



*Sonoma County Animal Services – Shelter Veterinarian –*

[REDACTED]

[REDACTED]

[REDACTED]

**Appendix Six – Photographs**

Attached are printed copies of photos of A 377134.

These photos and those of the other 14 chickens involved in this case can be found on the Sonoma County Animal Services computers.

[REDACTED]

*Sonoma County Animal Services – Shelter Veterinarian –*

[REDACTED]

Appendix Seven - [REDACTED] Preliminary  
Report

Attached report is considered a preliminary and is the only report that I have reviewed at the time of this report being written.

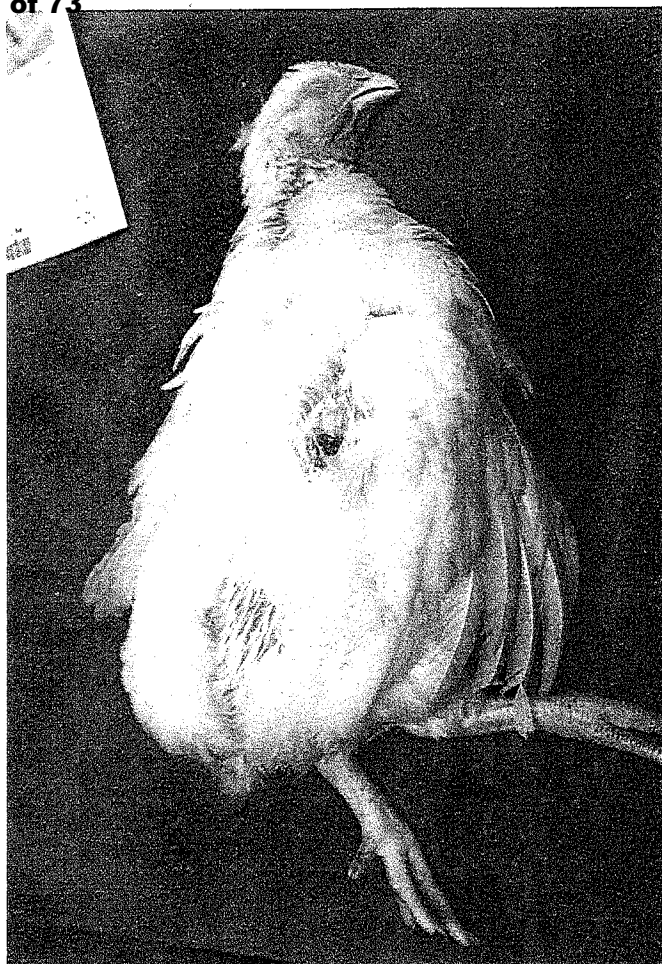
*Sonoma County Animal Services – Shelter Veterinarian –*

[REDACTED]

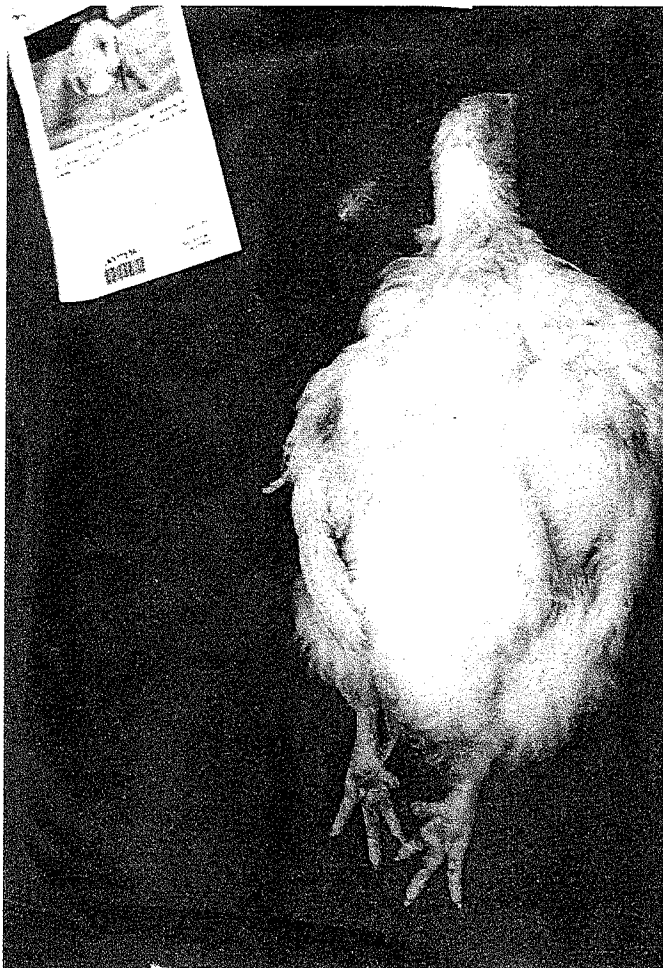
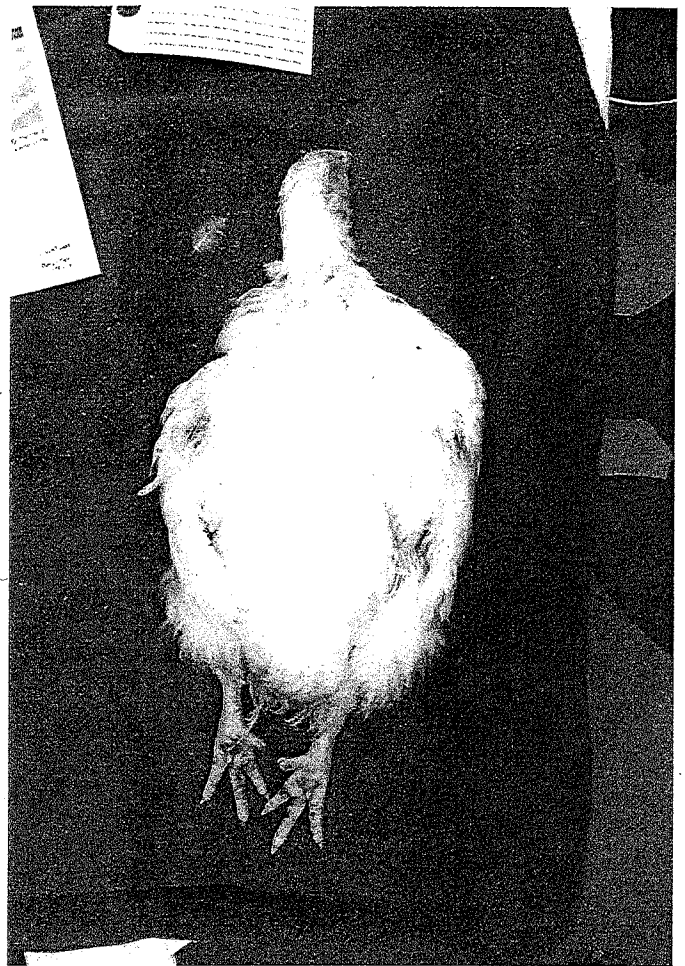
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**Appendix Eight – UC Davis California Animal Health and Food Safety Laboratory**  
**CAHFS #: D1813703 Report – Preliminary Version 2.**

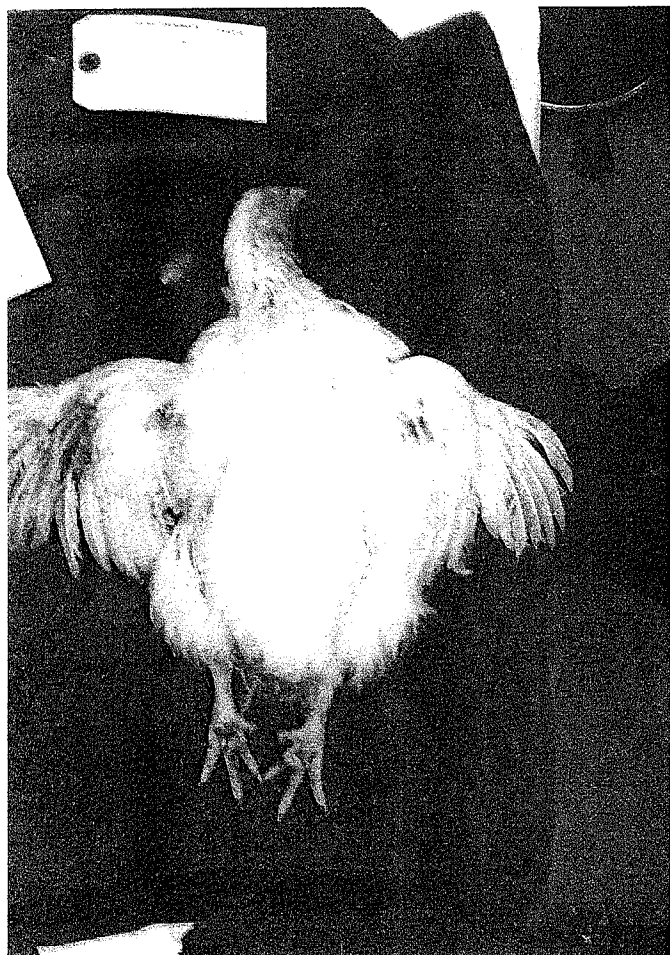
Attached report is considered a preliminary and is the only report that I have reviewed at the time of this report being written.

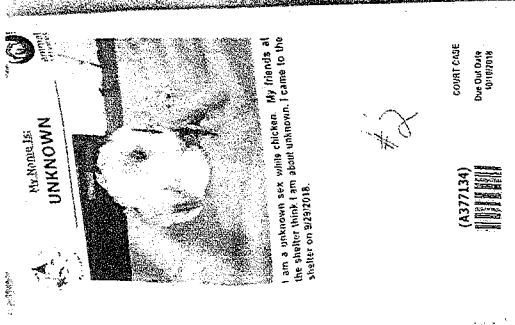
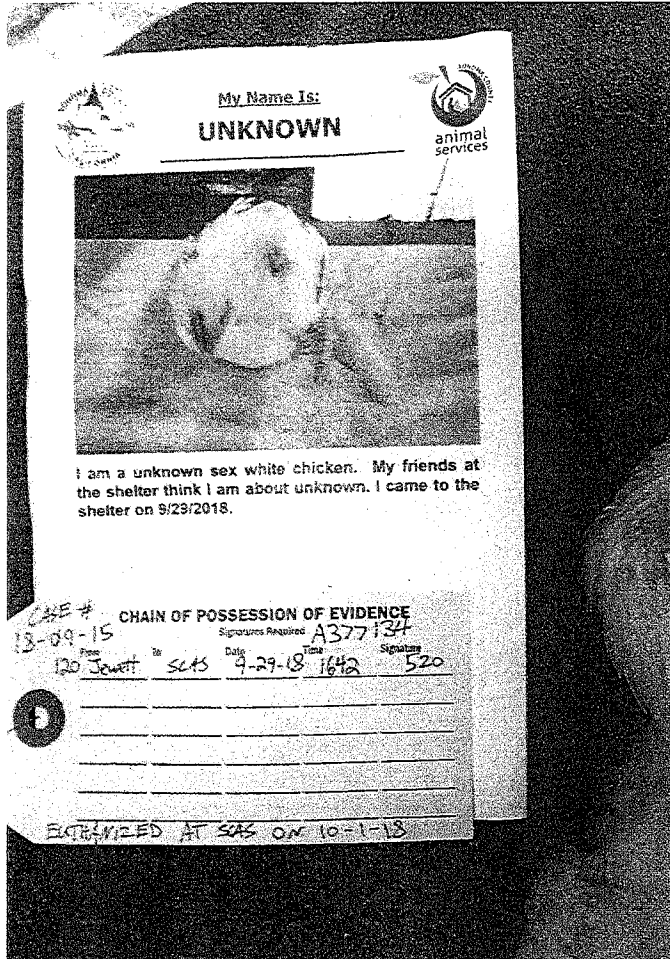




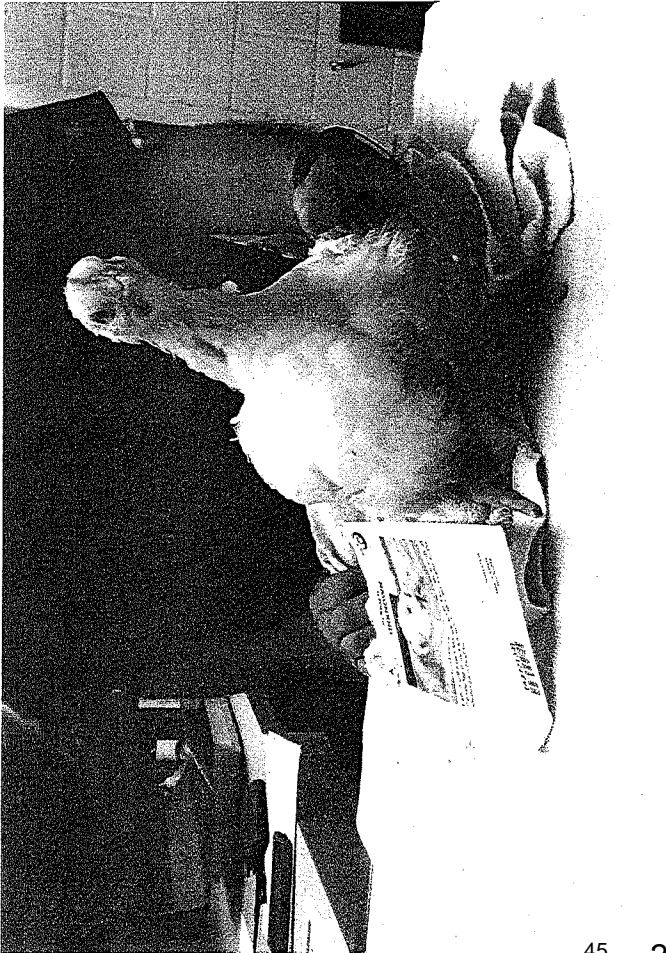
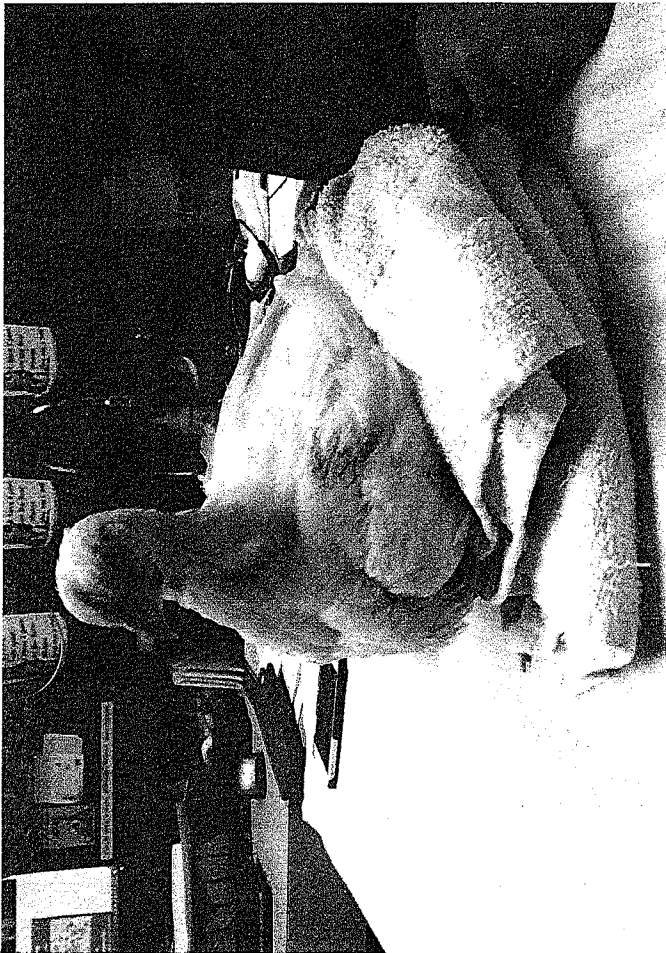






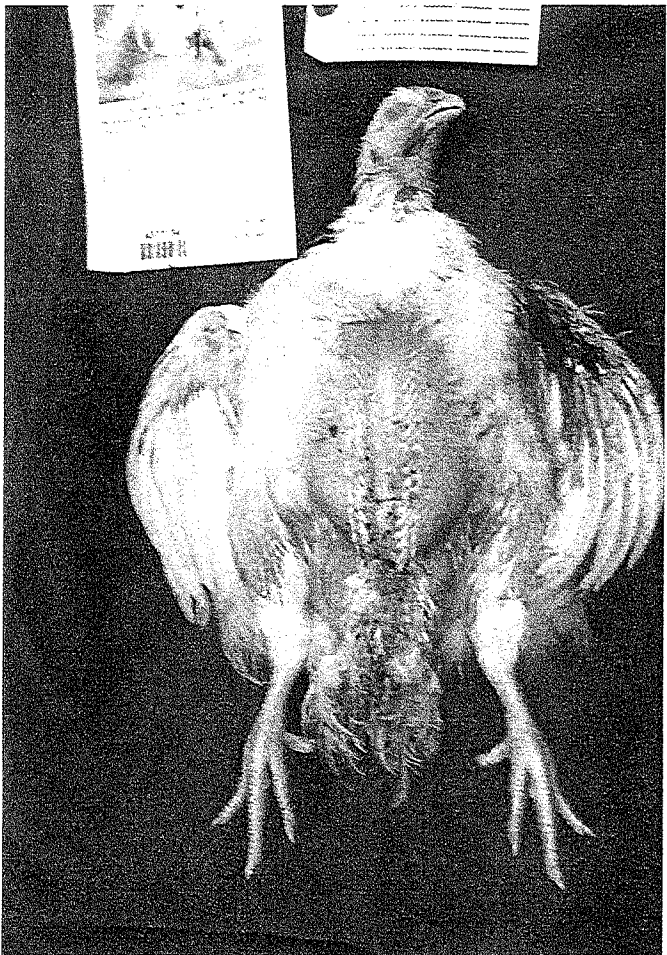
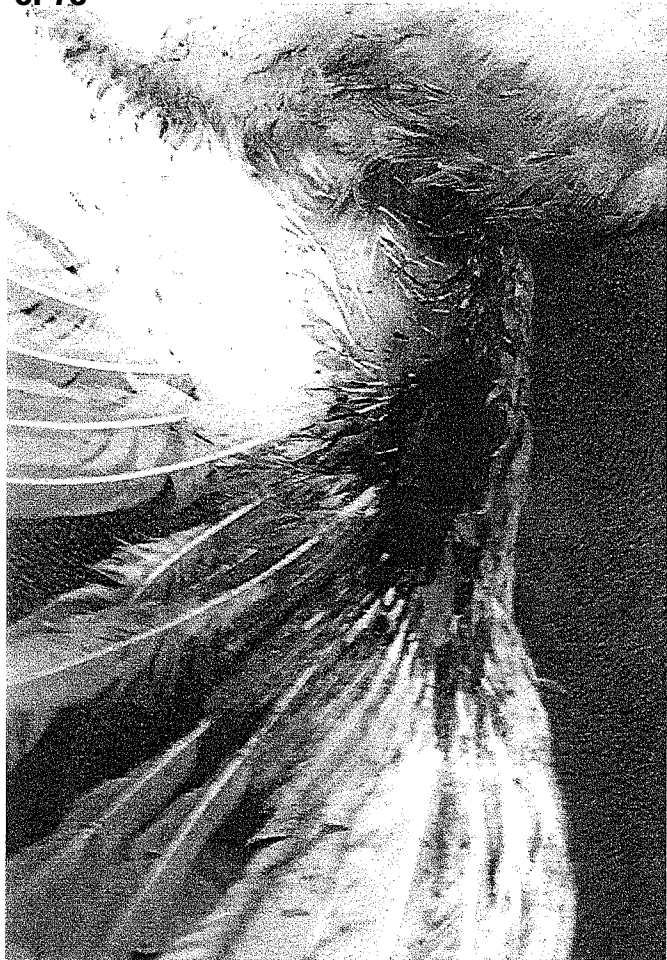


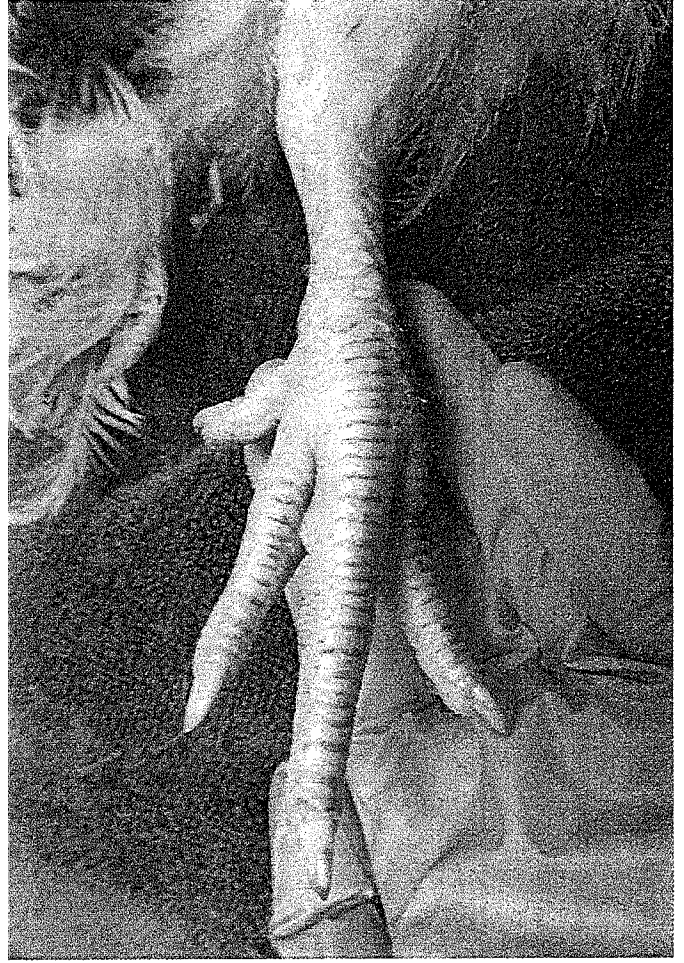




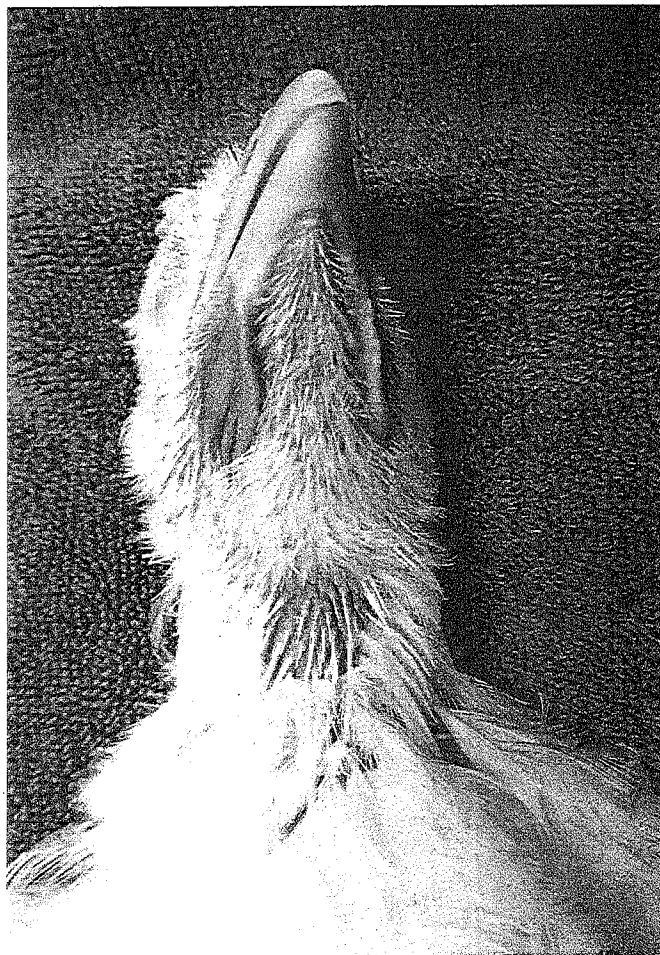


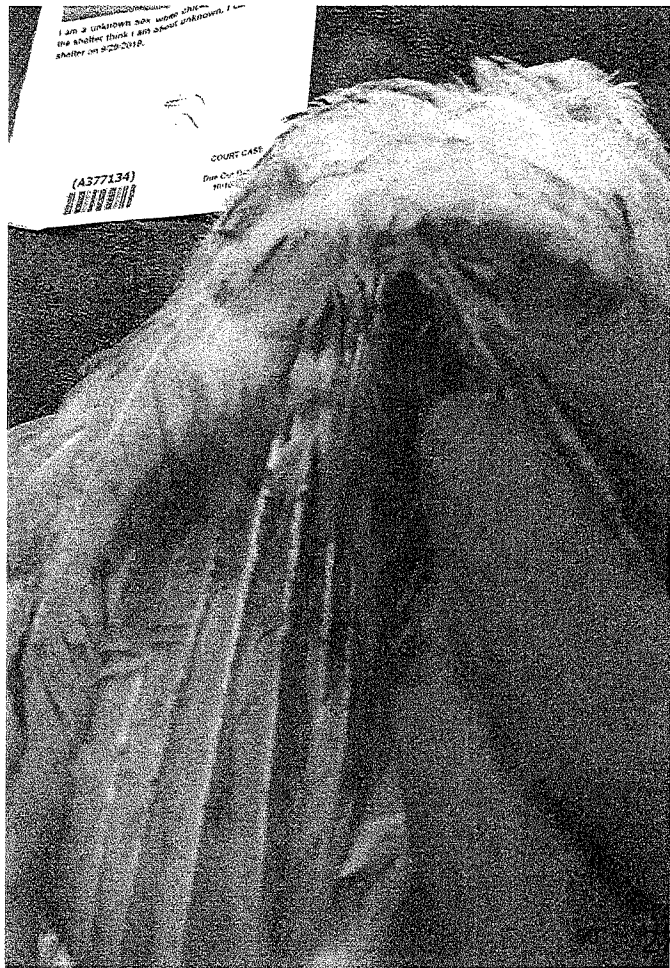
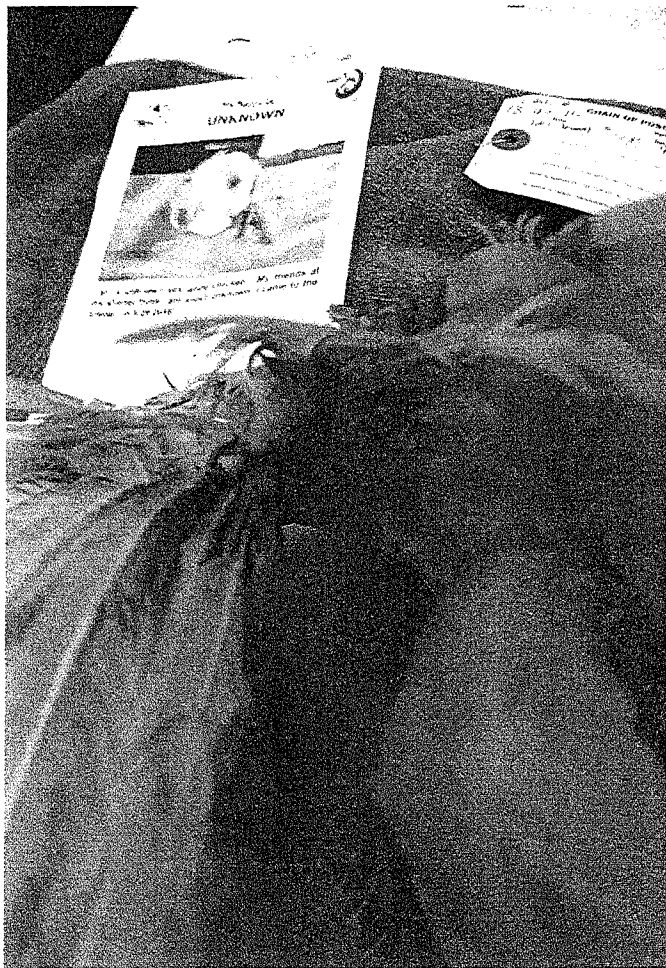
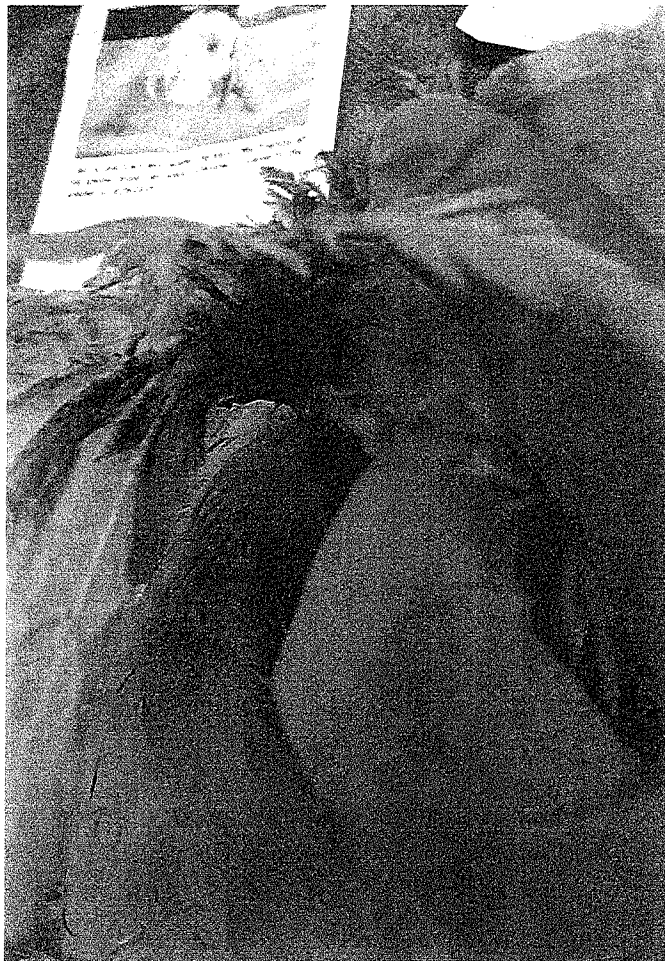




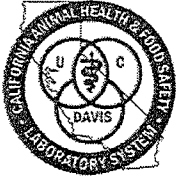












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**VETERINARY MEDICINE**

California Animal Health and  
Food Safety Laboratory  
PO Box 1770, Davis, CA, 95617  
(530) 752-8700

CAHFS Accession #: D1813703

Preliminary Version 2

Ref. #:

Coordinator: [REDACTED] DVM, PhD, Dipl. ACVP

E-Signed and Authorized by: [REDACTED] on

10/12/2018 2:20:06PM

Email To:  
Sonoma Co Animal Control  
[REDACTED]

Collection Site:  
Sonoma Co Animal Control  
1247 CENTURY CT,  
SANTA ROSA CA 95403  
Sonoma County.

This report supersedes all previous reports for this case

Specimens Received: 15 Carcass;

Date Collected: 09/30/2018 Date Received: 10/02/2018

Comments: 15 frozen carcasses

**Case Contacts**

Submitter	Sonoma Co Animal Control	707-565-7106	1247 Century Ct	Santa Rosa	CA	95403
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**Specimen Details**

Animal/Source	ID Type	Taxonomy	Gender	Age
D1813703-01	CAHFS Internal ID	Chicken		

**Laboratory Findings/Diagnosis**

Histopathological findings:

- Chickens G-O: Mild to moderate lymphocytic plasmacytic tenosynovitis, reo virus infection
- Chickens C and F, severe fibrinonecrotizing colomitis, three different bacteria isolated from swabs from F
- Chickens G, H, K, L, M, O: Mild to moderate lymphocytic plasmacytic/histiocytic epicarditis with occasional myocarditis
- Chickens I, L, M, N, O: Bursal depletion
- Chicken H: Severe necroulcerative dermatitis with dermal perforation (perforating injury presumptive)
- Chickens C and F: Fibrinosuppurative coelomitis, marked

Gross pathological findings:

- Chickens C (#377143) and F (#377146): Severe fibrinous coelomitis, epicarditis
- Chickens G-O: Non-specific findings; no significant pathology
- Chicken H (#377134): Left inner wing open wound
- Chicken J (#377136): Lateral rotation of the right distal tibiotarsus and severe lateral and backward deviation of the distal limb (metatarsus and digits); valgus deformity

**Case Summary**

10/12/2018: Microscopic examination of the tissues are completed now, significant findings are summarized in the diagnosis section. The coelomitis in chickens C and F are confirmed, and on bacterial cultures of F there are three bacteria isolated, all typically found in the intestinal tract, likely due to autolysis (bird C was not cultured due to the autolysis). The fresh carcass, "H" had a pale and somewhat enlarged spleen, there is no significant infection on histopathology and cultures isolated Staph. hominis, also likely a contaminant.

A significant and relevant finding is the tenosynovitis observed in all G-O birds, and reovirus is detected in three of them by PCR. Reo virus is a vertically transmitted disease that has been affecting many broiler birds, and typically involves the tendons of the hocks, leading to rupture of the tendons in severe cases. None of these birds had gross lesions of arthritis/synovitis, however histopathology revealed the consistent lesions, and this may be the most contributing factor in these chickens not being able to

move and stand up well, as [REDACTED] had mentioned on our phone conversation. I had initially suspected the clinical signs and poor quality of life may be due to the rapid body weight gain issues of broilers however at least one of the birds was not overtly heavy and the joint inflammation is more likely. Most birds also had epicardial and myocardial inflammation, also typically associated with reov virus infections. Our reov virus PCR is not highly sensitive, thus we are pursuing virus isolation on the 6 chickens with negative PCR results.

10/4/18: Two birds examined from the "found dead" had severe coelimitis as the cause of death. The degree of autolysis and freeze-thaw may hinder the results however swabs are submitted for cultures in an attempt to identify the bacterial agent involved. The remainder four birds from this group were discarded due to the advanced autolytic state of the carcasses.

On postmortem examination of the euthanized birds there were no specific pathologic observations.

The one bird with the leg rotation seems to be due to a limb deformity likely from early life and developed with the severe deviation of the distal limb. Microscopy is pending, as well as some ancillary testing.

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### Clinical History

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9/30: a group of animal right protesters broke into a commercial poultry ranch in Petaluma, CA. The protesters removed approximately 15 chicken from the buildings/houses. The protesters were arrested by sheriff's deputies and our agency took possession of 6 dead chickens and 9 live chickens. The 9 live chickens were examined by a vet and euthanized because of their health condition. 14 chicken have been frozen and one chicken has been kept col not frozen. We are trying to determine the cause of death of all 15 chickens; the 6 chickens that were brought in dead are all in one large bag and each chicken is clearly marked/identified. The 9 euthanized chicken are all in one bag and each chicken is clearly marked/identified. The one chicken that was kept in cold storage is in a bag by itself and also clearly marked.

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### Gross Observations

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Submitted are 15 chicken carcasses, designated "A" to "O" in the order of their ID numbers. Fourteen carcasses are frozen, the one chicken that is euthanized 10/1/2018 is refrigerated. Of the frozen chickens, five "found dead" chickens are in one large bag (A, B, C, D, F), the recently euthanized chicken is "H," and there are nine euthanized carcasses in a separate large bag (G, I-O). Frozen carcasses are thawed in lukewarm water throughout the day prior to necropsy.

Of the previously dead carcasses, chickens "C" and "F" are examined, birds "A", "B", and "D" are in advanced state of decomposition and cannot be evaluated. These two birds are in fair nutritional condition, the pectorals are straight, and there is scant adipose tissue stores internally. Both have prominent, developed Bursa of Fabricius (mostly around 1 cm diameter). Chicken E (ID #377145), although found in the bag of the "euthanized" birds, is severely autolytic and is discarded as well (presumed to be the 6th "found dead" bird). There is diffuse generalized green discoloration and with additional brown tinged soft internal organs, the skull is fractured into pieces, there is no open wound or hemorrhages (postmortem).

Postmortem changes in chickens C and F are similar. In chicken C diffusely the hepatic capsule, intestinal loops and the epicardium are overlain by thick fibrinous exudate. Spleen is mildly enlarged. Chicken F has severe fibrinous to fibrinosuppurative coelimitis. The right liver lobe is severely diffusely pale and shrunken with rounded edges in a compartment filled with yellow caseous material and fluid. The left liver lobe is severely enlarged extending to the cloaca and diffusely dark red-purple, containing miliary pinpoint pale foci.

Chickens G to O are all in good nutritional condition and in moderate to marked postmortem decomposition. All birds have wet, frothy, red to dark red lungs except lungs M and N are pink and frothy and chicken G has severe brown tinge of the lungs (freeze-thaw artifact, euthanasia artifact, and autolysis). Chickens H and L are females (small, inactive ova and oviduct), remainder birds are males. All have prominent, developed Bursa of Fabricius (mostly around 1 cm diameter). Most crops are empty or have scant corn/mash contents and the ventriculus typically have small amount of ingesta.

Chicken G: The crop is empty, ventriculus contains small numbers of pebbles. There is a focal region of koilin irregularities at the isthmus (erosions?). There is mild enlargement of the spleen. The cecal tonsils are petechiated.

Chicken H (refrigerated carcass): There is an ulcerative wound on the left inner wing at the radial metacarpal joint. There is dark red-black crusting (likely hemorrhage and necrosis of the epidermis) surrounding the ulceration exposing the dermis. The liver is dark mahogany. On the dorsal surface on the capsule, there are 3 pale, gray-tinged irregularly-shaped foci measuring about 4 x 8 and 2 x 3 mm. These foci do not extend to the parenchyma. This a female bird with small inactive ova. The cranial lobes of the kidneys are pale. There is a small amount of crop and ventriculus contents composed of mash-corn.

Bird I: Has an enlarged, diffusely pale spleen with some petechiations (swabbed). There is a small amount of corn in the crop and ventriculus.

Bird J: Small amount of crop contents are present, the ventriculus contains a moderate amount of corn mash. There is severe deviation of the right distal limb: the distal tibiotarsus is rotated leading to the lateral and backward rotation (>90 degrees) of the

metatarsus. The ligaments and joint are unremarkable. The rotation is associated with the distal tibia and does not release upon dissection of the tendons and ligaments of the tibiotarsus – metatarsus joint. The digits are in line with the metatarsus.

Chicken K: The crop is empty, the ventriculus has a small amount of mash feed.

Chicken L: A central brown friable circular area is in the entral hepatic parenchyma (euthanasia artifact, vascular). The ventriculus has a small amount of green to bright green contents. The crop is empty.

Chicken M: The crop is empty. There is some fibrous plant material in the ventriculus.

Chicken N: Has an empty crop. The ventriculus has scant contents.

Chicken O: The liver and heart have marked pallor, autolytic changes, as do most other birds like G and J. The ventricular wall is thinned and soft. The crop is empty, as well as the stomach with only a few pebbles.

**Bacteriology**

**BACTERIAL AEROBIC CULTURE**

Animal/Source	Specimen	Specimen Type	Results
D1813703-01	F/377146	Coelomic Cavity Swab	Enterococcus cecorum Lg# Enterococcus faecalis Rare# Escherichia coli Rare#
D1813703-01	H/377134	Liver Swab	No growth after 48 hours
D1813703-01	H/377134	Splenic Swab	Staphylococcus hominis Rare#

**Biotyper Organism Identification**

Animal/Source	Specimen	Specimen Type	Results
D1813703-01	F/377146	Coelomic Cavity Swab	Enterococcus cecorum Enterococcus faecalis Escherichia coli
D1813703-01	H/377134	Splenic Swab	Staphylococcus hominis

**Biotechnology**

**Influenza A PCR with Internal Control**

Animal/Source	Specimen	Specimen Type	Results
D1813703-01	Group 1	Oropharyngeal Swab Pool	Not Detected
D1813703-01	Group 2	Oropharyngeal Swab Pool	Not Detected

**Reovirus PCR**

Animal/Source	Specimen	Specimen Type	Analyte	Result	Units
D1813703-01	G/377133	Tendon tissue	Reovirus	Not detected	
D1813703-01	H/377134	Tendon tissue	Reovirus	Indeterminate	
D1813703-01	I/377135	Tendon tissue	Reovirus	Not detected	
D1813703-01	J/377136	Tendon tissue	Reovirus	Not detected	

CAHFS Preliminary Version 2

Accession # D1813703

October 12, 2018

Analyte	Result	Units
D1813703-01 K/377137 Tendon tissue		
Reovirus	Virus Detected	
D1813703-01 L/377138 Tendon tissue		
Reovirus	Virus Detected	
D1813703-01 M/377139 Tendon tissue		
Reovirus	Not detected	
D1813703-01 N/377140 Tendon tissue		
Reovirus	Not detected	
D1813703-01 O/377147 Tendon tissue		
Reovirus	Not detected	

### Histology

Chicken C: Sections of heart, air sacs, liver, spleen, kidneys, and gastrointestinal tract are examined. The epicardium is severely disrupted by a thick layer of caseonecrotizing exudate containing occasional bacterial colonies and large numbers of histiocytes and exudate are in the outer half of the myocardium. The liver capsule, serosal surfaces of organs, mesentery are overlain by severe similar exudate. There are frequent serum lakes and mild histiocytic hepatitis in the parenchyma of the liver.

Chicken F: Sections of heart, trachea, air sacs, liver, spleen, kidneys, skeletal muscle, and gastrointestinal tract are examined. The liver has multifocal to coalescing areas of necrosis and severe histiocytic, granulomatous hepatitis. The serosal surfaces of abdominal organs are overlain by fibrinocellular exudate. A large conglomerate taken from the coelomic cavity is composed of eosinophilic, caseonecrotic accumulations containing variable morphologies of bacteria.

Examined are sections of hock tendons and synovium, brain, feathered skin, peripheral nerves, heart, trachea, air sacs, lung, liver, spleen, kidneys, ova/testis, adrenal glands, bursa, skeletal muscle, esophagus, crop, proventriculus, ventriculus, pancreas and intestines from chickens G-O. Significant findings are as follows.

Chickens G-O: Mild to moderate lymphocytic plasmacytic tenosynovitis. In a couple cases there is also mild fibrillary synovial hyperplasia.

Chicken G: Marked diffuse epicarditis, with lymphocytic some histiocytic infiltrates and fibroblasts. Mild multifocal myocarditis histiocytic lymphocytic.

Splenic depletion. Multifocal fibrinous/serous effusion.

Chicken H: mild focal heterophilic, histiocytic, lymphocytic epicarditis and myocarditis, regionally extensive epicardial expansion and fibroblasts, mild (reactive?). Mild periportal mixed leukocytic expansion (incidental).

Left wing wound demonstrates segmentally ulcerated epidermis with severe caseonecrotic thick crust embedded with large numbers of bacterial colonies (cocci). The adjacent epidermis is intact. The dermis subjacent to this is expanded by large numbers of heterophils, and the deeper dermis is expanded by a linear track of necrotic cells and exudate, bacterial colonies, and several polarizing foreign material occasionally surrounded by macrophages (perforating wound presumptive).

Chicken I: Presumptive minimal myocarditis (freeze-thaw?). Fibrin/serum accumulations multifocally in the spleen, couple of lymphoid follicles, mostly not very cellular and histiocytic. Bursa is moderately depleted.

Chicken J: Also thyroid examined. There is focal periportal lymphocytic mixed expansion (incidental).

Chicken K: Multifocal mild lymphocytic histiocytic myocarditis and small focal epicardial infiltrates. Multifocal periportal lymphocytic mixed expansion (incidental).

Chicken L: Bursa is markedly depleted. The subepicardium is expanded by clear spaces and small numbers of mesenchymal cells, there is mild tombstoning of the lining cells and in one region there is prominent hypertrophy and hyperplasia. There are couple of suspicious areas of lymphoid cells infiltrating the myocardium (autolysis?). Focal lymphocytic adrenalitis.

Chicken M: Diffuse subepicardial expansion by fibropasia and histiocytes, lymphocytes. Multifocally there is moderate lymphocytic histiocytic myocarditis. Multifocal random acute hepatic necrosis and periportal expansions. The bursal stroma is expanded (atrophy?).

Chicken N: Bursa follicles are depleted. There is focal erosion/ulceration of the koilin with bacterial colonization.

Chicken O: There is depletion of the Bursa follicles and with expansion of the stroma. The subepicardium is expanded by clear spaces and large numbers of lymphocytic plasmacytic heterophilic histiocytic cells.

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### Virology

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**Avian Virus Isolation**

<b>Animal/Source</b>	<b>Specimen</b>	<b>Specimen Type</b>	<b>Results</b>
D1813703-01	G/377133	Tendon tissue	Pending
D1813703-01	H/377134	Tendon tissue	Pending
D1813703-01	I/377135	Tendon tissue	Pending
D1813703-01	J/377136	Tendon tissue	Pending
D1813703-01	M/377139	Tendon tissue	Pending
D1813703-01	N/377140	Tendon tissue	Pending
D1813703-01	O/377147	Tendon tissue	Pending



**UCDAVIS**  
**VETERINARY MEDICINE**  
 California Animal Health and  
 Food Safety Laboratory System

www.cahfs.ucdavis.edu

CAHFS Accession #: D1813703

Ref. #:

Coordinator: [REDACTED]

Date Received: 10/02/2018

Invoice Date: 10/12/2018

Billing ID: 00007358

**Preliminary - Fee Estimate**

This report supersedes all previous reports for this case

**Email To:**

Sonoma Co Animal Control  
 [REDACTED]

**Collection Site:**

Sonoma Co Animal Control  
 1247 CENTURY CT  
 SANTA ROSA, CA 95403  
 County: SONOMA

**Contacts:**

Role	Full Name	Phone	Address
Submitter	Sonoma Co Animal Control	707-565-7106	1247 CENTURY CT SANTA ROSA CA 95403

**FEE ESTIMATE ONLY.** Please pay from the statement of final charges that is mailed at the end of the month.  
 CAHFS is open, but will have only limited services on 11/12/2018, in observance of Veteran's Day. Please contact the laboratory to plan your testing needs accordingly.

**Specimens Received:** 15 Carcass;

**Customer Comments:** 15 frozen carcasses

**Total amount from previous estimates: 199.80**

**Current Charges:**

Item	Note	Qty	Units	Actual Price
Avian Virus Isolation		7	1	\$577.50
Reovirus PCR	Included in Cap	9	1	\$0.00
<b>Total for this Report:</b>				<b>\$577.50</b>
<b>Total for Case:</b>				<b>\$777.30</b>

**Remit Correspondence to:**

PO Box 1770  
 Davis, CA 95617  
 (530) 752-8700

**Remit Payment to:**

Cashier's Office  
 1200 Dutton Hall  
 Davis, CA 95616  
 (530) 752-4613

**CASE REPORT (Supplemental)**  
**SONOMA COUNTY ANIMAL SERVICES DIVISION**  
1247 Century Court, Santa Rosa, CA 95403 (707) 565-7100 Fax: (707) 565-7103

Classification: Crimes Against Animals: Sec: PC 597(b) Felony/Misdemeanor.  
Person having charge or custody of any animal, either as owner or otherwise, and subjects such animal to needless suffering and fails to provide proper care and attention.

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Case No.: 18-09-15  
Date of Incident: 09/29/18  
Location of Incident: 120 Jewett Road, Petaluma, CA, 94952

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Investigating Department: Sonoma County Sheriff Department  
Business Address: 2796 Ventura Avenue, Santa Rosa, CA, 95403

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Suspect: Robert Shawn McCoy  
Residence Address: 120 Jewett Road, Petaluma, CA 94952  
Driver's License: [REDACTED] DOB: [REDACTED]

Breed: 15 Chickens (9 live and 6 dead)

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Narrative: On 09/29/18 at approximately 1420 hours, I Officer Foster was contacted by Animal Control Officer Roger Dengler requesting assistance at 120 Jewett Road in Petaluma. At 1446 hours, I arrived at the location and met with Officer Dengler and Sonoma County Sheriff Sergeant Buchignani. I was informed that there were two groups of protesters that had both live and dead chickens in their possession that were illegally removed from the property.

I observed two groups of protesters (one at the base of the driveway and one about a 100 yards up the driveway).

Officer Dengler and I were advised by Sergeant Buchignani that the protesters would be led to our location at the base of the driveway, where the chickens would be handed over to us. After the protesters had relinquished the animals, they would then be placed into custody by the Sheriff's Office. I was instructed by Sergeant Buchignani to position my vehicle at the base of the driveway in order to better facilitate the impoundment of the chickens.

Prior to the impoundment, I made contact with the property owner, Robert McCoy. He informed me that the chickens could not be brought back to his facility once they left, and that if Sonoma County Animal Services (SCAS) wanted to keep the animals, it was

ok with him. I informed Mr. McCoy that we would be taking possession of the chickens at that time (Reference Signed Impound Notice).

Once all of the chickens were impounded, a final count of eight live and six dead was calculated. I contacted Supervising Animal Control Officer Kevin Davis by phone. He stated that we were to transport the animals to SCAS, where a veterinarian would meet us to examine the chickens.

At approximately 1645 hours, Officer Dengler and I arrived at SCAS. Approximately fifteen minutes later, DVM [REDACTED] arrived with a veterinarian technician.

Officer Dengler removed each of the live chickens from my vehicle, while I removed all of the dead chickens. It was at this time that Officer Dengler brought to my attention that there were in fact nine live chickens, not eight according to my impound notice. The count of six dead was correct however, for a total of fifteen live and dead chickens.

I Officer Foster photographed all of the deceased birds, and then placed them into the evidence freezer. After examining the live birds, DVM [REDACTED] then examined the dead ones. After examination, they were then placed back into the evidence freezer.

On 10-01-18, I Officer Foster assisted DVM [REDACTED] with taking additional photographs of all fifteen chickens. Chain of custody documentation with associated animal identification numbers were attached to each individual animal.

---

Recording Officer: J. Foster                      Badge No: 520                      Date: 10-08-18

J. Foster

#520

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Supervisor Approving:

Badge No:

K. DAVIS

#512

10-15-18



A18-096187-1

ASSIST/POLICE

Priority Level: 1

Total Animals: 1

Animal Type: DOG

Activity Address: [REDACTED]

Activity Comment: DEPUTY ON SCENE 5 BUSES W/ PROTESTORS AT CHICKEN FARM; REQUESTING ACO

**Caller Information:**

P267140 SHERIFF POLICE  
2796 VENTURA AVE  
SANTA ROSA CA 95403  
(707) 565-2121

**Result Codes:**

1 COMP

Officer: P999573 DALTON

Clerk: KADRAGNA

Call Date: 05/29/18 12:51 PM

New Date: 05/29/18 12:51 PM

Dispatch Date: 05/29/18 01:19 PM

Working Date: 05/29/18 02:23 PM

Complete Date: 05/29/18 03:10 PM

Memo:

Page 60 of 73  
Activity Card

A18-097499-1

ASSIST/POLICE

Priority Level: 1

Total Animals: 1

Animal Type: CHICKEN

Activity Address: [REDACTED]

Activity Comment: DXE PLANNED ANIMAL PROTEST EVENT ON 7-29-18.

**Owner Information:**

P371302

**Caller Information:**

P267140

SHERIFF POLICE

2796 VENTURA AVE

SANTA ROSA CA 95403

(707) 565-2121

**Result Codes:**

1 COMP

1 NVO

Officer: P999512 DAVIS

Clerk: KCRANE

Call Date: 07/29/18 09:56 AM

New Date: 07/29/18 09:56 AM

Dispatch Date: 07/29/18 09:57 AM

Working Date: 07/29/18 10:30 AM

Complete Date: 07/29/18 02:55 PM

Memo:

M18-405193

7/29/2018

SYSADM

2 OF 3

Next we walked to the north end of the Cage Free Building F & G. This building has two flocks in it, one on both sides. This building is also an aviary and was first put into production in 2016 & 2017. The building has nearly identical equipment as what I saw in house C. Per [REDACTED] the only difference is that this building is two levels. We visited the birds in house F which were placed in the building last week and have not started to lay. We stood near the fan that pulled air out of the building and though the air is typically the worst where it exits the building, the air quality in this building was very good.

We then walked to the manure drying room in House F where each day the wet manure from house F is dehydrated from 65% moisture down to 10% moisture. I noted a very minor smell of ammonia and the absence of flies as [REDACTED] explained, they have no habitat for flies to reproduce on the farm.

Last we entered the north end of House D. The colony cage house was put into production in 2014. Per [REDACTED] House D was one of the buildings that DXE trespassers used force to push past their employees to gain entry and steal hens. The age of the hens when they were stolen were approximately 20 weeks old. They had just been placed into the building and had yet to start laying. In House D we saw a colony cage system that [REDACTED] said is fully compliant with Proposition 2 requirements. I did not measure the dimensions of the cages. Proposition 2 requires 116 square inches per hen of placement. According to [REDACTED] their hens have over 120 square inches of placement. Similar to the cage free building, these hens have access to food and water 24 hours a day, their manure falls through the cage bottom onto a belt that removes the wet manure daily. The air quality in the building was good and we could see down the aisles.

M18-405194

7/29/2018

SYSADM

3 OF 3

Note 1: Of the thousands of chickens I observed, I only saw two dead chickens in the buildings I walked through. The Weber Family wanted to show me the buildings that the DXE Protesters had broken into on May 29, 2018 and made numerous accusations pertaining to their health and care standards. Health Manager [REDACTED] told me that he personally inspects each chicken that is found dead. If he is not able to determine the cause of death the chicken is sent to a lab for a necropsy.

Note 2: Virulent Newcastle Disease (VND), formerly known as Exotic Newcastle Disease is a contagious and fatal viral disease affecting the respiratory, nervous and digestive systems of birds and poultry. The disease is so virulent that many birds and poultry die without showing any clinical signs. There is a current outbreak in Southern California and by people/protesters trespassing on this ranch could possibly lead to a major disease outbreak. This was the reason I was fitted with a Tyvek suit and properly taped up before entering any of the buildings on the ranch/farm.

M18-403870 7/29/2018 SYSADM

1 OF 3

7-29-18 (512) I WAS ASKED BY RANCH OWNER'S [REDACTED] TO WALK THROUGH THEIR CHICKEN BARNs TO OBSERVE THE CONDITIONS THAT THEIR CHICKENS ARE BEING RAISED IN. THEY ASKED THAT I WALK THROUGH THE BARNs THAT THE DXE PROTESTERS BROKE INTO ON MAY 29, 2018 AND MADE SEVERAL ALLEGATIONS OF ABUSE!

I met with [REDACTED] (Director of Operations, [REDACTED]) and the farms Biosecurity/Animal Health manager [REDACTED] asked me if I would be willing to do a walkthrough of the farm before the protesters arrive. I had [REDACTED] sign a "Consent To Enter Property" agreement.

I slipped on a Tyvek suit (provided by [REDACTED]) and we entered the East end of Building C which is a cage free production building. Per [REDACTED] during the May 29th protest, DXE trespassers were able to pry open the door on the West End of Building C and run into the building wearing T-shirts over Tyvek suits and street shoes. Multiple hens were stolen from this building.

Building C contained hens that were 66 weeks of age. According to [REDACTED] most egg production hens have a life cycle of up to 85 weeks. For an older flock, the hens appeared well feathered, active and showed no abnormal behavioral signs. Per [REDACTED] the equipment in House C is a cage free aviary system that was installed in 2017. The system has multiple levels with feed and water available at all times. There are nest boxes providing hens with a dark, safe place to lay their eggs. The litter on the floor is made up of rice hulls which the hens use to dust bath and scratch. Throughout the system is perching for hens to roost, jump, and remain active.

We then toured the ranch packing area at the Far East end of Building C where all of the eggs from the three buildings are placed into flats before being transported to the top of the property for processing. There were two farm packers operating with one packing only cage free eggs and the other packing eggs from the colony cage building. There was hundreds of eggs being packed in two packers with no sight of a single bloody or malformed egg. It was noted that cage free eggs were packed into orange flats and colony cage eggs were packed into green flats.

Page 62 of 73  
Activity Card

A18-097877-2 FOLLOWUP/INVEST Priority Level: 3 Total Animals: 1 Animal Type: CHICKEN

Activity Address: [REDACTED]

Activity Comment: CONTACT RANCH MANAGER [REDACTED] 8-15-18 TO SET UP TIME TO INSPECT RANCH TODAY (512)

Caller Information:

P267140 SHERIFF POLICE  
2796 VENTURA AVE  
SANTA ROSA CA 95403  
(707) 565-2121

Result Codes:

3 MCO  
1 APPRV

Officer: P999573 DALTON Clerk: KADRAGNA

Call Date: 08/15/18 07:50 AM  
New Date: 08/15/18 07:50 AM  
Dispatch Date: 08/15/18 11:04 AM  
Working Date: 08/15/18 11:25 AM  
Complete Date: 08/15/18 12:05 PM

Memo:

M18-404398 8/15/2018 SYSADM  
8-15-18 (512) CONTACT RANCH MANAGER [REDACTED] TO SET UP TIME TO INSPECT CHICKEN RANCH TODAY. INSPECTION SHOULD BE DONE IN THE MORNING HOURS IF POSSIBLE. SEE 512 WITH QUESTIONS. INSPECTION IS BEING DONE AT THE REQUEST OF PETALUMA FARMS AND WAYNE HSIUNG (650-465-1672) ORGANIZER FOR ANIMAL RIGHTS NETWORK "DIRECT ACTION EVERYWHERE" AKA... DXE. ALLEGATIONS OF SUFFERING, STARVING AND ROTTING CHICKENS WITHOUT FOOD AND WATER.

SEE 512 TO GET A CONSENT TO ENTER PROPERTY FORM TO BE SIGNED BY THE RANCH MANAGER BEFORE ENTERING THE CHICKEN BARNS.

PETALUMA FARMS TO PROVIDE A BIO HAZARD SUIT BEFORE ENTERING ANY CHICKEN BARNS.

[REDACTED]

M18-404402 8/15/2018 CMCCAFFE  
8/15/18 I called S/O and set up a time to meet with him between 10:30-11am.-518

M18-404981 8/15/2018 RDALTON

(521) MC with Ranch Manager, [REDACTED] He provided me a Bio-Hazard suit and I signed the consent form to enter and walk through the facility.

Property, barns, both where the chickens and kept as well are where the eggs are processed was clean and free and any hazardous material. The Ranch's has a thorough cleaning and sanitation protocol.

The chickens were separated based on age. Each age group in different barns. All barns are set up with an automatic gravity water feeder that run the length of each enclosure in each barn. All barns and their enclosures are set up with automatic feeders. All water and food appeared to be clean. Ample water and food provided. All bird provided adequate space on the ground as well as roosting perch's in each enclosure. They had an isolation barns for sick birds.

In each barn they have a chart where they track egg production, weight and health of the birds. Once weekly they take 20 chickens and weigh them. Veterinary care provided as needed. Birds that died on property get picked up by a composting company.

PASSED INSPECTION.



DEADLY GERMS, LOST CURES

## *Tainted Pork, Ill Consumers and an Investigation Thwarted*

Drug-resistant infections from food are growing. But powerful industry interests are blocking scientists and investigators from getting information they need to combat the problem.

**By Matt Richtel**

Aug. 4, 2019

It was 7 a.m. on Independence Day when a doctor told Rose and Roger Porter Jr. that their daughter could die within hours. For nearly a week, Mikayla, 10, had suffered intensifying bouts of fever, diarrhea and stabbing stomach pains.

That morning, the Porters rushed her to a clinic where a doctor called for a helicopter to airlift her to a major medical center.

The gravity of the girl's illness was remarkable given its commonplace source. She had gotten food poisoning at a pig roast from meat her parents had bought at a local butcher in McKenna, Wash., and spit-roasted, as recommended, for 13 hours.

Mikayla was one of nearly 200 people reported ill in the summer of 2015 in Washington State from tainted pork — victims of the fastest-growing salmonella variant in the United States, a strain that is particularly dangerous because it is resistant to antibiotics.

What followed was an exhaustive detective hunt by public health authorities that was crippled by weak, loophole-ridden laws and regulations — and ultimately blocked by farm owners who would not let investigators onto their property and by their politically powerful allies in the pork industry.

The surge in drug-resistant infections is one of the world's most ominous health threats, and public health authorities say one of the biggest causes is farmers who dose millions of pigs, cows and chickens with antibiotics to keep them healthy — sometimes in crowded conditions before slaughter.

*[Read our other stories in our series on drug resistance, Deadly Germs, Lost Cures.]*

Overuse of the drugs has allowed germs to develop defenses to survive. Drug-resistant infections in animals are spreading to people, jeopardizing the effectiveness of drugs that have provided quick cures for a vast range of ailments and helped lengthen human lives over much of the past century.

## Cooler with Whole Hogs and Pig Parts



Much of the pork in a 2015 salmonella outbreak was traced to a Washington State slaughterhouse called Kapowsin Meats. Investigators inspecting the slaughterhouse were told to look at the farms that had supplied the pigs.

But public health investigators at times have been unable to obtain even the most basic information about practices on farms. Livestock industry executives sit on federal Agriculture Department advisory committees, pour money into political campaigns and have had a seat at the table in drafting regulations for the industry, helping to ensure that access to farms is generally at the owners' discretion.

Dr. Parthapratim Basu, a former chief veterinarian of the Agriculture Department's Food Safety and Inspection Service, said the pork industry regularly thwarted access to information on antibiotic use.

"When it comes to power, no one dares to stand up to the pork industry," he said, "not even the U.S. government."

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A reconstruction of the Washington outbreak provides a rare look into how these forces play out. The New York Times reviewed government documents, medical records and emails of scientists and public health officials, as well as conducted interviews with victims, investigators, industry executives and others involved.

Those industry officials argued in documents and interviews that farmers needed protection against regulators and scientists who could unfairly harm their business by blaming it for a food-poisoning outbreak when the science was complex and salmonella endemic in livestock. The tension mirrors a broader distrust in agriculture and other business about the intention of federal regulators and other government overseers.

"Have you ever heard of the phrase, 'I'm from the government, I'm here to help you' — and you know they're going to screw you?" said David J. Hofer, the secretary-treasurer of the Midway Hutterite Colony, a religious community that runs a hog farm in Conrad, Mont. Mr. Hofer said he was one of the farmers who objected to the farm inspections during the outbreak.

"They might have public health in mind, but they don't care if in the process they break you."



In the end, Mikayla Porter survived, but the threat of the infection that nearly killed her continues — not least because investigators still lack access to essential data.

“We can see resistance is really increasing,” said Dr. Robert V. Tauxe, director of the division of foodborne, waterborne and environmental diseases at the Centers for Disease Control and Prevention. Melissa Golden for The New York Times

## A Danger Grows

There are 2,500 different types of salmonella. The one that infected Mikayla is called 4,5,12:i-minus. It first showed up in the late 1980s in Portugal, and then in Spain, Thailand, Taiwan, Switzerland and Italy. In the United States, infections it causes have risen 35 percent over the past decade, while the overall rate of salmonella infections has stayed constant.

The strain typically resists four major antibiotics: ampicillin, streptomycin, sulfisoxazole and tetracycline.

“We can see resistance is really increasing,” said Dr. Robert V. Tauxe, director of the division of food-borne, waterborne and environmental diseases at the Centers for Disease Control and Prevention.

This particularly virulent strain of salmonella is just one of a growing number of drug-resistant germs that put farm families, and meat eaters generally, at risk.

A study in Iowa found that workers on pig farms were six times more likely to carry multidrug-resistant staph infections, notably MRSA. A study in North Carolina found that children of pig workers were twice as likely to carry MRSA than children whose parents didn't work in a swine operation.

Those germs can also wind up on pork sold to consumers. An analysis of government data by the Environmental Working Group, a research organization, found that 71 percent of pork chops at supermarkets in the United States carried resistant bacteria, second only to ground turkey, at 79 percent.

Like many outbreaks of resistant infections, the salmonella variant that sickened Mikayla is usually so widely dispersed that the C.D.C. has had a hard time tracking it.

But in the Washington outbreak, the infection was new to the region, and tests revealed the bug had the same genetic profile in patients, creating ideal conditions for scientific detective work.

“This was our real opportunity,” said Allison Brown, a C.D.C. epidemiologist. “Everything lined up.”



### Stealing Lauri

A pig kidnapping highlights the concerns over antibiotics in livestock.

Aug. 4, 2019

### A Celebration Turns Dire

The Porter family had invited friends and neighbors to the pig roast to celebrate a major life change: In three days, they would be moving to Costa Rica.

But the day after the roast, Mikayla felt sick, and by 4:30 a.m. the following morning, she had diarrhea so severe that her parents took her to the emergency room.

There, a doctor said she had a stomach bug, assuring them it would pass and approving her to travel. Her parents also felt sick, but not as seriously, and they flew to Costa Rica as planned.

After arriving, Mikayla got much worse, excreting mucus and blood. She lay in agony on the couch, the family dogs sitting beside her protectively.

A doctor at BeachSide Clinic near Tamarindo, the town where the family had rented a house, prescribed the antibiotic azithromycin, medical records show. It did not work.

The family returned to the clinic the next day. That is when Dr. Andrea Messeguer told Mikayla's parents their daughter could die, and helped arrange the airlift to Hospital CIMA in the capital, San José.

Mikayla recovering in a hospital in Costa Rica.  
The Porter family

There, doctors determined that Mikayla had a systemic infection. She received intravenous hydration and antibiotics. Tests came back from the national lab showing the drug-resistant salmonella strain.

Back in Washington, many others were also getting sick.

On July 19, Nicholas Guzley Jr., a police officer, ate pork at a restaurant in Seattle, and at 2 a.m. threw up in the shower. The medical ordeal that followed was so excruciating — vomiting, diarrhea, bleeding, a fever of 103.9 degrees, dehydration and multiple hospital visits — that he said it was worse than a near-death experience in 2003 when he had been hit by a truck.

“If you stack up all the pain from all the injuries, this blew it away,” he said.

On July 23, the head of Washington's Department of Health sent out an alert, warning that 56 people had fallen ill and publicizing an investigation into the outbreak by the state's health and agriculture agencies, coordinating with the C.D.C. The Washington State epidemiologist, Dr. Scott Lindquist, took the lead.

On July 27, a restaurant had its permit suspended for food safety violations, including failure to keep its food hot enough. Multiple restaurants were identified as possible sources of tainted pork, along with several pig roasts.

Dr. Lindquist and his team discovered that many of the infected roast pigs had come from a slaughterhouse called Kapowsin Meats. Tests of 11 samples taken from slaughter tables, knives, hacksaws, transport trucks and other spots showed that eight were positive for the resistant strain.

At Kapowsin, the state investigators spoke to the federal official responsible for inspecting the slaughterhouse, who suggested that they look for the farms where the tainted pork had come from.

## **The Heart of an Outbreak**

Records obtained by the state showed that many of the pigs supplied to Kapowsin originated on industrial farms in neighboring Montana.

On Aug. 13, state records noted that the investigative team — including the C.D.C. and the federal Agriculture Department — was in touch with officials in Montana to discuss gaining access to the farms.

Determining where the outbreak originated would have allowed the team to trace other possibly infected pork, recall it and advise the owners on how to change their practices.

But such investigations are extremely sensitive because the publicity can be bad for business, and because the law protects farmers in such situations. Over all, the government has little authority to collect data on farms.

“We have people in the slaughterhouses every day, all day long,” said Paul Kieker, the acting food safety administrator at the Agriculture Department. “We don’t have a lot of jurisdiction on farms.”

The Food and Drug Administration is charged with collecting antibiotic use data. But farms are not required to provide it, and only do so voluntarily.

As a result, the federal government has no information about the antibiotics used on a particular farm and no way to document the role of the drugs in accelerating resistance.

“I haven’t been on a farm for years,” said Tara Smith, a professor at Kent State University and an expert on the connection between resistance and livestock. “They’ve closed their doors to research and sampling.”

## **Investigators Are Turned Away**

Dr. Lindquist, the epidemiologist leading the investigation of the Washington outbreak, pleaded with Montana’s health agency to help him gain access to the farms that had supplied the Kapowsin slaughterhouse.

In a memo to state officials, he told them that such infections were increasing rapidly and that “on-farm investigations will help us better understand the ecology of salmonella” and “prevent future human illnesses.”

Days later, he received a phone call from Dr. Liz Wagstrom, the chief veterinarian for the National Pork Producers Council, a group that lobbies on behalf of the livestock industry. Its campaign donations to congressional candidates have more than doubled in the past decade, to \$2 million in 2018, according to the Center for Responsive Politics.

Dr. Wagstrom sought to find out what Dr. Lindquist had learned in his investigation and what he was saying to the media, he said, recalling the conversation. He said she was worried the pig farms might be unfairly tarnished, arguing that salmonella was common on farms, so an investigation wouldn’t prove anything, even if the infection was detected.

In an interview, Dr. Wagstrom said she was concerned that farm visit wouldn’t yield valuable information. “What would you learn that could positively impact public health?”

The industry soon became more involved. Officials from the National Pork Board joined regular crisis conference calls during the investigation, along with numerous state and federal health and agriculture officials.

The board is a group of pork industry executives whose members are elected by the industry and then appointed by the secretary of agriculture, cementing a tight bond between business and government.

Dr. Lindquist initially welcomed the executives’ presence, given their expertise, though he did not know who had initially invited them.

Dr. Scott Lindquist, the Washington epidemiologist who led the investigation of the tainted pork. Wigan Ang for The New York Times

## Rules With Big Loopholes

That same year, F.D.A. guidelines went into effect that were supposed to enable the tracking of antibiotics on farms. They required farms to obtain prescriptions from veterinarians to dispense antibiotics, and only to animals sick or at risk of illness. The guidelines said that farms must stop using antibiotics as “growth promoters.”

But the rules have loopholes, which were highlighted a year earlier when officials from the F.D.A., C.D.C., the Agriculture Department and the Pew Charitable Trusts met at the University of Tennessee. The group heard from Thomas Van Boeckel, an expert in statistical modeling and antibiotic resistance who was then at Princeton.

Dr. Van Boeckel told the group that he could build maps showing changing levels of antibiotic use on farms and compare them with changing levels of resistance.

To do so, he said, he needed data sets by region or, better yet, by farm.

“I was told there was a single data point per year, literally,” he said.

That data point: Around 33 million pounds of medically important antibiotics, a 26 percent increase from 2009, were sold in the United States for farm use. The figure, collected from sales data by the F.D.A., was the sum total of the information they were able to provide him.

Dr. Van Boeckel told the group that without more specific information, he couldn’t do any real measurement.

“They said: Yeah, that’s going to be challenging.”

A page from the Washington Agriculture Department's report, which included images of Kapowsin Meats.

As the end of August neared, Mikayla Porter had stabilized, but in Washington State, the salmonella caseload continued to grow.

On Aug. 26, Kapowsin agreed to cease operations, in cooperation with the state. The next day, there was a recall of 523,380 pounds of its pork products.

At the same time, the Montana Pork Producers Council wrote to the Washington health agency, saying it was “clear that there is little to no value in conducting on-farm investigations,” and that investigators should focus on slaughterhouses.

Anne Miller, the council's executive director, said she did not appreciate that the researchers were coming at a time of crisis. “The trick to getting good information is get research before you get to that situation,” she said. “Why hadn't this been done prior?”

She spoke to pork producers in the state, and some expressed concern about being unfairly blamed for the outbreak, worried that government officials seeking information on their farms could unfairly tarnish their image and business.

Mr. Hofer, of the farm in Conrad, said in a phone interview that he objected strongly to the investigation.

“I was animated about that,” he said. “Let's say they found something — it probably would have screwed up some other markets we had.”

Mr. Hofer said his farm provided pigs to Kapowsin but did not know if the sales had overlapped with the outbreak. He said it was clear to him that the slaughterhouse was to blame. “There was salmonella all over that plant.”

On Aug. 28, the National Pork Producers Council sent Washington State a follow-up letter concurring with Ms. Miller.

“I know that you do not want any inadvertent negative consequences to farms as a result of this proposed on-farm sampling,” Dr. Wagstrom wrote in the letter.

Ms. Miller and others in the industry said farms could provide voluntary information on antibiotic use, but they have taken a hard line on government access because of fears that individual farms would be singled out for a complex problem with multiple causes.

The position stuns some scientists.

“So let's not do anything to give anyone a bad reputation, including any bad behavior?” asked Dr. James Johnson, a professor at the University in Minnesota and an expert in resistant infections. “The people who stand to benefit from having everyone remain ignorant are the ones who protest the loudest.”

Mikayla with her mother, Rose Porter, and one of their chickens in Rainier, Wash. Ruth Fremson/The New York Times

That September, Dr. Lindquist still hoped his team would get the go-ahead to take samples from the five farms thought to have been possible sources for the outbreak, but it never came.

“I don’t know even to this day why this got stymied,” he said.

He said he did not know that Ms. Miller, the head of the Montana Pork Council, had contacted the farms and been told they would not permit a visit from researchers.

The farms officially declined, through her, to comment for this story.

By Sept. 22, the case load had hit 178 known infections, with 29 people hospitalized, but the outbreak was petering out. The investigation ended, Dr. Lindquist said, “with a whimper.”

“During the outbreak, I heard from restaurants, patients, the slaughterhouse, the U.S.D.A., F.D.A., the Department of Agriculture in Washington and Montana, the health department in Montana and the health department in Washington State,” Dr. Lindquist said. “I did not hear from the farms.”

Matt Richtel is a best-selling author and Pulitzer Prize-winning reporter based in San Francisco. He joined The Times staff in 2000, and his work has focused on science, technology, business and narrative-driven storytelling around these issues.

@mrichtel

A version of this article appears in print on Aug. 3, 2019, Section A, Page 1 of the New York edition with the headline: Across Farms, Illness Sleuths Hit Brick Wall

[READ 410 COMMENTS](#)







Office of the Mayor

CONSENT CALENDAR  
December 10, 2019

To: Honorable Members of the City Council

From: Mayor Jesse Arreguín, Councilmembers Davila, and Bartlett

Subject: Ninth Annual Martin Luther King Jr. Celebration: City Sponsorship and Relinquishment of Council Office Budget Funds to General Fund and Grant of Such Fund

RECOMMENDATION

1. Adopt a Resolution co-sponsoring the 9<sup>th</sup> Annual Martin Luther King Jr. Celebration Breakfast on January 20, 2020.
2. Adopt a Resolution approving the expenditure of an amount not to exceed \$500 per Councilmember including \$500 from Mayor Arreguin, to the Berkeley Rotary Endowment, the fiscal sponsor of the 9<sup>th</sup> Annual Martin Luther King Jr. celebration, with funds relinquished to the City's general fund for this purpose from the discretionary Council Office Budgets of Mayor Arreguin and any other Councilmembers who would like to contribute.

BACKGROUND

The annual Martin Luther King Jr Celebration, which first started in 2012, strives to bring together a diverse group of East Bay residents to celebrate and continue the work of Dr. Martin Luther King Jr. The purpose of this event is to bring the faith based, business, university, youth and civic communities together to celebrate the life and dreams of Dr. King and to honor adult and youth leaders in our community.

We are proposing that City Councilmembers make individual grants of up to \$500 to the Berkeley Rotary Endowment to commemorate and honor Dr. Martin Luther King Jr. The event is being held on January 20, 2020 at the UC Berkeley Pauley Ballroom.

FINANCIAL IMPLICATIONS

No General Fund impact; \$500 is available from Mayor Arreguin's Office Budget discretionary accounts.

ENVIRONMENTAL SUSTAINABILITY

No adverse effects to the environment

CONTACT PERSON

Jesse Arreguin, Mayor 510-981-7100

**Attachments:**

- 1: Resolution for City Sponsorship
- 2: Resolution for Council Expenditures

RESOLUTION NO. ##,###-N.S.

CITY SPONSORSHIP OF THE 9<sup>TH</sup> ANNUAL DR. MARTIN LUTHER KING JR.  
CELEBRATION

WHEREAS, the Ninth Annual Dr. Martin Luther King Jr. Celebration will take place on January 20, 2020; and

WHEREAS, the purpose of this event is to bring the faith based, business, university, youth and civic communities together to celebrate the life and dreams of Dr. King and to honor adult and youth leaders in our community; and

WHEREAS, historically the Berkeley City Council has generously provided sponsorship for this event.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the City of Berkeley hereby co-sponsors the 9<sup>th</sup> Annual Dr. Martin Luther King Jr. Celebration, has permission to use the City's name and logo in the event's promotional materials and signage naming the City of Berkeley as a co-sponsor solely for the purpose of the City indicating its endorsement of the event.

BE IT FURTHER RESOLVED that this co-sponsorship does not: (1) authorize financial support, whether in the form of fee waivers, a grant or provision of City services for free; (2) constitute the acceptance of any liability, management, or control on the part of the City for or over the MLK Jr Celebration; or (3) constitute regulatory approval of the event.

RESOLUTION NO. ##,###-N.S.

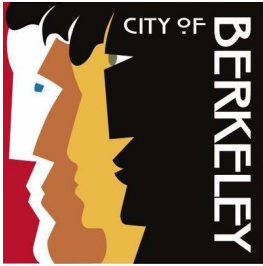
AUTHORIZING THE EXPENDITURE OF SURPLUS FUNDS FROM THE OFFICE EXPENSE ACCOUNTS OF THE MAYOR AND COUNCILMEMBERS FOR A GRANT TO PROVIDE PUBLIC SERVICES FOR A MUNICIPAL PUBLIC PURPOSE

WHEREAS, Mayor Jesse Arreguin has surplus funds in his office expenditure account; and

WHEREAS, a California non-profit tax exempt corporation, the Berkeley Rotary Endowment, seeks funds in the amount of \$500 to provide the following public services to publicly commemorate and honor the contributions of Dr. Martin Luther King Jr.; and

WHEREAS, the provision of such services would fulfill the following municipal public purpose of bringing the communities across the City, including, but not limited to faith based, business, university, youth and civic communities, together to celebrate the life and dreams of Dr. King and to honor adult and youth leaders in our community.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that funds relinquished by the Mayor and Councilmembers from their Council Office Budget up to \$500 per office shall be granted to the Berkeley Rotary Endowment to fund the following services of bringing the communities across the City, including, but not limited to faith based, business, university, youth and civic communities, together to celebrate the life and dreams of Dr. King and to honor adult and youth leaders in our community.



Councilmember Ben Bartlett  
City of Berkeley, District 3  
2180 Milvia Street, 5<sup>th</sup> Floor  
Berkeley, CA 94704  
PHONE 510-981-7130  
EMAIL: [bbartlett@cityofberkeley.info](mailto:bbartlett@cityofberkeley.info)

CONSENT CALENDAR  
December 10th, 2019

To: Honorable Mayor and Members of the City Council  
From: Councilmember Ben Bartlett and Cheryl Davila  
Subject: February 2020 Berkeley Black History Month organized by Berkeley Juneteenth Association: Relinquishment of Council Office Budget Fund to General Fund and Grant of Such Funds

RECOMMENDATION

Adopt a Resolution approving the expenditure of funds, including \$500 from Councilmember Bartlett, for Black History Month and the Berkeley Juneteenth Festival (organized by Berkeley Juneteenth Association, Inc. 501(c)(3). The funds should be relinquished to the City’s general fund for this purpose from the discretionary council office budget of Councilmember Bartlett and any other Councilmembers who would like to contribute.

BACKGROUND

Berkeley Juneteenth Association, Inc., (BJAI), has successfully produced thirty-two Juneteenth Festivals, and in 2014 began hosting Black History Month Celebrations. Ensuring that future generations are educated about the people, places, and events that have brought our community and our nation a mighty long way, is the cornerstone of Berkeley Juneteenth’s commitment to the community. They believe that their most important work is bringing our diverse community together to honor and celebrate African American history, creativity and accomplishments.

The 7<sup>th</sup> Annual Black History Month Celebration will be held on Saturday, February 29, 2020, at the Judge Henry Ramsey Jr. South Berkeley Senior Center, 2939 Ellis St; and the 33<sup>rd</sup> Annual Berkeley Juneteenth Festival will be held on Sunday, June 21, 2020, on Alcatraz @ Adeline.

2020 funding for both events has been adversely affected. City allocations from the General Fund of \$4250 and \$4050, respectively, were eliminated, and for this current year, no 2020 funding whatsoever has been allocated by the City for the Black History Month event. Funding for this year and prior years was received from Civic Arts for the Festival only.

FINANCIAL IMPLICATIONS OF RECOMMENDATION Staff time to disperse funds

ENVIRONMENTAL SUSTAINABILITY No impact.

CONTACT PERSON

Councilmember Ben Bartlett 510-981-7130  
James Chang 510-981-7131

ATTACHMENT: 1. Resolution

RESOLUTION NO. ##,###-N.S.

AUTHORIZE THE EXPENDITURE OF SURPLUS FUNDS FROM THE OFFICE EXPENSE ACCOUNTS OF THE MAYOR AND COUNCILMEMBERS FOR A GRANT TO PROVIDE PUBLIC SERVICES FOR A MUNICIPAL PUBLIC PURPOSE

WHEREAS, Councilmembers Bartlett has surplus funds in his office expenditure account; and

WHEREAS, a California non-profit tax-exempt corporation – Berkeley Juneteenth Association, Inc. – will receive the funds; and

WHEREAS, the provision of such services would fulfill the following municipal public purpose: Berkeley Juneteenth Association, Inc. (BJAI) Promotes greater societal cohesiveness and well-being by educating and involving the community-at-large in historical, family, and cultural activities pertaining to people of color; and

WHEREAS, BJAJ hosts various activities including Black History Month Celebrations and the Berkeley Juneteenth Festival; and

WHEREAS, cultural celebrations are critical to the social and spiritual unity of our community, and are integrated into BJAJ events; and

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that funds relinquished by the Mayor and Councilmembers from their council office budget, of an amount to be determined by each Councilmember, shall be granted to Berkeley Juneteenth Association, Inc.



Office of the City Manager

PUBLIC HEARING  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: David Brannigan, Fire Chief  
 Subject: 2019 Local Hazard Mitigation Plan

### RECOMMENDATION

Conduct a public hearing and upon conclusion, 1) adopt a Resolution adopting the 2019 Local Hazard Mitigation Plan (LHMP), and 2) adopt a Resolution amending the General Plan to incorporate the LHMP.

### SUMMARY

Staff has developed the 2019 LHMP to update the 2014 Disaster Mitigation Plan. The LHMP identifies Berkeley's natural hazard vulnerabilities and outlines a five-year strategic plan to reduce those vulnerabilities. Adoption of the LHMP is required for the City to receive mitigation grant funding, and maximizes the City's post-disaster recovery funding. The 2019 LHMP has undergone a thorough technical development and community review process, and has been recommended for Council adoption by the Planning Commission and the Disaster and Fire Safety Commission (DFSC). Staff has determined, and the Planning Commission concurred, that the LHMP project is "exempt" from CEQA. The Federal Emergency Management Agency (FEMA) has approved the Plan pending adoption by City Council.

### FISCAL IMPACTS OF RECOMMENDATION

Following City Council's adoption of the 2019 LHMP, the City of Berkeley will be eligible to:

- 1) Apply for federal pre- and post-disaster mitigation funding through federal mitigation grant programs.
- 2) Receive additional post-disaster recovery funding from the State of California. Following a disaster, recovery costs are generally borne as: 75% federal, 18.75% state, 6.25% city. If the City has a current, adopted LHMP, the Governor and State Legislature can vote to authorize the State to cover the 6.25% City share. In a catastrophic disaster with public infrastructure losses in the hundreds of millions of dollars, this 6.25% cost share would be very significant.

## CURRENT SITUATION AND ITS EFFECTS

The City of Berkeley's Disaster Mitigation Plan was originally adopted by the City Council on June 22, 2004 and updated in 2014. The LHMP identifies natural hazards and their possible impacts on the Berkeley community and outlines a five-year strategic plan to protect the Berkeley community from future disasters. The plan must be updated once every five years. To update the Plan for 2019, staff followed much of the same multi-phased and broadly-inclusive process used to develop the original plan in 2004, and the 2014 plan update. The resulting plan reflects community concerns.

## BACKGROUND

### ***Plan Development***

In August 2018, the City convened an interdepartmental planning team, which reviewed and updated the 2004 goals and objectives. Over the three months, this Core Planning Team collaborated with numerous partner representatives, scientists, and hazard experts to update information in the 2014 Hazard Analysis. The 2019 LHMP accounts for new scientific research on hazards that could affect Berkeley, their areas of exposure, and their potential impacts.

City and partner representatives worked with the project manager to identify Berkeley's progress mitigation actions identified in 2014 (Element D.2)). Next, the project manager, City representatives, and partner representatives combined information on the success of 2014 actions, updates to the hazard analysis, and guidance from the City's General Plan to identify "pre-draft" actions for the 2019 Mitigation Strategy (Element C).

These pre-draft actions were initially vetted by the City's Core Planning Team in October 2018. They were then further vetted by a diverse group of partner representatives at the December 2018 Institutional Community Partner Meeting. The Core Planning Team revised actions to reflect feedback received from institutional partners, then incorporated the actions into a complete 2019 First Draft Plan.

### ***Community Review***

In June 2018, staff released a survey to collect information from the community about their hazard concerns. The 518 responses informed the First Draft 2019 LHMP. City staff provided updates and presentations to the community throughout the plan development process. In 2018, City staff provided updates and presentations to the Planning Commission and Disaster and Fire Safety Commission.

- November 7, 2018 Planning Commission
- December 5, 2018 Disaster and Fire Safety Commission

On December 18, 2018, the City made the 2019 First Draft Plan a public document for review and comment by the Berkeley community. The City Manager sent a memo to City Council members and to secretaries of all City Commissions. The memos outlined



the process for Commissions to provide feedback and attached the First Draft Plan's Executive Summary and Actions.

From December 18, 2018 to February 28, 2019:

- The City posted the First Draft Plan on the City website and at City libraries, and community members were invited to provide feedback on the plan.
- At the following meetings, staff presented the planning process, updated Hazard Analysis, and 2019 Mitigation Strategy to Commissioners and community members for review and feedback.
  - January 3, 2019 Housing Advisory Commission
  - January 9, 2019 Parks and Waterfront Commission
  - January 9, 2019 Commission on Disability
  - January 10, 2019 Public Works Commission
  - January 16, 2019 Planning Commission
  - January 23, 2019 Disaster and Fire Safety Commission
  - February 4, 2019 Energy Commission
  - February 7, 2019 Landmarks Preservation Commission
  - February 14, 2019 Community Environmental Advisory Commission

The First Draft Plan was reviewed by 10 Commissions during the public comment period. Two partner agencies, nine Commissions, and 18 community representatives provided written feedback on the First Draft Plan, totaling in 189 separate questions and comments. Following the February 28, 2019 comment deadline, City staff reviewed feedback from commissions and community members. Staff provided responses, as documented in Public Comments and Staff Responses for the First Draft 2019 Local Hazard Mitigation Plan. Based on that feedback, staff incorporated appropriate changes into the Final Draft Plan, as documented in Summary of Changes to the First Draft 2019 Local Hazard Mitigation Plan. Both of these documents are available at [www.CityofBerkeley.info/Mitigation](http://www.CityofBerkeley.info/Mitigation) and at City libraries.

#### Final Draft Plan

As part of the 2019 LHMP update, City staff worked with the California Department of Forestry and Fire Protection (Cal Fire) to meet requirements of Government Code 65302.5. This new code requires that when the City updates the LHMP, the City also review and update the Safety Element of the General Plan to address fire risk. The City submitted the current General Plan and the Final Draft 2019 LHMP for Board of Forestry Review. At its meeting on June 11, 2019, the Board of Forestry and Fire Protection reviewed these documents, determined that they met Code requirements, and provided general recommendations for future collaboration.

The LHMP is written in accordance with federal requirements so that Berkeley can maintain eligibility for federal mitigation grant funding. Review of the Final Draft Plan included assessment by the Federal Emergency Management Agency in August 2019.

On September 20, 2019, FEMA determined the Final Draft LHMP to be eligible for final approval pending its adoption by the Berkeley City Council. (Attachment 4).

At its October 23, 2019 meeting, the Disaster and Fire Safety Commission unanimously approved the following motion:

Motion to recommend that City Council adopt the 2019 Local Hazard Mitigation Plan (LHMP), and reminds Council of the LHMP's important role as part of the City's General Plan: to serve as a guiding document to ensure that hazard mitigation goals are integrated into all city planning decisions and activities, including land use decisions. This integration into the General Plan is described on page C-79 of the final draft 2019 Local Hazard Mitigation Plan: "As with prior LHMP updates, this Plan will be well-integrated into the City's existing and future plans and planning mechanisms.": Stein

Second: Dean

Vote: 8 Ayes: Stein, Flasher, Bailey, Couzin, Degenkolb, Dean, Bedolla, Grimes;; 0 Noes; 1 Absent Simmons; 0 Abstain:

The Planning Commission held a Public Hearing on November 6, 2019 to consider public input and comment on the 2019 LHMP and proposed changes to the General Plan. See Attachment 5 for the staff report and Public Hearing Notice.

At the meeting, the Planning Commission approved the following motion:

Motion/Second/Carried (Kapla /Wrenn) to close public hearing at 8:17pm and recommend to City Council adoption of the 2019 LHMP, make the General Plan findings, and recommend amending the General Plan to reference the updated LHMP.

Ayes: Beach, Hernandez, Kapla, Krapata, Lacey, Martinot, Vincent, Wiblin, and Wrenn. Noes: None. Abstain: Schildt. Absent: None. (8-0-1-0)

#### California Environmental Quality Act (CEQA)

The environmental impacts of the LHMP, from a CEQA standpoint, are inconsequential. The proposed action is the adoption of a plan that identified natural hazards in Berkeley and outlines a five-year strategy of possible future efforts to further protect Berkeley's citizens, buildings, infrastructure and environment from those hazards. Many actions in the plan's mitigation strategy focus on studies and inter-agency programs, for which the City of Berkeley is not the Lead Agency. Other types of mitigation programs that may be undertaken would require specific CEQA review, once they are better understood and a scope is established.

Staff has determined, and the Planning Commission concurred, that the LHMP project is exempt from CEQA based on the following four sections of the CEQA Guidelines:

- 15183(d) – the LHMP is consistent with the General Plan;
- 15262 – the LHMP involves only feasibility or planning studies;
- 15306 – the LHMP consists of basic data collection and research; and
- 15601(b)(3) – the LHMP does not have the potential for causing a significant effect on the environment.

#### ENVIRONMENTAL SUSTAINABILITY

This 2014 Local Hazard Mitigation Plan was one of the first in the nation to incorporate climate change as a hazard of concern. The 2019 Plan further described this hazard of concern. Climate change is a manmade hazard with its own direct impacts, such as drought and severe storms. Climate change impacts also exacerbate Berkeley's natural hazards of concern, such as Wildland-Urban Interface (WUI) fire and flooding.

Implementing mitigation actions included in the plan's mitigation strategy will help to sustain and protect Berkeley's natural and built environment and the Berkeley community overall.

#### RATIONALE FOR RECOMMENDATION

Staff recommends that Council adopt the 2019 LHMP. The LHMP has undergone a thorough technical development and community review process. Adoption of the 2019 LHMP will make the City eligible to spend earmarked mitigation grant funding, and to apply for additional federal mitigation grants. Adoption of this plan will also make the City eligible to receive post-disaster recovery funding from the State.

Staff also recommends that Council adopt draft language for the Disaster Preparedness and Safety Element of the General Plan (Attachment 2, Exhibit A), which references the LHMP into the General Plan, but removes reference to the update year.

#### ALTERNATIVE ACTIONS CONSIDERED

None.

#### CONTACT PERSONS

Sarah Lana, Emergency Services Coordinator, Fire Department, (510) 981-5576  
Alene Pearson, Planning Commission Secretary, Planning Department (510) 981-7489

#### Attachments:

- 1: Resolution Adopting the Local Hazard Mitigation Plan (LHMP)
  - a. 2019 Local Hazard Mitigation Plan

- 2: Resolution Approving the General Plan Text Amendment
  - a. Proposed Amendments to the General Plan to Update Reference to the Local Hazard Mitigation Plan (LHMP)
- 3: July 29, 2019 California Board of Forestry Review Letter and General Plan Safety Assessment
- 4: September 20, 2019 FEMA Approval Pending Adoption Letter
- 5: November 6, 2019 Staff Report and Public Hearing Notice to Planning Commission
- 6: Notice of Public Hearing

RESOLUTION NO. ##,###-N.S.

ADOPT THE LOCAL HAZARD MITIGATION PLAN (LHMP)

WHEREAS, the Council adopted the Disaster Mitigation Plan on June 22, 2004; and

WHEREAS, the Plan was updated in 2014; and

WHEREAS, the 2014 Plan has expired; and

WHEREAS, the adoption of a current LHMP as an appendix to the Disaster Preparedness and Safety Element of the City's General Plan will maintain the City's compliance with 44 CFR Part 201, Section 201.6, and Government Code 65302.6 requirements, and associated eligibility for mitigation grant funding; and

WHEREAS, City staff has collaborated with numerous partner representatives, scientists and hazard experts to develop a First Draft Plan; and

WHEREAS, from December 18, 2018 through February 28, 2019, the community and all City commissions and boards were invited to provide feedback on the First Draft Plan, and these comments were reviewed and incorporated into the Final Draft 2019 LHMP; and

WHEREAS, at its meeting on June 11, 2019, the State of California Board of Forestry and Fire Protection reviewed the Final Draft LHMP and the Disaster Preparedness and Safety Element of the General Plan and determined that they met requirements of Government Code 65302.5; and

WHEREAS, on September 20, 2019, the Federal Emergency Management Agency determined the Final Draft Plan to be eligible for final approval pending its adoption by the Berkeley City Council; and

WHEREAS, on October 23, 2019, the Disaster and Fire Safety Commission reviewed the Final Draft 2019 LHMP and voted unanimously to recommend adoption of the LHMP; and

WHEREAS, on November 6, 2019, the Planning Commission held a duly noticed Public Hearing to consider public input and comment on the Final Draft LHMP and to consider changes to the Disaster Preparedness and Safety Element of the General Plan to update the LHMP reference in the General Plan; and

WHEREAS the Planning Commission voted to recommend adoption of the LHMP;

December 10, 2019

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the Local Hazard Mitigation Plan is hereby adopted, as shown in Exhibit A.

Exhibit:

A: 2019 Local Hazard Mitigation Plan (LHMP)



City of Berkeley

# **2019 Local Hazard Mitigation Plan**

Final Draft

September 19, 2019

## Acknowledgements

### City Council

Jesse Arreguin, Mayor  
Rashi Kesarwani, District 1  
Cheryl Davila, District 2  
Ben Bartlett, District 3  
Kate Harrison, District 4  
Sophie Hahn, District 5  
Susan Wengraf, District 6  
Rigel Robinson, District 7  
Lori Droste, District 8

### City Manager

Dee Williams-Ridley

### Project Managers

Sarah Lana, Emergency Services Coordinator, City of Berkeley  
Jamie Albrecht, LHMP Coordinator, City of Berkeley

### City of Berkeley Project Team

David Brannigan, Fire Chief  
Andrew Brozyna, Deputy Director of Public Works  
Galadriel Burr, Community Services Specialist  
Karl Busche, Acting Hazardous Materials Manager  
Caytie Campbell-Orrrock, Climate Action Program Specialist  
Stacie Clarke, Senior Management Analyst  
Jamie Cooney, Toxics Management Division Intern  
Amber Davis, Program Manager  
Cristi Delgado, Enterprise GIS & Open Data Coordinator  
Jennifer Lazo, Emergency Services Coordinator  
Keith May, Special Operations Chief  
Jenny McNulty, Program and Administration Manager  
Alene Pearson, Principal Planner  
Suzanne Ridel, PHEP Unit Senior Manager  
Rachel Rodriguez, PHEP Program Manager  
Tony Yuen, Fire Marshal

### Institutional Key Partner Representatives

Alex Yao, UC Berkeley Police Captain  
Alina Constantinescu, Berkeley Path Wanderers Incoming President  
Daphne White, Berkeley Path Wanderers, Board Member  
James Wogan, Berkeley Unified School District Manager of Student Services  
John Calise, Berkeley Unified School District Director of Facilities  
Kristi Mercado, AT&T FirstNet Senior Principal  
Minna Toloui, Ecology Center Climate Lead



Natasha Beery, Berkeley Unified School District Director (BSEP)  
Rafael Vargas, Sutter Health Emergency Management Coordinator  
Robert Maisonet, Lifelong Medical Compliance Coordinator  
Rochelle Pollard, AT&T Client Solutions Executive  
Steven Frew, EBMUD Manager Security and Emergency Preparedness  
Tonya Petty, Lawrence Berkeley National Lab Emergency Manager  
Jeffrey Bowman, Bayer  
Julia Halsne, EBMUD Manager of Business Continuity  
Nicole Stewart, Kinder Morgan Corporation Area Manager  
Margo Bennett, UC Berkeley Police Chief  
Amina Assefa, University of California  
Dr. Anna Harte, UC Berkeley Tang Center Medical Director  
Sue Watz, UC Berkeley Tang Center Executive Assistant  
Mary Popylisen, UC Berkeley Tang Center ESF 8 Lead  
Shirley Slaughter, Berkeley City College Director of Business & Administration Services  
Colleen Neff, Berkeley Path Wanderers Outgoing President  
Anne Wein, US Geological Survey Operations Research Analyst  
Michael Germeraad, Association of Bay Area Governments Resilience Planner

Technical Reviewers

Derek J. Lambeth, California Governor's Office of Emergency Services  
Kelly Riley, California Governor's Office of Emergency Services  
Lindsey Robinson, Michael Baker International  
JoAnn Scordino, Federal Emergency Management Agency

## Executive Summary

Berkeley is a vibrant and unique community. But every aspect of the city – its economic prosperity, social and cultural diversity, and historical character – could be dramatically altered by a disaster. While we cannot predict or protect ourselves against every possible hazard that may strike the community, we can anticipate many impacts and take steps to reduce the harm they will cause. We can make sure that tomorrow’s Berkeley continues to reflect our current values.

City government and community members have been working together for years to address certain aspects of the risk – such as strengthening structures, distributing disaster supply caches, and enforcing vegetation management measures to reduce fire risk. The 2004 Disaster Mitigation Plan formalized this process, ensuring that these activities continued to be explored and improved over time. The 2014 Local Hazard Mitigation Plan continued this ongoing process to evaluate the risks that different hazards pose to Berkeley, and to engage the community in dialogue to identify the most important steps that the City and its partners should pursue to reduce these risks. Over many years, this constant focus on disasters has made Berkeley, its residents and businesses, much safer.

The federal Disaster Mitigation Act of 2000 (DMA 2000) calls for all communities to prepare mitigation plans. The City adopted a plan that met the requirements of DMA 2000 on June 22, 2004, and an update on December 16, 2014. This is the 2019 update to that plan, called the 2019 Local Hazard Mitigation Plan (2019 LHMP).

### **Plan Purpose**

The 2019 LHMP serves three functions:

1. The 2019 LHMP documents our current understanding of the hazards present in Berkeley, along with our vulnerabilities to each hazard – the ways that the hazard could impact our buildings, infrastructure, community, and environment.
2. The document presents Berkeley City government’s Mitigation Strategy for the coming five years. The Mitigation Strategy reflects a wide variety of both funded and unfunded actions, each of which could reduce the Berkeley’s hazard vulnerabilities.
3. By fulfilling requirements of the DMA 2000, the 2019 LHMP ensures that Berkeley will remain eligible to apply for mitigation grants before disasters, and to receive federal mitigation funding and additional State recovery funding after disasters.

### **Plan Organization**

Unlike prior versions of the plan, the 2019 LHMP has been structured to specifically address DMA 2000 requirements. The 2019 LHMP is organized as follows:

#### *Element A: Planning Process*

This section of the 2019 LHMP describes the process used to develop the document, including how partners, stakeholders, and the community were engaged. It also addresses the City’s approach to maintaining the 2019 LHMP over the five-year planning cycle.

*Element B: Hazard Analysis*

This section of the 2019 LHMP outlines the different hazards present in Berkeley. Analysis of each hazard includes the areas of Berkeley with exposure to the hazard, the potential impacts of each hazard, and Berkeley's vulnerabilities to each hazard.

*Element C: Mitigation Strategy*

The Mitigation Strategy section first documents the authorities, policies, programs, and resources that the City brings to bear in implementing mitigation actions. Second, this section outlines a comprehensive range of specific mitigation actions and projects designed to reduce Berkeley's hazard vulnerabilities. This section also describes how the 2019 LHMP is integrated with other City plans.

*Element D: Plan Review, Evaluation, and Implementation*

This section describes how changes in development have influenced updates to the 2019 LHMP. It also provides a detailed description of Berkeley's progress on the Mitigation Strategy proposed in 2014.

*Element E: Plan Adoption*

This section will be used to document formal adoption of the Final Draft 2019 LHMP by the Berkeley City Council.

In the pages that follow, this Executive Summary describes highlights from Element B: *Hazard Analysis* and Element C: *Mitigation Strategy*, as well as any key updates that were made to the section since the 2014 version.

## Element B: Hazard Analysis

To become disaster resilient, a community must first understand the existing hazards and their potential impacts. Berkeley is exposed to a number of natural and human-caused hazards that vary in their intensity and impacts on the city. This mitigation plan addresses six natural hazards: earthquake, wildland-urban interface (WUI) fire, flood, landslide, and tsunami. Each of these hazards can occur independently or in combination, and can also trigger secondary hazards.

Although this plan is focused on natural hazards, four human-caused hazards of concern are also discussed: hazardous materials release, climate change,<sup>1</sup> extreme heat events, and terrorism. They are included because of their likelihood of occurrence and the magnitude of their potential consequences, as outlined in the table below.

**Table 1. Summary of Hazard Analysis**

<b>Hazard</b>	<b>Likelihood</b>	<b>Severity of Impact</b>
<b>Earthquake</b>	Likely	Catastrophic
<b>Wildland-Urban Interface Fire</b>	Likely	Catastrophic
<b>Rainfall-Triggered Landslide</b>	Likely	Moderate
<b>Floods</b>	Likely	Minor
<b>Tsunami</b>	Possible	Moderate
<b>Climate Change</b>	Likely	Moderate to Catastrophic*
<b>Extreme Heat</b>	Likely	Moderate to Catastrophic*

*\*Consequence levels for climate change and extreme heat depend highly on the success of global climate mitigation over the coming decades. If greenhouse gas emissions are significantly reduced, and carbon sequestration is increased, impacts may be moderate. If emissions remain steady at present levels or even increase, consequences may increase to catastrophic, although effects will differ widely over the globe.<sup>23</sup>*

Hazardous materials release is described only as a cascading impact of a natural hazard. Because this plan focuses on natural hazards as emphasized in DMA 2000, likelihood and consequence levels for hazardous materials release and terrorism are not defined.

## **Hazards of Greatest Concern**

### **Earthquake**

We do not know when the next major earthquake will strike Berkeley. The United States Geological Survey states that there is a 72% probability of one or more M 6.7 or greater earthquakes from 2014 to 2043 in the San Francisco Bay Region.<sup>4</sup> There is a 33% chance that a 6.7 or greater will occur on the Hayward fault system between 2014 and 2043.<sup>5</sup> This means that many Berkeley residents are likely to experience a severe earthquake in their lifetime.

A catastrophic earthquake on the Hayward Fault would cause severe and violent shaking and three types of ground failure in Berkeley. Surface fault rupture could occur in the Berkeley hills along the fault, damaging utilities and gas lines that cross the fault. Landslides are expected in the Berkeley hills during the next earthquake, particularly if the earthquake occurs during the rainy winter months. Landslide movement could range from a few inches to tens of feet. Ground surface displacements as small as a few inches are enough to break typical foundations. Liquefaction is very likely in the westernmost parts of the city and could occur in much of the Berkeley flats. Liquefaction can destroy pavements and dislodge foundations.

Shaking and ground failure is likely to create impacts that ignite post-earthquake fires. Firefighting will be simultaneously challenged due to broken water mains and damage to electrical, transportation, and communication infrastructure.

In a 6.9 magnitude earthquake on the Hayward Fault, the City estimates that over 600 buildings in Berkeley will be completely destroyed and over 20,000 more will be damaged. One thousand to 4,000 families may need temporary shelter. Depending on the disaster scenario, one hundred people could be killed in Berkeley alone, and many more would be injured. Commercial buildings, utilities, and public roads will be disabled or destroyed. This plan estimates that building damage in Berkeley alone could exceed \$2 billion, out of a multi-billion dollar regional loss, with losses to business activities and infrastructure adding to this figure.

Low-income housing units are expected to be damaged at a higher rate than other residences. Other types of housing, such as condominiums, may replace them when land owners rebuild. This could lead to profound demographic shifts in Berkeley.

### **Wildland-Urban Interface Fire**

Berkeley is vulnerable to a wind-driven fire starting along the city's eastern border. The fire risk facing the people and properties in the eastern hills is compounded by the area's mountainous topography, limited water supply, minimal access and egress routes, and location, overlaid upon the Hayward Fault. Berkeley's flatlands are also exposed to a fire that spreads west from the hills. The flatlands are densely-covered with old wooden buildings housing low-income and vulnerable populations, including isolated seniors, people with disabilities, and students.

The high risk of wildland-urban interface (WUI) fire in Berkeley was clearly demonstrated in the 1991 Tunnel Fire, which destroyed 62 homes in Berkeley and more than 3,000 in Oakland. Accounts of major wildfires in Berkeley date back to at least 1905 when a fire burned through

Strawberry Canyon and threatened the University campus and the small Panoramic Hill subdivision. Other major fires occurred in the 1970s and 1980s.

In 1923, an even more devastating fire burned through Berkeley. It began in the open lands of Wildcat Canyon to the northeast and, swept by a hot September wind, penetrated residential north Berkeley and destroyed nearly 600 structures, including homes, apartments, fraternities and sororities, a church, a fire station and a library. The fire burned downhill all the way to Shattuck Avenue in central Berkeley.<sup>6</sup>

If a fire occurred today that burned the same area, the loss to structures would be in the billions of dollars.<sup>7</sup> Destruction of contents in all of the homes and businesses burned would add hundreds of millions of dollars<sup>8</sup> to fire losses. Efforts to stabilize hillsides after the fire to prevent massive landslides would also add costs. Depending on the speed of the fire spread, lives of Berkeley residents could also be lost. Many established small businesses, homes, and multi-family apartment buildings, particularly student housing, would be completely destroyed, changing the character of Berkeley forever.

### ***Natural Hazards of Concern***

This plan identified three additional natural hazards of concern: rainfall-triggered landslide, floods, and tsunami. These hazards could cause significant damage and losses in Berkeley. However, unlike earthquake and WUI fire, their impacts are likely to be smaller, and confined to specific areas.

#### **Rainfall-Triggered Landslide**

Berkeley has a number of deep-seated landslides that continuously move, with the rate of movement affected by rainfall and groundwater conditions. Significant localized areas of the Berkeley hills face risk from landslide, and a major slide could endanger lives and impact scores of properties, utilities and infrastructure.

#### **Floods**

Floods also could damage property and cause significant losses in Berkeley. Flooding can occur when stormwater exceeds the capacity of a creek channel, or the capacity of the storm drain system. Creek flooding in Berkeley has the potential to affect about 675 structures, mainly in the western, industrial area of the city. It is unlikely that floodwaters will reach higher than three feet, but damages to homes, businesses, and their contents could total over \$160 million. Storm drain overflow creates localized flooding in many known intersections in Berkeley. With few properties covered by flood insurance, these costs would be borne primarily by Berkeley residents and businesses.

#### **Tsunami**

Tsunamis, though rare inside the San Francisco Bay, can occur from large offshore subduction style earthquakes around the Pacific Rim. Small, local tsunamis can also result from offshore strike-slip Faults such as parts of the San Andreas Fault of the Peninsula and the Hayward Fault through San Pablo Bay. The March 2011 Japan earthquake generated a devastating tsunami, which reached the Bay Area and caused minor damage to docks and floats in the Berkeley Marina. A larger tsunami could impact much more of Berkeley's western shores. Buildings, infrastructure, and roadways could be damaged, and debris and hazardous materials could cause post-tsunami fires. Deaths are possible if individuals choose not to evacuate hazardous areas, do not understand tsunami warnings, or are unable to evacuate.

### **Manmade Hazards of Concern**

While the focus of the 2019 LHMP is on natural hazards as emphasized in the Disaster Mitigation Act of 2000 (DMA 2000),<sup>9</sup> the plan provides analysis of four manmade hazards of concern. Climate change is described because its impacts are likely to exacerbate the natural hazards of concern identified in the plan. The 2019 LHMP specifically addresses the hazard of extreme heat events because they are projected to increase exponentially in the next century as climate change continues. Hazardous materials release is addressed in this mitigation plan as a potential impact from a natural hazard. Terrorism is identified as a hazard of concern but is not analyzed in-depth.

### **Climate Change**

Like regions across the globe, the San Francisco Bay Area is already experiencing negative impacts of climate change. These impacts will continue to grow in intensity and will disproportionately affect communities such as the elderly, children, people with disabilities, and people with low incomes.

The severity of these impacts will depend on the amount of greenhouse gas emissions produced worldwide over the coming decades. Mitigation of further emissions will reduce Berkeley's exposure to climate change. Berkeley's Climate Action Plan<sup>10</sup> identifies the City's plan for emissions reductions, known as climate change mitigation. Simultaneously, we are already experiencing climate change impacts that will intensify over time—including sea level rise, prolonged poor air quality from wildfires, drought, severe storms, and extreme heat – so it is also critical that Berkeley adapt to current and projected impacts in order to protect Berkeley's community, infrastructure, buildings, and economy, known as climate change adaptation.

Climate change will have direct impacts and will also exacerbate the natural hazards of concern outlined in this plan. Rising sea levels have the potential to impact infrastructure and community members in west Berkeley and the Berkeley waterfront. This will increase Berkeley's exposure to tsunami inundation and to flooding of critical infrastructure in these areas, which includes sanitary sewers, state highways, and railroad lines. Increased temperatures, when coupled with prolonged drought events, can increase the intensity of wildfires that may occur, and pose significant health and safety risks to people. By 2100, most of the Bay Area will average six heat waves per year, each an average length of ten day.<sup>11</sup> Shorter, more intense wet seasons will make flooding more frequent, and may increase the landslide risk in the Berkeley hills. California may experience greater water and food insecurity, and drought will become a more persistent issue as the effects of climate change deepen.

### **Extreme Heat Events**

Multiple factors contribute to the extreme heat hazard, including very high temperatures, nights that do not cool down, consecutive days of extreme heat, and extreme heat during unexpected times of the year. Extreme heat events impact public health, increase fire risk, damage critical facilities and infrastructure, and worsen air quality.

Social factors play a key role in vulnerability to extreme heat events, meaning that people with disabilities, chronic diseases, the elderly, and children under five are the most at risk to heat-



related illnesses.<sup>12</sup> Across California, the highest risk of heat-related illness occurs in the typically cooler regions found in coastal areas like Berkeley.

Projections indicate that the number of extreme heat days, warm nights, and heat waves will increase exponentially: by 2099, the City of Berkeley is expected to average 18 days per year with temperatures over 88.3 degrees F.

### **Hazardous Materials Release**

Over the last 25 years, Berkeley has seen a more than 90 percent reduction in the number of facilities with extremely hazardous materials. The City carefully tracks hazardous materials within its borders, and works closely with companies using large amounts of potentially dangerous materials. The City has identified fifteen facilities in Berkeley with sufficiently large quantities of toxic chemicals to pose a high risk to the community. Hazardous materials also travel through Berkeley by truck and rail. Natural hazards identified in the plan could trigger the release of hazardous materials.

### **Terrorism**

It is not possible to estimate the probability of a terrorist attack. Experts prioritize terrorism readiness efforts by identifying critical sites and assessing these sites' vulnerability to terrorist attacks. City officials are currently working with State and regional groups to prevent and prepare for terrorist attacks.

### ***Access and Functional Needs***

This plan recognizes that there are many individuals that are still disproportionately vulnerable during disasters. People with access and functional needs are defined as community members who may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities, live in institutionalized settings, are elderly, are children, are from diverse cultures, have limited English proficiency, or are non-English speaking, or are transportation disadvantaged. An individual with a disability is defined by the ADA as a person who had a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered.

### ***Summary of Changes to the Hazard Analysis***

The 2019 LHMP contains numerous updates to facts, figures, and descriptions. The City has incorporated the newest-available hazard data, including impact maps for particular scenarios. The City and its partners have provided additional descriptions, details and definitions to explain the science of these hazards and their potential impacts. Advances in GIS mapping technology have enabled the City to present maps that help to visualize information.

Institutional community partners have updated information regarding their vulnerabilities to the described hazards, as well as significant mitigation activities that they have completed, are in progress, or planned for the coming five years.

Within the historical section for each hazard, the City has added information about any instances of the hazard affecting Berkeley since 2014. Throughout the plan, the City has updated financial loss estimates for inflation.

### **Hazards Described in the 2014 Plan**

For the first time, the plan identifies extreme heat events as a hazard of concern. Significant changes and updates to the analysis of each hazard are described below:

#### **Earthquake (Section B.5)**

- The 2019 LHMP integrates the 2018 HayWired scenario developed by the USGS to help illustrate the potential impacts of a catastrophic earthquake near Berkeley. The plan now includes five maps with data from the scenario.
- Berkeley's liquefaction hazard is now mapped using both overall levels of susceptibility and probability of liquefaction in the 7.0M HayWired scenario.
- The seismic stability of City-owned and leased buildings has been updated to reflect significant retrofit and rebuilding efforts since 2014.
- The City has updated the plan to describe Berkeley's progress on mitigating earthquake vulnerabilities in privately-owned buildings. Detailed analysis along with three new maps have been provided to describe and illustrate the locations of potentially seismically vulnerable buildings, including unreinforced masonry buildings, soft story buildings, non-ductile concrete buildings, and tilt-up or other rigid-wall flexible diaphragm buildings.
- The Earthquake section includes updated descriptions from Key Institutional Partners about mitigation efforts completed or planned. Updated partner profiles include UC Berkeley, Berkeley Lab, Berkeley Unified School District, East Bay Municipal Utility District, AT&T, and Alta Bates Summit Medical Center.
- Earthquake risk and loss estimates have been updated to integrate regional estimates from the 2018 HayWired earthquake scenario.

#### **Wildland-Urban Interface Fire (Section B.6)**

The 2019 LHMP integrates hazardous fire zones as defined by the City of Berkeley and the California Department of Forestry onto one map.

The 2019 LHMP presents a new map overviewing the locations of pedestrian pathways in Berkeley. These pathways are key resources for pedestrian evacuation from wildland-urban interface fire.

#### **Rainfall-Triggered Landslide (Section B.7)**

This section has been updated to describe hazard occurrences in Berkeley since 2014.

#### **Floods (Section B.8)**

The Floods section has been updated to include newly-revised flood exposure maps for Berkeley from the FEMA National Flood Insurance Program.

#### **Tsunami (Section B.9)**

The Tsunami section now includes a map of Tsunami Evacuation Playbook zones. These zones, developed by the California Geological Survey, California Governor's Office of Emergency Services, and the National Ocean and Atmospheric Administration (NOAA), reflect more refined and detailed planning, in which forecasted tsunami amplitudes, storm surge, and tidal information can help guide what areas might be inundated.

The Tsunami section also includes new information about infrastructure vulnerabilities of the Berkeley Marina, based on recent tsunami inundation modeling by the California Geological Survey, University of Southern California, California State Lands Commission, and California Governor's Office of Emergency Services.

#### **Climate Change (Section B.10)**

The Climate Change section has been updated to use the latest available science and policy guidance on the direct and secondary impacts of climate change. It describes recent events that demonstrate climate change impacts that we are already experiencing.

The section provides new analysis of amounts of sea-level rise anticipated under different projected carbon emissions scenarios, as well as new maps of expected levels of inundation from 2-ft, 4-ft, and 5.5-ft sea level rise scenarios using the Adapting to Rising Tides Bay Shoreline Flood Explorer.

#### **Extreme Heat Events (Section B.11)**

Extreme heat events are a newly-introduced hazard of concern for the 2019 LHMP. The extreme heat events section describes factors that contribute to the extreme heat hazard, and describe how the Urban Heat Island Effect can further exacerbate impacts of extreme heat events. The section outlines the secondary hazards created by extreme heat, including public health impacts, fire, damage to critical facilities and infrastructure, and worsened air quality.

The section also describes the predicted average number of extreme heat days in Berkeley through the end of the century.

#### **Hazardous Materials Release (Section B.12)**

The Hazardous Materials Release section contains updated figures on the number of sites with hazardous materials in Berkeley. Additionally, the section has been updated since 2014 to reflect Berkeley industrial sites with large quantities of extremely hazardous materials. These sites have been mapped for reference.

## Element C: Mitigation Strategy

### *Authorities, Policies, Programs and Resources*

Through many years of diligent effort by City government and the community, Berkeley has developed many innovative initiatives to increase our disaster resilience. The authorities, policies, programs and resources that Berkeley will use to support execution of the 2019 LHMP Mitigation strategy include:

- The City has strengthened its ability to serve the community during and after disasters by seismically upgrading or replacing buildings that house critical City functions. In 2017, work was completed on the James Kenney Recreation Center and the Center Street Garage. Since 2004 the City has strengthened or rebuilt all seven of the City's fire stations, the historic Ratcliff Building (which houses the Public Works Department Operations Center), the Civic Center (which houses many key government functions), the Public Safety Building, a new animal shelter, and all libraries.
- The Berkeley Unified School District, supported by voter-approved bonds, has strengthened all public schools.
- The City of Berkeley has worked diligently to enhance public safety and reduce physical threats from earthquakes by requiring owners of soft story and unreinforced masonry buildings to retrofit their structures.
  - Berkeley was the first city in the nation to inventory the community's soft-story buildings. In 2014 Berkeley mandated retrofit of soft story buildings with five or more dwelling units. Since then, 61 percent of these identified buildings have had retrofits completed.
  - Over 99% of Berkeley's 700 unreinforced masonry buildings have been retrofitted or demolished since a City mandate began in 1991.
- The City offers a comprehensive suite of programs to encourage the community to strengthen buildings to be more hazard-resistant.
  - In early 2017, the Building and Safety Division developed a new Retrofit Grants program with funding from a Hazard Mitigation Grant from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES).
  - Since July 2002, the City has distributed over \$12 million to homeowners through the Transfer Tax Rebate Program, which reduces the real estate transfer tax to building owners who perform seismic safety work.
  - The City participates in the Earthquake Brace + Bolt (EBB) program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of owner-occupied residential buildings with 1-4 dwelling units.
- The City, working together with key partners, is using a comprehensive strategy to aggressively mitigate Berkeley's wildland-urban interface (WUI) fire hazard. These approaches include:

- Prevention through development regulations with strict building and fire code provisions, as well as more restrictive local amendments for new and renovated construction;
  - Enforcement programs including annual inspections of over 1,200 high-risk properties annually;
  - Natural resource protection through four different vegetation management programs;
  - Improvement of access and egress routes;
  - Infrastructure maintenance and improvements to support first responders' efforts to reduce fire spread.
- The Disaster Cache Program incentivizes community-building for disaster readiness. To date, the City has awarded caches of disaster response equipment to neighborhoods, congregations, and UC Berkeley Panhellenic groups that have undertaken disaster readiness activities.
  - Berkeley's 2009 Climate Action Plan has served as a model for jurisdictions across the nation. The Climate Action Plan also guides the City's new climate adaptation strategy.

These programs, and many others, place Berkeley as a leader in disaster management. Long-term maintenance and improvements to these programs will support execution of the 2019 LHMP Mitigation strategy, and will help to protect the Berkeley community in our next disaster.

### ***Disaster Mitigation Goals and Objectives***

Berkeley will focus on three goals to reduce and avoid long-term vulnerabilities to the hazards identified in Element B: *Hazard Analysis*:

1. The City will evaluate and strengthen all City-owned properties and infrastructure, particularly those needed for critical services, to ensure that the community can be served adequately after a disaster.
2. The City will establish and maintain incentive programs and standards to encourage local residents and businesses to upgrade the hazard resistance of their own properties.
3. The City will actively engage other local and regional groups to collaboratively work towards mitigation actions that help maintain Berkeley's way of life and its ability to be fully functional after a disaster event.

Five objectives guide the mitigation strategy:

- A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
- B. Increase City government's ability to serve the community during and after hazardous events by mitigating risk to key City functions.
- C. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
- D. Preserve Berkeley's unique character and values from being compromised by hazardous

events.

- E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.

**Overview of Actions**

This plan identifies and analyzes 27 mitigation actions to reduce the impacts from hazards described in Element B: *Hazard Analysis*. This suite of actions addresses every natural hazard posing a threat to Berkeley, with an emphasis on new and existing buildings and infrastructure.

Tables 1, 2, and 3 below summarize all of the actions. The tables group actions by their priority level (see Element C.5.a for details on prioritization of actions), and identify the hazard(s) and each action addresses.

**Table 2. High-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Building Assessment</b>	Continue appropriate seismic and fire safety analysis based on current and future use for all City-owned facilities and structures.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Strengthen and Replace City Buildings</b>	Strengthen or replace City buildings in the identified prioritized order as funding is available.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat

Name	Action	Hazards
<b>Buildings</b>	Reduce hazard vulnerabilities for non-City-owned buildings throughout Berkeley.	Earthquake Wildland-Urban Interface Fire Landslide Floods Climate Change Extreme Heat
<b>Retrofit Grants</b>	Implementation of the Retrofit Grants Program which helps Berkeley building owners increase safety and mitigate the risk of damage caused by earthquakes	Earthquake
<b>Soft Story</b>	Continued Implementation of the Soft Story Retrofit Program, which mandates seismic retrofit of soft story buildings with 5+ residential units.	Earthquake
<b>Unreinforced Masonry (URM)</b>	Complete the ongoing program to retrofit all remaining non-complying Unreinforced Masonry (URM) buildings.	Earthquake
<b>Concrete Retrofit Ordinance Research</b>	Monitor passage and implementation of mandatory seismic retrofit ordinances for concrete buildings in other jurisdictions to assess best practices.	Earthquake
<b>Gas Safety</b>	Improve the disaster-resistance of the natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami
<b>Fire Code</b>	Reduce fire risk in existing development through fire code updates and enforcement.	Wildland-Urban Interface Fire
<b>Vegetation Management</b>	Reduce fire risk in existing development through vegetation management.	Wildland-Urban Interface Fire Climate Change
<b>Hills Pedestrian Evacuation</b>	Manage and promote pedestrian evacuation routes in Fire Zones 2 and 3.	Earthquake Wildland-Urban Interface Fire

Name	Action	Hazards
<b>Hills Roadways and Parking</b>	Improve responder access and community evacuation in Fire Zones 2 and 3 through roadway maintenance and appropriate parking restrictions.	Earthquake Wildland-Urban Interface Fire
<b>Undergrounding</b>	Coordinate with PG&E for the construction of undergrounding in the Berkeley Hills within approved Underground Utility Districts (UUDs).	Earthquake Wildland-Urban Interface Fire
<b>EBMUD</b>	Work with EBMUD to ensure an adequate water supply during emergencies and disaster recovery.	Earthquake Wildland-Urban Interface Fire
<b>Extreme Heat</b>	Reduce Berkeley’s vulnerability to extreme heat events and associated hazards.	Climate Change Extreme Heat
<b>Hazardous Materials</b>	Mitigate hazardous materials release in Berkeley through inspection and enforcement programs.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change
<b>Air Quality</b>	Define clean air standards for buildings during poor air quality events and use those standards to assess facilities for the Berkeley community.	Wildland-Urban Interface Fire Climate Change Extreme Heat
<b>National Flood Insurance Program (NFIP)</b>	Maintain City participation in the National Flood Insurance Program.	Floods
<b>Hazard Information</b>	Collect, analyze and share information with the Berkeley community about Berkeley hazards and associated risk reduction techniques.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat



Name	Action	Hazards
<b>Partnerships</b>	Coordinate with and encourage mitigation actions of key City partners.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat

**Table 3. Medium-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Severe Storms</b>	Reduce Berkeley’s vulnerability to severe storms and associated hazards through proactive research and planning, zoning regulations, and improvements to stormwater drainage facilities.	Landslide Floods Climate Change
<b>Energy Assurance</b>	Implement energy assurance strategies at critical City facilities.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Climate Change Integration</b>	Mitigate climate change impacts by integrating climate change research and adaptation planning into City operations and services.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami Climate Change Extreme Heat
<b>Sea Level Rise</b>	Mitigate the impacts of sea level rise in Berkeley.	Climate Change
<b>Water Security</b>	Collaborate with partners to increase the security of Berkeley’s water supply from climate change impacts.	Climate Change

**Table 4. Low-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Tsunami</b>	Mitigate Berkeley's tsunami hazard.	Tsunami
<b>Streamline Rebuild</b>	Streamline the zoning permitting process to rebuild residential and commercial structures following disasters.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami

<sup>1</sup> Human action directly influences the probability that climate change will occur. Climate change is referenced as a natural hazard here because of its potential to exacerbate natural hazards described in this plan.

<sup>2</sup> Ackerly, David. 2018. California's Fourth Climate Change Assessment, San Francisco Bay Area Region Report. <http://www.climateassessment.ca.gov/regions/docs/20190116-SanFranciscoBayArea.pdf>

<sup>3</sup> <https://cal-adapt.org/tools/extreme-heat/>

<sup>4</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.3.

<sup>5</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.4.

<sup>6</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>7</sup> Total square footage of buildings in burn area is 9,386,281 square feet.

<sup>8</sup> In 2004, estimate was \$500 million.

<sup>9</sup> Public Law 106-390

<sup>10</sup> Berkeley Climate Action Plan (City of Berkeley, 2009) [www.cityofberkeley.info/climate/](http://www.cityofberkeley.info/climate/)

<sup>11</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017, p58-59)

[http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

<sup>12</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017) [http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

## Element A: Planning Process

Note: Meeting minutes, sign-in sheets, and other supporting documents to described activities are provided for State and federal reviewers in Attachment 1: *Documentation*.

### ***A.1 Plan Development Process***

#### Planning Process Overview

The City of Berkeley's Local Hazard Mitigation Plan was originally adopted by the City Council on June 22, 2004, following a process that built on years of disaster mitigation activities. An update to the Plan was adopted on December 16, 2014. To create the 2019 LHMP update, Berkeley followed the same multi-phased, broadly-inclusive process used to update the Plan in 2014.

#### LHMP Kickoff Meeting

On August 24, 2017, the City of Berkeley hosted a special USGS Earthquake Hazard Briefing about the HayWired earthquake scenario, and used this gathering to kick off the 2019 Local Hazard Mitigation Plan process. Earthquake is one of Berkeley's hazards of greatest concern; presenters included the United States Geological Survey (USGS). At this meeting, City staff and key partners learned together about the latest earthquake science, anticipated impacts, and experts' proposed mitigation actions to consider for the 2019 LHMP.

#### Development of First Draft Plan

Throughout 2018, the Project Manager collaborated with numerous City staff, partner representatives and hazard experts to update the plan's hazard analysis, progress on 2014 actions, and to develop the 2019 mitigation strategy. During this time City leaders provided guidance to the Project Manager through participation in the Core Project Team. As the Project Team created the First Draft 2019 LHMP, members engaged institutional key partners to include detailed information about partners' hazard and risk assessments and mitigation initiatives in the hazard analysis section of the Plan. The Project Team worked with partner representatives to identify opportunities for collaboration on Actions in the 2019 mitigation strategy.

#### Institutional Community Partner Meeting

In December 2018, the Core Team hosted an Institutional Community Partner Meeting to provide the 2019 LHMP Draft Mitigation Strategy for feedback by partner agencies. This event was the culmination of a yearlong collaboration to develop the First Draft 2019 LHMP. Meeting participants were provided the 2019 mitigation strategy's pre-draft objectives and actions. Attendees helped the City to ensure that the 2019 mitigation strategy aligned with their agencies' strategic program goals. Partner representatives and City staff discussed mitigation approaches proposed in the pre-draft mitigation actions, identifying actions that were most supportive of their agencies' missions, as well as opportunities for partnership to implement mitigation initiatives. The City incorporated feedback from those partner agencies.

### Public Review of First Draft Plan

From December 18, 2018 through February 28, 2019 the City posted the First Draft Plan on the City website and at City libraries for review and comment by the Berkeley community. All of the City's 30+ commissions were invited to provide feedback on the Plan, as well as all community members.

This public review process is considered a key step in the City Council's adoption of the 2019 Local Hazard Mitigation Plan. See Element E: *Plan Adoption* for details on the public review process.

Note: Meeting minutes, sign-in sheets, and other supporting documents to described activities are provided for State and federal reviewers in Attachment 1: *Documentation*.

## **A.2 Stakeholder Engagement**

The Project Team relied heavily on input from neighboring communities, fellow government agencies, and institutional key partners throughout the 2019 plan development process.

The City of Berkeley's planning process termed neighboring communities, local, and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development, as well as other interested parties as "Institutional Key Partners." The Project Manager collaborated with these agencies to include detailed information about partners' hazard and risk assessments and mitigation initiatives in the hazard analysis section of the Plan. Additionally, Institutional Key Partners were invited to review and provide comment on proposed actions as part of the process to develop the First Draft 2019 LHMP. Institutional Key Partners were invited to participate in person in the planning process at the Institutional Community Partner Meeting on December 3, 2018.

Institutional Key Partners were also invited to provide feedback on the First Draft Plan as part of the public process. See A1: *Public Review of First Draft Plan*.

Stakeholders were contacted through email, phone, and in-person meetings. Participation was multi-phased and included opportunities to contribute to and provide feedback:

- At the 2019 LHMP Kickoff Meeting, before plan development began
- Through the Disaster Questionnaire (see A3 for details)
- Throughout drafting of the First Draft 2019 LHMP, through
  - Contribution of narratives to the Hazard Analysis
  - Opportunities to provide feedback on the internal draft Mitigation Strategy both online and in-person at the Institutional Community Partner Meeting
- During the Public Review of the First Draft Plan (see A1 for details)

Note: Meeting minutes, sign-in sheets, and other supporting documents to described activities are provided for State and federal reviewers in Attachment 1: *Documentation*.

### **A.3 Public Engagement during Drafting Stage**

In order to involve the public early in the mitigation planning process, the City of Berkeley's Office of Emergency Services designed and distributed a questionnaire. It included seven open-ended questions about hazard concerns, preparedness, perceptions about the role of government, and suggestions for what the City could do better. There were also seven demographic questions to capture who answered the survey and how responses may differ, depending on personal identities and or where one lives or visits in Berkeley.

The questionnaire was available on Berkeley Considers, an online forum the City uses for community discussion and commentary, from June until September 2018. The questionnaire was announced on the City website and forwarded to partners for distribution. Over 500 people responded to the questionnaire. The responses were aggregated and categorized into themes. The Core Project Team used and referenced these results when developing the hazard analysis and mitigation strategy.

Note: Questionnaire documentation is provided for State and federal reviewers in Attachment 1: *Documentation*.

### **A.4 Update of Technical Information**

The Project Manager worked with City staff to update information in the 2014 hazard analysis, accounting for new scientific research on hazards that could affect Berkeley, their areas of exposure and their potential impacts.

To update hazard analysis references to key infrastructure and programs not operated by the City, the Project Manager also worked with Institutional Key Partners outside of City government: both those identified in the 2014 Plan, as well as new partners identified for the 2019 Plan.

The Endnotes Section of the Element B: *Hazard Analysis* provides a detailed listing of technical information incorporated into the plan.

### **A.5 Ongoing Public Participation and Plan Maintenance**

The City's Disaster and Fire Safety Commission will serve as the advisory body for implementation of this Plan. This group was created by ordinance to advise the City Council on disaster-related issues. All meetings of this Commission are held in public. Staff will present progress on mitigation strategy implementation to this group on an annual basis.

The City will maintain the [www.CityofBerkeley.info/Mitigation](http://www.CityofBerkeley.info/Mitigation) website and the [Mitigation@CityofBerkeley.info](mailto:Mitigation@CityofBerkeley.info) email address. Community members will be able to submit feedback during the implementation of this plan through this website and email address.

Additionally, community members are able to write and mail or hand-deliver feedback to the City Manager's Office at any time. The City will also use the website as one means of reporting implementation progress to the community.

## **A.6 Plan Monitoring and Updates**

The City of Berkeley will monitor, evaluate, and update the 2019 LHMP's Hazard Analysis and Mitigation Strategy throughout the five-year plan cycle. The City will incorporate these efforts into a comprehensive plan evaluation and update for the 2024 LHMP. More specifics are discussed below.

### Hazard Analysis

The City's Office of Emergency Services (OES) monitors newly-emerging information that will inform updates to the Hazard Analysis of the LHMP, including:

- Type, location, and extent of all natural hazards covered in the 2014 LHMP, as well as newly-emerging hazards;
- Occurrences of hazards (inside and outside Berkeley) and estimated probabilities of future hazard events; and
- Hazard impacts and community vulnerabilities.

OES staff will continue to monitor relevant hazard occurrences and new scientific discoveries that may impact the 2019 LHMP's Hazard Analysis. OES will provide this information to City staff, partners, and the public through the Digital LHMP (<https://arccg.is/reqbG>) and through Berkeley Ready outreach programs.

### Actions in 2019 LHMP's Mitigation Strategy

Each action in the Mitigation Strategy identifies a Staff Lead. As part of their day-to-day work, Staff Leads will monitor, evaluate and report on the progress of their assigned LHMP actions at necessary meetings with other staff, institutional community partners, the Disaster Council, relevant City commissions, and the Berkeley City Council.

At the beginning of each calendar year the Office of Emergency Services will coordinate a monitoring, evaluation, and reporting effort for the entire LHMP. OES will collect an updated progress report from each identified Staff Lead for each action. The progress report will:

- Provide qualitative and quantitative evaluation of City progress on activities
- Identify any necessary changes to the action in order to more effectively achieve stated purpose and goals
- Identify new Plan actions to be incorporated into the Strategy

In this way the individual actions in the plan will be monitored, evaluated, and updated during the five-year cycle. The Office of Emergency Services will maintain this information in order to facilitate the process each year, as well as the comprehensive update of all elements of the 2019 LHMP (see below).

### Comprehensive Plan Evaluation and Update

Comprehensive plan evaluation update will occur if a disaster occurs, or no later than the 4-year mark of the 2019 plan (late 2023). In either case, OES will reconvene the Core Planning team to

perform a thorough evaluation of the plan, including the ongoing efforts to keep hazard analysis and mitigation action information up-to-date as described above.

Evaluation will include examination of:

- Significant development in or affecting Berkeley, in order to update the Hazard Analysis and Mitigation Strategy;
- Current data, scientific discoveries, and recent hazard events since plan adoption, in order to update hazard profiles and vulnerability assessments in the Hazard Analysis;
- New policy, priority, and planning changes affecting Berkeley, in order to update the Mitigation Strategy;
- Progress on actions in the 2019 Plan's mitigation strategy, in order to update plan goals, objectives, and mitigation actions for 2024.

The Core Project Team, coordinated by the Office of Emergency Services, will use these assessments to create the updated Internal First Draft 2024 LHMP. The Core Project Team will first share this internal document with Institutional Community Partners for review and feedback. Following their review and relevant changes, the Core Project Team will provide the First Draft 2024 LHMP to the Berkeley community for review. Public feedback, including that of Berkeley Commissions and individual community members, will inform development of the Final Draft 2024 LHMP, which will be provided for review to the California Board of Forestry, the California Governor's Office of Emergency Services, and then to the Federal Emergency Management Agency (FEMA).

Following receipt of feedback from the California Board of Forestry and approval pending adoption from FEMA, the 2024 LHMP will go to the City's Planning Commission and Disaster and Fire Safety Commission for recommendations to the City Council for adoption. The Berkeley City Council is the governing body that adopts the updates to the City of Berkeley Local Hazard Mitigation Plan.

The table on the following page summarizes the City's approach to monitoring, evaluating, and updating the 2019 LHMP.



	Hazard Analysis	2019 Mitigation Strategy: Actions	Comprehensive Plan Evaluation and Update
<b>WHO</b>	Office of Emergency Services	Staff Leads, with Office of Emergency Services as Coordinator	Core Project Team, with Office of Emergency Services as Lead
<b>WHEN</b>	Ongoing	Ongoing/Annually	Every 5 years Update process to start at least one year prior to plan expiration After a disaster event
<b>HOW</b>	Monitors hazard information Reports information to stakeholders and public through Digital LHMP and Berkeley Ready outreach programs	Staff Leads will monitor, evaluate and report on the progress of their assigned LHMP actions through day-to-day work OES collects progress reports on annual basis	Review/revise Plan accounting for: <ul style="list-style-type: none"> <li>• Development affecting Berkeley</li> <li>• Hazard/vulnerability data and recent hazard events</li> <li>• Policy, priority, and planning changes</li> <li>• Progress on actions in 2019 Mitigation Strategy</li> </ul>

## Element B Contents

B.	Hazard Analysis .....	7
B.1	Hazard Analysis Summary .....	8
B.1.a	Hazards Description .....	8
B.1.b	Identification of Hazards .....	9
B.1.c	Hazard Location .....	11
B.1.d	Hazard Extent .....	11
B.2	Previous Occurrences and Future Probabilities .....	11
B.3	Vulnerabilities .....	12
B.4	NFIP-Insured Structures .....	20
SECTION I: HAZARDS OF GREATEST CONCERN .....		21
B.5	Earthquake .....	21
B.5.a	Historical Earthquakes .....	21
B.5.b	Earthquake Hazard .....	21
B.5.c	Exposure and Vulnerability .....	44
B.5.d	Earthquake Risk and Loss Estimates .....	87
B.6	Wildland-Urban Interface Fire .....	93
B.6.a	Historical Wildland-Urban Interface Fires .....	93
B.6.b	Wildland-Urban Interface Fire Hazard .....	96
B.6.c	Exposure and Vulnerability .....	97
B.6.d	Wildland-Urban Interface Fire Risk and Loss Estimates .....	108
SECTION II: HAZARDS OF CONCERN .....		109
B.7	Rainfall-Triggered Landslide .....	109
B.7.a	Historical Rainfall-Triggered Landslides .....	109

B.7.b Rainfall-Triggered Landslide Hazard..... 109

B.7.c Exposure and Vulnerability..... 110

B.7.d Rainfall-Triggered Landslide Risk and Loss Estimates ..... 111

B.8 Floods..... 112

B.8.a Historical Floods ..... 112

B.8.b Flood Hazard..... 112

B.8.c Exposure and Vulnerability..... 114

B.8.d Flood Risk and Loss Estimates..... 128

B.9 Tsunami..... 130

B.9.a Historical Tsunamis..... 130

B.9.b Tsunami Hazard ..... 130

B.9.c Exposure and Vulnerability..... 131

B.9.d Tsunami Risk and Loss Estimates..... 138

SECTION III: MANMADE HAZARDS OF CONCERN..... 140

B.10 Climate Change..... 140

B.10.a Direct and Secondary Climate Change Impacts..... 141

B.10.b Climate Change Impacts to Natural Hazards of Concern ..... 148

B.11 Extreme Heat Events..... 153

B.11.a Historical extreme heat events ..... 153

B.11.b Extreme Heat Hazard..... 153

B.11.c Exposure and Vulnerability..... 156

B.11.d Extreme Heat Event Risk and Loss Estimates..... 160

B.12 Hazardous Materials Release ..... 161

B.12.a Historical Hazardous Materials Releases..... 161

B.12.b Hazardous Materials Release Hazard..... 161

B.12.c Exposure and Vulnerability..... 161

B.12.d Hazardous Materials Release Risk and Loss Estimates ..... 167

B.13 Terrorism..... 168

Endnotes ..... 169

## Tables in Section B: Hazard Analysis

Table 1.	Summary of Hazard Analysis .....	9
Table 2.	MMI descriptions .....	25
Table 3.	Berkeley Soft-Story Building Status as of December 2018.....	49
Table 4.	Chart of Berkeley Soft-Story Building Status as of December 2018.....	50
Table 5.	Transfer Tax Rebate Program .....	55
Table 6.	Key Berkeley Utility Systems .....	60
Table 7.	Sanitary Sewer System.....	62
Table 8.	Storm Drain System .....	63
Table 9.	Key Berkeley Transportation Systems.....	69
Table 10.	Curbs, Streets and the Solano Tunnel .....	71
Table 11.	Key Berkeley Communications Systems .....	74
Table 12.	Top 25 Berkeley Employers, by Number of Employees .....	86
Table 13.	History of Major Wildland-Urban Interface Fires in the Oakland/Berkeley Area 94	
Table 14.	Noteworthy BPWA Paths.....	105
Table 15.	2004 Flood Loss Analysis.....	128
Table 16.	Sea Level Rise Projections in year 2100.....	143
Table 17.	Predicted average number of extreme heat days in Berkeley by year .....	160
Table 18.	Berkeley industrial sites with large quantities of extremely hazardous substances .....	163

## Maps in Section B: Hazard Analysis

Map 1.	Regional faults and their location with respect to Berkeley.....	22
Map 2.	Modified Mercalli Intensity for HayWired Earthquake Scenario.....	26
Map 3.	California Geological Survey Earthquake Fault Planning Zone.....	29
Map 4.	California Geological Survey Earthquake-Induced Landslide Planning Zone.....	31
Map 5.	Active and potentially-active landslides in Berkeley hills (developed by Alan Kropp Associates and used with permission).....	33
Map 6.	Probability of Landslide in HayWired Earthquake Scenario.....	35
Map 7.	Level of Susceptibility to Liquefaction in Berkeley.....	38
Map 8.	Probabiliy of Liquefaction in Berkeley in HayWired Earthquake Scenario.....	40
Map 9.	Status of Soft Story Buildings Subject to Mandatory Retrofit (December 2018).	51
Map 10.	Berkeley Parcels with Unreinforced Masonry Building Types (June 2018).....	53
Map 11.	Updated Inventory of Potentially Seismically Vulnerable Buildings (June 2018) 58	
Map 12.	Gas Transmission Pipelines and Jet Fuel Line.....	66
Map 13.	Transportation Infrastructure in Berkeley.....	70
Map 14.	City of Berkeley Critical Facilities.....	80
Map 15.	Area burned by 1923 Berkeley Fire.....	95
Map 16.	California Department of Forestry and City of Berkeley Hazardous Fire Zones 98	
Map 17.	Pedestrian Pathways in Berkeley.....	104
Map 18.	Flood Insurance Rate Map – Berkeley Index.....	115
Map 19.	Panel 00014H.....	117
Map 20.	Panel 0018H.....	118
Map 21.	Panel 0019G.....	119
Map 22.	Panel 0052H.....	120
Map 23.	Panel 0056H.....	121

Map 24. Panel 0057G ..... 122

Map 25. Panel 0080G ..... 123

Map 26. Berkeley Area Watersheds ..... 125

Map 27. Berkeley Tsunami Inundation ..... 132

Map 28. Tsunami Evacuation Zones ..... 134

Map 29. Berkeley Harbor Map ..... 136

Map 30. Berkeley Shoreline Areas Prone to Permanent Inundation due to 2-ft of Sea  
Level Rise by year 2100 (Very likely scenario) ..... 144

Map 31. Berkeley Shoreline Areas Prone to Permanent Inundation due to 4-ft of Sea  
Level Rise by year 2100 (Likely scenario) ..... 145

Map 32. Berkeley Shoreline Areas Prone to Permanent Inundation due to 5.5-ft of Sea  
Level Rise by year 2100 (Not as likely scenario) ..... 146

Map 33. Comparison maps of Berkeley Shoreline with modeled 5.5 feet of sea level rise  
(left) and its compounded effects from a 25-year storm surge (right) ..... 147

Map 34. Percentage of tree coverage in City of Berkeley ..... 157

Map 35. Location of Cooling Centers in City of Berkeley ..... 159

Map 36. Level 1 Hazardous Materials Facilities and Transportation Systems ..... 165

## B. Hazard Analysis

To become disaster resilient, a community must first understand the existing hazards and their potential impacts. Berkeley is exposed to a number of natural and human-caused hazards that vary in their intensity and impacts on the city. This mitigation plan addresses six natural hazards: earthquake, wildland-urban interface (WUI) fire, flood, landslide, tsunami, and extreme heat. Each of these hazards can occur independently or in combination, and can also trigger secondary hazards.

Although this plan is focused on natural hazards, three human-caused hazards of concern are also discussed: hazardous materials release, climate change,<sup>1</sup> and terrorism. They are included because of their likelihood of occurrence and the magnitude of their potential consequences.

The analysis of hazards in this plan has the following components:

- Historical Events. Within recent history the city has experienced the effects of all hazards addressed in this plan. Descriptions of the impacts of these disasters help illustrate some of the types of damage they can cause.
- Hazard. Describes the ways that each hazard can damage the community, and maps the locations in Berkeley that are particularly prone to specific hazards, such as the “one-percent annual chance” floodplain. Areas that could experience secondary hazards, such as liquefaction following earthquakes, are also discussed.
- Exposure and Vulnerability. This plan identifies the people, buildings and infrastructure that exist in hazard zones. Vulnerability refers to the susceptibility to physical injury, harm, damage, or economic loss of the exposed people, buildings and infrastructure. City elements exposed to each hazard are listed and mapped, and their vulnerability is discussed. This section includes discussion of cascading hazards and impacts created by the primary hazard, for example utility disruption caused by damage from earthquake shaking.
- Risk and Loss Estimates. The expected damage to be caused by future hazard events is estimated quantitatively, when possible. For most hazards, specific figures are estimated for the damage and losses that could occur. Consequences of damage on city residents and visitors are explored.

The best available technical methods were used to estimate possible losses caused by various hazards. The City’s detailed GIS databases, which include carefully gathered information about building types, natural features, and important property uses, were extensively used to characterize the city’s hazards.



## B.1 Hazard Analysis Summary

First, this section summarizes the relative likelihood and severity of impact of each of the hazards identified in Sections B.5 – B.13. Next, Berkeley’s key vulnerabilities to each hazard are summarized.

### B.1.a Hazards Description

Sections B.5 – B.13 present hazards in Berkeley, describing their likelihood and detailing their potential consequences. Using a structure outlined by Saunders, Beban and Kilvington (2013 draft), the table below summarizes these hazards, their relative likelihoods, and the relative severities of their potential consequences.

Relative degrees of likelihood are described as:

- *Likely*: The event may occur several times in your lifetime, up to once every 50 years
- *Possible*: The event might occur once in your life time, Once every 51 – 100 years
- *Unlikely*: The event does occur somewhere from time to time, once every 101 – 1,000 years
- *Rare*: Possible but not expected to occur except in exceptional circumstances, once every 1,001 to 2,500 years
- *Very rare*: Conceivable but highly unlikely to occur, once every 2,500+ years

Relative severity of hazard impacts is described using the following terms, which are defined by matrix of factors, including Social/Cultural, Buildings, Critical Buildings, Lifelines, Economic and Health and Safety:

- *Catastrophic*
- *Major*
- *Moderate*
- *Minor*
- *Insignificant*

**Table 1. Summary of Hazard Analysis**

<b>Hazard</b>	<b>Likelihood</b>	<b>Severity of Impact</b>
<b>Earthquake</b>	Likely	Catastrophic
<b>Wildland-Urban Interface Fire</b>	Likely	Catastrophic
<b>Rainfall-Triggered Landslide</b>	Likely	Moderate
<b>Floods</b>	Likely	Minor
<b>Tsunami</b>	Possible	Moderate
<b>Climate Change</b>	Likely	Moderate to Catastrophic*
<b>Extreme Heat</b>	Likely	Moderate to Catastrophic*

*\*Consequence levels for climate change and extreme heat depend highly on the success of global climate mitigation over the coming decades. If greenhouse gas emissions are significantly reduced, and carbon sequestration is increased, impacts may be moderate. If emissions remain steady at present levels or even increase, consequences may increase to catastrophic, although effects will differ widely over the globe.<sup>23</sup>*

Hazardous materials release is described only as a cascading impact of a natural hazard. Because this plan focuses on natural hazards as emphasized in DMA 2000, likelihood and consequence levels for hazardous materials release and terrorism are not defined.

## **B.1.b Identification of Hazards**

### **B.1.b.i Natural Hazards**

The natural hazards included in this plan were first identified through a community-based process during the revision of the Disaster Preparedness and Safety Element of the City's General Plan, adopted in 2002. The General Plan is the result of four drafts, approximately 100 hours of public workshops, meetings, and hearings, almost 1,000 pages of policy suggestions submitted by Berkeley citizens, and the hard work and dedication of the Berkeley community and Berkeley Planning Commission<sup>4</sup>. Specialists from the California Geological Survey, US Geological Survey, UC Berkeley, the Earthquake Engineering Research Institute (EERI), the Association of Bay Area Governments (ABAG) and many others worked with the city on programs and research that were incorporated in the Disaster Preparedness and Safety Element.

In 2019, extreme heat was added as a specific hazard to the mitigation plan.

### **B.1.b.ii *Manmade Hazards***

The focus of this mitigation plan is on natural hazards as emphasized in the Disaster Mitigation Act of 2000 (DMA 2000).<sup>5</sup> However, the plan addresses four manmade hazards—climate change, extreme heat events, hazardous materials release, and terrorism.

Climate change was specifically identified as a hazard of concern in the City’s 2009 Climate Action Plan, and in 2014, climate change was added to the mitigation plan. Newly-available maps and information now allow us to identify potential climate change impacts, and to consider related mitigation actions. The 2019 LHMP specifies extreme heat events as an additional hazard of concern.

Hazardous materials release is addressed in this mitigation plan as a potential impact from a natural hazard. Terrorism is identified as a hazard of concern but is not analyzed in depth. Other manmade hazards that could occur in Berkeley, such as ground water contamination, are not included in this plan, but may be addressed by other City programs in ongoing regulatory processes, such as activities of the Toxics Management Division.

The worst potential disaster that Berkeley could face involves multiple hazards happening at the same time. A major earthquake could trigger significant landslides, spark fires and release toxic chemicals. If an earthquake occurred during the rainy winter season, landslides would be worsened and flooding could occur, exacerbated by damaged creek culverts and storm drains. In addition, the severity and frequency of extreme heat events, flooding, and wildfires are worsening over time due to climate change. City staff conducts planning and training to respond to challenging, multi-hazard events such as these. In addition to looking at each hazard individually, this plan explores how the hazards interact, and how mitigation activities for each hazard impact the overall disaster risk in Berkeley.

### **B.1.b.iii *Public Health Impacts of Identified Hazards***

The City’s Public Health and Environmental Health Divisions have provided guidance on the public health impacts associated with hazards included in this plan. For example, drinking water quality is likely to be impaired after a major earthquake or flood, and air quality can be affected by a fire. Impure water and poor air quality have public health impacts, and providing accurate and timely information along with disease prevention measures are core public health functions. Power outages can threaten the lives of people with disabilities and people with access and functional needs that rely on electrical equipment.

In 2014, the Public Health Division participated in the Bay Area Regional Risk-Based Assessment of public health impacts of a variety of hazards. The assessment for Berkeley focused on the health impacts of a severe or moderate earthquake, a wildland/urban interface fire, and a moderate influenza pandemic. In addition to evaluating these categories of risk, the assessment focused on three sub-populations considered most vulnerable in a disaster: 1) seniors and homebound individuals with disabilities, 2) individuals with mental/behavioral health illness, and 3) UC Berkeley students in multi-unit residential housing. The assessment helps to inform our public health emergency preparedness and mitigation efforts. It also helped to engage our partners with recommendations for improving their own preparedness plans as they serve these

most vulnerable populations.

#### **B.1.b.iv *Access and Functional Needs***

While the assessment mentioned above focused on those three sub-populations specifically, this plan also recognizes that there are many individuals that are still disproportionately vulnerable during disasters. People with access and functional needs are defined as community members who may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities, live in institutionalized settings, are elderly, are children, are from diverse cultures, have limited English proficiency, or are non-English speaking, or are transportation disadvantaged. An individual with a disability is defined by the ADA as a person who had a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered.

#### **B.1.b.v *Hazards Not Considered in the Plan***

Other natural hazards that are extremely rare in Berkeley are not included in this plan; these include prolonged low temperatures, heavy rainfall and hail; high winds; and small tornados and waterspouts. This plan does not focus on these hazards because they are not as likely to occur or to create damage that is as serious as the hazards addressed in detail. California is not generally exposed to the large tornado events experienced in the Midwest. Berkeley's geographic location and moderate climate typically shelters it from prolonged storms and extremes of cold and heat. Ocean temperatures moderate the power of tropical storms, lessening the effects of low barometric pressure and storm surge. However, these hazards may become more prevalent in Berkeley with the changing climate.

Naturally-occurring communicable disease outbreaks (e.g. a flu pandemic; measles; norovirus) do pose a significant risk to the Berkeley community, but are not addressed in this plan. Mitigation activities for communicable disease include, for example, measures to provide and promote a high baseline level of immunization in the community, both for routine childhood immunizations and for annual seasonal flu vaccination. The City's Public Health Division leads Berkeley's communicable disease and public health emergency preparedness planning, in conjunction with State and Bay Area local health jurisdictions.

#### **B.1.c Hazard Location**

Sections B.5 – B.13 detail the locations of all hazards addressed in this hazard analysis.

#### **B.1.d Hazard Extent**

Sections B.5 – B.13 detail the extent of all hazards addressed in this hazard analysis.

### **B.2 *Previous Occurrences and Future Probabilities***

Sections B.5 – B.13 detail the previous occurrences in Berkeley of each hazard in this hazard analysis and examine the probability of future hazard events in Berkeley. Probabilities are

summarized in Table 1 above.

### **B.3 Vulnerabilities**

For each hazard presented in Sections B.5 – B.13, the following list summarizes Berkeley’s key vulnerabilities to the structures, systems, populations, and other community assets that are susceptible to damage and loss from hazard events. For each hazard, the following information is identified:

Numbers (1, 2, 3, etc.) define the category of the vulnerability being described. If the City of Berkeley does not own or control the category, the responsible entity is included. Below each number, letters (a, b, c, etc.) highlight vulnerabilities identified in this plan.

This list identifies both primary and cascading vulnerabilities. Primary vulnerabilities are directly related to the primary natural hazard, such as building vulnerabilities to earthquake shaking. Cascading vulnerabilities result from primary vulnerabilities, and are included in the list below. For example, structures that are not seismically sound have increased vulnerability to fire following earthquake. This format demonstrates how mitigating primary vulnerabilities can also mitigate cascading impacts.

This list highlights key vulnerabilities identified through this planning process; but it is not all-inclusive.

*List of Vulnerabilities:*

#### **B.3.a.i Earthquake (Including shaking, surface fault rupture, liquefaction, seismically- triggered landslides, and fire following earthquake)**

##### 1. Structures

- a. City buildings vulnerable to collapse from exposure to earthquake shaking:
  - i. Old City Hall
  - ii. Veterans Memorial Building
  - iii. Un-assessed City buildings may be vulnerable to earthquake shaking and ground failure
- b. Privately-owned buildings
  - i. Soft-story buildings: 70 unretrofitted soft-story buildings vulnerable to damage/collapse from exposure to earthquake shaking
  - ii. 6 unretrofitted unreinforced masonry (URM) buildings vulnerable to collapse from exposure to earthquake shaking. 274 retrofitted URM buildings vulnerable to moderate or greater damage from exposure to earthquake shaking
  - iii. Non-ductile concrete buildings are vulnerable to collapse and perform poorly during earthquakes.
  - iv. Rigid wall flexible diaphragm buildings including tilt up buildings may also be highly susceptible to adverse effects from earthquakes, such as collapse during ground shaking.

- v. If buildings are damaged/collapse from exposure to earthquake shaking or ground failure:
  - 1. Buildings are more vulnerable to gas line rupture at service connections
  - 2. Buildings are more vulnerable to fire following earthquake
  - 3. People more vulnerable to injury/death from exposure to building damage/collapse
  - 4. People with disabilities and people with access and functional needs, students, and low income individuals may live in older housing units that are more vulnerable to collapse or damage from earthquakes.
  - 5. People are more vulnerable to illness from exposure to asbestos or encapsulated asbestos, which may dislodge in an earthquake
- c. Healthcare Facilities (Alta Bates Summit)
  - i. Five Alta Bates Campus buildings are vulnerable to damage from exposure to earthquake shaking
  - ii. Four buildings on the Herrick campus are vulnerable to major damage from earthquake shaking
  - iii. People in and around four buildings on the Herrick campus are vulnerable to injury or death from exposure to seismic building damage
- d. School Facilities (Berkeley Unified School District)
  - i. Unreinforced Masonry Building at BUSD Corporation Yard vulnerable to damage from earthquake shaking
  - ii. People in and around Unreinforced Masonry Building at BUSD Corporation Yard are vulnerable to injury/death from exposure to seismic building damage
- e. BART
  - i. BART tracks in Berkeley vulnerable to damage from earthquake shaking
- f. Railroad (Union Pacific)
  - i. Railroad infrastructure vulnerable to damage from exposure to earthquake shaking and liquefaction (specific vulnerability unknown)
  - ii. If railroad infrastructure is damaged due to earthquake shaking and/or liquefaction:
    - 1. Trains more vulnerable to accidents
    - 2. People more vulnerable to illness/injury from exposure to hazardous materials, if trains carrying hazardous materials
- g. Highways and Interstate (Caltrans)
  - i. Interstate 80 vulnerable to damage from exposure to liquefaction
  - ii. Parts of Highways 13 and 24 vulnerable to damage from exposure to liquefaction
  - iii. Overpasses at Ashby and University Avenues vulnerable to damage from exposure to earthquake shaking (but are not expected to collapse).
  - iv. If roads are damaged from earthquake shaking and/or liquefaction:
    - 1. People in vehicles more vulnerable to injury/death in accidents
    - 2. People vulnerable to injury/death from exposure to hazardous materials, if transportation accidents occur involving vehicles carrying hazardous materials
- h. Streets/Curbs/Solano Tunnel

- i. Solano Tunnel vulnerable to isolation if fault rupture or earthquake- induced landslide in surrounding areas cause road blocks
    - ii. Streets and curbs vulnerable to damage from exposure to liquefaction, fault rupture and earthquake-induced landslides
    - iii. Significant damage to streets and curbs may prevent people with disabilities and people with access and functional needs from navigating to their destinations
    - iv. If significant street damage impedes access by emergency responders to fight fires, perform rescues, access utilities or perform other emergency response actions:
      - 1. People vulnerable to additional injuries/death
      - 2. Structures and infrastructure vulnerable to additional damage
  - i. Hazardous Materials
    - i. If earthquake shaking causes lab spills, storage tank failures and/or industrial equipment problems, people in Berkeley vulnerable to injury/death from exposure to hazardous materials release
2. Systems
- a. Water system (EBMUD)
    - i. Water pipes vulnerable to rupture from exposure to liquefaction, landslide-induced earthquake and fault rupture
    - ii. If water pipes rupture due to earthquake shaking or ground failure, structures more vulnerable to damage/destruction from fire following earthquake.
    - iii. Depending on the severity of earth movement, water and sewer lines may break, and the safety of the drinking water supply may be compromised.
  - b. Sanitary Sewer System
    - i. Sanitary sewer system vulnerable to blockage/pipe rupture/damage from exposure to liquefaction, landslide-induced earthquake and fault rupture
    - ii. If sanitary sewer system is blocked/ruptured/damage from seismic ground failure, roads and buildings more vulnerable to sinkhole
  - c. Storm Drain System
    - i. Storm drain system vulnerable to blockage/rupture/other damage from exposure to liquefaction, landslide-induced earthquake and fault rupture
  - d. Creek Culverts
    - i. In an earthquake, there is a strong possibility that some of these culverts may be damaged and, in some cases, collapse.
  - e. Electricity System (PG&E)
    - i. Utility poles vulnerable to toppling from exposure to earthquake shaking and from exposure to liquefaction, landslide-induced earthquake and fault rupture
    - ii. Aboveground utility lines vulnerable from exposure to falling trees and structure collapse from earthquake shaking and from exposure to liquefaction, landslide-induced earthquake and fault rupture
    - iii. PG&E Electrical substations vulnerable to damage from exposure to earthquake shaking and from exposure to liquefaction, landslide- induced earthquake and fault rupture
    - iv. Underground cables vulnerable to rupture from exposure to liquefaction,

- landslide-induced earthquake and fault rupture
- v. If power is lost, there will be many impacts to vulnerable City and private infrastructure
- vi. Interruptions in electrical power may jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival
- f. Natural Gas System (PG&E)
  - i. Gas transmission pipeline, distribution lines and service lines and valves in west Berkeley vulnerable rupture from exposure to liquefaction
  - ii. Gas distribution lines, service lines and valves vulnerable to rupture from exposure to earthquake-induced landslides and fault rupture
  - iii. If gas system ruptures occur, fire following earthquake is more likely, and:
    - 1. Infrastructure/buildings are more vulnerable to damage/destruction
    - 2. People are more vulnerable to injury/death
- g. Aviation Fuel System (Kinder Morgan)
  - i. Exposed to liquefaction (specific vulnerability unknown)
- h. Communication Systems
  - i. Land line telephone distribution system and cable system use utility poles, which are vulnerable to toppling from exposure to earthquake shaking and ground failure
  - ii. Underground communication lines vulnerable to rupture from exposure to earthquake-induced landslides, fault rupture and liquefaction
  - iii. Mobile phone system antennae vulnerable to:
  - iv. Damage from earthquake shaking
  - v. Power outage from damage to electrical infrastructure (vulnerability increased if generators not onsite)
    - 1. Interruptions in electrical power jeopardize people with access and functional needs that rely on electrical equipment for survival
  - vi. If communication systems are damaged due to earthquake shaking and ground failure:
    - 1. Cellular voice communication may be unusable due to earthquake impacts, combined with high demand. Voice communication is more vulnerable than SMS text messaging systems.
    - 2. Cable customers may experience a total loss of video service, and total loss or severe network congestion of voice and data services.
    - 3. People with disabilities and people with access and functional needs that require assistance from others may not be able to reach them
- 3. Populations
  - a. People in Berkeley are exposed to ground shaking, landslides, liquefaction, in addition to fire following earthquake
  - b. People with disabilities and people with access and functional needs may be separated from their caregivers and may need assistance
  - c. A number of the cascading impacts of earthquake on people are mentioned above in the relevant section

### **B.3.a.ii Wildland-Urban Interface Fire**



1. Structures
  - a. 8,300 properties in Fire Zones 2 and 3 vulnerable to damage/destruction from exposure to WUI fire
  - b. 215 dwelling units in Fire Zone 3 - Panoramic Hill area (280 including Oakland units) especially vulnerable to damage/destruction from exposure to WUI fire, due to undersized water main and limited access routes for firefighters
  - c. Wooden buildings with narrow side yards and dense vegetation in Fire Zone 1 vulnerable to damage/destruction from exposure to a WUI fire beginning in Fire Zone 2 or 3
  - d. People with access and functional needs, students, and low income individuals may live in older housing units that do not have the most up to date safety features.
  - e.
2. Populations
  - a. Residents and firefighters in Fire Zone 2 vulnerable to injury/death from exposure to WUI fire
  - b. 520 residents in Panoramic Hill area (620 including Oakland residents) especially vulnerable to injury and death from exposure to WUI fire, due to limited access/egress routes
  - c. People with disabilities and people with access and functional needs may be separated from their caregivers and may need assistance
  - d. People with disabilities and people with access and functional needs may not have immediate transportation options to evacuate quickly
  - e. People with disabilities and people with access and functional needs face physical and socioeconomic barriers that may prevent them from participating certain mitigation activities, such as vegetation management.
  - f. Berkeley residents and visitors vulnerable to eye and respiratory illnesses from exposure to air pollution caused by large WUI fires
3. Electricity system (PG&E)
  - a. Cascading Vulnerabilities
    - i. If exposed to extreme heat from WUI fire:
      1. Utility poles vulnerable to toppling
      2. Aboveground utility lines vulnerable to burning
      3. Underground cables vulnerable to melting
    - ii. Interruptions in electrical power jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival
4. Natural Gas System (PG&E)
  - a. Gas service connections vulnerable to rupture in buildings exposed to WUI fire
  - b. Structures, Infrastructure and People/Natural Gas System (PG&E)
  - c. People, structures and infrastructure in areas exposed to gas line rupture vulnerable to additional fire exposure
5. Communication Infrastructure (AT&T)
  - a. Land line telephone distribution system uses utility poles, which are vulnerable to toppling if exposed to heat from WUI fire.
  - b. People with disabilities and people with access and functional needs that require assistance from others may not be able to reach them
6. Streets and curbs

- a. Streets and curbs in Fire Zones 2 and 3 vulnerable to damage/destruction from exposure to WUI fire
- b. Significant damage to streets and curbs may prevent people with disabilities and people with access and functional needs from navigating to their destinations
- 7. Storm drain system
  - a. Drainage structures in Fire Zones 2 and 3 vulnerable to damage/destruction from exposure to WUI fire
- 8. Structures and Infrastructure
  - a. Structures and infrastructure in fire-burned areas in Fire Zones 2 and 3 vulnerable to damage/destruction from exposure to landslide and flooding

### **B.3.a.iii *Rainfall-triggered landslides***

- 1. Structures
  - a. Approximately 6,000 structures vulnerable to damage or destruction from exposure to landslide
- 2. Systems
  - a. Water system (EBMUD)
    - i. Water pipes vulnerable to rupture from exposure to landslide
  - b. Sanitary Sewer System
    - i. Sanitary sewer system pipes vulnerable to rupture from exposure to landslide
  - c. Storm Drain System
    - i. Storm drain system vulnerable to blockage/rupture/other damage from exposure to landslide
  - d. Electricity System (PG&E)
    - i. Utility poles and aboveground utility lines vulnerable to toppling from exposure to landslide
    - ii. Underground cables vulnerable to rupture from exposure to landslide
    - iii. Interruptions in electrical power jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival
  - e. Natural Gas System (PG&E)
    - i. Gas distribution and service lines and valves in Berkeley hills vulnerable to rupture from exposure to landslide

### **B.3.a.iv *Floods***

- 1. Structures
  - a. 475 structures vulnerable to damage to first floor and basement finishes, contents and appliances from exposure to up to 1 foot of flooding. 200 additional structures, also primarily in the City's west, are vulnerable to damage from exposure from up to two feet of flooding.
  - b. Streets, structures and infrastructure in the Potter Watershed are vulnerable to damage from exposure to localized flooding in the following locations:
    - i. San Pablo Avenue between Ward and Murray
    - ii. California Street between Woolsey and Harmon
    - iii. Woolsey Street between California and Adeline
    - iv. Woolsey Street at Dana
    - v. Ashby Avenue between California and King

- vi. Martin Luther King, Jr. Way between Russell and Woolsey
- vii. Parker Street between Seventh and Fourth
- viii. Fulton Street at Derby
- ix. Ellsworth Street between Blake and Parker
- x. Telegraph Avenue between Ashby and Woolsey
- xi. Telegraph Avenue at Stuart
- xii. College Avenue at Dwight
- c. Streets, structures and infrastructure in the Cordonices Watershed are vulnerable to damage from exposure to localized flooding in the following locations:
  - i. Second Street, Creek corridor to Gilman
  - ii. Railroad tracks, Creek corridor to Gilman and to Albany
  - iii. Gilman Street between Sixth and Second
  - iv. Codornices Creek at Sixth, at most street crossings east of San Pablo, at Glen
  - v. Ninth Street between Harrison and Creek Corridor
  - vi. Monterey Ave between Posen and Hopkins
  - vii. Hopkins Street at Carlotta
  - viii. The Alameda between Napa and Yolo
  - ix. Sonoma Ave between Fresno and Hopkins
  - x. Spruce Street, Eunice to Creek corridor
  - xi. Euclid Ave, Cragmont to Codornices Park
  - xii. Cragmont, Euclid to Regal
  - xiii. Various locations on La Loma, Glendale, Campus Drive, Queens, Shasta Road

### **B.3.a.v *Tsunami***

1. Structures
  - a. City buildings exposed to tsunami inundation (the extent of each building's vulnerability is unknown)
    - i. Dona Spring Animal Shelter
    - ii. Marina Boat Docks
    - iii. Berkeley Yacht Club
    - iv. Shorebird Nature Center
    - v. Marina Corporation Yard
    - vi. Marina Administration Building
  - b. Privately-owned structures in the Marina and on the western edge of Berkeley exposed to tsunami inundation. The extent of each building's vulnerability is unknown.
2. Populations
  - a. Estimated 23 traditional households and over 200 individual Marina boat residents are exposed to tsunami inundation. Specific vulnerability is unknown.
  - b. Estimated that staff/customers at 77 businesses are exposed to tsunami inundation. Staff and guests at the DoubleTree hotel alone may account for 600+ people.
  - c. Estimated that 1,664 employees at four government offices are exposed to tsunami inundation. Specific vulnerability unknown.
  - d. People with disabilities and people with access and functional needs may not have

immediate transportation options to evacuate quickly.

3. Systems
  - a. Gas Dock, Docks B-K, and Dock O have moderate vulnerability to some tsunami events
  - b. Key roads exposed to tsunami inundation:
    - i. Ramps to University Avenue Bridge
    - ii. Frontage road north to Gilman Street
    - iii. Frontage road south to Ashby Avenue/CA-13
    - iv. Interstate 80
    - v. Ramps to I-80 Bicycle/Pedestrian overcrossing: Specific vulnerability is unknown.
4. Other community assets
  - a. 1,000 boats in Marina slips exposed to tsunami inundation. Specific vulnerability unknown.

### **B.3.a.vi *Climate Change***

1. Structures
  - a. Structures in low-lying areas around Berkeley Aquatic Park, as well as land around the Berkeley Marina and infrastructure east of the highway along 2nd Street, are exposed to sea level rise. Specific vulnerability is unknown.
  - b. Sea level rise will cause the groundwater table and stream water levels to rise, increasing the structures exposed to liquefaction in an earthquake. Specific increase in vulnerability unknown.
  - c. Rising sea levels will increase the structures exposed to tsunami inundation. Specific increase in vulnerability unknown.
  - d. Increases in the intensity and frequency of winter storms due to climate change will increase exposure to landslides for structures in the Berkeley hills. Specific increase in vulnerability unknown.
  - e. More structures will become vulnerable to damage from exposure to flooding
2. Systems
  - a. Flooding resulting from sea level rise in combination with severe storms may threaten natural gas pipelines regionally. This can lead to disrupted service and the leakage of methane gas from the system. Methane is both a health and safety hazard as well as a highly potent greenhouse gas, further contributing to climate change.
  - b. Drought affects local water supply for urban, agricultural, and environmental uses, and can also increase wildfire hazard, and may be correlated with high heat conditions. Climate change is likely to exacerbate the occurrence of prolonged droughts.
3. Populations
  - a. People vulnerable to increased incidences of West Nile virus, human hanta virus, and Lyme disease from increased exposure to disease vectors, caused by increases in air temperature and changes in precipitation.
  - b. Climate change is likely to exacerbate the natural hazards of concern identified in the plan, making more people vulnerable to their impacts.

### B.3.a.vii *Extreme Heat*

1. Structures
  - a. High temperatures can damage critical transportation infrastructure, such as roads.
2. Populations
  - a. People with disabilities, people with access and functional needs, people with chronic diseases, the elderly, and children under five are the most at risk to heat-related illnesses.
  - b. Communities of color, people with low incomes, people with disabilities, and people with access and functional needs suffer during extreme because of lack of access to common heat adaptation strategies, such as air conditioning.
3. Systems
  - a. Extreme heat often leads to power outages because of the extra demand on the power grid.
  - b. Interruptions in electrical power jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival
4. Other community assets
  - a. Extreme heat can cause stagnant air conditions and ground-level ozone.
  - b. Extreme heat dries out vegetation.
    - i. Cascading Vulnerability
      1. Dry vegetation can act as fire fuel, promoting spread of WUI fires.

## B.4 *NFIP-Insured Structures*

The City of Berkeley does not have NFIP-insured structures that have been repetitively damaged by floods.

## SECTION I: HAZARDS OF GREATEST CONCERN

Earthquakes and wildland-urban interface (WUI) fires are the hazards of greatest concern to Berkeley. Both of these hazards have a relatively high likelihood of occurrence and the potential for widespread damage within the city and the greater east bay region. Berkeley is committed to reducing the impact of these hazards on the city, and therefore they are the primary focus of the mitigation actions identified in Element C: *Mitigation Strategy* of this plan.

### B.5 Earthquake

#### B.5.a Historical Earthquakes

Destructive earthquakes struck the Bay Area in 1838, 1868, 1898, 1906, 1911, 1989, and 2014. Impacts of the earlier earthquakes in Berkeley are not well documented, but the damage of the 2014 Magnitude (M) 6.0 South Napa Earthquake is fresh in the memory of many Berkeley residents. It took the lives of two people, injured 300 others, and caused moderate to severe damage to more than 2,000 structures.<sup>6</sup> Electricity and water services sustained disruptions and there was minor damage to roads, water and natural gas lines and wastewater treatment facilities.

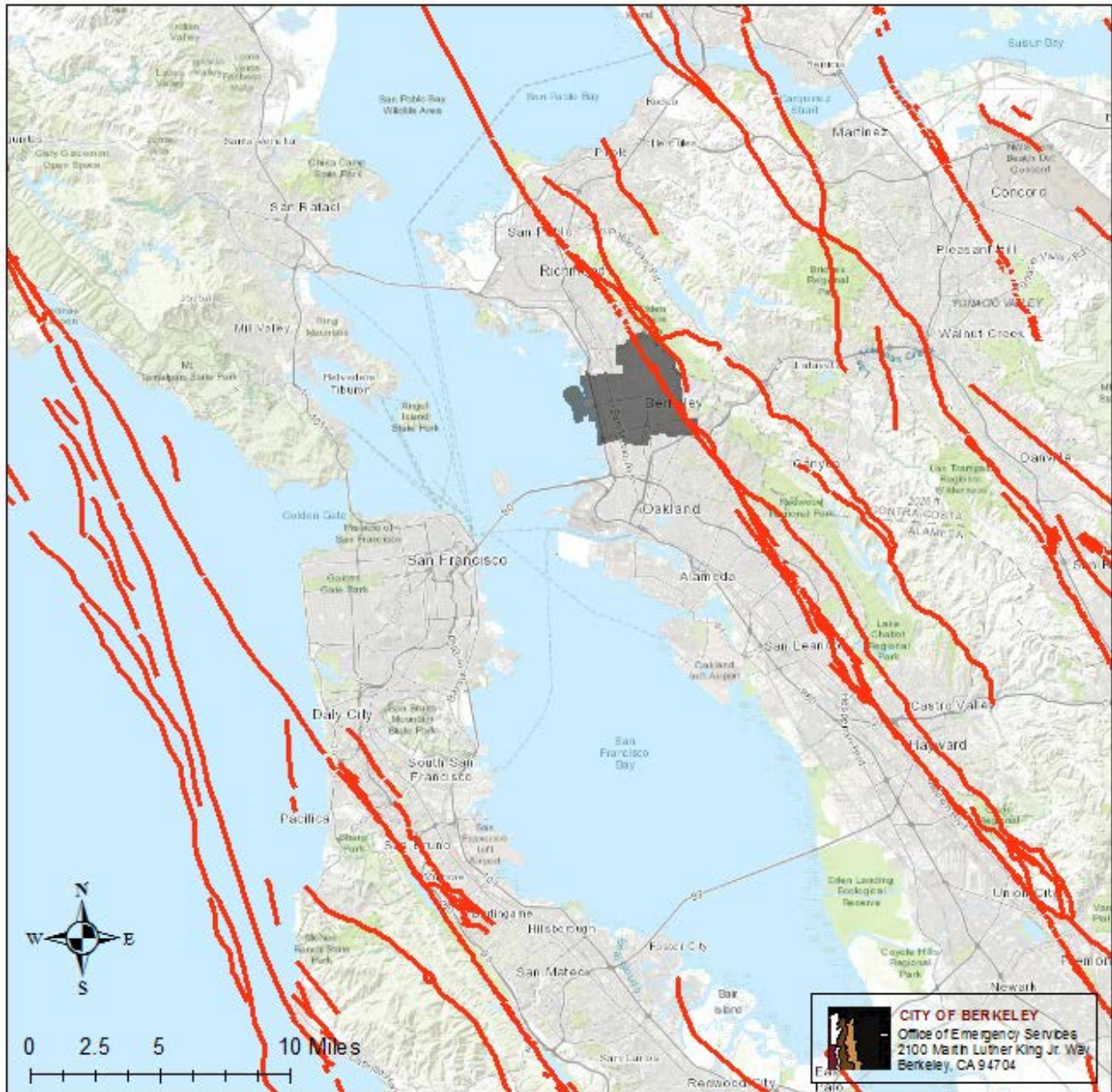
The 1989 Loma Prieta earthquake also informs the Bay Area's understanding of earthquakes. Sixty-two people died in the Bay Area as a direct result of this earthquake. Most of the fatalities, 42, were caused by the collapse of a two-level elevated highway in Oakland only a few miles from the Berkeley city limits. Damage in the City of Berkeley was minor in comparison to many of its neighbors. Many residential structures experienced collapse of unreinforced masonry chimneys, and new cracks were found in the Martin Luther King, Jr. Civic Center Building. The earthquake epicenter was far from Berkeley, but region-wide impacts and disruption increased the Berkeley community's awareness of the high risk Berkeley faces from much closer earthquakes.

The 1906 San Francisco Earthquake caused structural damage in Berkeley, including chimney cracking and collapse, and considerable damage to some public buildings including Berkeley High School structures.<sup>7</sup> Other "small" earthquakes in Berkeley over the years have caused slight damage to some buildings.

#### B.5.b Earthquake Hazard

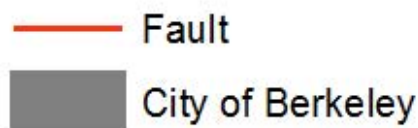
Map 1 shows the City of Berkeley and its proximity to known active geologic faults in the San Francisco Bay Region. This map shows most the San Francisco Bay Area, with the City of Berkeley shaded in dark gray. Many red lines move across the map. One line moves from south to east from the Pacific coast down the Peninsula, and another set of lines moves west to south-east down the East Bay. One line, the Hayward fault, of particular concern, stretches from the middle of San Pablo Bay, crosses directly through the eastern section of Berkeley, and terminates in Hayward. A large earthquake on any of the illustrated faults could impact Berkeley. For example, the 1989 M 6.9 Loma Prieta earthquake was a rupture of the San Andreas fault, and the 2014 M 6.0 South Napa earthquakes occurred along the West Napa fault.

Map 1. *Regional faults and their location with respect to Berkeley*



Source: In 2012, USGS mapped multiple faults in the region that can produce damaging shaking in the region. (Shapefiles and description from ABAG website)

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, ©



USGS states that there is a 72% probability of one or more M 6.7 or greater earthquakes from 2014 to 2043 in the San Francisco Bay Region.<sup>8</sup> There is a 33% chance that a 6.7 or greater will occur on the Hayward fault system between 2014 and 2043.<sup>9</sup> This means that many Berkeley residents will experience a severe earthquake in their lifetime.

To provide a historical context, the 1994 Northridge earthquake, which caused an economic loss of \$40 billion dollars,<sup>10</sup> was a M 6.7 earthquake. This strength of earthquake in the Bay Area would produce strong shaking and ground failure throughout the region, causing significant damage in nearly every Bay Area city and county.

### **Earthquake Scenarios**

Scenarios are used to help us understand and prepare for disasters, by painting a detailed, vivid, realistic picture of what it would be like if such an event occurred under current social and economic conditions. Scenarios are not predictions, and should be treated as a tool to drive and support the hazard mitigation planning process.

HAZUS, an earthquake loss estimation program developed by FEMA, was used to estimate damage to buildings, economic losses, deaths and injuries, and shelter requirements after an earthquake. This plan includes information from both a 2004 earthquake scenario and the 2018 HayWired scenario developed by the USGS to help illustrate the potential impacts of a catastrophic earthquake near Berkeley.



### B.5.b.i *Ground Shaking*

The most significant physical characteristic of a major earthquake is ground shaking. During an earthquake, the ground can shake for a few seconds or up to a minute or more. The strength and duration of ground shaking is affected by many factors, including the types of soils underlying a city, and the distance, size, depth, and direction of the fault rupture that caused the quake.

The strongest shaking is typically close to the fault where the earthquake occurs. Horizontal shaking in particular causes most earthquake damage, because structures often have inadequate resistance to this type of motion.

Weak soils, such as bay mud and fill at the city's waterfront, also experience strong shaking in earthquakes, even from distant quakes. According to the USGS, as seismic waves pass from rock to soil, they slow down but get bigger. Hence a soft, loose soil may shake more intensely than hard rock at the same distance from the same earthquake. An extreme example for this type of amplification was in the Marina district of San Francisco during the 1989 Loma Prieta earthquake. That earthquake was 100 kilometers (60 miles) from San Francisco, and most of the Bay Area escaped serious damage. However, some sites on landfill or soft soils, like San Francisco's Marina district, experienced significant shaking.

#### **Magnitude and Intensity<sup>11</sup>**

Two commonly-used scales represent different earthquake characteristics: magnitude and intensity.

##### Magnitude

An earthquake has a single magnitude, which indicates the overall size and energy released by the earthquake. Magnitude is measured using moment magnitude (M).

##### Intensity

In the same earthquake, different locations will experience different amounts of shaking. The shaking experienced at different locations varies based on:

- The earthquake's overall magnitude
- The distance from the fault that ruptured in the earthquake
- The ground type: thick valley deposits shake longer and harder than rock.

Intensity measures the strength of earthquake shaking at a particular location. Intensity is measured using the Modified Mercalli Intensity (MMI) scale. Intensity is based on observed effects. The MMI value assigned to a specific site after an earthquake provides a more meaningful measure of the earthquake's severity at that location than the magnitude, which applies one value to the entire earthquake.

As shown in Table 2, the MMI scale is composed of twelve increasing levels of intensity that range from imperceptible shaking to catastrophic destruction. Lower numbers on the intensity scale generally deal with the manner in which the earthquake is felt by people. Higher numbers on the scale are based on observed structural damage.

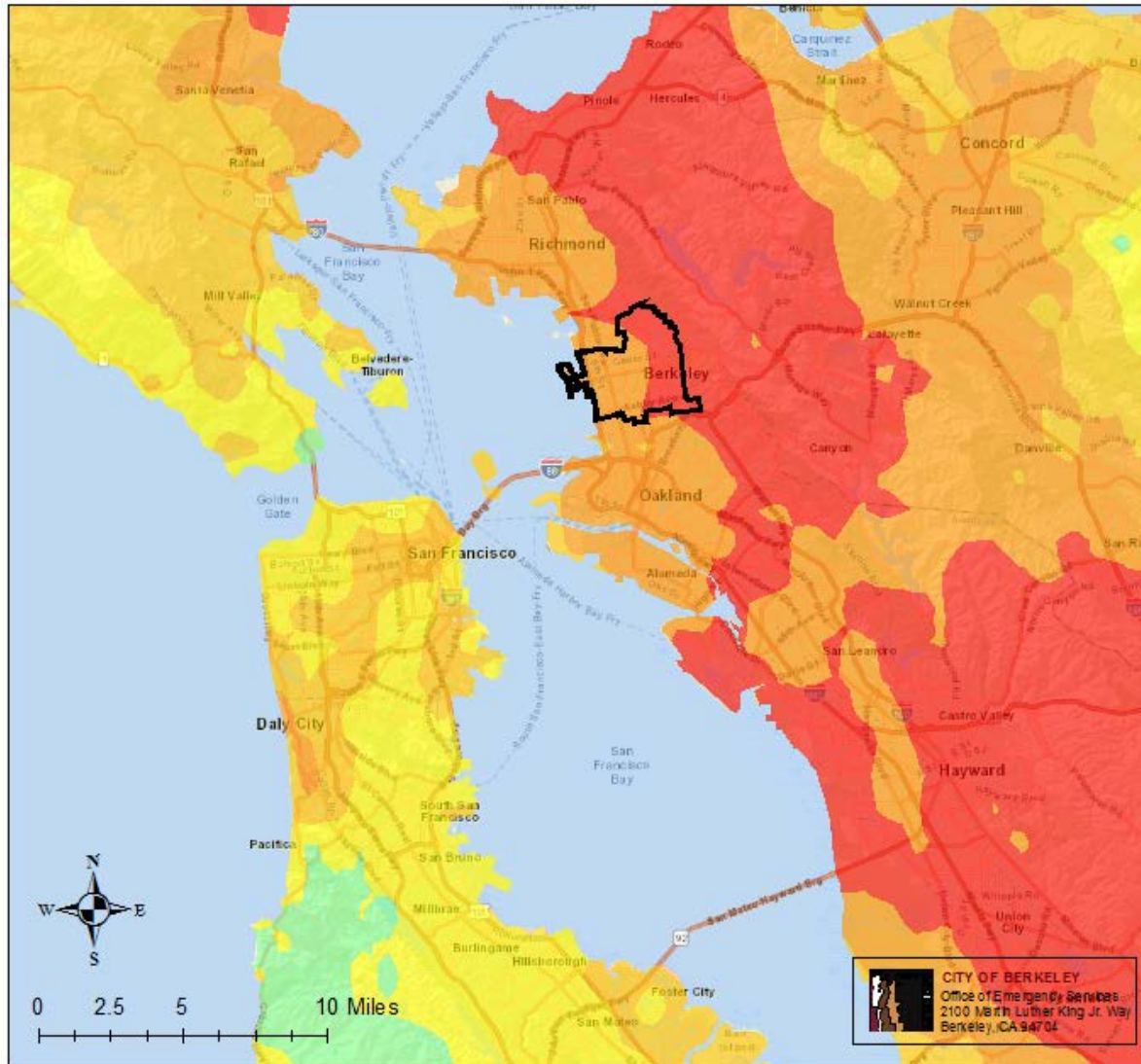
**Table 2. MMI descriptions<sup>12</sup>**

<b>MMI</b>	<b>Shaking</b>	<b>Description and damage</b>
I	Not felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by a few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very strong	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
VIII	Severe	Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.
IX	Violent	Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shift off foundations.
X+	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.

Map 2 shows most of the San Francisco Bay Area and the different levels of shaking intensity anticipated in the HayWired Scenario. Shaded in colors of yellow, orange, and red, the map shows that very strong, severe, and violent shaking will be felt all along the East Bay, stretching from Pinole to south of Hayward.

Berkeley is outlined with a thick black line and is shaded in colors of orange and red, indicating that in this scenario, Berkeley will experience severe and violent shaking, associated with MMI Levels VIII and IX.

Map 2. **Modified Mercalli Intensity for HayWired Earthquake Scenario**



Source: USGS, HayWired Scenario, August 2017.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

- City of Berkeley
- I (Not Felt)
- II - III (weak shaking)
- IV (light shaking)
- V (moderate shaking)
- VI (strong shaking)
- VII (very strong shaking)
- VIII (severe shaking)
- IX (violent shaking)
- X+ (extreme shaking)

### B.5.b.ii **Ground Failure**

Earthquakes can cause the ground to fail in several ways: through surface fault rupture, liquefaction, and seismically-triggered landslides.

#### **Ground Failure Maps**

This section presents maps to explore Berkeley's exposure to different types of ground failure. When a map is presented, the title indicates whether it is a:

- General Susceptibility Map
- Seismic Hazard Planning Zone Map
- Scenario Map

These maps present different information from different sources and cannot always be compared side-by-side. Each of these map types is describe below; readers are encouraged to refer back to these definitions when reviewing maps in this section.

#### **General Susceptibility Maps**

General susceptibility maps show areas that are exposed to a particular hazard. They show areas that are more prone to experiencing the hazard over time. These maps do not refer to any specific event circumstances, like a particular earthquake with a specific epicenter, Magnitude, and depth.

#### **Seismic Hazard Planning Zone Maps<sup>13</sup>**

Seismic Hazard Planning Zone Maps are a type of General Susceptibility map that deals with ground failure. These State regulatory maps do not consider a particular earthquake event, and instead are used:

- To support land use decisions by identifying areas where future earthquake-induced ground failure is more likely to occur, and
- To determine whether approval of more in-depth site-specific hazard investigation and mitigation may be required for certain projects during the construction permitting process.<sup>14</sup>

#### **HayWired Scenario Maps**

HayWired maps show the three types of ground failure in a specific earthquake scenario. This type of map helps planners to consider the general impacts of a catastrophic earthquake on the Hayward fault. However, these maps should be used carefully and not be considered an accurate predictor of the future. The data used to make these maps is not granular enough to predict an earthquake's impact at a specific address or location. Further, the specific location and magnitude of Berkeley's next big earthquake is unlikely to match this scenario exactly.

### B.5.b.iii *Surface Fault Rupture*

Fault slip describes movement of the earth at fault lines. The movement can be very slow (fault creep) or very sudden (co-seismic slip, which is part of all earthquakes).

Generally this movement occurs miles below the surface. When the fault slips all the way to the surface, this is called surface fault rupture. In surface fault rupture, one side of a fault can shift by several feet vertically and horizontally from its previous location. This can severely damage structures that cross the fault, including buildings, roads, pipelines, and train tracks.

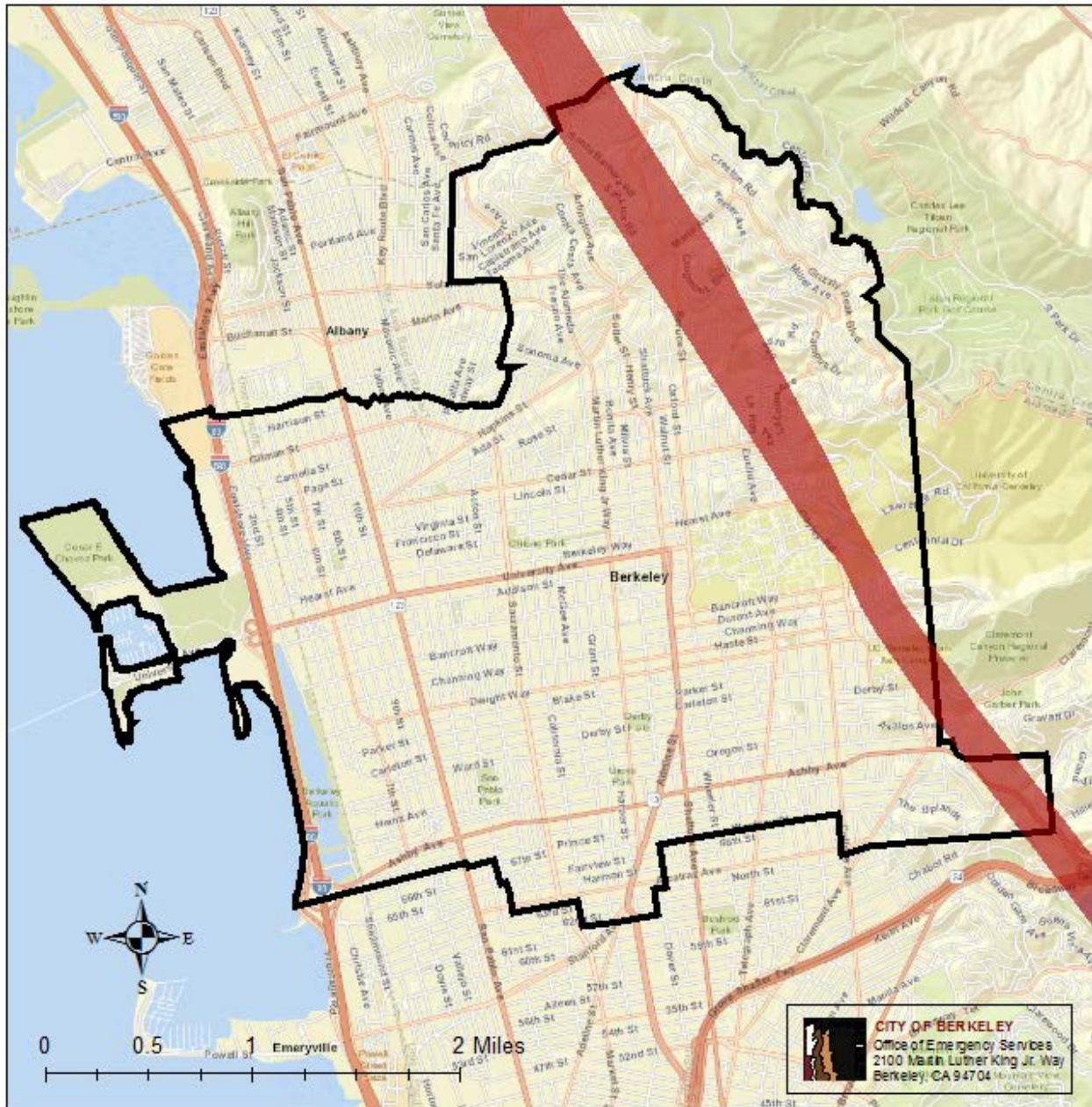
The Earthquake Fault Planning Zone in Berkeley is indicated in a thick red line on Map 3. The map is zoomed in on the City of Berkeley, which is outlined in a thick black line. The Zone depicted includes an area approximately ¼-mile wide along the Hayward fault, which runs in the northwest-southeast direction along the base of the hills in the eastern portion of the city. This Zone indicates the area of Berkeley that is exposed to surface fault rupture.

Fault rupture may not occur in every earthquake, but when it does, it is likely to be concentrated in a narrow zone, with small parallel surface ruptures occurring over a wider area. If fault rupture occurs, potential impacts include damage to:

- Underground and aboveground utilities (electricity, water, sewer) and communications conduits that cross the fault
- Gas lines that cross the fault, causing fire ignitions
- Important east-west streets, making travel between the hills and flatland areas difficult where displacements are large
- The Solano Tunnel, which is an important transportation connection in the north-south direction
- Buildings, due to ground displacement.

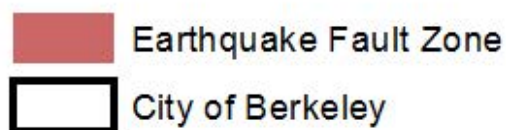


Map 3. California Geological Survey Earthquake Fault Planning Zone



Source: California Geological Survey, Earthquake Fault Planning Zone.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



#### B.5.b.iv *Seismically-Triggered Landslides*

Rainfall-triggered landslides are described in detail in Section B7.

Seismically-triggered landslides can result in significant property damage, injury and loss of life. Berkeley expects to experience landslides during the next earthquake, particularly if the earthquake occurs during the rainy winter months. While rainy weather or earthquakes could cause small landslide events that would impact a few homes, strong earthquake shaking coincident with wet, saturated hills presents a worst-case scenario.

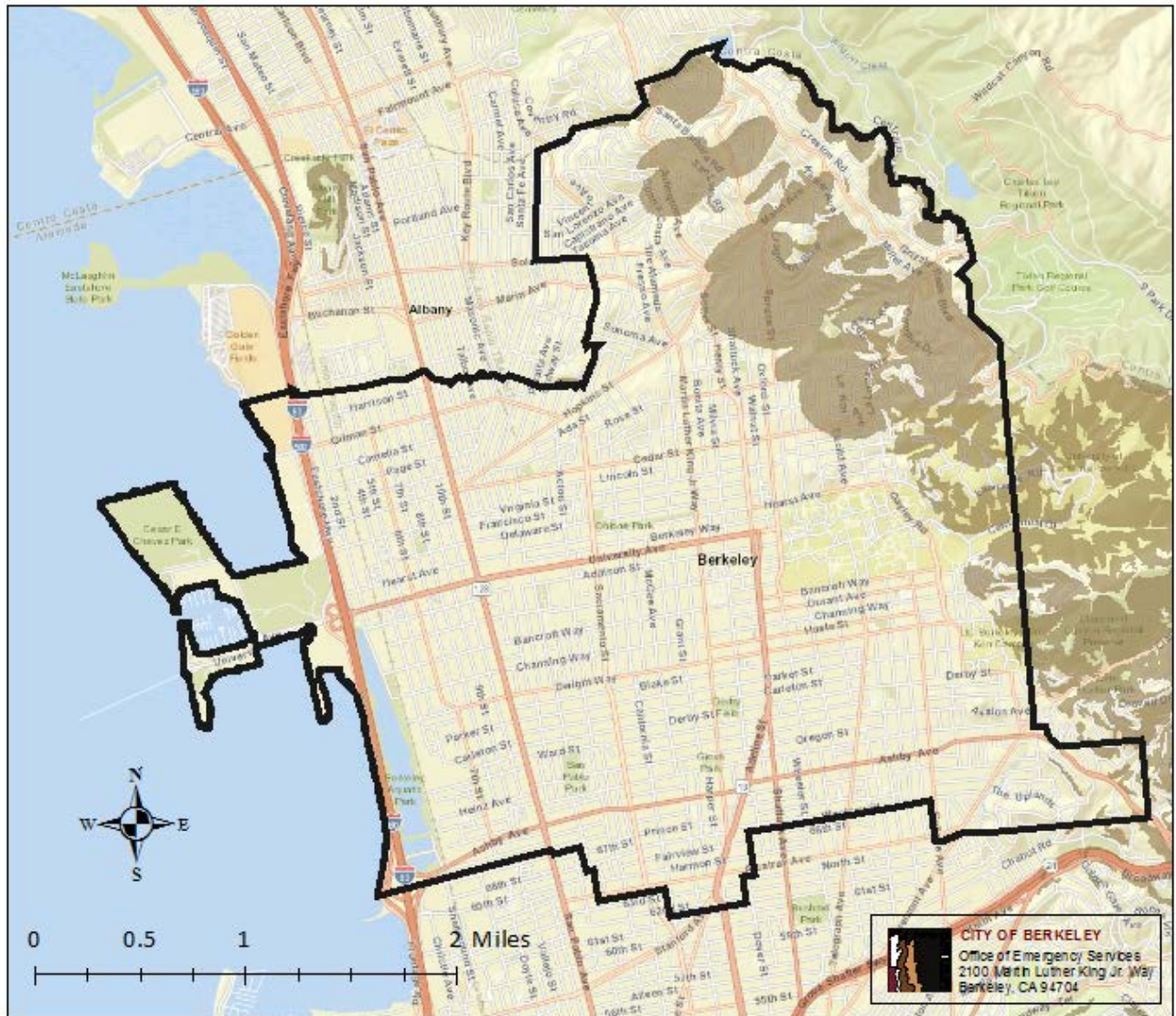
Movement could range from a few inches to tens of feet, but ground surface displacements as small as a few inches are enough to break typical foundations. Even small aftershocks could continue to cause slides for weeks and months after a quake, blocking roads and damaging homes. Even small landslide displacements caused by earthquake shaking can open surface cracks, which allow subsequent rainfall to infiltrate the slide mass and cause instability long after the earthquake.

In Berkeley, the potential for landslide from seismic activity is high in the hill areas and along creek banks. Areas of Berkeley that are exposed to seismically-triggered landslides are displayed in increasing levels of detail on the three maps described below.

The California Geological Survey has identified the areas of Berkeley with potential to experience earthquake-induced landslide. These areas are shown in light brown on Map 4 throughout the Berkeley hills. These areas are identified by combining information on rock or soil strength, slope gradient (steepness), and anticipated future shaking levels. All areas underlain by known active or dormant landslides are included in the zone. Map 4 indicates that significant portions of the Berkeley hills have the potential to experience earthquake-induced landslide.




Map 4. California Geological Survey Earthquake-Induced Landslide Planning Zone



Source: California Geological Society, Earthquake-Induced Landslide Planning Zone.

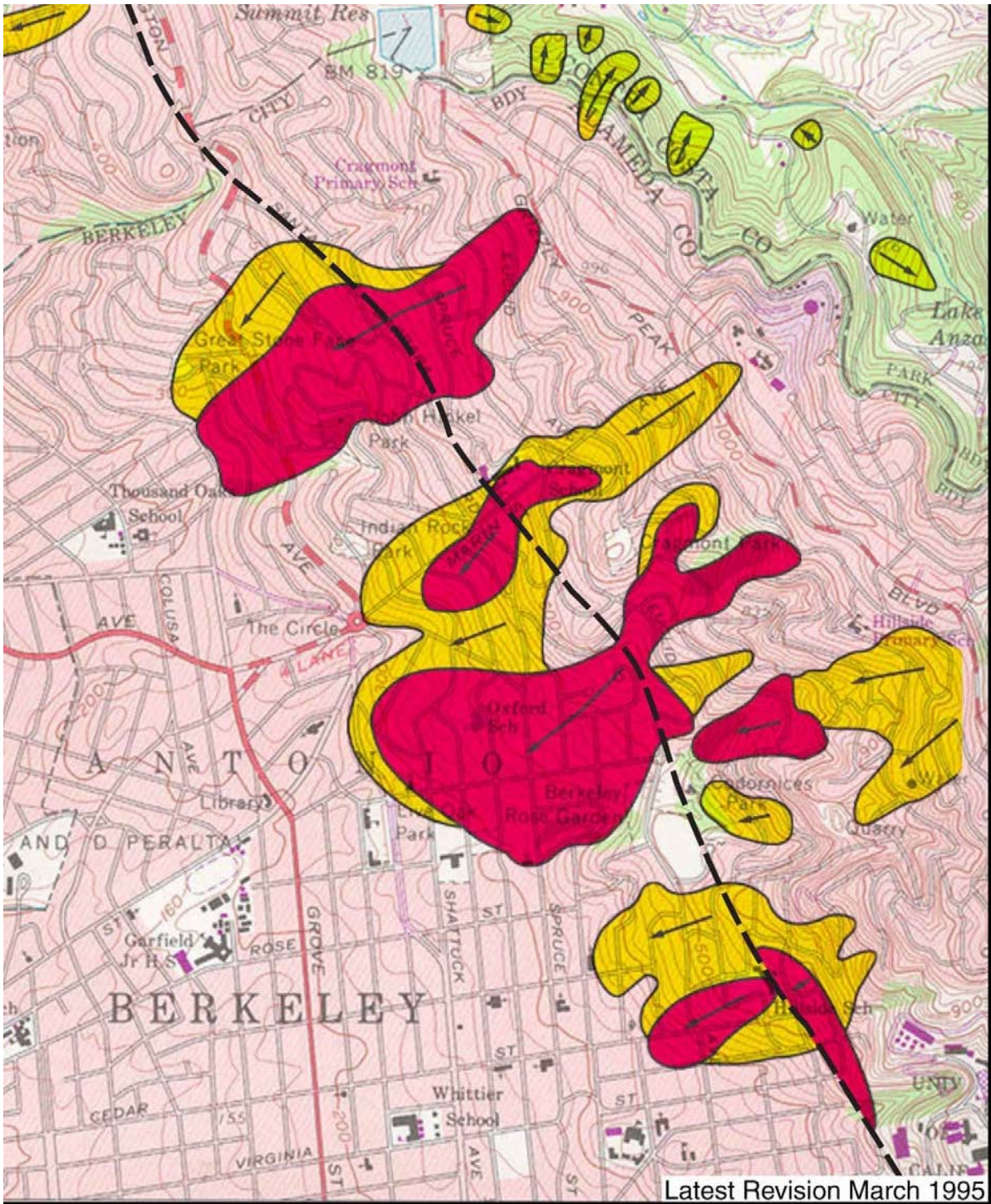
Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Earthquake-Induced Landslide Planning Zone



Map 5, created by Alan Kropp and Associates, focuses on a specific area in the northern part of the Berkeley hills. This map illustrates this area in particular because the area has active landslides, indicated in red on the map. Potentially-active slides are indicated in yellow. In a Hayward fault earthquake, significant movement is likely in active landslide areas. Earthquake shaking and active slides together could activate other potentially-active slides.

Map 5. Active and potentially-active landslides in Berkeley hills (developed by Alan Kropp Associates and used with permission)

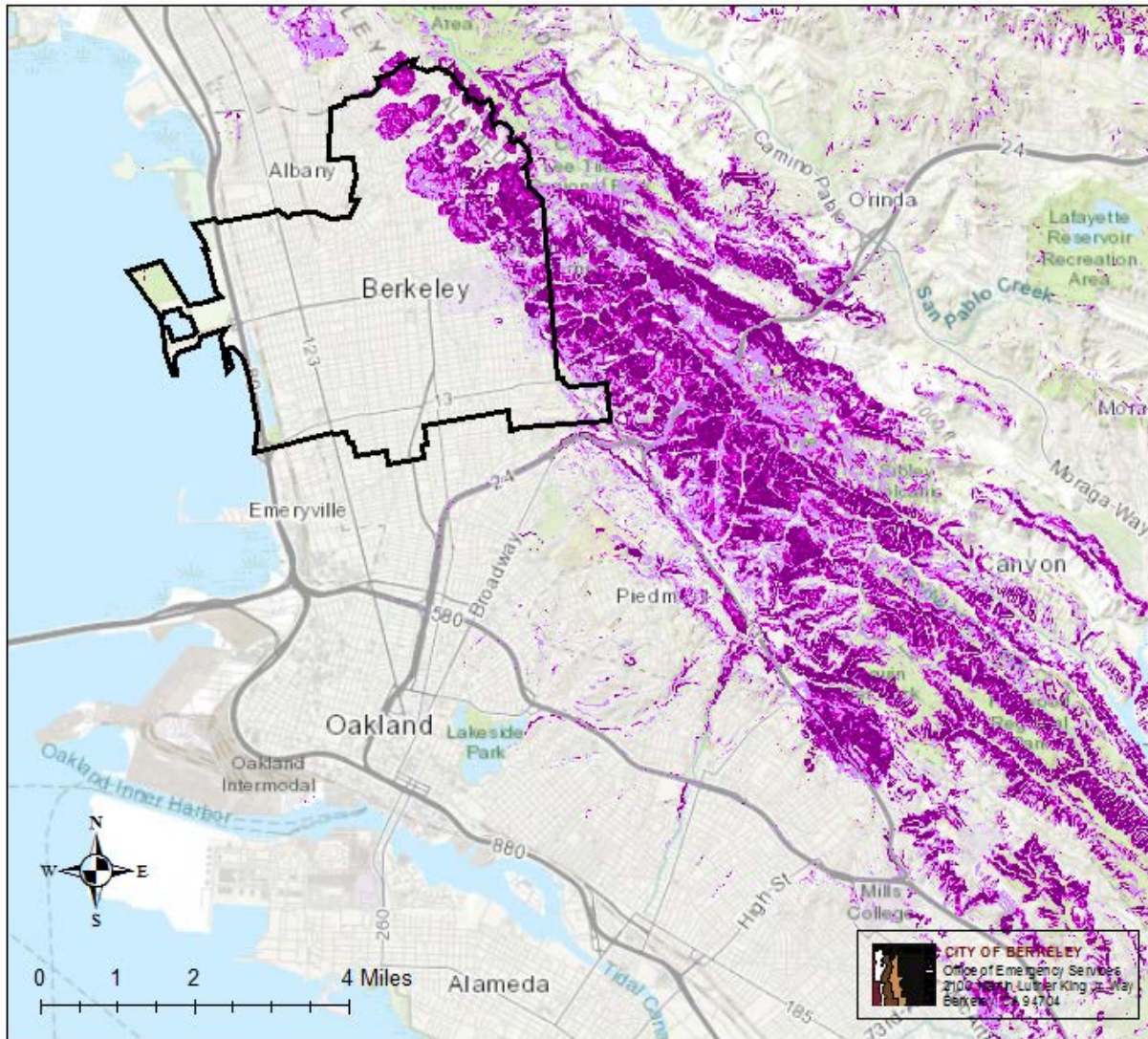


Map 6 shows where landslides are most likely to occur during the mainshock of the HayWired scenario earthquake. To make this prediction, scientists at USGS considered ground shaking intensity, the geology of the study area, and elevation. Probability of landslide is presented as medium (lavender areas), high (magenta areas), and very high (dark purple areas). The maps shows that in Berkeley, the chance of landslide exists primarily in the hills (or in the eastern part of the city), with probabilities ranging from 2% to greater than 32% in some places.

Map 6 is not zoomed in on Berkeley to ensure accuracy of the data. Presenting data at a parcel level could produce inaccurate results. The map shows parts of Oakland, Alameda, Orinda, and Albany.







Map 6. *Probability of Landslide in HayWired Earthquake Scenario*



Source: USGS, HayWired Scenario, August 2017.

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors,

-  City of Berkeley
-  Medium (2-15%)
-  High (15-32%)
-  Very High (>32%)

There are few generally-accepted methods to estimate damage from landslides caused by earthquakes.

Earthquake-induced slides may occur at the time of a major earthquake, or in subsequent aftershocks or rainstorms. Residents may have some warning that slides are imminent, helping to reduce damage and casualties. Landslide consequences would be seen primarily in the hills areas of Berkeley, and would likely include:

- Damage to structures, primarily residences. Damage homes could vary considerably, depending on their location and the quality of their foundations, and if there are any retaining walls. Some houses could be entirely destroyed or moved down the hill, while others could see minimal, repairable damage.
- Gas line rupture, igniting multiple fires
- Water line rupture, reducing water supply to fight fires
- Rupture of other underground and aboveground utility and communication systems
- Distortion of major and minor roads. This would make access difficult or impossible for firefighters and other emergency responders. It would also make egress difficult for residents of impacted areas.

### B.5.b.v *Liquefaction*

Liquefaction is a phenomenon that occurs in wet, sandy or silty soils. When shaken, the soil grains consolidate, pushing water towards the surface and causing a loss of strength in the soil. The ground surface may sink or spread laterally. Structures located on liquefiable soils can sink, tip unevenly, or even collapse. Pipelines and paving can tear apart.

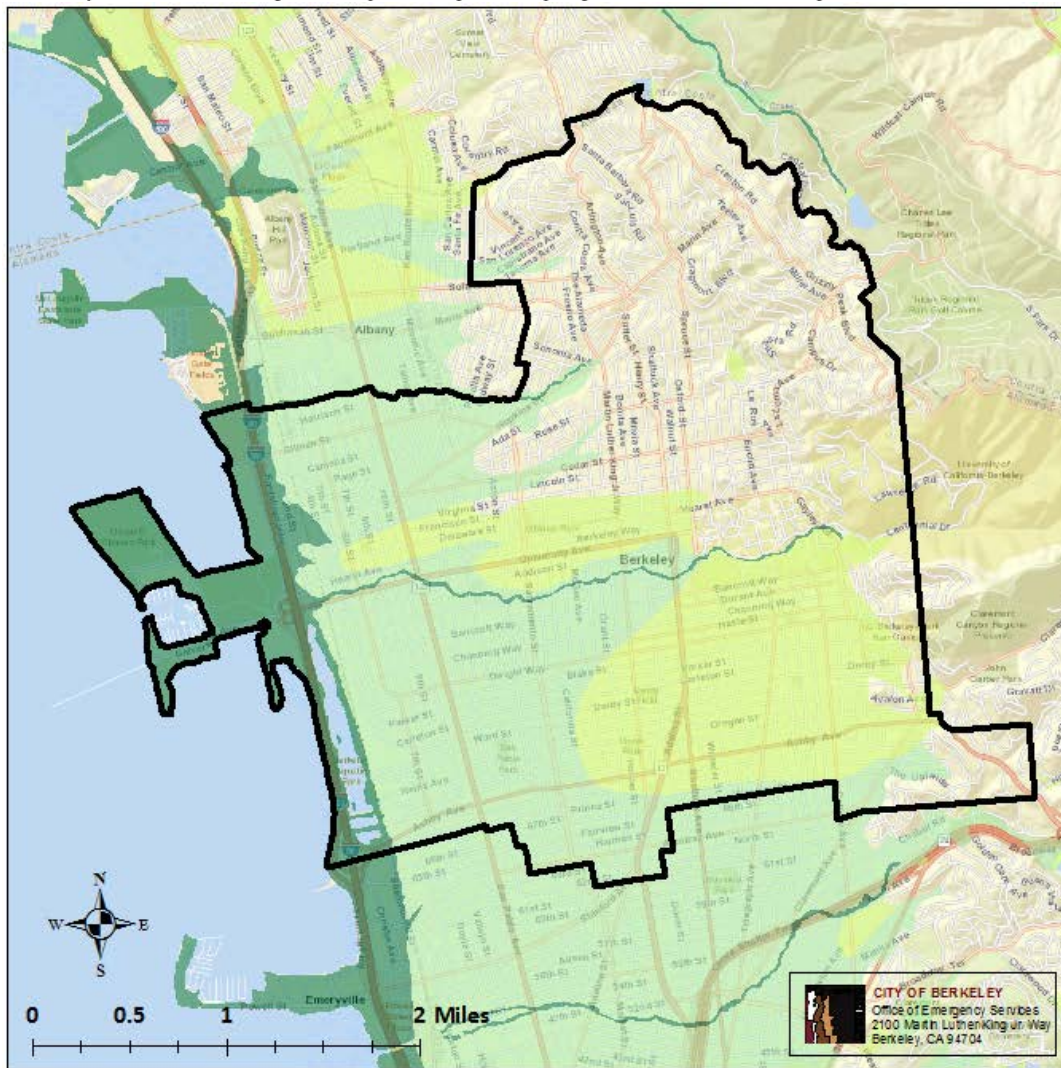
Three ingredients are necessary for liquefaction to occur:

1. Liquefiable sediments
2. Ground shaking
3. Groundwater within three meters of the surface

In an earthquake, liquefiable soils need to be shaken hard and long enough to trigger liquefaction. The USGS classified sediments in the Bay Area based on their susceptibility to liquefaction. Map 7 depicts in various shades of green the areas in Berkeley where soil types and groundwater conditions are more or less susceptible to liquefaction. West Berkeley, along the Bay, is the most susceptible to liquefaction, shaded in very dark green. Moving east into the city, the susceptibility decreases. The Berkeley flats, or the center part of the city, have moderate to low susceptibility to liquefaction, shaded in light shades of green. East Berkeley and the hills have very low susceptibility to liquefaction, with no shading.

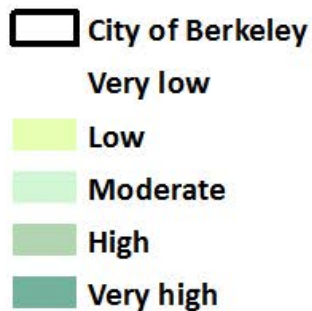


Map 7. Level of Susceptibility to Liquefaction in Berkeley



Source: USGS, 2006.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



Map 8 shows the liquefaction predicted to occur in Berkeley in a magnitude 7.0 earthquake on the Hayward fault, as explored in the HayWired scenario. The map indicates the City of Berkeley with a thick black line and is zoomed out to also show parts of Oakland and Alameda.

To make this prediction the USGS considered areas' general susceptibility to liquefaction (as shown above in Map 7) and expected levels of ground shaking in the HayWired scenario earthquake. The resulting map divides Berkeley and surrounding areas by their likelihood of experiencing liquefaction.

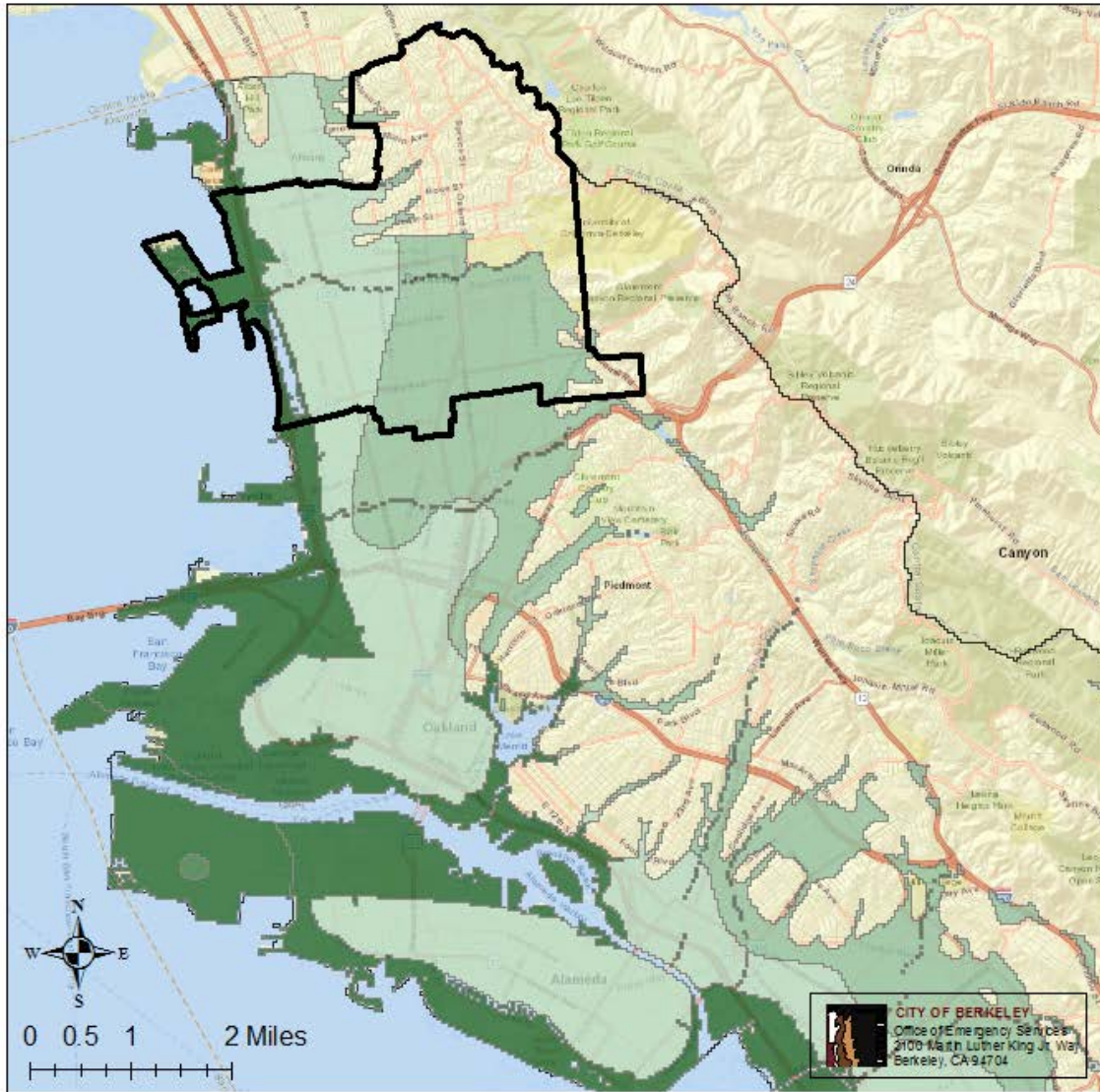
The probability of liquefaction is highest in west Berkeley along the Bay at 40% or greater, shaded in dark green. This area includes Interstate 80, Aquatic Park, and the Berkeley Marina. The probability decreases to 10% or less in the central and southern parts of Berkeley, shaded in light greens.

Percentages in this map can also be interpreted as the likelihood that any particular location within an area will experience liquefaction in the HayWired scenario.

Sea-level rise resulting from climate change may raise the water table in Berkeley and increase the areas of Berkeley that are susceptible to liquefaction.<sup>15</sup>



Map 8. *Probability of Liquefaction in Berkeley in HayWired Earthquake Scenario*



Source: USGS, HayWired Scenario, August 2017.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

- City of Berkeley
- Not assessed
- Less than 5%
- 5% to 10%
- 10% to 20%
- 20% to 30%
- 30% to 40%
- Greater than 40%

### B.5.b.vi *Fire Following Earthquake*

Significant portions of the following section were originally developed for the City of San Francisco through the Community Action Plan for San Francisco (CAPSS)<sup>16</sup>. While the report was developed for San Francisco, many of the findings are relevant to Berkeley. Both cities have potential for high earthquake shaking, which increases the risk of post-earthquake fire ignitions. Both cities also have dense multi-family housing, which facilitates fire spread.

Additionally, Fire Following Earthquake was analyzed in the HayWired earthquake scenario. Expected impacts are described later in the Earthquake Risk and Loss section.

Fires break out following all major earthquakes. Fire following earthquake presents a significant problem in dense urban environments, where many simultaneous ignitions lead to a firestorm. In these cases, fire damage is even more severe than damage from earthquake shaking. There are many examples from around the world of fire following earthquake:

<b>Earthquake</b>	<b>Impacts of Earthquake-Caused Fire</b>
2014 South Napa Earthquake <sup>17</sup>	Nine fires erupted post-earthquake. Immediately after the earthquake, the City of Napa continued pushing water through the damaged system to maintain firefighting and other critical functionality. Although this resulted in an estimated total loss of 100-acre feet of water (about 7% of monthly water usage), it also ensured that water was available for firefighting at all but one of the nine post-earthquake fires.
1995 Kobe Earthquake	More than 100 fires broke out following the 1995 Kobe earthquake, during which broken water mains left the fire department helpless, and fires destroyed more than 7,000 buildings. Fire was also a major contributor to the death toll.
1994 Northridge Earthquake	More than 100 fires broke out following the 1994 Northridge earthquake, severely impacting area fire departments, even though it largely affected only the edge of greater Los Angeles.
1989 Loma Prieta Earthquake	Thirty-six fires broke out in San Francisco. Natural gas line rupture was responsible for some of the fire ignitions. Failure of the city's electrical systems may have actually reduced the number of fire ignitions. Fires in the Marina District claimed four structures in the area, but lack of wind that night assisted in preventing the fires from spreading. Overall, the shaking experienced in the Loma Prieta earthquake was moderate, as the epicenter was 70 miles away.
1906 San Francisco Earthquake	The earthquake was followed by a firestorm that lasted for three days, and in that time swept over an area of over 3.5 square miles. <sup>18</sup> It is estimated that 80 percent of San Francisco's property value was lost in the fire.

**B.5.b.vi.1 Fire following earthquake hazard**

Earthquake shaking can start fires in numerous ways, such as:

- Tipping over appliances with pilot lights
- Damaging electrical equipment leading to sparks
- Exposing materials to open flames from stoves, candles, fireplaces and grills

In the 1994 Northridge earthquake in Los Angeles, over half of the ignitions were due to electrical systems, and about a quarter were fueled by gas.

Ground failure due to liquefaction, surface fault rupture and landslide can rupture gas lines (both underground and at the private gas meter). These ruptures can start and fuel fires.

Earthquakes can also damage the systems we have in place to stop fires. Earthquake shaking can damage a building's active fire protection systems (e.g., fire alarms and sprinkler systems), as well as its passive fire protection systems (construction features designed to slow/stop fire, e.g. fire walls, fire-rated floor-ceiling assemblies, fire doors).

Post-earthquake fires can also spread quickly due to spilled flammable chemicals.

Fires also spread more quickly after major earthquakes because earthquakes damage the infrastructure needed to fight fires. Earthquake shaking and ground failure due to liquefaction, surface fault rupture and landslide can simultaneously:

- Break water mains, causing a drop in water pressure
- Damage electrical systems necessary to provide energy to pump water
- Damage communication infrastructure
- Impede transportation routes with debris or landslides
- Jam firehouse doors, preventing apparatus from responding.

Fires can occur in the days or months following an earthquake due to the aforementioned possible damage to electrical systems, fire protection systems, and gas lines.

**B.5.b.vi.2 Exposure and vulnerability**

Soft-story and unreinforced masonry buildings are more prone to earthquake damage (see Section B.5.c.iii), and thus are also likely to be a key source of earthquake-caused fires when gas or electricity lines break or rupture. Additionally, Berkeley has many older multi-unit apartment buildings without fire sprinkler systems. These buildings could both cause and feed fires following an earthquake. Even buildings that survive earthquake shaking can succumb to fire, including those buildings that have been seismically retrofitted.

Densely-populated neighborhoods with wooden homes, such as most of the residential areas in Berkeley, are at high risk of fire spread following a major earthquake. Earthquakes in places with this type of construction have caused the two largest peacetime urban fires in history: in 1923 in Tokyo; and in 1906 in San Francisco, where 80% of the 28,000 destroyed buildings were lost due to fire.

The Berkeley Fire Department today is a well-prepared, professional organization that trains for earthquake-caused fires. However, after the next large earthquake, there are likely to be more fires than Berkeley's firefighters can respond to at one time.

Compounding this challenge, fire personnel will not only be fighting fires, but will also be responding to needs for search and rescue and emergency medical services.

Firefighters in nearby cities will be struggling to address response needs in their own jurisdictions, and State and federal resources may not be able to help the City for many hours. The 1991 East Bay Hills Fire destroyed 3,354 structures in only a few hours and overwhelmed the capacity of local fire departments, even though neighboring departments were available to assist.

Fires in Berkeley could burn out of control, and may threaten entire neighborhoods. Fire damage will add to the city's overall earthquake damage, making recovery more difficult and lengthy by increasing the number and severity of damaged buildings, lengthening the time required to repair and replace damaged buildings, displacing residents, and weakening neighborhoods.

## B.5.c Exposure and Vulnerability

This section describes Berkeley's earthquake vulnerabilities. It contains four parts:

- Buildings
- Infrastructure (systems for utilities, transportation and communications)
- Critical response facilities
- People

In some instances, a system's earthquake vulnerability could potentially create a secondary hazard (e.g., if earthquake shaking were to result in a hazardous materials spill.)

Much of Berkeley's built environment is owned and operated by other public and private entities and is not under the City's direct authority. The City works with other public agencies and companies on disaster planning, and this section includes information about some of the activities that the City's key community partners are undertaking to mitigate the hazards that may impact or originate on their own property.

### B.5.c.i *Buildings*

Ground shaking produces most building losses in typical earthquakes. Buildings are also vulnerable to ground displacements associated with primary fault rupture, liquefaction and landslides.

This section first addresses the earthquake exposure and vulnerability for City-controlled buildings. Secondly, it describes earthquake exposure and vulnerability for buildings *not* controlled by the City, including private residences and commercial buildings.

#### **Retrofitting vs. New Construction**

Building codes are continually improved, incorporating new knowledge about building methods that effectively resist seismic forces.

Buildings built using older techniques can be especially vulnerable to earthquake damage. Buildings are usually retrofitted with the goal of reducing loss of life, but damage can still be expected in many retrofitted buildings. Building retrofit is often preferable to building replacement, as retrofitting an existing building can be more cost-effective and environmentally-friendly, while preserving historic architecture.

New building construction is expected to perform better than retrofitted buildings in an earthquake. However, the goal of the building code is to reduce loss of life in an earthquake, not to ensure the continued use of the building. This means that a large earthquake will damage even new buildings, which may remain unusable for long periods of time.

### B.5.c.ii *City-Owned Buildings*

The City of Berkeley owns or leases approximately 221 buildings and structures. These facilities have multiple uses, including running City government, providing emergency services, low-income housing, and recreation. In recent years, the City has been seriously examining the risk to its buildings from disasters, particularly earthquakes. Many important City buildings have been assessed for seismic safety and, when possible, strengthened or replaced.

However, additional of City buildings need to be assessed to determine their level of vulnerability to seismic events. Some may pose some risks to life and emergency operations. Four of these vulnerable buildings are explored further below.

#### *North Berkeley Senior Center, 1901 Hearst Street*

The North Berkeley Senior Center is a dynamic community gathering place offering a wide array of services and social events, including classes, a senior lunch program, and field trips. The Center also serves as a gathering place for community and commission meetings, and as an affordable rental for other organizations looking to host a gathering in a large community hall. During emergencies the Center has also been identified as one of the City's mass care and shelter sites.



In February 2016, FEMA awarded the City a Pre-Disaster Mitigation Grant of \$1.875 million to mitigate the Center's seismic vulnerabilities, including possible collapse. With the passage of Bond Measure T1 in the fall of 2016, the City has secured funding for the retrofit of the North Berkeley Senior Center.

Mandatory safety upgrades will be performed during this retrofit, including structural seismic upgrades so that the building can be immediately occupied after a major earthquake; upgrades for compliance with current building codes, including ADA and Fire codes; and deferred maintenance including exterior, roof replacement, and first floor restroom upgrades. The Center will also have a hookup for a generator, increasing the facility's ability to provide services in the event the grid is down.



*Live Oak Community Center, 1301 Shattuck Avenue*

The Live Oak Community Center currently houses youth and family recreation programs and public events during evenings and on weekends. The building is also used as a shelter in the event of emergencies.



The Live Oak Community Center Seismic Retrofit project will include seismic upgrades, needed repairs to building systems, including plumbing, mechanical, electrical, accessibility, and architectural features, and energy and water efficiency upgrades to meet current building codes.

Project work will improve the building’s expected post-earthquake damage state performance level from collapse prevention to either life safety or immediate occupancy. This change will allow the facility to be used as mass care site in the event of an earthquake.

*Old City Hall, 2134 Martin Luther King, Jr. Way*

Old City Hall is a City of Berkeley Landmark that is part of the Civic Center Historic District and listed on the National Register of Historic Places. This building has a potential collapse hazard that needs to be retrofitted. There is no identified funding source to retrofit this building. As of December 2018, plans are underway to use the site as Berkeley’s Emergency Storm Shelter, which will operate when it’s raining or under 40 degrees.



*Veterans’ Memorial Building, 1931 Center Street*

Veterans’ Memorial Building is also a City of Berkeley Landmark, part of the Civic Center Historic District, and listed on the National Register of Historic Places. It is used for public assembly, as a homeless shelter, and for daytime homeless services, is a potential collapse hazard that needs to be retrofitted. A homeless shelter currently operates in the building. During the day, the Dorothy Day House, Berkeley Food and Housing Project, Options Recovery, Building Opportunities for Self Sufficiency (BOSS), and Berkeley History Center use the building for their homeless service programs. There is no identified funding source to retrofit this building.



### **Notable Mitigation Activities**

The City has strengthened many important buildings for emergency response and recovery. Since 2014, the City has continued its program to strengthen or replace key at-risk structures, including the Center Street Garage and James Kenney Recreation Center. In 2019, the City is developing its Civic Center Vision and Implementation Plan for Old City Hall and Veterans Memorial Building.

#### *Center Street Garage, 2025 Center Street*

The replacement of the Center Street Garage has been one of the City's high priority downtown projects. The preexisting 5-story structure did not meet current seismic standards and retrofit was determined to be infeasible. The new 8-story facility opened in October 2019 and meets current seismic standards. It has 720 parking spaces, solar panels, electric vehicle charging stations, a water storage system, secure bicycle parking, office space for parking management, and commercial and art display space on the first floor. Construction was funded through 2016 Parking Revenue Bond Fund (\$28.3 million) and the Off Street Parking Fund (Fund 835) (\$8.2 million).

#### *James Kenney Recreation Center, 1720 Eighth Street*

The James Kenney Community Center currently houses daycare, afterschool children's programs, day camps, various teen recreation programs, open gym, and public events during evenings and on weekends. The site is the City's best equipped mass care and shelter site in the event of a disaster.

In 2017, a retrofit of the facility was completed at a total cost of \$3.05 million. The James Kenney Community Center Seismic Retrofit project involved seismic strengthening of the Recreation and Gym Building, as well as fire protection sprinklers throughout the building, and necessary ADA upgrades.

This work was made possible by a Pre-Disaster Mitigation Program grant for \$727,499, provided by the State Office of Emergency Services and the Federal Emergency Management Agency, as well as a Department of Housing and Community Development Grant for over \$1 million.

#### *Civic Center Vision and Implementation Plan*

The City is embarking on a community process to develop a shared vision and plan for Old City Hall, the Veterans Memorial Building and Civic Center Park – critical, underutilized civic resources that would support current and future community needs while celebrating their architectural significance, central location, and history as the center of City government.

The project team, which would start in fall 2019, would aim to build civic trust, establish shared and realistic expectations of the capacities of three elements, and, ultimately, deliver preliminary design concepts of the space to City Council for review a year later in Fall 2020.



### B.5.c.iii *Privately-Owned and Other Structures*

Berkeley has about 43,636 housing units<sup>19</sup>, serving the city's population of 112,580<sup>20</sup>. Most were built before 1980, meaning that few of Berkeley's homes were constructed to modern building code standards, which require earthquake-resistant structural measures, fire-resistant materials, and landslide-resistant siting and landscaping.

Older houses constructed with a crawl space or aboveground basement below the first floor can have several weaknesses, because older building codes were inadequate to resist seismic forces, or because codes were not followed properly. The bottom of the wood frame exterior walls may not be adequately bolted to the foundation, meaning the house can slide off the foundation during strong shaking. The foundation itself may be constructed of weak or deteriorated materials, like brick or very old concrete. Also, the wall that encloses the crawl space, known as a cripple wall, may be weak and vulnerable to collapse due to inadequate bracing and deterioration of wood members from termite attack and dry rot. Hillside houses can suffer from any of these weaknesses, but have increased risks of failure to cripple walls and poorly braced extra-tall walls along the sloping sides.

#### **Notable Mitigation Activities**

A number of City incentive programs and educational efforts promote seismic strengthening activities.

#### **Plan Set A**

The City's adoption of Standard Plan Set A<sup>21</sup> educates homeowners and contractors about measures to improve seismic resistance of their homes. Contractors' adherence to this Standard simplifies the City's plan review and inspection process.

#### **Mandatory Retrofit Ordinances**

The City of Berkeley has worked diligently to enhance public safety and reduce physical threats from earthquakes by requiring owners of soft story and unreinforced masonry buildings to retrofit their structures. Berkeley Municipal Code (BMC) Chapter 19.39, effective January 4, 2014, mandated owners of soft story (also known as soft, weak or open front / "SWOF") buildings with five or more dwelling units to apply for a building permit for a seismic retrofit by December 31, 2016. Owners were given two years to complete the work upon submission of the permit application. Previously, the City approved an ordinance in 1991 (BMC 19.38) requiring owners of unreinforced masonry (URM) buildings to evaluate their buildings, obtain retrofit permits and complete seismic retrofits according to a schedule based on each building's risk categorization but in all cases no later than 2001.

Through these hazard mitigation measures, the City of Berkeley hopes to increase the safety and resilience of the city's building stock to prevent injury and loss of life and reduce post-disaster recovery time.

*Soft Story Ordinance for Buildings with Five or More Dwelling Units*

Soft story buildings are characterized as multi-story wood-frame buildings with extensive ground story openings such as windows, storefronts, garage openings, or open-air spaces such as parking. These buildings may have few perimeter or interior walls at the ground level, leading to a relatively soft or weak lateral load resisting system in this lower story. Since the collapse of soft story buildings in the 1989 Loma Prieta and the 1994 Northridge earthquakes, there has been considerable concern in California about tenant safety and the seismic deficiencies in these buildings. In 2005, Berkeley was the first city in the country to pass an ordinance to address this potentially unsafe condition.

Berkeley’s original 2005 ordinance added Chapter 19.39 to the Berkeley Municipal Code, requiring owners of soft story buildings with five or more dwelling units to submit a seismic engineering evaluation report analyzing the ability of the building to resist earthquake forces and describing possible work to remedy weaknesses. The ordinance also required owners to notify tenants of the building’s soft, weak or open front (SWOF) condition and post an earthquake warning notice at the building entrance. The initial wood-frame SWOF inventory included 321 buildings. The inventory has since increased to 332 buildings, containing 3,665 units.

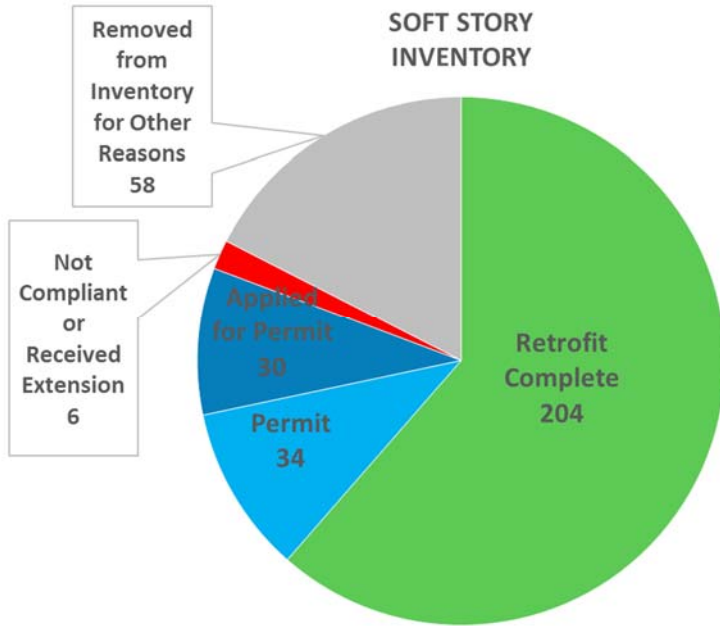
On December 3, 2013, Council adopted amendments to Berkeley Municipal Code Section 19.39.110 establishing mandatory seismic retrofit requirements for soft story buildings with five or more dwelling units. The ordinance established December 31, 2016 as the deadline for property owners to apply for a building permit. Owners must complete retrofits within two years of submitting the permit application. Table 3 describes the status of the 332 soft story buildings subject to mandatory retrofit as of December 2018.

**Table 3. Berkeley Soft-Story Building Status as of December 2018**

<b>Number of buildings</b>	<b>Percent*</b>	<b>Status</b>
204	61	Retrofit Complete
34	10	Permit
30	9	Applied for Permit
6	2	Not Compliant or Received Extension
58	17	Removed from Inventory for Other Reasons
332	100%	<i>Total buildings identified as soft-story</i>

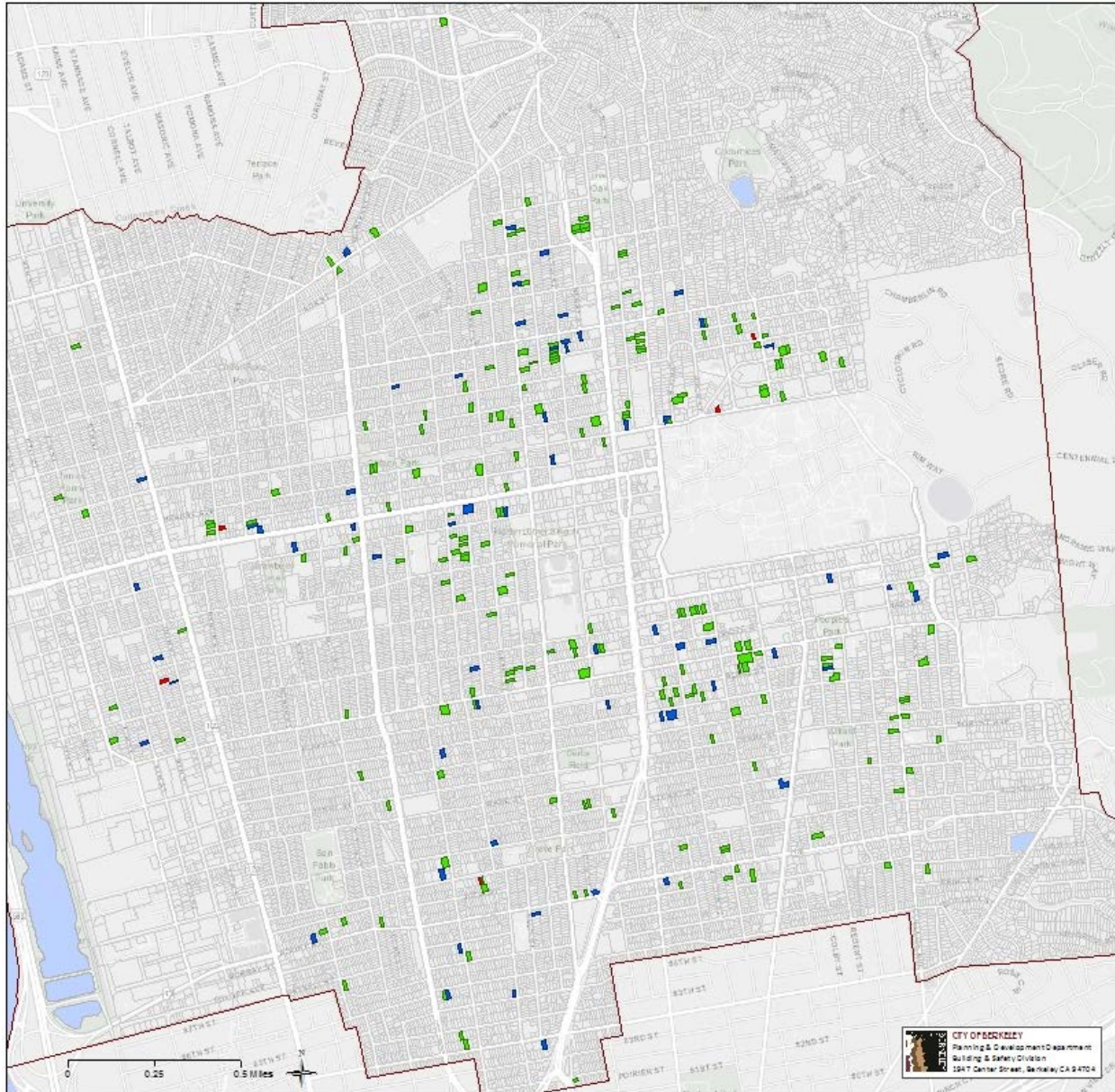
\*Due to rounding, percentages do not add up to 100 percent.

Table 4. Chart of Berkeley Soft-Story Building Status as of December 2018



Map 9 shows the retrofit status of soft story buildings subject to mandatory retrofit, as of December 2018. Green symbols depict parcels with retrofit buildings, blue indicates parcels containing one or more buildings with permits issued or currently under review, and red shows parcels with extensions filed or buildings out of compliance.

Map 9. **Status of Soft Story Buildings Subject to Mandatory Retrofit (December 2018)**



## Unreinforced Masonry (URM) Ordinance

Unreinforced masonry (URM) buildings are generally constructed of brick, block, tile, stone, or other types of masonry, and were built prior to modern earthquake-resistant design. During an earthquake, unreinforced masonry walls that were originally built with inadequate reinforcement (embedded steel bars) are susceptible to collapse. In addition, URM buildings often include unreinforced masonry parapets, chimneys, and high brick veneers that tend to disconnect from the building and fall outward, creating a hazard for people below and in some instances causing the building to collapse. Weak or nonexistent connections between the masonry walls and the floors and roofs place occupants, pedestrians, and adjacent buildings in harm's way.

Although unreinforced masonry buildings are no longer constructed today, existing URM buildings can be retrofitted to reduce risks caused by earthquake activity. If these buildings are not retrofitted and suffer major damage in an earthquake, the costs of repair after the earthquake could be prohibitively high and may result in demolition or loss of use.

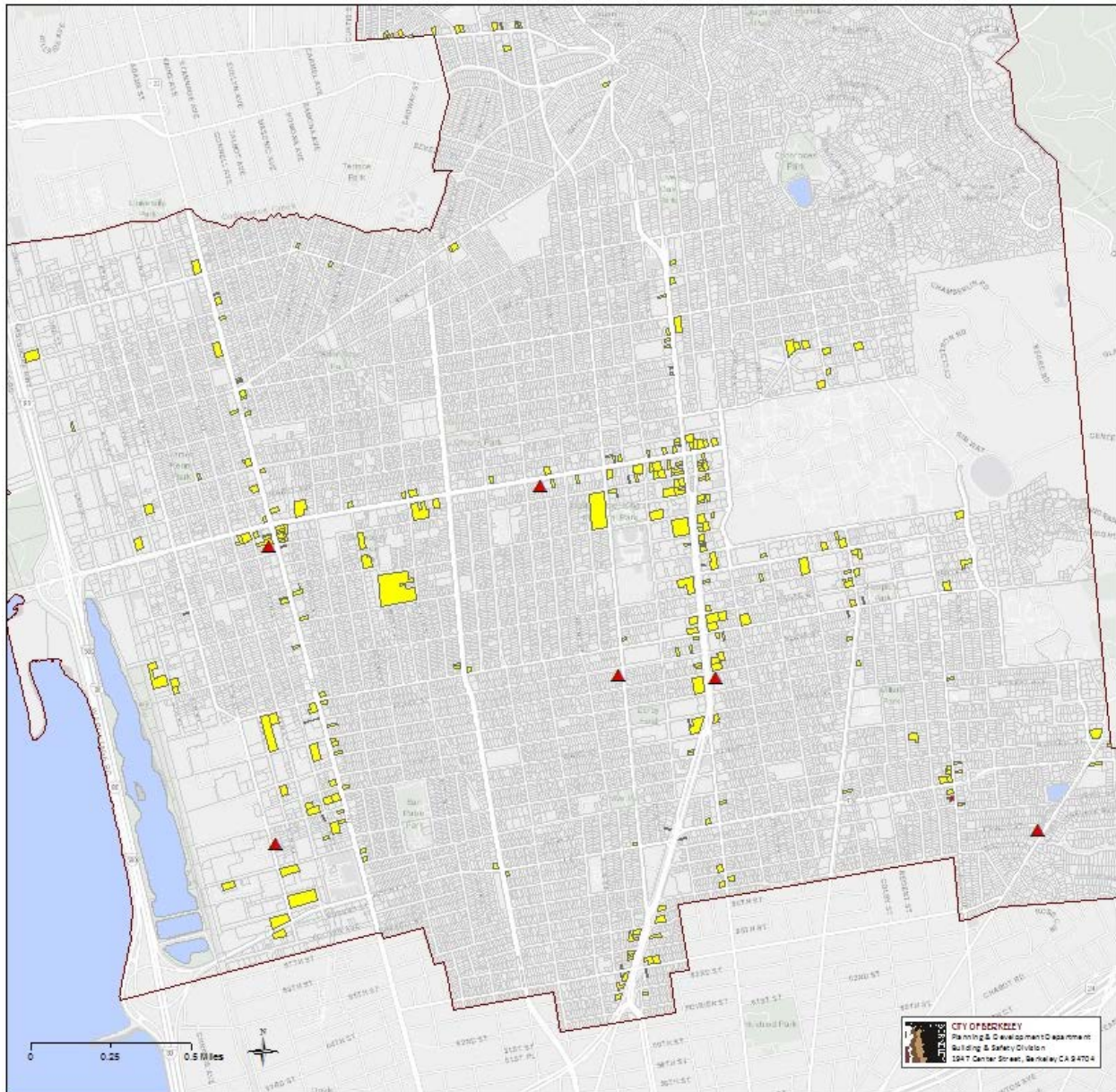
In response to State law, the City of Berkeley compiled an inventory of unreinforced masonry buildings in 1989, identifying approximately 700 residential and commercial URM buildings that were built prior to 1956. In 1991, the City adopted the Unreinforced Masonry Ordinance 6088-N.S. Subsequent amendments to the ordinance required owners of unreinforced masonry buildings to evaluate their buildings, obtain necessary permits and complete seismic retrofits by 2001.

Of the approximately 700 buildings originally included in the City's unreinforced masonry (URM) inventory, hundreds were removed from the list after owners provided evidence the buildings adequately met building standards or that the buildings were not unreinforced masonry structures. Of the original list, roughly 99% have been seismically retrofitted, demolished or demonstrated to have adequate reinforcement. As of August 2018, six buildings are still required to retrofit in order to avoid further penalties. Five of the six building owners have applied for retrofit permits.

Map 10 shows the unreinforced masonry (URM) inventory as of June 2018. Parcels in yellow contain buildings that are compliant with the Unreinforced Masonry Ordinance 6088-N.S. Red triangular symbols denote unreinforced masonry buildings still subject to mandatory retrofit, including those currently in the permitting process.



Map 10. Berkeley Parcels with Unreinforced Masonry Building Types (June 2018)



- COMPLIANT WITH URM ORDINANCE
- ▲ NOT COMPLIANT WITH URM ORDINANCE (INCLUDING THOSE IN PERMIT REVIEW PROCESS)

## Financial Incentives

### *Retrofit Grants*

In early 2017, the Building and Safety Division developed a new Retrofit Grants program with funding from a Hazard Mitigation Grant from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES). In the first round of the Retrofit Grants program, the City offered grants of up to \$25,000 to owners of soft story buildings with five or more units, and unreinforced masonry buildings. During the first round of the grant program, owners of 48 buildings containing over 400 housing units applied for grants, amounting to over \$1 million in federal funding.

The Building and Safety Division launched the second round of grant funding in May 2018, offering design and construction grants to owners of other seismically vulnerable buildings: rigid wall - flexible diaphragm buildings (RWFD) with walls made of concrete or masonry and wood or steel roofs, non-ductile concrete buildings (NDC), and soft story buildings with 3-4 residential units and non-residential uses, which are not covered under the mandatory soft story retrofit program. In the second round of the grant program, as of August 2018, owners of 66 buildings applied for an additional \$1.3 million in FEMA funding. These buildings contain almost 300 housing units in addition to a variety of retail, commercial, and educational occupancies.

In the spring of 2018, City staff conducted outreach to promote the second round of grant funding and assist owners with the application process. Information packets, including applications, fact sheets about relevant building types and grant program details were mailed to property owners of nearly 1,000 potentially vulnerable buildings. The application deadline for the second phase of the Retrofits Grants Program was June 25, 2018.

Although single-family homes and duplexes were not eligible for this program, other programs are available for property owners and are detailed below.

### *Transfer Tax Rebate Program*

By ordinance, the City created a program to rebate up to one-third of the transfer tax amount to be applied to earthquake upgrades on homes. The process begins once the homeowner makes seismic safety improvements. When the owner wishes to sell the house and the sale amount has been determined, the buyer and seller place a portion of the real estate transfer tax amount in an escrow account to be drawn down after improvements are complete. Since July 2002, the City has distributed over \$12 million to homeowners through this program as outlined in Table 5 below.

**Table 5. Transfer Tax Rebate Program**

<b>Fiscal Year</b>	<b>Property Transfer Rebates</b>	<b>Total Funds Issued</b>
2003	382	\$1,133,047
2004	467	\$ 1,539,738
2005	385	\$ 1,459,510
2006	262	\$ 1,168,654
2007	144	\$ 611,433
2008	152	\$ 681,002
2009	138	\$ 533,061
2010	150	\$ 592,539
2011	157	\$ 593,974
2012	166	\$ 623,502
2013	159	\$ 766,746
2014	164	\$ 798,370
2015	138	\$ 773,697
2016	147	\$ 859,831
2017	55	\$ 423,586
2018 <sup>1</sup>	31	\$ 165,010
<b>Total (FY 2003-2018)</b>	<b>3,097</b>	<b>\$12,723,700</b>

***Earthquake Brace + Bolt***

The City participates in the Earthquake Brace + Bolt (EBB) program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of owner-occupied residential buildings with 1-4 dwelling units.

The EBB program provides incentives to homes most vulnerable to severe damage in an

<sup>1</sup> As of September 2018. Taxpayers may still claim seismic-related refunds for properties purchased in FY 2018.



earthquake, typically those built before 1979 with raised foundations and unbraced “cripple walls,” the wood-framed walls which surround the crawl space. Bracing the cripple walls with plywood and using anchor bolts to improve the connection between a home’s wood framing and its foundation are seismic improvements that can help reduce potential damage to a home during an earthquake.

The program supplements other programs to subsidize or finance seismic improvements in Berkeley homes; these programs can be used in combination or separately.

*Property Assessed Clean Energy (PACE)*

Additionally, the PACE program provides financing for seismic improvements, and allows owners to pay back costs over time on their property tax bills with no upfront costs.

**Expanded Inventory of Seismically Vulnerable Buildings**

With the launch of the Retrofit Grants Program, staff conducted extensive research to update and refine the City’s inventory of seismically vulnerable buildings. In addition to soft story buildings not currently subject to mandatory retrofit such as those with 3-4 residential units or commercial uses, Berkeley has numerous non-ductile concrete and tilt-up or other rigid wall-flexible diaphragm (RWFD) buildings. These additional building types may also be highly susceptible to adverse effects from earthquakes.

Although no ordinance currently requires property owners of these building types to retrofit, the City of Berkeley has encouraged owners to apply for grant money under the City’s Retrofit Grants Program.

*Non-Ductile Concrete Buildings*

Non-ductile concrete buildings built prior to the mid-1970’s and modern seismic code standards have performed very poorly in recent earthquakes, and have resulted in catastrophic collapses. In older concrete buildings, the detailing and construction of the reinforcing steel may be inadequate to safely resist large seismic forces caused by ground motions on these heavy structures. The most vulnerable buildings contain elements like columns, wall piers, and joints of beams and slabs that can fail in an earthquake. These buildings are considered “non-ductile” (i.e. brittle) concrete buildings and pose a high risk during a major earthquake. Retrofits of these buildings can vary widely in terms of scope and level of difficulty, and are often expensive to retrofit or rebuild.

*Rigid Wall-Flexible Diaphragm (RWFD) Buildings Including Tilt-Up Buildings*

Tilt-up or other rigid wall-flexible diaphragm building types are typically one or two story commercial buildings with reinforced concrete or reinforced masonry (brick or concrete block) walls. A “tilt-up” building is a specific type of building with precast concrete walls and is distinguished by its method of construction. RWFD have “flexible” roof diaphragms that consist of wood or steel beams, trusses, or rafters with wood sheathing or metal decking above. They may also have flexible diaphragms at intermediate floor levels. These buildings commonly include warehouses, manufacturing facilities, large retail stores, and other similar structures. The most common deficiency is an inadequate connection between the rigid walls and the roof (and floors) leading walls to pull away and collapse during ground shaking. Buildings designed under

codes that predated the 1998 California Building Code are of primary concern.

*Soft Story Buildings Not Subject to Mandatory Retrofit*

Similar to Soft Story buildings subject Berkeley Municipal Code Section 19.39.110, those with only 3-4 unit or commercial uses are also vulnerable to collapse in the event of an earthquake due to weak lateral load resisting systems. Since the initial phase of the project, the grant program has expanded to include Soft Story buildings with 3-4 residential units, and some mixed-use or nonresidential Soft Story buildings that are not mandated to retrofit.

*Process for Updating the Inventory of Seismically Vulnerable Buildings*

The City has worked diligently to update and broaden its inventory of seismically vulnerable buildings to include non-ductile concrete buildings, rigid wall-flexible diaphragm buildings, and soft story buildings with 3-4 residential units or commercial uses. This effort began with extensive staff research to identify vulnerable buildings using City and other data sources.<sup>22</sup> It was followed by a field study with the Earthquake Engineering Research Institute (EERI) to assess a portion of the newly identified non-ductile concrete and rigid-wall flexible-diaphragm buildings<sup>23</sup>, and a “virtual survey” to identify potential soft story buildings.<sup>24</sup>

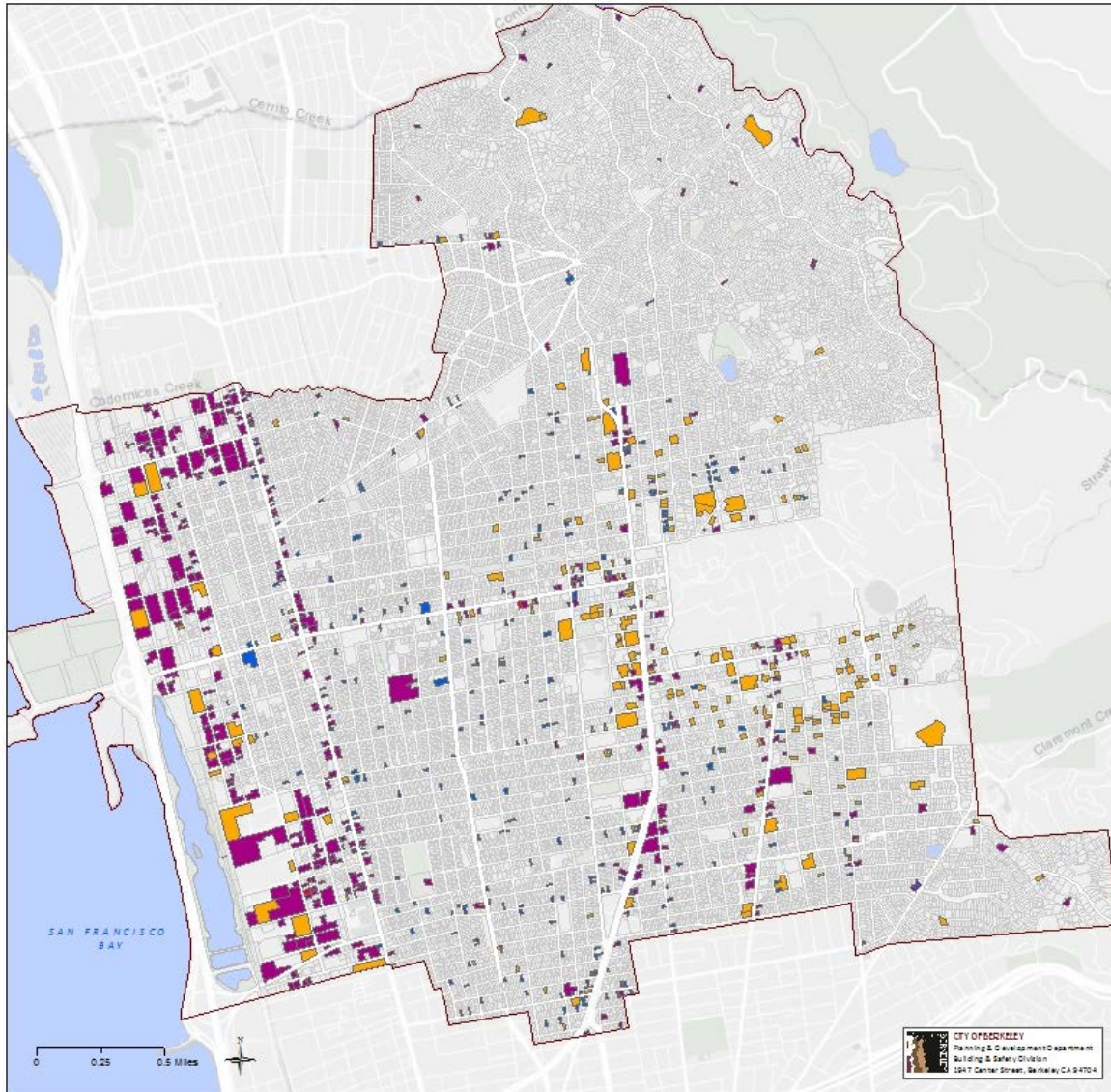
*Updated Inventory of Seismically Vulnerable Buildings (2018)*

As of June 2018, the City identified 1,047 potentially seismically vulnerable buildings that did not already appear on the soft story or URM inventories. The updated inventory includes 230 potentially non-ductile buildings and nearly 550 buildings that may be rigid wall-flexible diaphragm, including tilt-ups. The City has also added to the inventory approximately 240 soft story buildings not subject to mandatory retrofit under Chapter 19.39 of the Berkeley Municipal Code.

Map 11 shows Berkeley’s updated Inventory of Seismically Vulnerable buildings, as of June 2018. Soft story buildings are somewhat evenly spread throughout the City. Potentially non-ductile concrete buildings and rigid wall-flexible diaphragm buildings are more heavily concentrated along commercial corridors and west of San Pablo Avenue. Non-ductile concrete buildings are also clustered in central Berkeley, and near the UC Berkeley Campus. Soft story buildings are depicted in blue, non-ductile concrete buildings in orange, rigid wall-flexible diaphragm buildings in purple, and unreinforced masonry buildings in red.

This map reflects properties that are eligible for the Cal OES/FEMA Grant Program.

Map 11. Updated Inventory of Potentially Seismically Vulnerable Buildings (June 2018)



- POTENTIALLY NON-DUCTILE CONCRETE
- POTENTIALLY TILT-UP OR OTHER RIGID WALL-FLEXIBLE DIAPHRAGM
- POTENTIALLY SOFT STORY AND WOOD FRAMED BUILDINGS
- UNREINFORCED MASONRY

### **B.5.c.iv Infrastructure**

This section examines the earthquake exposure and vulnerability of Berkeley's infrastructure. It is organized into three components: utilities, transportation and communications.

Infrastructure described in this section provides the foundation for day-to-day life in Berkeley. These systems are also vital to many of the City's disaster response activities, and restoration of these systems will be critically important to Berkeley's recovery from a major earthquake.

Many of these systems are also significant because their failure in an earthquake could create secondary hazards, compounding the challenge to Berkeley's disaster response and recovery activities.

Much of the City-owned infrastructure was built before World War II when the city was growing and modernizing. After over 90 years in service, much of the infrastructure requires extensive maintenance, repair or enhancements.

Electrical, natural gas, petroleum, telecommunications, and potable water supply infrastructures are not under the City's control, but rather are owned and managed by other quasi-governmental, private or special district entities.

The following three sections (Utilities, Transportation and Communications) describe these key infrastructure systems and their vulnerabilities, demonstrated by the earthquake hazard exposure depicted on Maps 3, 4, and 7. These sections also outline how these vulnerabilities may create secondary hazards following an earthquake. Included in each section are the City's key partners and their mitigation activities.

The Department of Public Works has an up-to-date database describing elements, characteristics and conditions of all roads, storm drains, and sewer pipelines. The database includes specific information on these systems and their conditions for maintenance and management purposes. This type of information will also facilitate Public Assistance applications after a disaster, as federal repair guidelines attempt to apportion damage due to the hazard event and damage from normal wear and tear.

Disputes over existing element conditions can lead to additional expense and delays in making needed repairs.

**Utility Systems: Earthquake Exposure and Vulnerability**

The table below shows owners of key utility system infrastructure in Berkeley.

**Table 6. Key Berkeley Utility Systems**

Owner/Manager	Infrastructure
City of Berkeley	<ul style="list-style-type: none"> <li>• Storm drains</li> <li>• Retaining walls in right-of-way</li> <li>• Sanitary sewer collection system that links to the EBMUD system</li> <li>• Creeks, open channels and creek culverts in right-of-way and on City property</li> <li>• Street Lights and traffic lights on poles or utility poles and above- and below-ground conduits supplied from the PG&amp;E system</li> <li>• Transfer Center, city waste disposal and recycling, located at Second and Gilman streets</li> </ul>
EBMUD	<ul style="list-style-type: none"> <li>• Potable and fire suppression water supply system consisting of pipelines, pumping plants, flow/pressure control facilities, and storage tanks and reservoirs owned by the East Bay Municipal Utility District</li> <li>• Sanitary sewer transmission pipeline (EBMUD wastewater interceptor) and pumping station</li> </ul>
PG&E	<ul style="list-style-type: none"> <li>• Electric distribution system, including substations, mains, laterals and meters, owned by the Pacific Gas and Electric Company</li> <li>• Natural gas distribution system, including main pipelines, lateral pipelines and meters</li> </ul>
AT&T, Comcast and others	<ul style="list-style-type: none"> <li>• Telecommunications aerial and underground conduits</li> </ul>
Kinder Morgan Corporation	<ul style="list-style-type: none"> <li>• Aviation fuel and multi-product pipelines buried under the right-of-way of the Union Pacific railroad tracks</li> </ul>
Various	<ul style="list-style-type: none"> <li>• 513 sites in the city storing more than 55 gallons, 200 cu ft or 500 lbs accumulated hazardous materials and hazardous waste</li> </ul>

Liquefaction is a significant contributor to utility failure after an earthquake. When soil liquefies, the effective stress of a soil is reduced to essentially zero, which corresponds to a complete loss of shear strength or shear resistance. Sloping ground and ground next to creeks and the Bay may slide on a liquefied soil layer, opening large cracks or fissures in the ground. This can cause significant damage to infrastructure lines such as water, natural gas, sewage, storm, electrical and telecommunications systems installed in the affected ground. Buried tanks, pipelines, conduits, and manholes may float in the liquefied soil due to their buoyancy.

Landslides, liquefaction, or subsidence caused by earthquakes may subject pipelines to significant displacement, causing the pipelines to develop leaks or breaks.

The following systems are described in further detail:

- Water System
- Sanitary Sewer System
- Storm Drain System
- Natural Gas and Electricity Systems
- Aviation Fuel Pipeline
- Hazardous Materials Management

### **Water System: Earthquake Exposure and Vulnerability**

*Key Partner: East Bay Municipal Utility District (EBMUD)<sup>25</sup>*

The East Bay Municipal Utility District (EBMUD) provides drinking water to approximately 1.4 million people and sewer services to 640,000 in the East Bay. After an earthquake, EBMUD is responsible for maintaining and providing water and sewer services to its customers, including water for post-earthquake fire suppression. Much of the water for the East Bay comes through the Claremont Tunnel. This water is stored in a network of reservoirs throughout the Berkeley Hills and is distributed to customers through underground pipelines. EBMUD was created in 1923, and the age and extent of its system makes it particularly vulnerable to damage in earthquakes. EBMUD has studied the impacts of earthquake shaking, liquefaction, landslides and fault rupture on most of its infrastructure.

Following a major seismic event:

- Earthquake-induced landslides in the Berkeley hills could impact water lines, reducing water available for firefighting
- If fault rupture occurs, water lines within the fault rupture planning zone could be broken
- Liquefaction in the western part of the city could impact water service

In the HayWired earthquake scenario, EBMUD's 4,162 miles of pipe suffer about 1,800 breaks and 3,900 leaks during the earthquake sequence. EBMUD crews will likely begin working to repair the system immediately after an event. The average EBMUD customer would be without water for 6 weeks, some for as many as 6 months.<sup>26</sup>

Depending on the severity of earth movement, water and sewer lines may break, and the safety of the drinking water supply may be compromised. In addition, without power, sewer lift pumps will fail, leading to major sewage overflows. For this reason, the City's Environmental Health and Public Health Divisions may issue precautionary drinking water advisories, either in collaboration with water utilities or independently. These advisories may be in place until the

drinking water system is confirmed safe.<sup>27</sup>

**Sanitary Sewer System: Earthquake Exposure and Vulnerability**

The City’s sanitary sewer system is made up of pipelines with large diameter (six inches to 120 inches). Some of the large diameter pipes provide temporary storage when the EBMUD wastewater interceptor<sup>28</sup> system cannot accept flows. The amount of storage time provided by these large diameter pipes depends on the inflow rate and the ability of downstream segments to accommodate flow. Failure of the EBMUD interceptor system or the City’s sanitary sewer system could cause sewage to back up beyond the Berkeley sanitary sewer system’s storage capacity. When the volume of effluent is larger than the sanitary sewer system’s storage capacity, it will overflow through manhole covers onto city streets and into the storm drain system and creeks that flow to the Bay.

The table below outlines the total length of Berkeley’s sanitary sewer system, as well as the length and percentage of the system that lies within the hazard areas depicted on Maps 3,4, and 7.

**Table 7. Sanitary Sewer System**

Infrastructure Element	Total Length	Length in Hazard Areas		
		Earthquake-Induced Landslide Planning Zone	Fault Rupture Planning Zone	Very High, High, and Moderate Liquefaction Susceptibility Zone
Sanitary sewer	260 miles	50 miles (19%)	29 miles (11%)	101 miles (39%)

The Berkeley hills have a high landslide risk, which could particularly impact the sanitary sewer system.

If fault rupture occurs, it could critically damage portions of the sanitary sewer system that are within the Fault Rupture Planning Zone.

The liquefaction hazard is more acute on the west side of the city. Liquefaction-caused earth movements will affect underground infrastructure, including a high proportion of the sanitary sewer system. Liquefied areas may move laterally, breaking Berkeley’s underground sanitary sewer pipelines. Liquefied areas could also compromise EBMUD’s wastewater interceptor line, adjacent to Interstate 80. Damage to either system would interrupt the systems’ ability to convey sewage.

**Storm Drain System: Earthquake Exposure and Vulnerability**

Areas of the city’s storm drainage system are known to be extremely weak and at risk of collapse. An earthquake would cause significant damage to this system. If the next earthquake occurs during or shortly before a rainstorm, the city could experience significant flooding in areas that have not seen floodwaters previously. The weaknesses of this system are described in more detail in Section B.8, which addresses floods.

The table below outlines the total length of Berkeley’s storm drain system, as well as the length and percentage of the system that lies within the hazard areas depicted on Maps 3,4, and 7.

**Table 8. Storm Drain System**

Infrastructure Element	Total Length	Length in Hazard Areas		
		Earthquake-Induced Landslide Planning Zone	Fault Rupture Planning Zone	Very High, High, and Moderate Liquefaction Susceptibility Zone
Storm Drains	94 miles	13 miles (14%)	8 miles (9%)	45 miles (48%)

Earthquake-caused ground failure could change the horizontal alignment of pipes so that storm drains would not function.

The Berkeley hills have a high landslide risk, which could block or damage storm drains.

If it occurs, fault rupture could damage portions of the storm drainage system within the Fault Rupture Planning Zone.

The liquefaction hazard is more acute on the west side of the city. Liquefied areas may move laterally, breaking underground storm pipelines and affecting other underground infrastructure and creeks.

**Electricity and Natural Gas Systems: Earthquake Exposure and Vulnerability**

*Electricity*

Berkeley’s electricity system is almost entirely aboveground. Earthquakes can topple or break utility poles, and falling trees or collapsing structures can damage utility lines.

Electrical switches and transformers in the distribution system can be damaged, as can equipment at substations and transmission lines, possibly leading to system wide loss of these utilities. Grid-tied photovoltaic (solar) panels are reliant on the electric grid being functional unless they are designed with smart inverters and battery back-up storage so that they can island from the grid.

Because electrical system infrastructure exists throughout Berkeley, earthquake shaking, liquefaction, fault rupture and earthquake-induced landslides can all damage this infrastructure both above and below the ground. This means that a major earthquake will cause significant power loss to Berkeley. Loss of power can lead to many cascading and significant consequences such as impacts to vulnerable infrastructure, inability to operate fuel and water systems that require electricity, communication and service disruption, loss of heating or cooling, and loss of critical function for populations that rely on power for survival.



### *Natural Gas*

Underground systems are particularly prone to damage from ground failure in earthquakes and landslides. Natural gas line rupture is one of the chief causes of post-earthquake fires, as discussed in Section B.5.b.vi Fire Following Earthquake.

Additionally, rupture compromises this lifeline unless redundant connections unaffected by the earthquake are available. Underground damage is harder to detect and repair, and the length of service losses may be greater than for aboveground systems.

This plan is focused on natural hazards and their impacts. This plan addresses gas pipeline rupture as a secondary hazard to earthquake liquefaction, earthquake-induced landslides and surface fault rupture.

The term “gas pipeline” includes:

- Transmission pipelines, which carry natural gas across long distances, usually to and from compressors or to a distribution center or storage facility. Transmission lines are large steel pipes (10" to 42" in diameter) that are federally-regulated. They carry unodorized gas at a pressure of approximately 60-900 psi.
- Distribution pipelines (“gas mains”), which are the middle step between high-pressure transmission lines and low-pressure service lines. Distribution pipelines are small- to medium-sized pipes (.25" to 24" in diameter) that are federally-regulated and carry odorized gas at intermediate pressure levels, from 2 to 60 psi.
- Service pipelines, which connect to meters to deliver natural gas to individual customers. These narrow pipes are usually less than 2" in diameter, and carry odorized gas at low pressures, such as 6 psi.

Like electricity infrastructure, service and distribution pipelines exist throughout Berkeley. In the HayWired Scenario, service and distribution pipelines will be exposed to severe and violent shaking, as well as to liquefaction concentrated in the western part of Berkeley, earthquake-induced landslides and fault rupture in the Berkeley hills. Rupture of service and distribution lines can ignite and fuel fires. Additionally, natural gas leaks within buildings can cause carbon monoxide poisoning. Finally, any loss of service could lead to loss of heating and cooling, which may jeopardize the health and safety of many people.

Not only do ruptures have the potential to cause fires, but they also have climate implications. The main component of natural gas is methane, which is a potent greenhouse gas that is 25 times more harmful to the atmosphere over a 100-year period than carbon dioxide.<sup>29</sup>

In addition to service and distribution lines, transmission pipelines are also vulnerable to ground failure in a major earthquake. Map 12 uses thick blue lines to identify PG&E’s natural gas transmission lines. Significant portions of PG&E natural gas transmission lines lie in areas of Berkeley that are more susceptible to liquefaction ( Map 7). In an earthquake, these soils need to

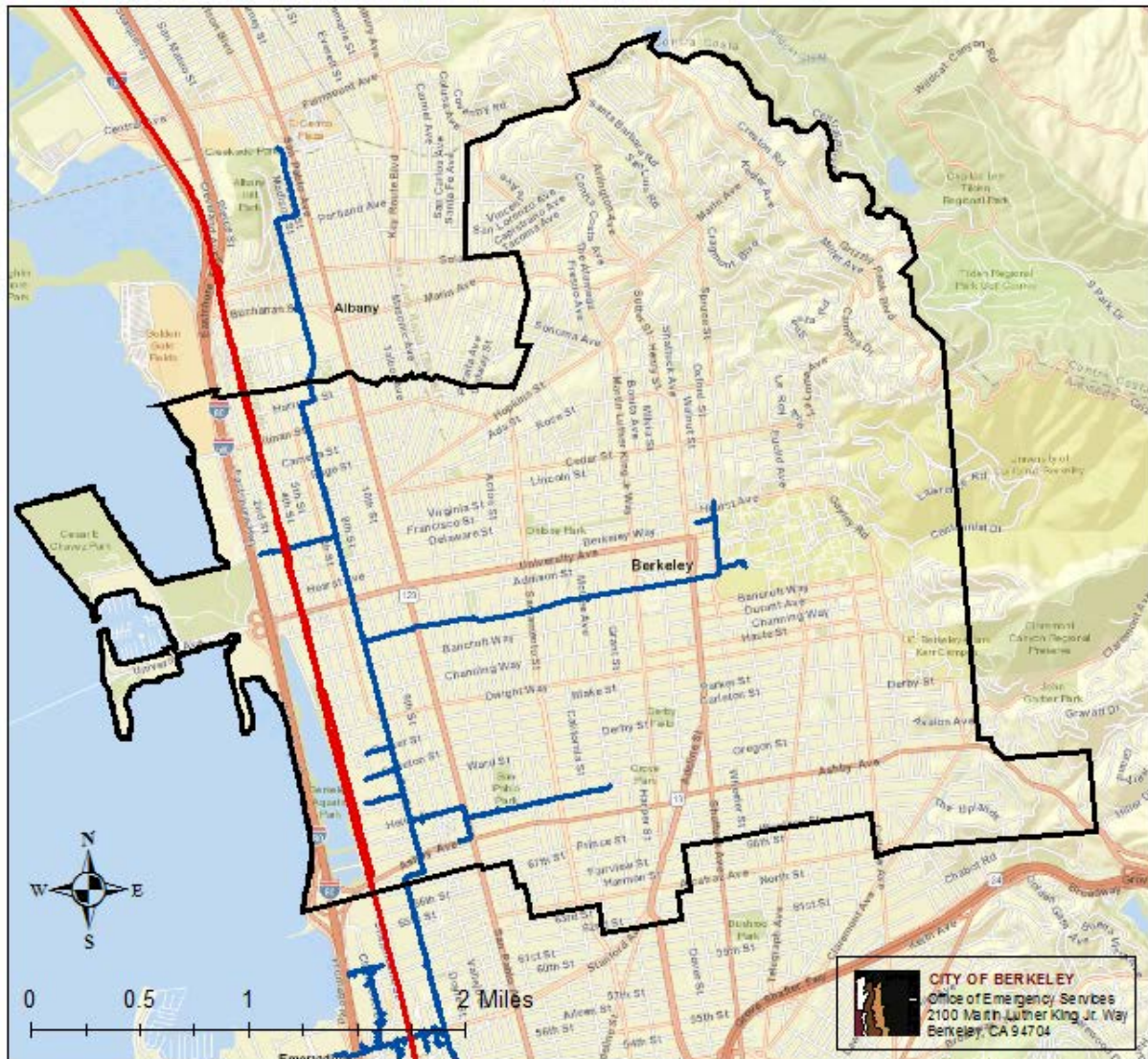
be shaken hard and long enough in order to trigger liquefaction. If liquefaction does occur, pipelines located in liquefiable soils can tear apart.

The natural gas transmission line runs the length of Berkeley (north-south direction) under Seventh Street.

- The Seventh Street transmission line branches out to the West in four locations: Grayson, Carleton, Parker and Virginia Streets. The Virginia street branch runs almost all the way to the Eastshore Freeway.
- The Seventh Street transmission line branches out to the east in two locations. The first is at Heinz Avenue, continuing onto Russell Street after passing San Pablo Avenue. The transmission line ends where Russell Street crosses McGee Avenue. The second is at Allston Way. The transmission line extends the entire length of Allston Way, to the edge of UC Berkeley campus at Oxford Street, where it splits. One short transmission line continues into the campus and the other follows Oxford Street north just past Hearst Avenue, where it ends.

Map 12 also shows in a thick red line the location of pipelines carrying aviation fuel. These pipelines run along the Union Pacific railroad right-of-way in the western part of the city.

Map 12. Gas Transmission Pipelines and Jet Fuel Line



Sources: PG&E and Kinder-Morgan

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

- City of Berkeley
- Jet Fuel Line
- Gas Transmission Lines

## Notable Mitigation Activities

One potential solution to mitigate some of the negative impacts of the use of natural gas is to encourage buildings to switch from natural gas to electricity for water heating and space heating or cooling in buildings. The electrification of buildings helps reduce greenhouse gas emissions, especially if the electricity is powered by solar or by carbon-free energy provided by East Bay Clean Energy. The Office of Energy & Sustainable Development is currently exploring options for all-electric buildings, which would potentially no longer need to be connected to the natural gas power grid. This would significantly reduce risk for the fire, health, and climate impacts associated with widespread existing leakages in the system as well as damage to the pipelines from a natural disaster. The electrification of buildings, when coupled with on-site solar and back-up storage batteries, could also provide clean energy back-up power to buildings in the event of a power outage. OESD is currently working to address financial, regulatory, and technical barriers to this clean energy solution, while also exploring the energy assurance aspects of potential solutions.

*Key Partner: Pacific Gas and Electric Company (PG&E)<sup>30</sup>*

Pacific Gas and Electric (PG&E) provides electricity and natural gas to 15 million people in northern and central California. They have a staff of 20,000 prepared to respond to restore electrical service after disasters and storms. They also have a well-established priority system for restoring power to emergency services before other community needs. PG&E recognizes that large earthquakes may damage key facilities and that electric power might be lost for limited periods of time. The potential for a loss of power means that emergency and critical uses should have dedicated emergency power sources.

Natural gas is subject to damage and disruption in areas with soil failure, for example landslide and liquefaction. Broken lines can create fires if ignited until the fuel supply is exhausted. The repair of damaged underground lines will take time. Following the Loma Prieta earthquake it took about 30 days to repair damaged lines in the San Francisco Marina.

### Key Partner's Notable Mitigation Activities

PG&E has assessed the seismic vulnerability of many elements of its system and has taken steps to improve its functionality after an earthquake, such as replacing bushings on high voltage lines, anchoring substation equipment and replacing old gas lines with more flexible alternatives.

As a consequence of the San Bruno rupture, the National Transportation Safety Board (NTSB) has issued a number of recommendations to State and federal administrations and institutions to improve the safety of pipeline networks as well as to upgrade the integrity management program and emergency response system<sup>31</sup>.

As a result, PG&E has proposed \$2.2 billion in pipeline upgrades through 2014 and outlined a Pipeline Safety Enhancement Plan to modernize its gas transmissions operations over the next several years. As part of this plan and in direct response to the recommendations issued by the

NTSB, PG&E has begun improving its network by automating shutoff valves, with more automatic shutoff valves planned for Berkeley; updating its emergency response plan to reflect industry best practices; and implementing data management systems intended to ensure its pipeline records are traceable, verifiable and complete.

Additionally, PG&E has created a First Responders Safety website, which provides secure access to maps and information about natural gas transmission lines, natural gas storage facilities, and shut-off valves. The City's Information Technology department has incorporated this information into its GIS maps. Berkeley first responders have attended PG&E's First Responder Workshops to learn more about components of natural gas and electric utility infrastructure, as well as how to respond to natural gas hazards and avoid dangers presented by migrating natural gas and secondary ignition sources.

### **Aviation Fuel Pipeline**

Map 12 shows in red lines the location of pipelines carrying aviation fuel. These pipelines run along the Union Pacific railroad right-of-way in the western part of the city. Per Map 7, soils in this area are potentially susceptible to liquefaction. Like with the PG&E natural gas transmission lines, rupture of these aviation fuel lines during an earthquake could spark and feed a dangerous fire.

*Key Partner: Kinder Morgan, Inc.*<sup>32</sup>

Two aviation and multipurpose pipelines run along the railroad tracks from Richmond to the Oakland Airport, through western Berkeley. The pipes are made of high-pressure welded steel, installed primarily in the 1960s, although a few segments were installed in the 1950s. The company has not conducted a study of the impacts of an earthquake on the Hayward fault. This type of pipeline, however, is known to have performed well, due to its ductile nature, in earthquakes elsewhere in the world. Kinder Morgan, Inc. has focused on developing procedures to respond immediately after a disaster to shut down the pipeline. Each pipeline has automatic, remote control and other manual valves along its length and the flow can be shut down within minutes. Kinder Morgan, Inc. reported that after the 1989 Loma Prieta earthquake, these pipelines were shut down and monitored for leaks, breaks and changes in pressure. No damage was found.

### **Hazardous Materials Management**

The shaking and ground failure that can accompany earthquakes could cause hazardous materials release. The City carefully tracks and regulates hazardous materials in both public and private structures through its Toxics Management Division. There are 513 facilities in the city that store more than 55 gallons, 200 cu ft or 500 lbs accumulated hazardous materials and hazardous waste.<sup>33</sup> The majority of these sites are automobile-related facilities (e.g., facilities with motor oil), and medical facilities. To minimize the risk of release during an earthquake, the City requires engineering studies for facilities having extremely hazardous substances. These studies are discussed in more detail in Section B.12 *Hazardous Materials Release*.

### Transportation System Earthquake Vulnerabilities

The table below shows key transportation system infrastructure in Berkeley, along with the agencies responsible for the systems.

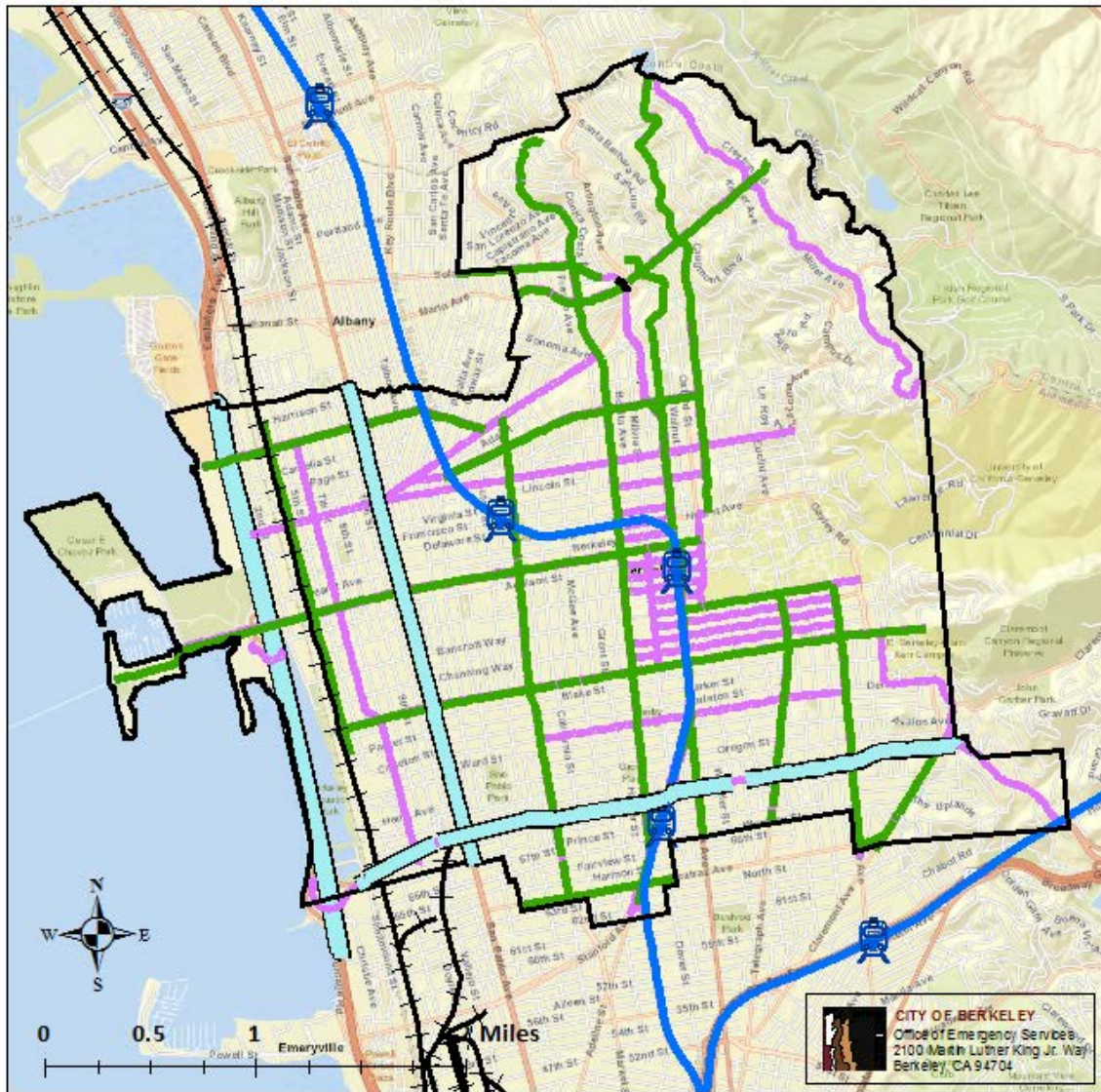
**Table 9. Key Berkeley Transportation Systems**

Owner/Manager	Infrastructure
City of Berkeley	<ul style="list-style-type: none"> <li>• Roads, curbs, paths and sidewalks</li> <li>• Traffic lights on poles, and above and below ground conduits supplied from the PG&amp;E system</li> <li>• Traffic circles and islands</li> <li>• Sutter Street Solano Avenue tunnel</li> <li>• I-80 Pedestrian Bridge</li> <li>• University Avenue interchange approach structure and railroad crossing</li> </ul>
Caltrans	<ul style="list-style-type: none"> <li>• US Interstates 80 and 580 and freeway access structures at Ashby, University and Gilman streets in Berkeley, and at Powell and Buchanan streets in Emeryville and Albany owned by the State Department of Transportation</li> <li>• Tunnel Road/Ashby (State Route 13), and San Pablo Avenue (State Route 123)</li> </ul>
Bay Area Rapid Transit District	<ul style="list-style-type: none"> <li>• BART system, consisting of four miles of underground rails and three stations, at Adeline/Ashby, Center Street, and North Berkeley</li> </ul>
Union Pacific	<ul style="list-style-type: none"> <li>• Train tracks</li> </ul>
Amtrak	<ul style="list-style-type: none"> <li>• University Avenue passenger stop</li> </ul>









Map 13 below shows the location of major transportation infrastructure. Designated Emergency Access and Evacuation Routes<sup>34</sup> are indicated with purple lines. The Union Pacific railroad is indicated with a black hatched line along Berkeley’s western shoreline. Interstate 80 and California State Highways 13 and 123 are indicated in light blue, running along Berkeley’s western shoreline, southern end, and north to south in Berkeley’s west, respectively. The Bay Area Rapid Transit (BART) tracks are indicated with thick blue lines, with station icons for the system’s three Berkeley stations and the El Cerrito Plaza station in the City of El Cerrito provided for context. The Solano Tunnel, which provides a key north-south connection to vehicles in the eastern portion of the City, is indicated with a thick black line.



Map 13. *Transportation Infrastructure in Berkeley*



Sources: Berkeley Planning Department, BART, and ESRI, Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Highways
-  Railroad
-  BART Stations
-  BART
-  Solano Tunnel
-  Major streets
-  Emergency Access and Evacuation Routes

The table below calculates the exposure of City-owned transportation infrastructure to earthquake these hazards.

**Table 10. Curbs, Streets and the Solano Tunnel**

Infrastructure Element	Total Length	Length in Hazard Areas		
		Earthquake-Induced Landslide Planning Zone	Fault Rupture Planning Zone	Very High, High, and Moderate Liquefaction Susceptibility Zone
Curbs	354 miles	56 miles (16%)	42 miles (12%)	177 miles (50%)
Streets	258 miles	43 miles (17%)	26 miles (10%)	117 miles (45%)
Solano Tunnel	0.09 miles	0 miles (0%)	0 miles (0%)	0 miles (0%)

Map 13 and Table 10 together identify key areas of exposure within Berkeley’s transportation infrastructure.

Nearly half of all City streets are have a moderate or greater exposure to liquefaction, meaning that vehicle movement throughout the city is likely to be impacted by liquefaction-caused earth movements in a major earthquake. This movement will also affect aboveground infrastructure (streets, curbs and sidewalks.) Transportation infrastructure west of Interstate 80 is especially vulnerable to liquefaction. Per Map 8, in the HayWired scenario earthquake, over 40 percent of this area is expected to liquefy.

Transportation infrastructure in the area could be severely damaged. Additionally, emergency services vehicles may not be able to access the area, at least until the University Avenue overpass is inspected for damage.

Half of all City streets are have a moderate or greater exposure to liquefaction. Curbs serve as water barriers to property when it rains, curbs function as part of the drainage system. If curbs are impacted by ground failure from an earthquake, they lose their ability to function in this way.

To the city’s east, 17 percent of City streets are situated in the earthquake-induced landslide planning zone. Landslides in this area could distort major and minor roads. This would make access difficult or impossible for firefighters and other emergency responders. It would also complicate evacuation for residents in the Berkeley hills.

Fault rupture, if it occurs, could damage important east-west streets along the fault, making travel between the hills and flatland areas difficult where displacements are large.



The Solano Tunnel is an important connection in the north-south direction. It is not located in a seismic hazard zone. However, it is situated in the direct proximity of the Fault Rupture Planning Zone, as well as the Earthquake-Induced Landslide Planning Zone. Should one of these hazards occur, access to Solano Tunnel could be limited or even impossible.

### Key Transportation Partners

Partner-run transportation systems have varying levels of exposure to seismic hazards.

Per Map 13, Interstate 80 is susceptible to earthquake-induced liquefaction. Additionally, the HayWired Scenario Liquefaction Map (Map 8) shows that in a 7.0 magnitude earthquake on the Hayward fault, 40% or more of the ground underneath Berkeley portions of Interstate 80 is predicted to liquefy. This is a major thoroughfare for Berkeley and the Bay Area overall.

#### *Caltrans*<sup>35</sup>

Caltrans is responsible for constructing and maintaining the statewide highway system. The 1989 Loma Prieta earthquake caused significant damage to Caltrans structures, such as bridges, overpasses and on-ramps. As a result, Caltrans launched a comprehensive review of earthquake safety on highways throughout the state. A program to retrofit all vulnerable structures was started and the two overpass structures in Berkeley, at Ashby and University Avenues, have already been strengthened. These retrofits were designed to prevent collapse in a major earthquake, but will not guarantee that these structures can be used after an earthquake. Depending on damage levels, demolition may be required. Caltrans also strengthened the City-owned approach ramps to the overpass on University Avenue to the same standards. Caltrans emergency response teams are trained to inspect their facilities and manage some elements of traffic flow after a major earthquake.

The City owns a portion of a structure at University Avenue that provides access to the state-owned interchange structure connecting to Interstate 80. The City portion of this structure extends over the railroad tracks and west to ground level. Caltrans owns the eastern portion. Caltrans retrofitted both the state-owned and City-owned structures in recent years to high standards of safety.

#### *Bay Area Rapid Transit District (BART)*<sup>36</sup>

The Bay Area Rapid Transit District (BART) provides an important public transportation link between Berkeley, San Francisco, and other Bay Area locations to 360,000 riders daily. In the 1960s, Berkeley taxpayers issued a separate tax to have the BART facilities in Berkeley (three stations and over four miles of tunnel) put underground, and these tunnels are generally considered low risk by BART engineers.

According to Map 13, within Berkeley, the BART system is not exposed to ground failure from earthquakes. However, Map 2 shows that BART infrastructure in Berkeley will be subject to severe shaking in a 7.0 magnitude Hayward fault earthquake.

### Key Partner's Notable Mitigation Activities

In 2002 BART completed a study of the earthquake vulnerability of the entire system, analyzing multiple earthquakes, predicting damage, and assessing cost-effectiveness of retrofits. Upgrades to the system are being funded by \$980 million in General Obligation Bonds, authorized by voters in Alameda, Contra Costa, and San Francisco counties, supplemented with an additional \$240 million from other sources. Since 2008, retrofit has been completed on many elevated tracks, stations, parking structures, and rail yards. Work to upgrade the Transbay Tube seismic joints was completed in 2010. BART is continuing to secure the Transbay Tube to a higher level of strength against future large earthquakes. The current effort is expected to be completed in 2014. Evaluations of several other areas of the Tube are ongoing and further retrofits may be constructed in the future. At this time, those retrofits are expected to be completed in approximately 2018.

As part of the vulnerability study, BART determined that the Berkeley Hills Tunnel which crosses the Hayward fault may be damaged in an earthquake on that fault, cutting a key commuting link. Initial evaluations determined that retrofit or replacement of this tunnel were not viable options. BART continues to study the feasibility of adequately strengthening the tunnel but as yet there is not a retrofit solution that can appropriately achieve this goal. Therefore there are no current plans to perform retrofit construction on the tunnel. BART will however be prepared with materials and crews to respond quickly to any damage that may occur in an earthquake.

BART's investment in earthquake retrofit is strengthened by its earthquake early warning system, which can help prevent train derailments in the system by slowing or stopping trains upon notification of an earthquake. Currently, BART has a system in place, which is activated when an earthquake larger than magnitude 4 or 5 is experienced within the BART system. BART is working with UC Berkeley and others to implement a statewide earthquake early warning system. This system would issue notification to operators such as BART upon detection of P-waves.<sup>37</sup> Upon notification, BART would automatically slow or stop trains within the system. The length of advance warning depends on how far away the earthquake originates.

## Communications System Earthquake Vulnerabilities

The table below shows key communications system infrastructure in Berkeley, along with the companies responsible for the systems.

**Table 11. Key Berkeley Communications Systems**

Owner/Manager	Infrastructure
AT&T	<ul style="list-style-type: none"> <li>Land line telephone distribution system that shares poles with PG&amp;E in some locations and is located underground in other locations</li> </ul>
Comcast and other companies	<ul style="list-style-type: none"> <li>Cable systems that share poles with PG&amp;E in some locations and are located underground in other locations</li> </ul>
Verizon, Sprint PCS, Nextel and other companies	<ul style="list-style-type: none"> <li>Cellular telephone antennae distributed throughout the city</li> </ul>

Communications infrastructure is spread throughout Berkeley, and thus is exposed to all earthquake ground failure hazards.

Telephone and cable communications systems are almost entirely aboveground in Berkeley. Earthquake shaking can topple or break utility poles, and falling trees or collapsing structures can damage utility lines.

Additionally, Berkeley’s underground utilities include communications conduits. Underground systems are particularly vulnerable to damage from ground failure in earthquakes. Displacement on the Hayward fault could rupture these systems, compromising these lifelines unless redundant connections unaffected by the earthquake are available. Ground movement due to liquefaction in the west and landslides in the east will also severely impact these systems. Liquefied areas may move laterally, breaking underground cables and damaging communication lines. Landslides can damage underground and aboveground communications infrastructure during earthquakes, or in separate slides that can occur for weeks or months following an event.

Underground damage is harder to detect and repair and the length of service losses may be greater than for aboveground systems.

### Key Communications Partners

#### *AT&T*<sup>38</sup>

AT&T provides and maintains telephone service to Berkeley residents, along with internet access, Uverse Television Service, mobile telephone service, and other business services. The telephone wires, conduits, coaxial cables and fiber optic lines have been tested and designed to be highly resistant to earthquake shaking, and easy to reroute should problems occur. For example, slack is provided in underground cables to permit earth movement without damage. All

AT&T facilities have batteries that can run for four hours without electrical service, and many diesel generators are available to supplement the batteries if needed. Minimal water is required to keep the electrical equipment from overheating.

AT&T expects some telephone outages, including mobile phone service, after a major earthquake, and service restoration would take hours to days, depending on location and the situation. A major earthquake could impact service in a 50 square mile radius. The central office in Berkeley, with major equipment, has been seismically strengthened, but it is possible that neighboring buildings that have structural deficiencies could collapse into this building and cause damage. If the central office building was completely destroyed, portable equipment and trailers could quickly reestablish service. AT&T is prepared to set up additional phone lines open to the public at a central location if major service losses occur.

The AT&T Network Disaster Recovery (NDR) team has managers, engineers, and technicians who receive special training in physical recovery of AT&T's network. Members participate in several recovery exercises each year to test, refine, and strengthen AT&T's business continuity and disaster response services in order to minimize network downtime.

AT&T's Network Disaster Recovery organization is responsible for the rapid recovery of service at AT&T sites following a catastrophic event.

In the case of an event or disaster the NDR has three primary goals:

1. Route noninvolved telecommunications traffic around an affected area
2. Give the affected area communications access to the rest of the world
3. Recover communications service to a normal condition as quickly as possible through restoration and repair

AT&T won Frost & Sullivan's 2010 Product Leader Leadership of the Year Award for Business Continuity and Disaster Recovery Services in North America.

#### *Verizon Wireless*<sup>39</sup>

Verizon Wireless serves its individual, government and business customers with voice and/or data services via Verizon's wireless cellular network.

Verizon has designed and built its network with day-to-day reliability and disaster resilience in mind. Since inception, all Verizon Wireless facilities in California have been built to the most stringent California building codes. Verizon also follows an internal Network Equipment Building System standard. Since 2004, Verizon has hardened its network by moving two of its Bay Area switching facilities to newly-constructed facilities. These facilities meet or surpass all then-current earthquake standards; they also provide additional redundancy with respect to capacity for battery back-up, generators, fuel and HVAC. The facilities also have increased security through design and alarming capabilities. All major transport facilities (i.e., the links between switching facilities, network hubs, the internet, etc.) are fully redundant either through

SONET Ring architecture or diverse path routing.

Verizon Wireless has worked with the City to place all 13 of its Berkeley cell site facilities. In the Verizon Wireless Northern California network, about two-thirds of all sites have permanent generators. This represents an approximately 250 percent increase since 2004. In Berkeley in particular, cell site facilities have relatively few generators, with only 2 of the 13 sites so equipped.

In a disaster, Verizon's basic service mission does not change. However, it is understood that the network may be damaged from the impacts of a disaster, such as an earthquake, and that the demand on the network will simultaneously rise. In this case, the mission of Verizon Wireless will be to:

1. Restore and/or enhance the network as quickly as possible, to the greatest extent possible.
2. Assist with local communities' wireless communications needs to the greatest extent possible to enhance public safety and relief or rescue efforts.

Verizon's local network group trains and drills for disaster events, and local personnel have aided recovery efforts for other disasters outside the area, such as Hurricanes Katrina and Sandy. In the event of a disaster, Verizon makes the resources of the entire company available locally.

#### *Comcast<sup>40</sup>*

Comcast provides the following services to the Berkeley community:

- Voice (wireline telephone service)
- Video (television)
- Data (high-speed Internet, Wi-Fi hotspots, cellular backhaul services)
- Home security/home automation

Comcast's distribution telephony network depends on other communications providers. If supporting providers' networks are operational, Comcast will maintain connectivity to all its customers. If an individual network fails, Comcast will lose its connection to the customers using that particular network.

To protect its infrastructure in earthquakes and other disasters, Comcast has hardened all its sites. Additionally, all sites are connected via redundant fiber networks to maintain service to greater service areas. Major metro fiber routes are backed up by redundant routes and failover technologies.

After a catastrophic earthquake, due to facility redundancy of backbone/regional networks, Comcast expects that transport of major traffic should continue. However, local serving areas are more likely to experience gaps in service due to lessened redundancy between headend

facilities<sup>41</sup> and customer homes.

In the event of a power outage, Comcast will use battery backup to maintain service for up to eight hours. Comcast monitors its power supplies, and in the event of the backup batteries being depleted, generators are in place to maintain service.

Comcast's ability to recover from facility damage after an earthquake will be determined by its ability to access headend locations, as well as to refuel generators if commercial power is lost. Customers may experience a total loss of video service, and total loss or severe network congestion of voice and data services. Comcast also provides cellular backhaul services<sup>42</sup> for Verizon Wireless. Impacts to Comcast's infrastructure could potentially impact Verizon's service to its customers.

### B.5.c.v *Critical Response Facilities*

In addition to the infrastructure mentioned above, a key network of facilities supports disaster response activities. This network includes facilities owned by the City, as well as others owned by the City's key partners. Map 14 shows the locations of all of these facilities. Because these facilities serve the whole Berkeley community on a day-to-day basis, they are positioned throughout the City.

Recognizing that these facilities will need to be as usable as possible following a catastrophic earthquake, the City has put major effort into ensuring seismic stability of these buildings:

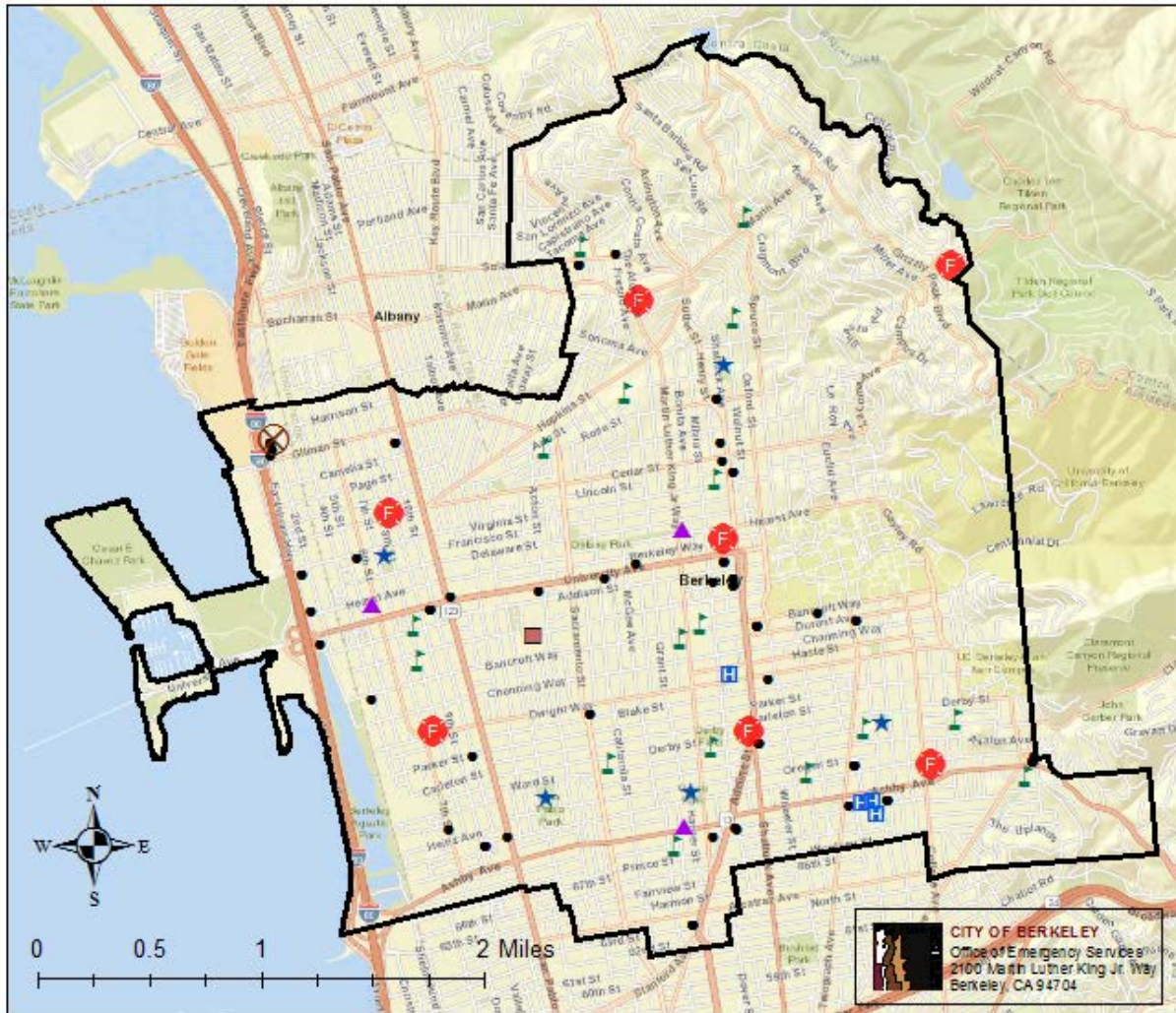
- The Public Safety Building was built in 2000 to essential services standards. This facility houses the Police Department Headquarters and 9-1-1 Communication Center, the Fire Department Headquarters, and the City's primary Emergency Operations Center.
- The City's seven fire stations (on Map 14 with red circles and a "F") have all been retrofitted or built to essential services standards.
- City libraries serve as community gathering points both prior to and following disasters. The City's Main Library, which underwent a complete retrofit in 2002, is planned for use as a disaster volunteer reception center. In 2009, the Branch Library Improvement program began work to renovate the City's four branch libraries for seismic safety. Over the next five years Claremont and North branches were remodeled and expanded while South/Tool Lending Library and West branches were demolished and rebuilt. The program was completed in December 2013.
- The Civic Center Building's isolation system and retrofit elements were designed to provide life safety and limited repairable damage in a Design Basis Earthquake (DBE), and life safety and repairable damage in the Maximum Considered Earthquake (MCE). Although the building's base isolation system would meet the essential services standard of the 2010 California Administrative Code, the building was not built to essential services standards. The nonstructural systems and equipment in the Civic Center Building would need to be evaluated to ensure that their support and bracing systems also meet essential services requirements. Nonstructural elements along the access path to the essential services area should also be evaluated to ensure unobstructed access to these areas in the aftermath of an earthquake.
- City recreation centers (on the map with blue stars) and senior centers (one the map with purple triangles) are considered potential disaster shelter sites. The James Kenney Recreation Center was retrofitted in 2017. Funding (including FEMA mitigation grant funding) has been secured for a retrofit of the North Berkeley Senior Center.

Also on Map 14, are:










- Berkeley Unified Schools (green flags spread throughout)
- Corp Yard (pink rectangle located in Central Berkeley)
- Transfer Station (X in a circle in Northwest Berkeley near the highway)
- Hospitals (blue H with two spots in South and South Central Berkeley)
- Telecom Antennas (black dots spread throughout)



Map 14. City of Berkeley Critical Facilities



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-  City of Berkeley
-  Fire Stations
-  Recreation Centers
-  Senior Centers
-  Schools
-  Corporation Yard
-  Transfer Station
-  Hospitals
-  Telecom Antenna

## Key Critical Response Facility Partner: Hospitals

Hospitals are not operated or owned by City government, but they are critical to disaster response: Following an earthquake, hospitals must be able to care for not only their existing patients, but also a surge of new patients who are injured in the earthquake.

In 1973 as a direct result of the devastation caused by the 1971 San Fernando earthquake (65 deaths and a hospital collapse), the State Legislature passed the Alfred E. Alquist Seismic Safety Act. The Act requires every hospital in California with acute care patient facilities to be built to higher standards than other buildings so they can be reoccupied after major earthquakes. Eleven years later, following the 1994 Northridge earthquake, Senate Bill 1953 expanded the scope of the 1973 Act, requiring:

- By 2002, all critical non-structural components in surgery and emergency medical rooms be retrofitted;
- By 2013, all hospital buildings built before 1973 be replaced or retrofitted so they can reliably survive earthquakes without collapsing or posing threats of significant loss of life;
- By 2030, all existing hospitals (including those built after 1973) be seismically evaluated and retrofitted, if needed, so they are reasonably capable of providing services to the public after disasters.

The Office of Statewide Health Planning and Development develops and regulates seismic performance standards for hospitals.

### *Alta Bates Summit Medical Center<sup>43</sup>*

There is one acute care hospital in Berkeley, Alta Bates Summit Medical Center, owned and operated by the Sutter East Bay Hospitals. The hospital has two campuses in Berkeley: Alta Bates and Herrick.

The Alta Bates campus is a full service acute care hospital, while the Herrick campus provides acute care limited to mental health and cancer care services. Alta Bates is comprised of eight buildings used to provide acute patient care, five of which were built to pre-1973 seismic standards. These buildings are not considered a threat to life safety, but may not be functional or repairable after an earthquake.<sup>44</sup> The Hospital Seismic Safety Act requires these buildings to be retrofitted or replaced by 2030 to meet standards to be repairable or functional following an earthquake. Three additional buildings at Alta Bates and three at Herrick have already met this standard.<sup>45</sup> Four buildings at the Herrick Campus are considered to be a significant risk to life safety.<sup>46</sup> Acute care functions formerly housed in these buildings have been relocated into seismically compliant portion of the Herrick campus and/or to the Summit Campus as of 2013.

### *UC Berkeley University Health Services*

University Health Services (UHS), located at the Tang Center, is a fully-accredited ambulatory health facility serving the students, faculty and staff of the University of California, Berkeley.

UHS provides medical care, including urgent care, primary care, occupational health and specialty services, supported by a pharmacy, laboratory, physical therapy, immunization/travel services, a medical records department, radiology services and advice nurse access. UHS also offers counseling, social services and psychiatric care to support students' academic success.

UHS' disaster response role depends on the needs at the time of the event. In a localized emergency, UHS may provide for members of the campus by addressing mental health needs, distributing vaccinations, assisting with relocation, or by providing other support services. In a catastrophic earthquake, UHS will use available resources to triage and care for campus persons, but will require additional resources to care for large numbers of people who may present. By providing care on campus, UHS will help to reduce demand on local emergency rooms from people who do not need tertiary care.

UHS coordinates its disaster readiness activities with both the City of Berkeley's Public Health Division and the Alameda County Public Health Department. Relationships between these entities have been built over many years, establishing the understandings and relationships that will support effective disaster response.

In 1993, the Tang Center was constructed to an essential facilities standard, due to both its health-related mission and its then-designation as a backup Emergency Operations Center for the campus.

To secure access to electronic health records, UHS moved its clinical management system to a secure hardened facility with redundant power and network connectivity. Backups of all data reside both locally in the Data Center and at the San Diego Super Computing Center (SDSCC).

UHS has located shipping containers in close proximity to the building to store medical supplies to support basic triage immediately following a major earthquake.

In coordination with the Office of Emergency Management, and local entities, UHS participates in planning and drills for various emergency scenarios, including loss of water and power.

### **Key Critical Response Facility Partner: Public Schools**

Public schools are not operated or owned by City government, but they are critical to disaster response: they may be used for temporary sheltering of people displaced from their homes following an earthquake. Schools also support disaster recovery, providing a welcome return to normal routines for children, and childcare so that parents can rejoin the workforce.

Unlike laws and regulations for privately-owned buildings, there is a statewide approach to retrofitting and upgrade of existing schools, which must meet special earthquake design standards. The Division of the State Architect is the review agency for the design and construction of public K-12 school facilities in California. The Field Act, originally passed in 1933, regulates the design, construction and renovation of public school buildings, and the inspection of existing school buildings. Many subsequently adopted State laws, amendments to the Field Act, and supplementary laws, call for additional safety measures for all public K-12

schools in the state. California has the most stringent safety codes for school buildings in the U.S.

Up until June 30, 2006, community colleges had to comply with the Field Act. In 2006, Assembly Bill 127 was passed, giving community colleges the option of choosing to design and construct under local building codes or under the Field Act.<sup>47</sup>

Only some charter school buildings are subject to Field Act provisions. Many school and building officials are unclear about the rules that apply when the Field Act does not.<sup>48</sup>

#### *Berkeley Unified School District*<sup>49</sup>

The Berkeley Unified School District, a special local government district, manages primary and secondary education and educational facilities, including all public schools in the city. City government provides police and fire services to the District, but has limited authority over these structures.

In 1989, shortly after the Loma Prieta earthquake, the District hired engineers to evaluate the structural safety of the buildings. Engineers found significant problems at many schools. The District's Board took swift action. Within a year, the District closed a number of schools, took precautionary measures at ones that remained open, and developed a plan of action to correct safety problems within the District as a whole.

Local voters have approved several bond measures to renovate and modernize city schools. In June 1992, local voters approved a bond measure to raise taxes to provide \$158 million to renovate and modernize the city's schools. In November 2000, voters approved another supplemental bond measure for the safety program totaling an additional \$116.5 million. In the years since voters approved the original tax measure, all of the schools identified by the engineers have been seismically strengthened or demolished and replaced.

#### **Notable Mitigation Activities**

As of 2013, all District pre-K, K-12, and adult educational facilities, requiring retrofit under the Field Act and subsequently adopted State safety laws have been retrofitted. Additionally, with the exception of plant operations, all administrative spaces have been retrofitted and the transportation facility was built in strict accordance with the seismic building code.

In November 2010, Berkeley voters approved Measure I, funding improvements to school safety and facilities. Seismic work funded by the measure includes:

- Demolition of the Old Gymnasium at Berkeley High School.
- Replacement of the unreinforced masonry building at the BUSD corporation yard that functions as its maintenance facility. Due to cost estimates proving to be much higher than the original projections, this project remains on the unfunded list and has been delayed.

In 2012, the District moved its administrative offices out of the seismically-unsafe Old City Hall and into a newly-renovated building on Bonar and University.

In addition, as the building code becomes more stringent, Berkeley continues to improve the seismic safety of its schools. For example, Berkeley plans to do a voluntary upgrade of the Berkeley Community Theater located at Berkeley High School as well as the Multi-Purpose Room building at Rosa Parks Elementary School over the next two years.

#### *Berkeley City College*<sup>50</sup>

Berkeley City College is a community college serving about 6,297 students in downtown Berkeley. The college, funded by two local measures, is a state-of-the-art facility meeting the latest seismic and fire safety codes. The building's primary Emergency Operations Center (EOC) is located in the Auditorium, Room 021. Its secondary EOC is located in Room 431. The EOC will be connected to the Alameda County Sheriff and the Peralta Community College district headquarters through short-wave radio.

#### *UC Berkeley Campus*

UC Berkeley is a major institution separate from the City but located at its core. 42,000 students, 2,200 faculty and over 11,000 staff work or study on campus. The Hayward fault runs through the eastern half of the UC Berkeley campus, and beginning in the early 1970's, the University began earthquake vulnerability studies and retrofit projects, championed by senior University officials. In the early part of 1997, the campus reassessed the condition of its buildings and began an effort to comprehensively address its seismic risk. The SAFER Program (Seismic Action Plan for Facilities Enhancement and Renewal) was launched through Chancellor Robert Berdahl and Vice Provost Nicholas Jewell. A 1997 structural survey of existing campus buildings revealed that about 27 percent of the building space could perform poorly in a major local or regional earthquake.<sup>51</sup> These findings led to SAFER effectively becoming a physical renewal plan for UC Berkeley's built environment. Since 1997, \$500 million worth of seismic improvements have been made to campus buildings and, as of early 2006, work has been completed or started on 72 percent of the square footage identified as needing seismic improvement.<sup>52</sup> The seismic improvement work completed at UC Berkeley has reduced by half the life safety risks for students, faculty, and staff and has cut the risks of potential earthquake-caused economic losses by 25 percent.<sup>53</sup> Planners and executive staff also devoted attention to a wide range of disaster preparedness efforts, ranging from emergency preparedness to facilities and lifeline planning, along with a robust financing strategy.<sup>54</sup>

The City and the University have independent disaster planning programs. However, their risks are inextricably intertwined. A significant portion of UC Berkeley students, faculty and staff live in the city and rely on Berkeley's private industries, housing, and infrastructure. The city's condition after a disaster directly impacts the ability of the University students, faculty and staff to continue their work. Likewise, the city depends on the jobs, commerce, and income created by the University. This means that the viability of University labs, research and other facilities after a disaster has a large influence on the current way of life. The University depends on the City's fire, search and rescue, and hazardous materials emergency services for the campus. Therefore, the risk of fire and catastrophic building collapses on campus directly impacts the capacity of the City's emergency responders. It is in the mutual interest of both the City and the University to coordinate disaster readiness efforts.

### *Berkeley Lab*<sup>55</sup>

Berkeley Lab is a member of the national laboratory system supported by the U.S. Department of Energy through its Office of Science. It is managed by the University of California (UC) and is charged with conducting unclassified research across a wide range of scientific disciplines such as genomics, physical biosciences, life sciences, fundamental physics, accelerator physics and engineering, energy conservation technology, and materials science. The Laboratory's research is conducted in close collaboration with many UC campuses, especially UC Berkeley, UC San Francisco, and UC Davis.

Berkeley Lab employs 5,200 scientists, engineers, support staff and hosts 20,000 guests and users from around the world each year.

Berkeley Lab is located northeast of the City of Berkeley and UC Berkeley campus, on the hill slopes in the East Bay in the Tilden Regional Park area. Parts of the Lab are located on the Hayward fault line, which can result in and significant building damage and earthquake-induced landslides.

The Lab's emergency management function is administered through the Berkeley Lab Emergency Management Program. The mission of the Lab's Emergency Management Program is to build a safe and secure foundation for scientific discovery by preparing for, mitigating, responding to, and recovering from potential hazards caused by natural, technological, and human-caused emergencies.

Berkeley Lab continuously reviews and updates buildings with regard to seismic requirements in accordance with the California Building Code. Several buildings have been retrofitted over the last two decades, with new buildings meeting or exceeding existing code requirements.

### **Berkeley Businesses**

Businesses are vital to the economy of the city and provide jobs to city residents. Ensuring that businesses and employers can return to normal function quickly will in turn ensure that the city recovers quickly from a disaster.

**Table 12. Top 25 Berkeley Employers, by Number of Employees<sup>56</sup>**

<b>Employers</b>	
Alta Bates Medical Center	Lawrence Berkeley Laboratory
Ansys, Inc.	Lifelong Medical Care
Bayer Healthcare LLC	Meyer Sound
Backroads Active Travel	MSCI Inc.
Berkeley Bowl Produce	OC Jones & Sons
Berkeley Clement Inc.	Recreational Equipment Inc.
Berkeley City College	Siemens Corporation
Berkeley Marina Doubletree	Target
Berkeley Repertory Theatre	University of California, Berkeley
Berkeley Unified School District	US Postal Service
City of Berkeley	Whole Foods Market California Inc.
Genji Pacific	YMCA of the Central Bay Area
Kaiser Permanente	

**B.5.c.vi People**

People with disabilities and people with access and functional needs, students, and low income individuals may live in older housing units that are more vulnerable to collapse or damage from earthquakes. These groups may also have less socioeconomic means to prepare for and recover from an earthquake that damages their home. Interruptions in electrical power jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival. Significant damage to streets, curbs, and transportation systems may prevent people with disabilities and people with access and functional needs and people without cars from navigating to their destinations. Damage to and reduced functionality of communication systems may make it difficult for people to meet up with family, friends, and caregivers.

## B.5.d Earthquake Risk and Loss Estimates

No one knows what the characteristics of the next damaging quake to strike Berkeley will be. A quake could occur on any of the regional faults, be deep or shallow under the ground, and shake for a few seconds or up to nearly a minute. The degree of shaking and resulting damages will vary greatly depending on these characteristics.

However, FEMA developed the Hazards US (HAZUS) software to help estimate the consequences of different earthquake scenarios. HAZUS runs a computer model of a hypothetical earthquake, defining the earthquake's magnitude, epicenter location, rupture mechanism and time of day. Using this information, HAZUS estimates losses for that particular earthquake. **These theoretical losses will not exactly predict the actual damage of the scenario earthquake.** Instead, they provide reasonable data to help guide earthquake readiness activities.

### Scenario Predictions

This section references three different HAZUS analyses:

- For the 2004 version of this plan, a magnitude 6.9 scenario earthquake on the Hayward fault underneath Berkeley was simulated using HAZUS.<sup>57</sup> In 2014, these loss estimates were combined with impact descriptions from newer HAZUS scenarios for a larger earthquake.<sup>58</sup> Because Berkeley's increased population and density since 2004, it is likely that these predictions underestimate the impacts and associated costs of such an event.
- For the HayWired Earthquake Scenario, a magnitude 7.0 scenarios earthquake on the Hayward fault epicentered in Oakland was simulated using HAZUS. Predictions from this scenario consider all losses across the Bay Area, not just those in Berkeley specifically.

Together, these scenario descriptions create a broad picture of the impact to Berkeley and the Bay Area overall from a catastrophic earthquake.

These HAZUS analyses predict:

#### Deaths and injuries:

- One hundred people in Berkeley could be killed by this earthquake. Fifty more will be in critical condition requiring urgent medical care. Three hundred additional people will need hospitalization and 1,000 people will require first aid.
- HayWired suggests that across the Bay Area, 800 deaths and 16,000 nonfatal injuries could occur from shaking alone.<sup>59</sup>

#### Fire following earthquake:

- In the first day following the earthquake<sup>60</sup>, fires could ignite in six to twelve<sup>61</sup> different locations around the city. Outside fire departments may not be able to provide mutual aid. Emergency personnel will be stretched thin fighting these fires and may need to use a temporary, aboveground water supply system to pump water from the Bay. Fire could burn for hours or days in a worst-case scenario. Post-



earthquake fires could add \$32 to \$64 million<sup>62</sup> of damage to structures in Berkeley.

- In counties nearest the fault rupture, the HayWired mainshock could cause about 450 large fires, burning building floor area equivalent to that of more than 52,000 single-family dwellings. Such fires would kill hundreds of people and cause property (building and content) losses approaching \$30 billion.<sup>63</sup>
- For the HayWired scenario, an estimated 500,000 to 1 million people will need shelter as a result of fire following earthquake.
- Other potential economic impacts from fire following earthquake in the HayWired scenario include the loss of perhaps \$1 billion in local tax revenues.

Debris:

- Following the earthquake, the city will need to remove and dispose of up to 570 tons of debris, consisting of building materials, personal property, and sediment will be generated by the earthquake. “Traditional” household waste volumes will also increase due to large amounts of spoiled food resulting from power outages and other debris from residential cleaning. Equipment beyond the current capacity of the region’s private waste management companies will be needed to clear debris. Transportation routes will need to be cleared and restored to move debris out of damaged areas. Before heading to landfill or recycling areas, debris must be sorted at separate facilities. A key challenge will be the disposal of large amounts of contaminated, electronic, and hazardous materials waste. Landfill space is scattered throughout the region.

Buildings:

- Over \$2 billion<sup>64</sup> of building damage could occur in Berkeley. Commercial corridors will see damage to URM buildings. Damage to tilt-up buildings will impact businesses in the western area of the city. Soft-story buildings, which are situated throughout Berkeley, will be damaged. 620 buildings will be completely destroyed. 21,000 more will have slight to moderate damage, primarily residential structures.
- Regionally, HayWired suggests that building damage could total \$43.3 billion in 2016 dollars, with an additional \$17.0 billion in 2016 dollars from damage to contents and commercial inventories.

Displacement:

- From 3,000 to 12,000 households will be displaced from their homes after the quake. About 200 more families will be forced to leave their homes due to fire damage. This represents up to a quarter of households in the city. One thousand to 4,000 of those households will seek temporary shelter provided by the City and the Red Cross. The remainder may stay with friends, relatives or in hotels.
- Haywired estimates that in Alameda County, 51,975 households would be displaced and 38,430 people will seek short-term shelter.

- Low-income and student populations disproportionately live in soft-story multi-unit apartment buildings, older buildings with weak foundations, and other vulnerable types of structures. Much of the damage to residential structures will occur in housing for these populations.

## Infrastructure

### Sanitary Sewer System

Interceptors (sewer pipes) will suffer major damage following an earthquake. Loss of electrical power will render pumping plants unusable, causing sewage backups and spills through the street access holes, posing potential public health concerns. Open trenches may be necessary to carry sewage for short distances. Sewer pipeline breaks may cause “sinkholes” that undermine roads and buildings.

### Water System

EBMUD serves Alameda County and has strengthened its water treatment plants and major aqueducts. Of particular concern, however, are underground pipes, which distribute water from larger aqueducts to customers.

In the HayWired scenario, EBMUD’s 4,162 miles of pipe suffer about 1,800 breaks and 3,900 leaks during the earthquake sequence. The average EBMUD customer would be without water for 6 weeks, some for as many as 6 months.<sup>65</sup>

These impacts can be reduced if current efforts to replace old, brittle pipe are completed before the next large bay-region earthquake occurs, because such pipe is more susceptible to earthquake damage.

Additionally, EBMUD’s Claremont Tunnel has been seismically retrofitted and is not likely to be vulnerable to landslide. It may incur fault offset of up to 7.5 feet immediately but this effect has been incorporated into the mitigation design.<sup>66</sup>

### Electricity

Immediately following the earthquake, 29,000 homes, more than 60% of Berkeley households, will be without electricity. Power will be down for days to a week. For the HayWired scenario, Pacific Gas and Electric Company (PG&E) was unable to offer a public estimate of the time required to restore power throughout the San Francisco Bay area after the HayWired scenario mainshock.

The majority of electrical power in the region is transmitted by Pacific Gas & Electric Company (PG&E). Most of PG&E’s electrical substations in the Bay Area were built in the 1900s and 1920s. Although mitigation efforts have been made, significant damage to these buildings is expected. Underground cables that cross liquefiable and weak soils are vulnerable. Immediately after the earthquake, PG&E is likely to initiate power shedding to balance the grid, followed by a progressive blackout of the Bay Area to prevent cascading power failure.

Damaged sections in the transmission and distribution system will need to be repaired or

bypassed. Before electrical circuits are energized, inspections for gas leaks in impacted areas will be necessary. Under the normal circumstances, it takes 2 to 3 days to restore a transmission system. Impeded accessibility as well as workforce shortages will, at the minimum, double restoration times.

### Natural Gas

PG&E is the provider of natural gas in the Bay Area. Across the Bay Area, ground failure is expected to damage the network of pipes beneath city streets. Hundreds of breaks in mains, valves, and service connections will occur. Broken gas mains could fuel street fires. Structural fires will occur as a result of broken service connections.

HayWired provides estimates for restoration of natural gas in the City of Oakland, to Berkeley's south. HayWired estimates that fifty percent of Oakland buildings will have service restored within 10 days of the quake, and 90 percent will have service restored after 36 days.

Restoration of service across the Bay Area could take as long as two months for customers because individual connections will need to be inspected and appliances re-lighted. Most gas shutoffs are expected to be initiated by cautious customers.

### Hazardous Materials Management

Building structural failures, dislodging of asbestos or encapsulated asbestos, laboratory spills, transportation accidents, pipeline breaks, storage tank failures, and industrial equipment problems will be the major sources of hazardous materials accidents following an earthquake.

## **Transportation**

### Highways

In Oakland, Highways 580, 880, 980, and 24, where they form the MacArthur Maze, a complex of elevated interchange structures, are built on liquefiable soils. Closure of sections of the Maze due to inspection or damage will restrict access into and throughout areas of need in the East Bay.

The Caldecott Tunnel provides the central link between Contra Costa and Alameda, carries Highway 24, as well as main electrical and gas, transmission lines beneath the roadway. Adjacent, separate tunnels are used for BART and water pipelines. The Claremont Tunnel (EBMUD) has been retrofitted. The BART tunnel is vulnerable to closure due to landslide. If the utilities or mass transit below the roads are damaged, Highway 24 will be closed for months for reconstruction.

### BART

BART could be damaged in neighboring cities on all sides, shutting off a major mode of public transit to San Francisco, Oakland and other destinations. Additional ferries and bus lines could be established within a week to provide substitutes for BART.

The BART Berkeley Hills Tunnel which crosses the Hayward fault would be damaged in a

major earthquake on that fault, cutting a key commuting link. As yet, retrofit or replacement of this tunnel is not a viable option and BART has instead developed plans to quickly return this section to service. Depending on the amount of damage sustained, the line could return to partial service within weeks of an earthquake with full replacement potentially taking several years to complete. This will cause inconvenience to many Berkeley residents and may change employment patterns. Temporary transport options, such as buses and increased use of individual cars, are likely to be more polluting than BART. In general, the traffic on all Berkeley roads and highways will probably increase for at least two years following the earthquake. Since 2008, retrofits have been completed on many elevated tracks, stations, parking structures and rail yards. At this time, all retrofits are expected to be completed by approximately 2018.

### **Communications**

In the HayWired Scenario, communications systems, particularly telephone networks, will sustain damage that reduces capacity. Power outages will reduce functionality in situations when the outages last longer than the performance of battery backup and maybe even generator refueling. Congestion will also reduce functionality to a great degree, for several hours or more.<sup>67</sup>

An overload of post-earthquake calls in the region will make phoning difficult. Carriers will block the calls coming into the region to relieve circuit overloading. Outbound calls, as well as text messaging, are likely to be available.<sup>68</sup> The region's telecommunications companies will prioritize calls to allow emergency responders to communicate by phone.

Customers located in areas subject to severe ground shaking and high probability of ground failure may lose land-based connections to the telephone system. Access for repairs in those areas will be a major problem.

The cellular phone system relies on the integrity of antennas that are mostly located on building tops. Cell phone calls typically connect to the same landline systems that will be hampered by the expected overload of calls.

### **UC Berkeley**

Enrollment at UC Berkeley may slow for a few years, depending on the level of damage experienced on campus. In the unlikely but possible event of a catastrophic incident, such as significant loss of life in a residence hall or classroom building, declines in enrollment will be significant. Remaining students, currently about 30 percent of the city's population, may struggle to find affordable housing. Businesses may rebuild or may move to new, cheaper locations. Many local, independent businesses will need to make the tough decision to rebuild or close shop. Retail businesses will be affected by demographic changes after an earthquake. Businesses located in neighborhoods with significant damage will suffer as customer demand changes, even if the businesses themselves are undamaged by the earthquake.

### **Businesses**

Additional losses to income will likely occur due to Berkeley business closures, estimated at \$288 million.<sup>69</sup>

Regionally, HayWired predicts \$12.3 billion (in 2016 dollars) in building damage-related income

losses (for example, relocation costs and lost rent), and total direct economic loss as \$82.6 billion in 2016 dollars.

### **Rebuilding**

Based on experiences in large urban areas being rebuilt following disaster, planners expect that rebuilding activities will begin quickly, but will prove expensive as construction professionals around the Bay Area are overloaded with work. Owners of damaged multi-unit rental housing may not be able to rebuild affordable housing, and may choose to build condominiums or other higher-profit housing to replace the damaged structures. Many residents will discover they are underinsured for earthquake and fire damage, making it difficult or impossible for them to rebuild. Rebuilt homes, meeting modern codes and style considerations, will change the look of the city.

Although much harder to predict, demographic shifts may also follow an up-ended housing market. Older homeowners may be unable or unwilling to rebuild, for example, and young families may need to relocate, at least temporarily, to ensure the continuity of their children's education. The likely loss of older, more affordable housing stock will also change Berkeley's economic profile.

An event similar to this scenario is likely to occur in the next few decades. Earthquakes causing significantly more or less damage are also possible.

## **B.6 Wildland-Urban Interface Fire**

There are two primary types of wildfires: “wildland” fire and “wildland-urban interface” (WUI) fire. WUI fires occur where the natural landscape and urban-built environment meet or intermix. There may be a distinct boundary between the built and natural areas, or development or infrastructure may be intermixed in the natural area. WUI fires primarily cause damage to the natural and built environment, as well as injury and death of people and animals.

### **B.6.a Historical Wildland-Urban Interface Fires**

Catastrophic fires, including the 2018 Camp Fire in Butte County and the October 2017 North Bay Fires demonstrate the wildland-urban interface fire hazard that is present and growing in California. Berkeley itself has significant WUI fire history, most recently in the October 20, 1991 Tunnel Fire. This fire in the Oakland/Berkeley hills started the day before as a vegetation fire in the drought-dried hills east of Oakland. It was reignited and whipped into firestorm proportions by 20-30 mph winds, gusting to 60 mph, and spread within minutes to residential structures. While the fire burned a greater area in Oakland, it raged across city boundaries between Oakland and Berkeley, destroying entire neighborhoods in both cities and remaining out of control for more than 48 hours. Sixty-two single-family homes<sup>70</sup> were destroyed in Berkeley. Ten thousand people were evacuated from the hills areas. Most of the 25 people killed in the blaze were trying to evacuate when they were killed. FEMA estimated the damage at \$1.5 billion in 1991 (approximately \$2.8 billion in 2018 dollars<sup>71</sup>).

The 1991 firestorm also caused \$3 million of damage to Berkeley’s public infrastructure<sup>72</sup>. The 2,000-degree fire affected utility systems, including power, gas, telephone and water. Ten key water tanks were drained at the peak of the fire as a result of unprecedented demand from firefighting units, fire prevention measures by homeowners (e.g. wetting roofs with garden hoses), and broken water service connections in burned homes. Early in the fire, burning power lines and melting underground services resulted in a loss of power, which affected water system pumping plants. A total of eight pumping plants, which refilled the water tanks being used by fire fighters, lost power by the first afternoon. Although these were restored by evening, the capacity of the water system pumps was far less than the amount of water used by firefighters and spilled by broken connections.

Total damages in the city of Berkeley, including loss of private structures, loss and damage of public infrastructure, and the cost of City services, are estimated at \$61 million.<sup>73</sup>

The day of the 1991 fire, the Bay Area experienced high temperatures of 80-90 degrees, and unusually hot, dry winds blowing from the east, rather than the normal, moisture-laden western winds from the ocean. This type of wind, referred to as Foehn or Diablo winds, occurred 21 days in 2018. These winds, combined with the high temperature, low humidity, and built-up dry fuel load create Red Flag conditions. The number of Red Flag Warnings issued for the East Bay Hills by the National Weather Service has increased from three in 2012 to nine in 2018. These conditions were present for the 1991 Tunnel Fire. The firefighters were helped when on the second day, the winds shifted to the west and cooler temperatures and fog rolled in.

Historically, major fires have occurred in the wildland-urban interface under virtually the same

critical fire conditions. The table below identifies significant WUI fires in Berkeley history.

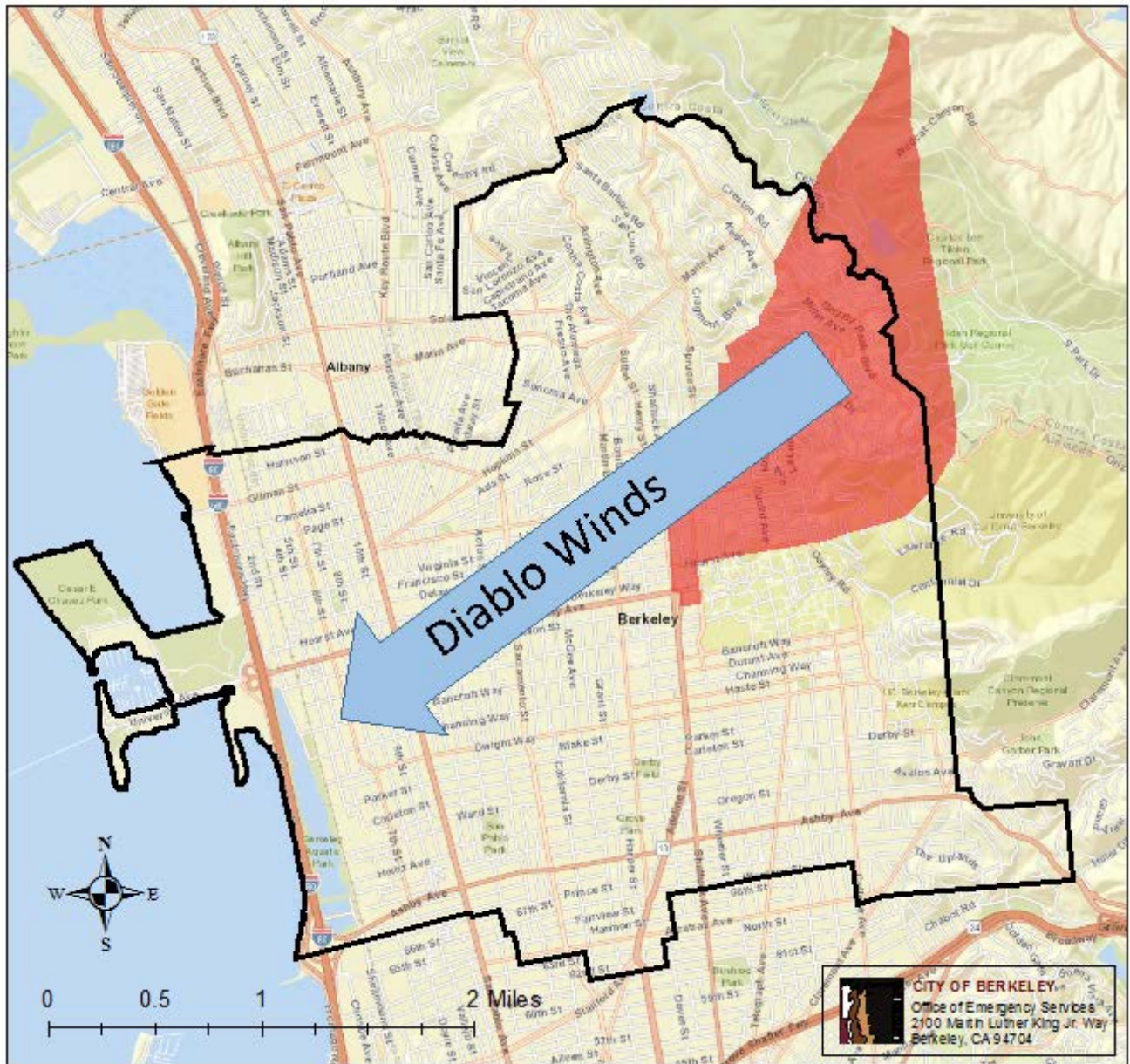
**Table 13. History of Major Wildland-Urban Interface Fires in the Oakland/Berkeley Area<sup>74</sup>**

September 17, 1923	Berkeley Fire	568 structures
September 22, 1970	Fish Canyon Fire (Oakland)	39 structures
December 14, 1980	Wildcat Canyon Fire (Berkeley)	5 structures
October 20, 1991	Tunnel Fire (Oakland/ Berkeley)	3,354 dwellings; 25 lives lost


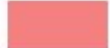
The Berkeley Fire of 1923 began in the open lands of Wildcat Canyon to the northeast and, swept by a hot September Diablo wind, penetrated residential north Berkeley and destroyed nearly 600 structures, including homes, apartments, fraternities and sororities, a church, a fire station and a library. Wood shake roofs are cited as a large contributing factor in the spread of this fire. The fire burned downhill all the way to Shattuck Avenue in central Berkeley. A total of 130 built-up acres were burned, and about 4,000 people were made homeless. Historical analysis of newspaper reports after the fire indicates that significant acreage was burned in both Strawberry and Claremont Canyons. Because there were few, if any structures in these areas, the full scope of the fire has been underreported in subsequent years. After this devastating fire, officials stated that the only reason that the fire stopped spreading was because the northeast wind stopped and the damp western wind took over. Fire officials at the time were certain that if the northeast wind had not stopped, the buildings would have burned all the way to the bay in Berkeley, and the fire would have devastated Emeryville and moved south and west into Oakland<sup>75</sup>.

Map 15 depicts in red the area burned by the 1923 fire, which stretches from East Bay Regional Parks to Shattuck Avenue. It also overlays the Diablo wind pattern (indicated by a big blue arrow) to demonstrate how the fire could have spread into the Berkeley flatlands, had it not been for the change in wind direction.

Map 15. Area burned by 1923 Berkeley Fire



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  1923 Burn Area



## B.6.b Wildland-Urban Interface Fire Hazard

The City of Berkeley faces an ongoing threat from a very likely wildland fire along its hillsides, where wildland and residential areas intermix. Wildland-urban interface (WUI) fires can be sparked by both human activity and natural causes. Once ignited, these fires can be difficult to contain when they occur during extreme fire weather conditions. A WUI fire can move with breathtaking speed. In the recent North Bay Fires, it is said that the fire burned the equivalent of a football field every second.<sup>76</sup>

Hot, dry, windy weather often coincides with WUI fires. WUI fire spread is affected by wind speed and direction, fuel and topography. Dry, dense vegetation feeds fires, including some residential landscaping. Wooden homes also serve as fuel for fire. Tall trees, present throughout Berkeley, can harbor canopy fires at the treetops that contribute to fire spread and are particularly difficult to fight. Fire spreads uphill quickly.

Fires burn buildings and threaten infrastructure. The intense heat associated with a firestorm can deteriorate concrete and asphalt pavement, curbs, sidewalks, and drainage structures. Other infrastructure that burns includes aboveground wiring for electricity, telephone and cable, and poles for lights and street signals.

In addition to impacts on the natural and built environment, fire has impacts to public health. Fires can result injuries and death from burns and smoke inhalation.

### Secondary Hazards

#### *Worsened air quality*

Air pollution from fires both in Berkeley and throughout the region can cause eye and respiratory illnesses, and can exacerbate asthma, allergies, chronic obstructive pulmonary disease, and other cardiovascular diseases. The City of Berkeley Occupational Health, Public Health, and Environmental Health Divisions coordinate air quality messages for staff and community through the Public Information Officer in the City Manager's Office.

#### *Landslide*

WUI fires can increase an area's risk of landslide and flooding. When all supporting vegetation is burned away, hillsides become destabilized and prone to erosion. The charred surface of the earth is hard and absorbs less water. When winter rains come, this leads to increased runoff, erosion and landslides in hilly areas.

#### *Flooding*

Erosion and land slippage subsequent to fires can lead to temporary or permanent displacement and property damage or loss,<sup>77 78</sup> making it a secondary hazard that must be mitigated immediately after a fire.

#### *Power outages*

Fire can lead to power outages in two ways, either by manual shutoff by the utility in order to reduce the risk of wildfires or wildfire spread or a result of a wildfire. Loss of power can lead to many cascading and significant consequences, such as impacts to vulnerable infrastructure, inability to operate fuel and water systems that require electricity, communication, and service

disruption, loss of heating or cooling, and loss of critical functions for people that rely on power for survival.

### **B.6.c Exposure and Vulnerability**

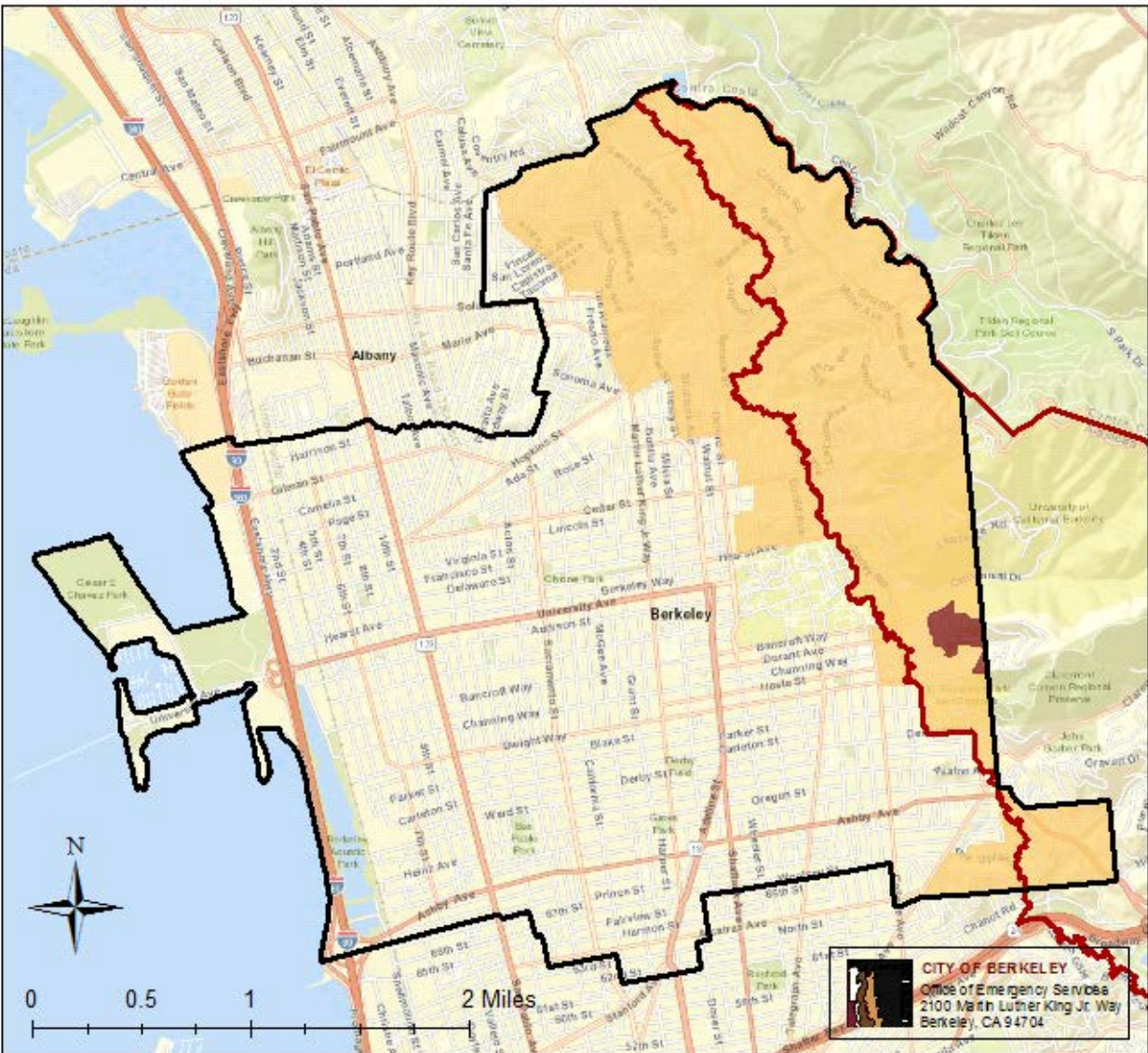
Berkeley is most vulnerable to a wind-driven fire incident originating in an area adjacent to the City's eastern border, in land owned by UC Berkeley, Berkeley Lab, the East Bay Regional Park District, the City of Oakland or Contra Costa County. The WUI fire risk facing Berkeley's wildland-urban interface area is compounded by the area's mountainous topography, its limited water supply, its minimal access and egress routes, and its location, overlaid upon the Hayward Fault. These factors have all contributed to the area's significant WUI fire history. Given the right wind conditions, a fire in one of these areas could quickly enter and encroach itself in Berkeley.

Since before the 1920s, the City of Berkeley has established and adjusted fire zones in Berkeley. While the zones were initially established to address urban fire issues, they have evolved to designate the City's WUI fire hazard. Currently, the Berkeley Fire Department currently has divided the city into Fire Zones 1, 2, and 3, designated in order of ascending fire risk. These zones are shown in Map 16.

Fire Zone 3 is the Panoramic Hill area specifically and is colored in red on Map 16; Fire Zone 2, colored in yellow-orange, covers the remainder of the city's eastern hills; Fire Zone 1, with no coloring, covers the rest of the City west of the hills. Fire Zones 2 and 3 currently include about 8,300 properties. These zones have the strictest fire prevention standards in the City for issues such as building materials for new structures. The City also enforces vegetation management measures in these areas.

The California Department of Forestry has designated a Very High Fire Severity Zone that covers a portion of the Berkeley hills but not all of Fire Zone 2. It is indicated on Map 6 by a thick red, line.

Map 16. California Department of Forestry and City of Berkeley Hazardous Fire Zones



Sources: Fire Zones 1, 2, and 3 as of 01/2013 Berkeley Ordinance NO. 7,157-N.S., and California Department of Forestry. Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



While much of the concern for fire is placed on the hills, Berkeley's flatlands are at risk as well. The flatlands are densely covered with old wooden buildings that have narrow side yards and dense vegetation. Most of these houses are old and not built with modern, fire-resistant materials. They have a high risk of damage in an earthquake, which could spark multiple ignitions, for example, by damaging gas or electric lines.

### **Panoramic Hill Area**

The Panoramic Hill area (labeled as the "Hazardous Fire Zone 3" Fire Zone on Map 16) has the greatest WUI fire vulnerability.

It is a wildland-urban interface area located on a hill above Memorial Stadium, between Strawberry Canyon to the north and Claremont Canyon Nature Preserve to the south. The ample vegetation in both canyons adds to the neighborhood's WUI fire risk. Many of the homes in this area have wood shake and shingle roofs and are surrounded by brush-type vegetation. Panoramic Hill also includes one of Berkeley's most architecturally-significant residential districts, which is listed in the National Register of Historic Places because of its association with the Arts and Crafts movement.

The neighborhood lies in both Berkeley and Oakland. There are about 280 dwelling units on Panoramic Hill, including 215 dwelling units in the Berkeley part of the neighborhood. There are approximately 520 residents in the area, including close to 100 in Oakland. The area is surrounded by the Berkeley Lab, the University of California, Berkeley (Clark Kerr campus) and the East Bay Regional Park District.

The Hill's limited water supply, access/egress routes, and its exposure to fault rupture further exacerbate the area's WUI fire risk above that of Fire Zone 2.

### **Water Supply Limitations**

Water supply to the Panoramic area is limited to one undersized water main. As of December 2018, work is in progress to improve water supply. If the existing main is damaged by an earthquake or landslide, any area beyond the point of the break will be without water service. This is different from other areas in the hills and flatlands, where the "gridded" structure of the water system allows for more redundancy in the event of a water main break. In Panoramic Hill, an earthquake could spark a fire, which could be fueled by damaged gas lines. Damage to the area's one water main from an earthquake or resulting landslide could limit residents' and professionals' ability to suppress the fire.

This sequence of events could devastate the neighborhood and grow into a firestorm, threatening other parts of the city and neighboring jurisdictions.

### **Access and Egress**

Panoramic Way is the only paved road into and out of this neighborhood. It forms a single loop, 12-18' wide, that begins and ends just south of Memorial Stadium. The street's narrow width and hairpin turns make it barely accessible to fire apparatus, which are required to perform three-

point-turns to ascend the Hill.

Panoramic Way's narrow width also means that at many points the road is not wide enough to allow vehicles to pass one another. Under normal conditions, vehicles responding to medical emergencies have been impeded by commercial vehicles, trash collection trucks, and illegally-parked personal vehicles.

History demonstrates that endangered residents in the path of a major fire will attempt to leave the area via private vehicles crammed with personal belongings. When there is another major hill area fire or an earthquake, emergency access and egress on the substandard road will be highly constrained. People trying to leave a dangerous condition will conflict with emergency personnel trying to address it or trying to reach others who need help to leave. Further, an earthquake-induced landslide impacting Panoramic Way could also block any vehicles from entering or leaving the area.

### **Exposure to Fault Rupture**

Further intensifying the neighborhood's vulnerability, the Hayward Fault runs under Panoramic Way, just before it crosses the parking lot and bisects the Memorial Stadium. In a Hayward Fault earthquake, the Panoramic Hill area will likely be isolated from the City's emergency services, all of which lie on the other side of the fault to the West (with the exception of Fire Station 7, which lies north of the UC Berkeley campus).

### **Notable Mitigation Activities**

The City, working together with key partners, is using a comprehensive strategy to aggressively mitigate Berkeley's WUI fire hazard. These approaches include prevention through development regulations; natural resource protection through vegetation management; improvement of access and egress routes; and infrastructure maintenance and improvements to support first responders' efforts to reduce fire spread.

#### Prevention

The City enforces several programs to reduce Berkeley's fire hazard, especially the WUI fire hazard in the hills. These include strict building and fire code provisions, as well as more restrictive local amendments<sup>79</sup> for new and renovated construction, and vegetation control inspections in high-risk properties.

PG&E's Community Wildfire Safety Program has precautionary measures in place to help reduce the risk of wildfires. Its goal is to help customers prepare for and stay safe during extreme weather events, including sending notifications when and where power may be turned off for safety. The City works closely with PG&E and is mindful of the impacts that power outages may have on people with disabilities and people with access and functional needs.

### *Panoramic Hill Area Development Regulations*

Following the 1970 Fish Canyon Fire, the Planning Department established the Berkeley portion of the area as an ES-R (Environmental Safety-Residential) zone. This action limited the use of land and the size and occupancy of residential structures in the area.

The ES-R regulations are the most stringent residential standards in the Berkeley Zoning code.

The City has continued to adopt strict standards that curtail development on Panoramic Hill, so that as few additional people as possible are placed at risk until the area's underlying infrastructure issues are addressed. In 2008, City Council adopted a moratorium on development on the hill. In May 2010, the Council repealed the moratorium, passing an ordinance that blocks establishment of any residential units on the Hill. The restriction remains in effect until Council adopts a Specific Plan for the area's land use. The Specific Plan must include:

- Proposals for water, wastewater and storm water systems
- Proposals for a circulation system adequate to accommodate projected traffic, and to provide for emergency access to the area
- An action plan and finance measures necessary to carry out the Specific Plan.

Because the neighborhood resides in both Berkeley and Oakland, in 2006, the Alameda County Local Agency Formation Commission (LAFCo) expanded Berkeley's Sphere of Influence to include the Oakland part of Panoramic Hill. LAFCo acted to do so despite opposition letters from the City Manager of the City of Berkeley and City Administrator from City of Oakland. LAFCo's action means that the City of Berkeley is now officially charged with planning for all of Panoramic Hill, including those areas currently in Oakland. While Berkeley must consider the entire Hill in its planning documents, it only gains zoning authority if those portions of the Hill in Oakland are annexed to the City of Berkeley – a long and complicated process requiring agreement of both Cities.

Since it is highly unlikely that there will be City funds available to undertake the planning and then the design and construction necessary to address the area's infrastructure deficiencies in the foreseeable future, existing land and homeowners in Berkeley and Oakland will likely need to collaborate to provide the necessary funding for a Specific Plan. Grant funding may also be available to undertake some of the necessary planning, design, and construction.

### Natural Resource Protection

The Hazardous Fire Area Inspection Program is in place for a subset of properties within Fire Zones 2 and 3. Each year, Fire Department personnel inspect over 1,400 parcels in Fire Zones 2 and 3. Additionally, personnel conduct complaint-driven inspections in all three of the City's Fire Zones.

The City also runs a number of vegetation management programs to reduce fuel loads, including:

- The Fire Fuel Chipper Program, a popular yard waste collection service. The

Program serves properties in the hills from June through September each year. Since 2014, over 100 tons of vegetation was collected and recycled, on average, each year.<sup>80</sup>

- A fire fuel abatement program on public land. This Program was maintained in order to reduce fire fuel on public property. From May to mid-August each year, an average of 125 tons of debris are removed from approximately 98 public sites, including parks, pathways and landscaped medians.<sup>81</sup>
- The Fire Fuel Debris Bin Program is coordinated by the Department of Public Works' Zero Waste Division, which delivers and removes 30 yard roll-off boxes from requesting neighborhoods. This effort yields an average of 132 tons of plant debris per year.<sup>82</sup>
- Additionally, 30,000 tons of residential and commercial plant debris and commercial food waste<sup>83</sup> is collected each year through weekly curbside collection and converted to compost.
- The City of Berkeley's Zero Waste Division has expanded staffing to include a full-time Recycling Program Manager, and is working to hire additional field representatives to help educate the community about its vegetation management programs. Additionally, the Division is performing a Feasibility Study to reimagine the City's Solid Waste and Recycling Transfer Station to achieve its goal of Zero Waste. This reenvisioned facility will help to support outreach staff in their efforts to promote vegetation management programs.

### Safe Passages Program

Safe Passages is a project to support the City's emergency evacuation plan by helping to ensure clear ingress for emergency vehicles and egress routes for evacuation. Project implementation will include evaluation of streets requiring parking restrictions, enforcement mechanisms, vegetation clearing and management, and a robust public education campaign to reduce risks and maximize benefits.

### Access and Egress

#### *Key Partner: Berkeley Path Wanderers Association*

Berkeley Path Wanderers Association (BPWA) is an all-volunteer nonprofit organization concerned with Berkeley paths. In the city's many steep neighborhoods with winding roads, these paths take the shortest, most direct routes, mimicking city block grids that do not exist. In addition to producing a community recreation asset, these pathways can assist evacuation and firefighting efforts in the hills. In preparedness outreach, the City instructs community members to always be ready to evacuate without a car and to be aware of the locations of developed paths that may reduce evacuation distance. However, because developed pathway conditions vary widely from those with concrete steps and railings to those with wooden steps, these paths may not be good options for evacuees with mobility issues or low vision. For these evacuees, the City recommends City streets for pedestrian evacuation.

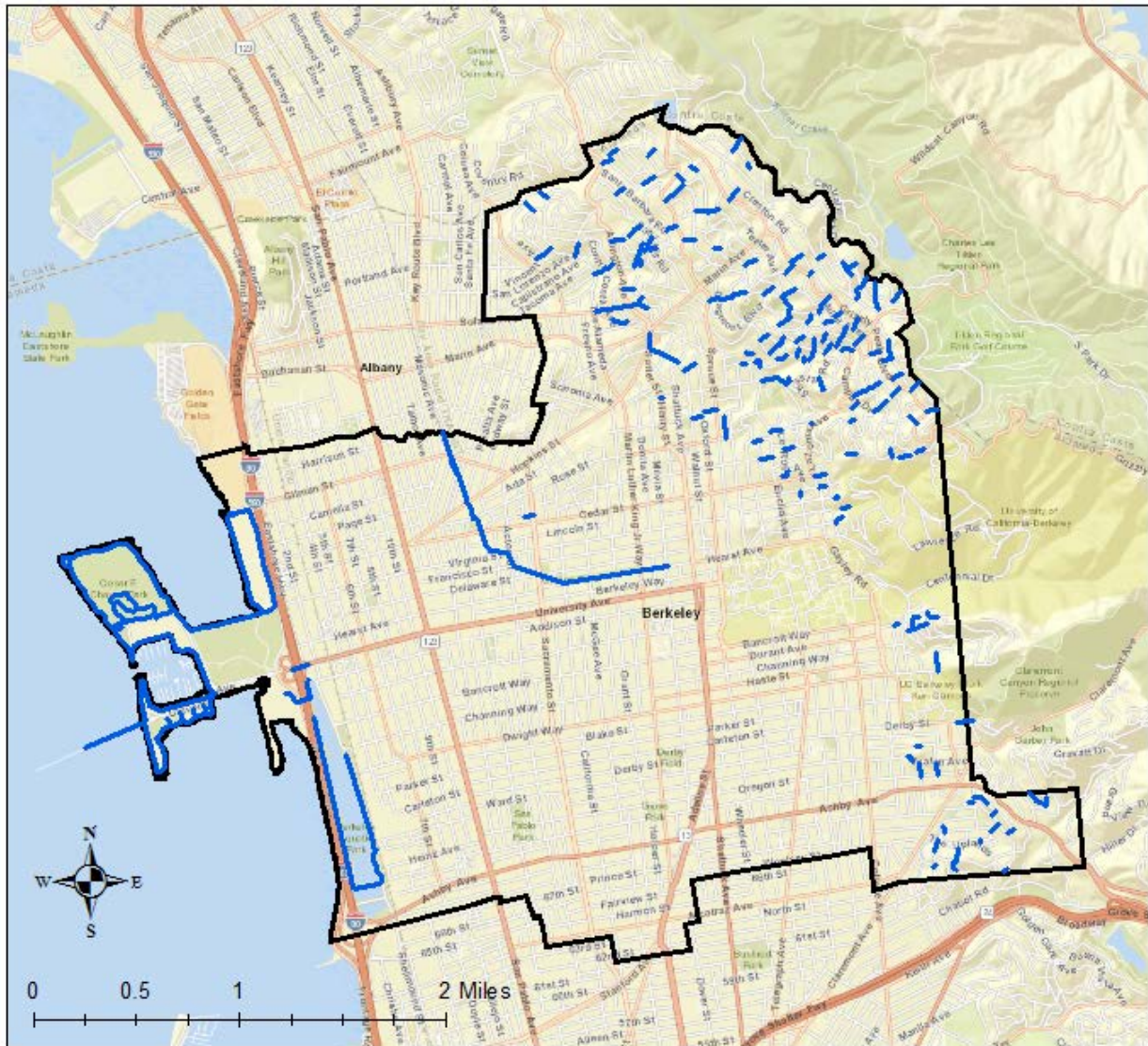
Since 1997, BPWA has built and maintained rustic paths using wood ties secured to the ground with rebar, replaced wooden ties and rebar when necessary, cleared overgrown vegetation, and conducted monthly weeding. The group also cleans and clears historic cement paths. BPWA has

also contributed funds for installation of handrails. The City's Department of Public Works performs more heavy maintenance, such as cement work and hand rail installation and replacement.

Map 17 shows pedestrian paths in the City of Berkeley using blue lines. As indicated on the map, there are many small paths in the Berkeley hills that can help with fire evacuation and firefighting efforts.





Map 17. Pedestrian Pathways in Berkeley



Source: Berkeley Path Wanderers Map, 8th Edition.

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Berkeley Paths

BPWA has improved 34 paths in the hills north of the UC Berkeley campus. Most of the paths offer more expeditious evacuation routes than the surrounding city streets. The table below shows some of the BPWA paths that significantly reduce pedestrian evacuation distances.

**Table 14. Noteworthy BPWA Paths**

Path Name	Distance	Distance without Path
Acacia Walk	0.1 miles	0.4 miles
Atlas Path	<0.07 miles	0.2 miles
Bret Harte Path	< 0.1 miles	0.2 miles
Glendale Path	0.2 miles	0.6 miles
John Muir Path	< 0.1 miles	0.3 miles
Northgate Path	< 0.1 miles	0.4 miles
Upper Covert Path	< 0.1 miles	0.5 miles
Wilson Walk	< 0.03 miles	0.4 miles
Yosemite Steps	0.1 miles	0.4 miles
Dwight Way Path	Links Dwight Way and Clark Kerr Fire Trail	

In July of 2018, BPWA conducted a survey of all the paths, noting the condition and needed repairs of each path. BPWA plans to continue conducting full path surveys every five years. City staff met with BPWA about the survey and are working on reviewing their comments, concerns and stated priorities. With new funding for pathway improvements, the Department of Public Works is preparing cost estimates to confirm how to best use this initial funding. It will likely include signage and possibly other work as funds are available.

In addition to maintaining paths, the group raises awareness of the paths for use as both escape routes for residents and as access routes for emergency personnel. BPWA performs outreach through a published map, their newsletter, free public meetings, and free guided walks.

In fall of 2018, the BPWA hosted walks with three Berkeley neighborhoods to practice using evacuation routes out of the Berkeley hills. These routes included key paths, and served to better familiarize community members with evacuation routes they may need to use in a disaster that blocks roadways.

### Notable Mitigation Activities

In the spring of 2015 the City performed repair work on Bret Harte Path. Work included the removal and replacement of damaged concrete stairs, removal and replacement of damaged concrete walkway, and the installation of handrails.

In the spring and summer of 2016 the City developed the previously undeveloped John Muir Path.

The BPWA does not maintain paths on UC Berkeley land, but is exploring ways to work with UC Berkeley to improve pedestrian transitions between UC and adjacent neighborhoods. For example, in the winter of 2017 the Berkeley Path Wanderer's Association (BPWA) installed approximately thirty 4'-wide wooden stairs at the bottom steep section of Dwight Way Path. This path is located at the top of Dwight Way (a City street) and merges onto the Clark Kerr Fire Trail on UC Berkeley property.

The City-BPWA partnership will continue into the future:

- The City is currently working on the future development of the currently undeveloped Devon Lane.
- The City has entered into an agreement with EBMUD to realign and upgrade Arden Path. The current upper portion of the path is on EBMUD property rather than City property and will be realigned onto City property. The path will also receive a new staircase over a steep section of the path. EBMUD is scheduled complete this work in late 2019.
- City forces are currently working to install a handrail along the lower portion of Park Path. Work is scheduled to be complete in 2019.

### Improving Firefighting Readiness

Early suppression efforts prevent many WUI fires from growing out of control. Since the 1991 fire, the City has continued to build firefighting infrastructure to enable firefighters to reduce fire spread.

In 2006, the City constructed a new fire station on Shasta Road, just north of the UC Berkeley campus in the hills. This station, in addition to being in the wildland-urban interface, is the only City fire station east of the Hayward fault.

In 2010, the City put into operation an aboveground, portable water system that can pump water from any source, including the San Francisco Bay, in the event of drained tanks or damaged pipelines. This system is designed to carry up to 20,000 gallons of water per minute for a distance of one mile and elevation gain of 100 feet; it will also carry smaller flows to higher elevations. This capacity was based on calculations of water volumes required to fight the fire front presented in the 1991 blaze, assuming that some capacity will be available from EBMUD sources, in light of system upgrades.

Since the 1991 fire, the Berkeley Fire Department has been also working to strengthen its wildland firefighting skills and to prevent conflagrations. Firefighters remain in a constant state

of readiness to respond to a wind-driven WUI fire in the hills, which could transition into a fast-moving urban firestorm in the flatlands. Additionally, the City has built cooperative relationships with neighboring fire departments to put out vegetation fires before they grow into multi-jurisdictional problems. Mutual response agreements among the City and its neighboring jurisdictions have increased the fire resources that respond to the reporting jurisdiction.

This cooperation has been assisted through formal efforts, such as the inter-jurisdictional Hills Emergency Forum (HEF), started after the 1991 fire. HEF exists to coordinate the collection, assessment and sharing of information on East Bay Hills fire hazards, and to provide a forum for building interagency consensus on the development of fire safety standards and codes, incident response and management protocols, public education programs, multi-jurisdictional training, and fuel reduction strategies.

*Key Partner: UC Berkeley*

UC Berkeley campus lands include approximately 800 acres of wildland in the East Bay hills that border on residential neighborhoods in Berkeley and Oakland. The combination of an accumulation of dense nonnative vegetation and increased urbanization has created a wildland-urban interface (WUI) condition posing an extreme threat to lives and property. From 1923 to 1991, 14 major fires have occurred in this area, including the 1991 Tunnel Fire that destroyed more than 3,354 dwellings and claimed 25 lives.

UC Berkeley depends on the City for fire services, but does not fall under City fire preparedness ordinances. The University has an established Campus Fire Mitigation Committee to develop and oversee a program to manage the WUI fire hazard. The goal is to manage vegetation to ensure that the vulnerable areas are WUI fire-defensible by improving accessibility for fire crews, creating and maintaining escape routes, and lessening the rate of fire spread and/or reducing the potential for embers to ignite adjacent neighborhood. The University has made repeated efforts since 1974-75 to eliminate the vast groves of eucalyptus trees on its property. Earlier efforts were unsuccessful, as the felled trees regrew from their cut stumps. UC efforts since 2001 have emphasized the use of herbicides to kill the eucalyptus trees after felling, along with an integrated management approach to prevent the millions of viable eucalyptus seeds from germinating. The University's goal is to convert its eucalyptus- and pine-forested areas to oak/bay woodland, scrubland, grassland or other floral communities historically found in the East Bay hills. In 2006, UC Berkeley opened the Center for Fire Research and Outreach to encourage and facilitate collaboration on fire-related research questions and provide a central point for wildfire information.<sup>84</sup>

*Key Partner: Berkeley Lab<sup>85</sup>*

With regard to wildland fire and wildland-urban interface (WUI), the Berkeley lab is in a vulnerable position. The lab borders a potential wildland fire area in the Tilden Regional Park area and borders a highly populated urban area in the City of Berkeley. This can cause challenges with timely evacuations, thus the laboratory has developed an evacuation process for shelter-in-place during wildland fires if necessary. The goal will be to evacuate the laboratory, however, this may not be the safest thing for employees after an earthquake or prior to a wildland fire. The lab has a trained and qualified Emergency Response Organization (ERO) to make

critical decisions regarding protective actions and the safety of lab employees.

#### **B.6.d Wildland-Urban Interface Fire Risk and Loss Estimates**

The 1923 fire was the worst WUI fire to impact Berkeley in recent history. This plan calculates losses that would occur if that fire were to recur today. A repeat of this fire would cause significantly more damage in Berkeley than the recent 1991 Tunnel fire.

The 1923 Berkeley Fire started in Wildcat Canyon to the northeast of the city and burned south and west down to Shattuck Avenue, stopping at the edge of UC Berkeley. Map 15 shows the area burned by this fire. The California Railroad Commission documented the burned area in 1923, three months after the fire. By superimposing this historical map onto the current day structures of Berkeley using the City's Geographic Information System, we find that, today, over 3,000 structures are located in the footprint of the 1923 fire. These structures include single-family homes, multi-family residences (many of which house UC Berkeley students), and stores, restaurants, and offices central to downtown Berkeley.

If a fire occurred today that burned the same area, the loss to structures would be in the billions of dollars.<sup>86</sup> Destruction of contents in all of the homes and businesses burned would add hundreds of millions of dollars<sup>87</sup> to fire losses. Efforts to stabilize hillsides after the fire to prevent massive landslides would also add costs.

While the financial losses from this scenario are staggering, the social impacts of such a fire could be devastating. Thousands of families could be homeless following such an event, losing all of their possessions. Many more could need short-term shelter while the fire was burning. Residents and firefighters could be killed, especially in difficult-to-access areas. Local, independent businesses might disappear forever. A large portion of the city would need to be entirely rebuilt. In short, the entire face of northeast Berkeley could be completely changed.

## SECTION II: HAZARDS OF CONCERN

Rain-induced landslides, flooding, tsunami and climate change are hazards of concern for Berkeley, because of their potential to severely impact specific areas of the city. Section C of this plan identifies mitigation actions to reduce the impact of each of these hazards.

Climate change is addressed in further detail in Berkeley's Climate Action Plan.

### ***B.7 Rainfall-Triggered Landslide***

Seismically-triggered landslides are discussed in detail in B.5.b.iv.

#### **B.7.a Historical Rainfall-Triggered Landslides**

The most recent landslide in Berkeley occurred in January 2017. In January 2017, the overall rainfall in California was on pace to be the wettest season in over 100 years on record. Rain created saturated soil conditions in parts of Berkeley and throughout the State. The slide occurred on an undeveloped lot in the North Berkeley hills and threatened to close the street lying in the path of the slide. Repairs to the hillside were completed in late 2018. No one was hurt.

Berkeley's most significant recent landslide occurred in North Berkeley during the winter of 1997-98, when soil became oversaturated from heavy rains brought by the El Nino weather system. One home was significantly damaged and had to be demolished. Two additional homes were yellow-tagged, meaning they were of questionable safety, but residents were able to reoccupy these homes after the hillside was stabilized. No one was hurt.

At other times during the 20th century landslides of rainfall-saturated ground in the Berkeley Hills damaged and sometimes destroyed homes and public infrastructure, including streets, sewers, and other utilities. Most of the areas damaged were later rebuilt or built over.<sup>88</sup>

Other recent landslide experiences are limited to minor slides blocking roads, such as the collapse of the Euclid Avenue retaining wall in 1996.

#### **B.7.b Rainfall-Triggered Landslide Hazard**

Landslides are natural geologic phenomena that range from slow moving, deep-seated slumps to rapid, shallow debris flows. Landslide risk can be exacerbated by development. Grading for roads, home construction and landscaping can decrease hillside stability by adding weight to the top of a slope, destabilizing the bottom of a slope, and/or increasing water content of the underlying materials.

Landslides are most frequently triggered in periods of high rainfall, and are likely to continue occurring in Berkeley. The hazard is greater in steeply-sloped areas, although slides may occur on slopes of 15 percent or less if the conditions are right. Slope steepness and underlying soils are the most important factors affecting the landslide hazard. However, surface and subsurface

drainage patterns also affect the landslide hazard, and vegetation removal can increase the likelihood of a landslide.

The most dangerous landslides in terms of life safety are fast-moving, generally shallow debris flows. These are triggered when intense rainfall follows storms that have already saturated hillsides. Debris flows initiate in concave slope areas where subsurface water is concentrated, elevating pore pressure above the natural strength of the soil. Once initiated, debris flows can travel great distances at relatively high velocities, flowing down drainages and onto alluvial fans and damaging any structures lying in their paths. Preexisting and recently-active, larger landslides (such as those shown in Map 5) are more often triggered by exceptionally long periods of seasonal rainfall, and sometimes do not start moving until long after the rain has stopped. These types of slides may not move as rapidly as debris flows, but can damage large areas and many structures, resulting in extensive landslide losses.

### **B.7.c Exposure and Vulnerability**

Berkeley faces a moderate landslide hazard. There are a number of deep-seated landslides that continuously move, with the rate of movement affected by rainfall and groundwater conditions. These active landslides are shown in red on Map 5. Landslide movement could range from a few inches to tens of feet in any given year, but ground surface displacements as small as a few inches are enough to break typical foundations. In addition, there are many more deep-seated landslides that are not currently moving, but have moved in historic time or in recent geologic time. The more significant of these are shown in yellow on Map 5. These “dormant” landslides could be reactivated by changing surface or subsurface conditions.

Areas of the community situated on historic or recent deep-seated landslides are most vulnerable to landslide hazards. Vulnerabilities in these areas include hundreds of homes, roads, sidewalks, underground utilities (water, sewer lines, storm drains, natural gas lines, and conduits) and aboveground utilities (electricity, telecommunications, cable). People may be hurt or killed during the landslide. Damage to roads and sidewalks may prevent, especially people with disabilities and people with access and functional needs from navigating the area or evacuating quickly. Damage to underground utilities may pose serious health and environmental risks. Interruptions in electrical power jeopardize people with disabilities and people with access and functional needs that rely on electrical equipment for survival.

For debris flows, hazard areas are typically at the base of steep hillsides, near the mouths of steep hillside drainages, and in or around the mouths of canyons that drain steep terrain<sup>89</sup>. In Berkeley, several collector streets that are critical for emergency access and evacuation are located in areas susceptible to landslides.

### **Key Mitigation Activities**

Regardless of triggering mechanism, landslide hazard mitigation techniques are the same. Landslide hazard can be reduced through grading, soil strengthening, geotechnical engineering components, drainage, control of runoff, and landscape methods. In new development, the City regulates the issuance of permits and inspects new development activities. However, most

Berkeley hillside development predates current best practices and codes and therefore remains vulnerable to the threat of landslides. The City maintains major retaining structures in the right-of-way that help to control landslide risk in key areas.

#### **B.7.d Rainfall-Triggered Landslide Risk and Loss Estimates**

There are few generally-accepted methods to estimate damage from landslides caused by rain. However, many of Berkeley's hillside homes are located in areas that could slide under the right circumstances. According to a USGS report<sup>90</sup>, approximately 6,000 structures are located in areas at moderate to high risk of landslides.



## **B.8 Floods**

### **B.8.a Historical Floods**

Berkeley's most recent widespread flooding occurred in 2004 throughout the City during a 25-year rainfall event. Flooding also occurred during the 1997 - 1998 El Niño season.

In the early 1960s, the Strawberry and Codornices Creeks overflowed, causing flooding of streets and intersections. The flooding was of short duration and shallow depth and occurred in small areas. A few buildings flooded, including some on the University of California, Berkeley campus.

### **B.8.b Flood Hazard**

Berkeley faces a minor flood hazard, primarily from local creek flooding and storm drain overflow.

#### **Creek Flooding**

Like in many urban areas, creeks in Berkeley have been affected by urban development. Stretches of creeks in Berkeley are completely contained by culverts<sup>91</sup>, and open channel segments of the creeks are often segmented by shorter culverts that enable streets and development.

Creeks in west Berkeley flow year-round. The upper reaches of creeks only flow for a short time after rainfall. When the level of runoff exceeds the capacity of a creek, the flood waters overtops the banks and floods into properties and streets.

Creek flooding in Berkeley generally originates on private property.

#### **Storm Drain Overflow**

The City's storm drainage infrastructure collects urban runoff, and carries it either directly to the Bay or to nearby watercourses that discharge to the Bay. Flooding from storm drainage infrastructure can happen independently of creek flooding. Causes for such flooding are generally rainfall events that exceed the capacity of the storm drainage facilities, blockages, or storm drainage damage that reduces the capacity of the storm drainage infrastructure.

#### Capacity

When storm water runoff exceeds the capacity of the storm drain infrastructure, the excess water flows into city streets. Most of Berkeley's storm drain infrastructure is engineered to accommodate a 10-year design storm<sup>92</sup>. Using this 10-year design storm standard is considered the most cost-effective design practice,<sup>93</sup> and provides guidance for computing flows and for sizing storm drainage infrastructure.

#### Age

Maintenance helps preserve the flow capacity of the infrastructure, reducing the frequency of

flooding, however many components of Berkeley's storm drain infrastructure are over 90 years old and are past their useful life expectancy. Concrete pipes have eroded or separated and metal pipes have corroded over the years. In some locations sink holes have formed as soil enters the storm drain through cracks and other defects. Berkeley's Watershed Management Plan (see *Notable Mitigation Activities*) recommends an inspection program to identify infrastructure that has deteriorated to a condition of being in danger of collapse or deteriorated reducing hydraulic flow capacity.

### Creek Culverts

Berkeley is underlain by a patchwork of creek culverts, most privately constructed and many a century or more old. In a catastrophic event such as an earthquake, there is a strong possibility that some of these culverts may be damaged and, in some cases, may collapse. A culvert collapse could be physically and economically catastrophic in an area such as Downtown Berkeley where buildings have deep basements, many underground utilities, and streets are congested with vehicle and pedestrian traffic. Most culverts are located on private property, with some located beneath private improvements. Failure of a private culvert may cause significant damage to private property, and improvements on that property. For culvert breaks beneath public property, the City intends to repair such a break on an as needed basis, as it currently does with a break in its storm drains. However, many private property owners are unaware that improvements on their property may be situated above a culvert.

### **Flooding Factors**

Factors that induce flooding in Berkeley include:

- Winter storms with heavy rainfall: Heavy rainfall increases urban runoff and flows to creeks and the City's storm drainage infrastructure.
- Blockages: Blockages can happen in creeks and in the City's storm drainage infrastructure. The City increases maintenance efforts of its infrastructure ahead of and during significant rainfall events. Residents are responsible for maintaining their creeks and infrastructure within their property.
- Bay tides: Runoff from Berkeley goes directly to the Bay. Higher tide and sea level rise reduce creek and storm drainage flow capacity in the western portions of the City.
- Power outage: An unknown number of property owners rely on electric sump pumps to keep their homes buildings free from water during the rainy season. Any protracted power outage during the rainy season could disable these pumps and lead to water damage in many structures.
- Climate change and its effects: Climate change is linked to increasing the intensity and severity of rainfall events and to sea-level rise. The effects of heavy rainfall and sea-level rise are discussed above. (See Section B10: Climate Change.)

### Public Health Impacts<sup>94</sup>

Urban runoff typically contains contaminants that can threaten public health. These include bacteria, toxins, petroleum products, etc. Watersheds in the City are not a source of municipal potable water.<sup>95</sup> Flood waters represent of potential source of contamination to improvements that are at risk of flooding. Local gardens face a similar threat of contamination if they are exposed to urban runoff. Heavy storm water runoff can contaminate the ocean, lakes, and other bodies of water with other bacteria.<sup>96</sup>

## B.8.c Exposure and Vulnerability

Flooding exposure in Berkeley generally results from creek flooding and storm drain overflow.

### Creek Flooding Exposure - National Flood Insurance Program

Berkeley's creek flooding exposure is assessed through the National Flood Insurance Program (NFIP), which makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. Participants in the NFIP must regulate development in floodplain areas in accordance with NFIP criteria.

Berkeley has participated in the NFIP since September 1, 1978 and is currently in good standing with the Program. NFIP compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA.

As part of Berkeley's effort to comply with the requirements of the NFIP, Berkeley has adopted various floodplain management measures. Thanks to the fact that the City has abided by and enforced federal flood insurance program requirements since the 1970s, flood insurance claims have been extremely low.

Berkeley's Flood Zone Development Ordinance regulates development in areas identified in the Flood Insurance Study and Flood Insurance Rate Maps. To file insurance claims with FEMA for flood damage, owners of parcels in this area must have FEMA flood insurance, and comply with the terms and conditions of the insurance. Few Berkeley homeowners are known to carry flood insurance, presumably because of negligible flood damage in recent decades, so those losses would be borne almost entirely by building owners.

The City last updated Berkeley Municipal Code (BMC) Chapter 17.12: *Flood Zone Development Ordinance* in September 2009 to maintain Berkeley's continued compliance with FEMA National Flood Insurance Program requirements. The Ordinance regulates all publicly- and privately-owned land within the areas of special flood hazard. BMC 17.12 automatically incorporates new FIRM panels. BMC 17.12 establishes the Director of the Public Works Department as the Floodplain Administrator for the City and addresses standards for construction, utilities, subdivisions, manufactured homes and recreational vehicles.

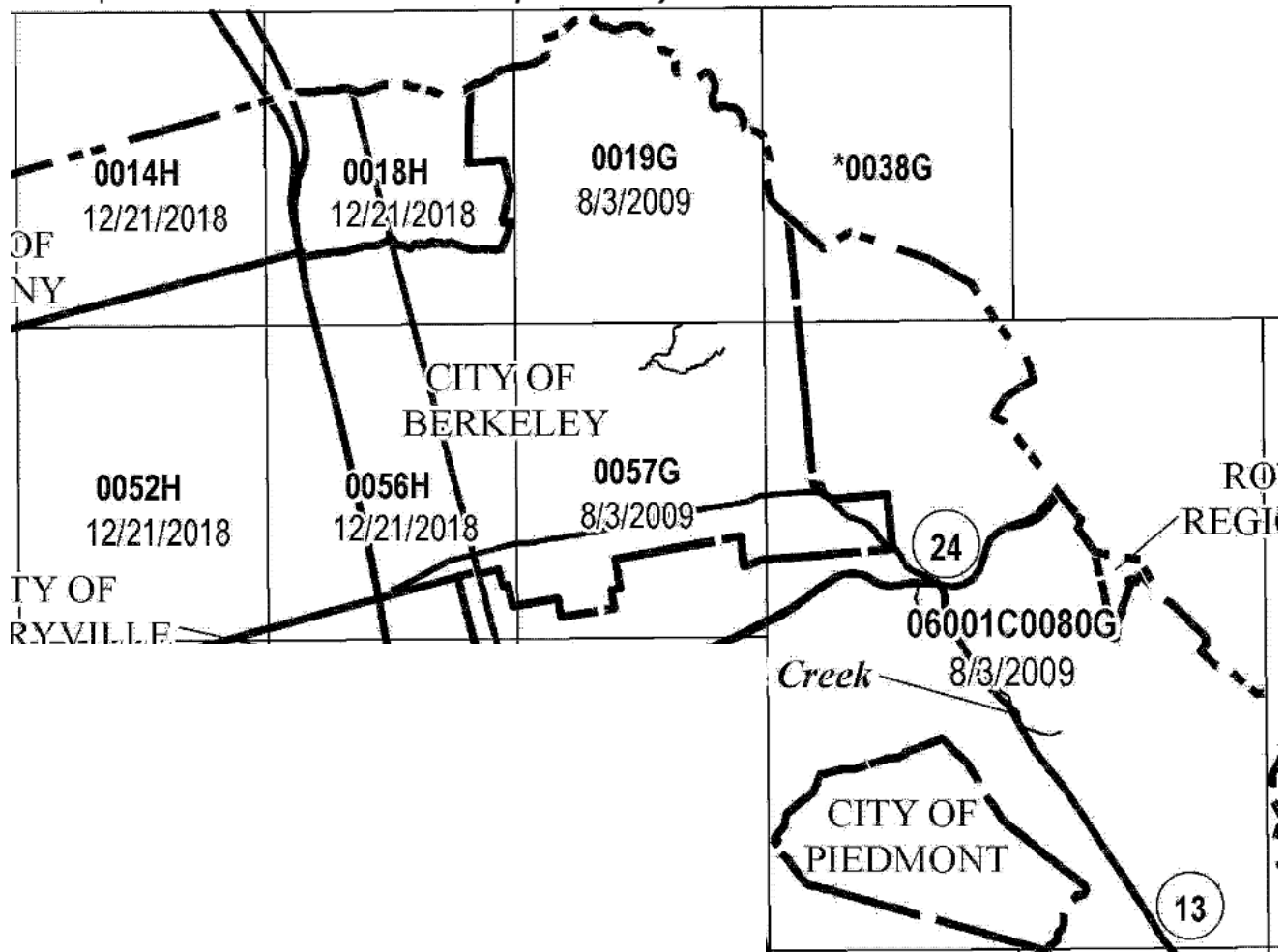
The City of Berkeley will maintain participation in the National Flood Insurance Program under the Public Works Department's Engineering Division and the Planning and Development Department's Land Use Planning and Building and Safety Divisions. The Supervising Civil

Engineer will work with FEMA and other partners to continue to update and revise flood maps for the City, and to continue to incorporate FEMA guidelines and suggested activities into City plans and procedures for managing flood hazards. The Zoning Officer and Building Official are responsible for applying BMC requirements to private property projects.

Analysis: Flood Insurance Rate Maps

Map 18 shows the FEMA Flood Insurance Rate Map panels that apply to the City of Berkeley. The map panels present areas of special flood hazard in Berkeley are identified by the FEMA “Flood Insurance Study, Alameda County, California and Incorporated Areas,” dated August 3, 2009 and revisions effective December 21, 2018.<sup>97</sup> The study presents flood zone boundaries and any known flood depths or elevations for the one-percent annual chance flood and the 0.2-percent annual chance flood.

Map 18. *Flood Insurance Rate Map – Berkeley Index*



Each panel displays a number and the date that the associated Flood Insurance Study was last updated by FEMA. These panels, when available, are presented one by one in the following pages.

The pages that follow present the map panels from the index above ordered left to right, top row

to bottom row:

Panel Number	Update Date	Notes
0014H	12/21/2018	
0018H	12/21/2018	
0019G	08/03/2009	
0038G	09/30/2015	Not presented because FEMA did not print panel
0052H	12/21/2018	
0056H	12/21/2018	
0057G	08/03/2009	
0080G	08/03/2009	

Maps highlight areas of flood hazard using the following structure<sup>98</sup>:

- Areas highlighted in blue (2018 maps) or blue polka dots (2009 maps) represent Special Flood Hazard Areas subject to inundation by the 1% annual chance flood, meaning that they have a one percent probability of flooding in a given year.
- Areas highlighted in brown (2018 maps) or black polka dots (2009 maps) represent areas of 0.2% annual chance flood hazards, meaning that they have a 0.2% probability of flooding in a given year.

Maps show that flood depths from creek flow in Berkeley are not great.

2004 Flood Analysis

A 2004 analysis explored Berkeley’s flood exposure and vulnerabilities to a one percent annual chance flood occurred in Berkeley. This analysis predicted that:

- The maximum flood depth would be two feet deep, mostly near creek channels.
- Approximately 675 structures would be impacted to various degrees:
  - The majority would be inundated by one foot or less of water.
  - Approximately 200 structures could flood with up to two feet of water.

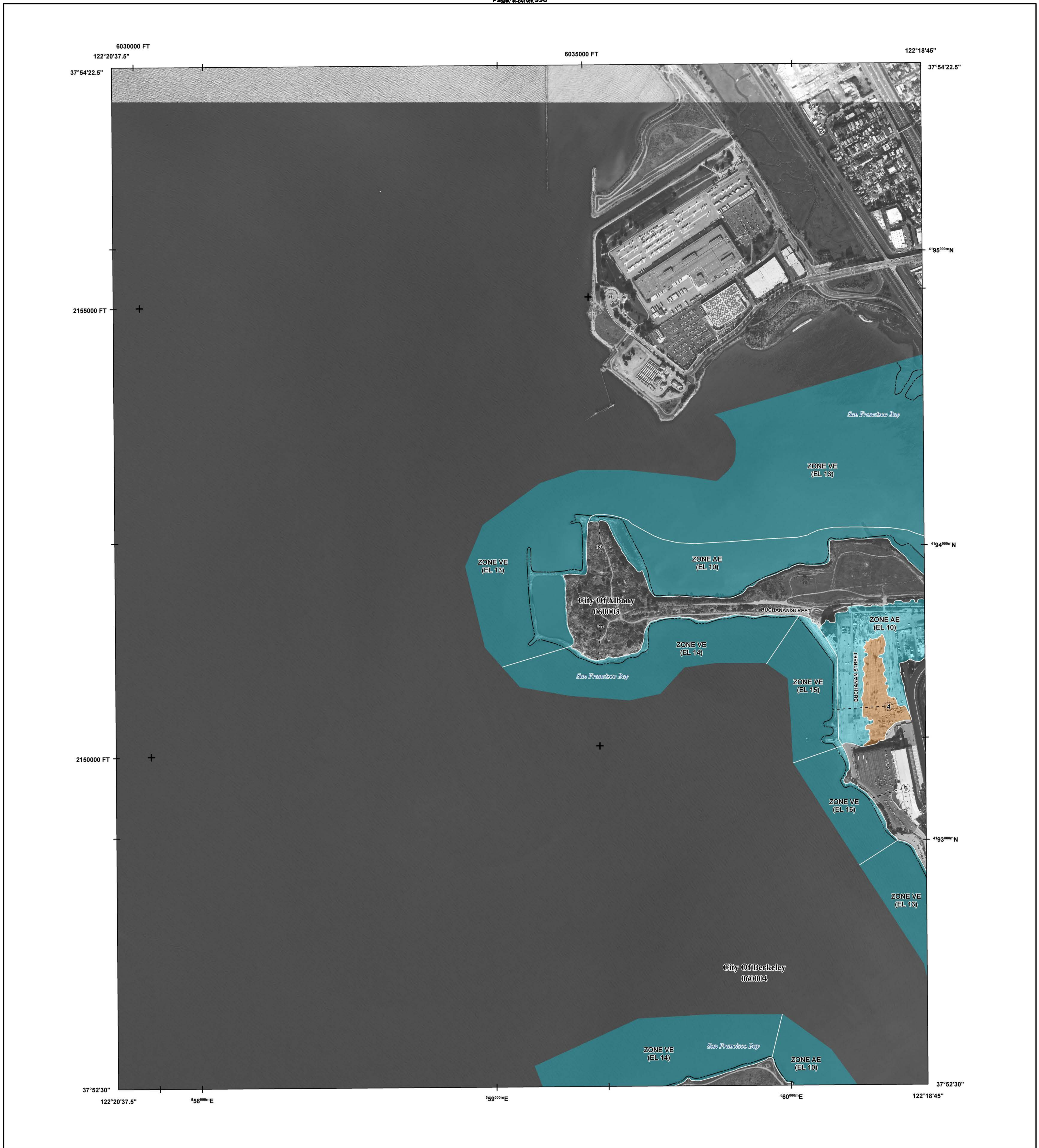
A flood depth of one to two feet has the potential to damage structures, first floor and basement finishes, contents and appliances in exposed buildings.

Berkeley’s exposure to a one percent annual chance flood has likely increased since 2004 but resources are not available at this time to perform a new analysis.

Repetitive Loss Properties

Berkeley does not have any Repetitive Loss Properties as defined by the National Flood Insurance Program.<sup>99</sup>





**FLOOD HAZARD INFORMATION**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT  
**THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://MSC.FEMA.GOV)**

<b>SPECIAL FLOOD HAZARD AREAS</b>	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
<b>OTHER AREAS OF FLOOD HAZARD</b>	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
<b>OTHER AREAS</b>	NO SCREEN Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
<b>GENERAL STRUCTURES</b>	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
<b>OTHER FEATURES</b>	Limit of Study
	Jurisdiction Boundary

**NOTES TO USERS**

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-338-2627) or visit the FEMA Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

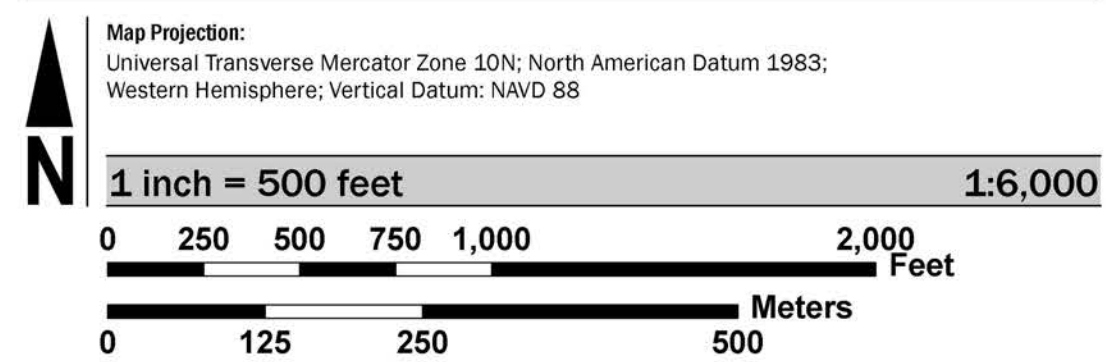
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

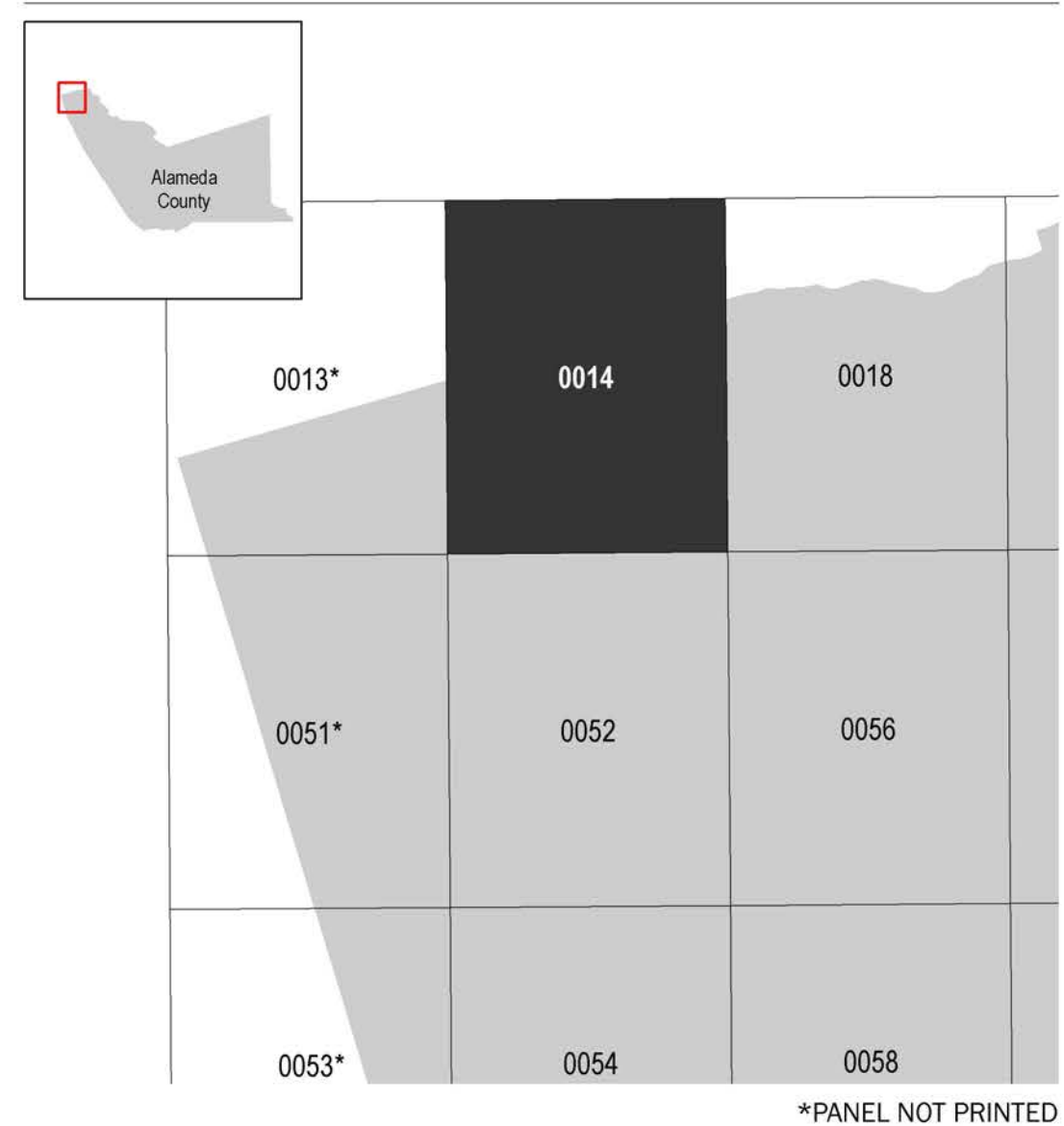
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from Coastal California LIDAR and Digital Imagery dated 2011. USDA NAIP 2012 imagery is used in areas not covered by the Coastal California imagery.

**SCALE**



**PANEL LOCATOR**



**National Flood Insurance Program**

**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOOD INSURANCE RATE MAP**

**ALAMEDA COUNTY, CALIFORNIA**  
 and Incorporated Areas

PANEL 14 OF 725

Panel Contains:  
 COMMUNITY ALBANY, CITY OF BERKELEY, CITY OF

NUMBER	PANEL	SUFFIX
060003	0014	H
060004	0014	H

VERSION NUMBER  
2.3.2.0

MAP NUMBER  
06001C0014H

MAP REVISED  
DECEMBER 21, 2014





**FLOOD HAZARD INFORMATION**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT  
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<b>SPECIAL FLOOD HAZARD AREAS</b>		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
<b>OTHER AREAS OF FLOOD HAZARD</b>		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
<b>OTHER AREAS</b>		Area of Minimal Flood Hazard Zone X
		Area of Undetermined Flood Hazard Zone D
<b>GENERAL STRUCTURES</b>		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
<b>OTHER FEATURES</b>		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

**NOTES TO USERS**

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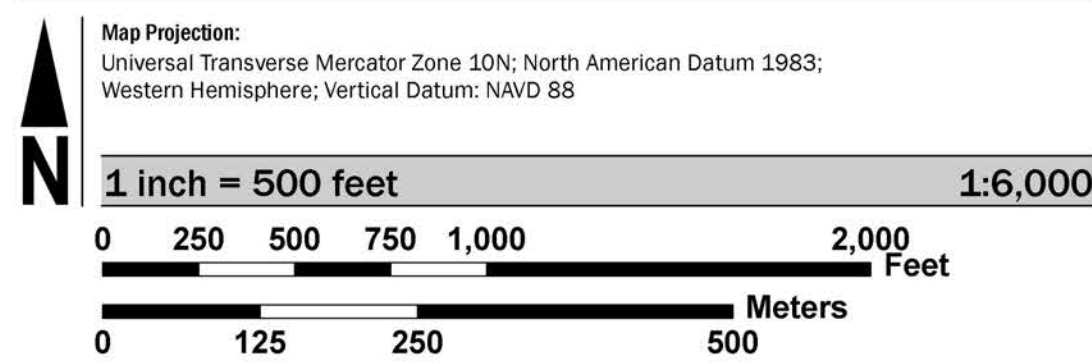
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For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

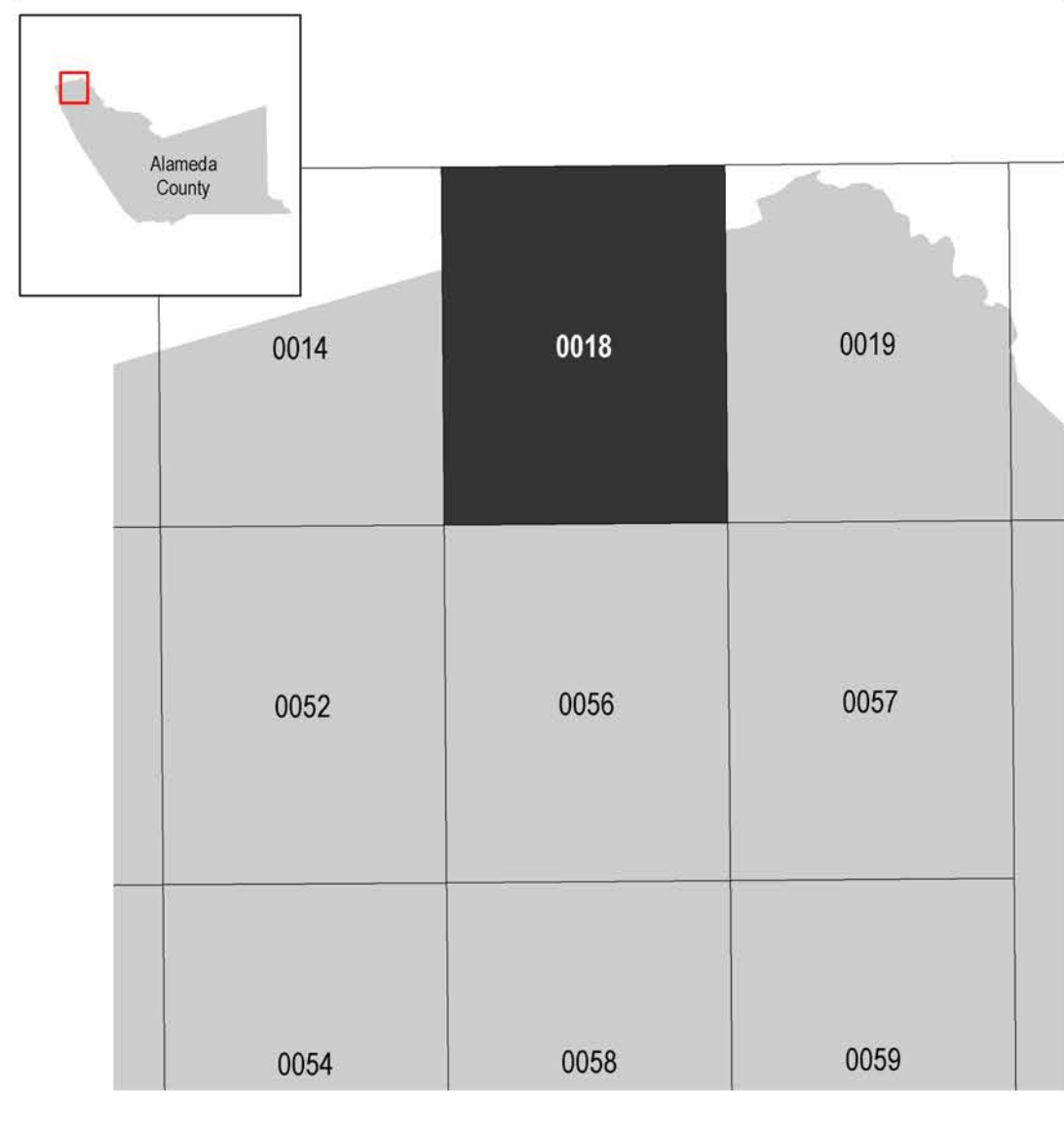
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**SCALE**



**PANEL LOCATOR**



**National Flood Insurance Program**

**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOOD INSURANCE RATE MAP**

**ALAMEDA COUNTY, CALIFORNIA**  
 and Incorporated Areas

PANEL 18 OF 725

**FEMA**

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
ALBANY, CITY OF	060003	0018	H
BERKELEY, CITY OF	060004	0018	H

VERSION NUMBER  
2.3.2.0

MAP NUMBER  
06001C0018H

MAP REVISED  
DECEMBER 21, 2018



### NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodways have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10. The horizontal datum was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NINGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was derived from multiple sources. Within the City of Livermore, base map information was derived from digital orthophotos provided by the City of Livermore Engineering Department. This information was produced at scales of 1:1,200 and 1:2,400 with 1-foot pixel resolution from photography dated May 7, 2001. Within the City of San Leandro, base map information was derived from digital orthophotos provided by the City of San Leandro Information Services Department. This information was produced at a scale of 1:2,400 with 1-foot pixel resolution from photography dated April 19, 2003. Additional information was derived from U.S. Geological Survey Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from photography dated 1991 or later.

This map reflects more detailed and up-to-date stream channel configurations than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

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Contact the FEMA Map Service Center at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://msc.fema.gov>.



### LEGEND

**SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently destroyed. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

Areas determined to be outside the 0.2% annual chance floodplain.

Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\* (EL 987)

\* Referenced to the North American Vertical Datum of 1988

Cross section line

Transsect line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

1000-meter Universal Transverse Mercator grid values, zone 10N

600000 FT 5000-foot grid ticks; California State Plane coordinate system, zone III (FIPSZONE 0403), Lambert Conformal Conic projection

DX5510 x Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORY

Refer to listing of Map Repositories on Map Index

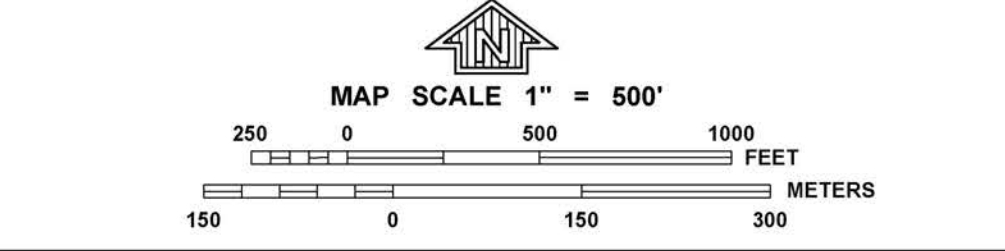
EFFECTIVE DATE OF COUNTY-WIDE FLOOD INSURANCE RATE MAP

August 3, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0019G

**FIRM**

**FLOOD INSURANCE RATE MAP**

**ALAMEDA COUNTY, CALIFORNIA AND INCORPORATED AREAS**

PANEL 19 OF 725  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
BERKELEY, CITY OF	060004	0019	G

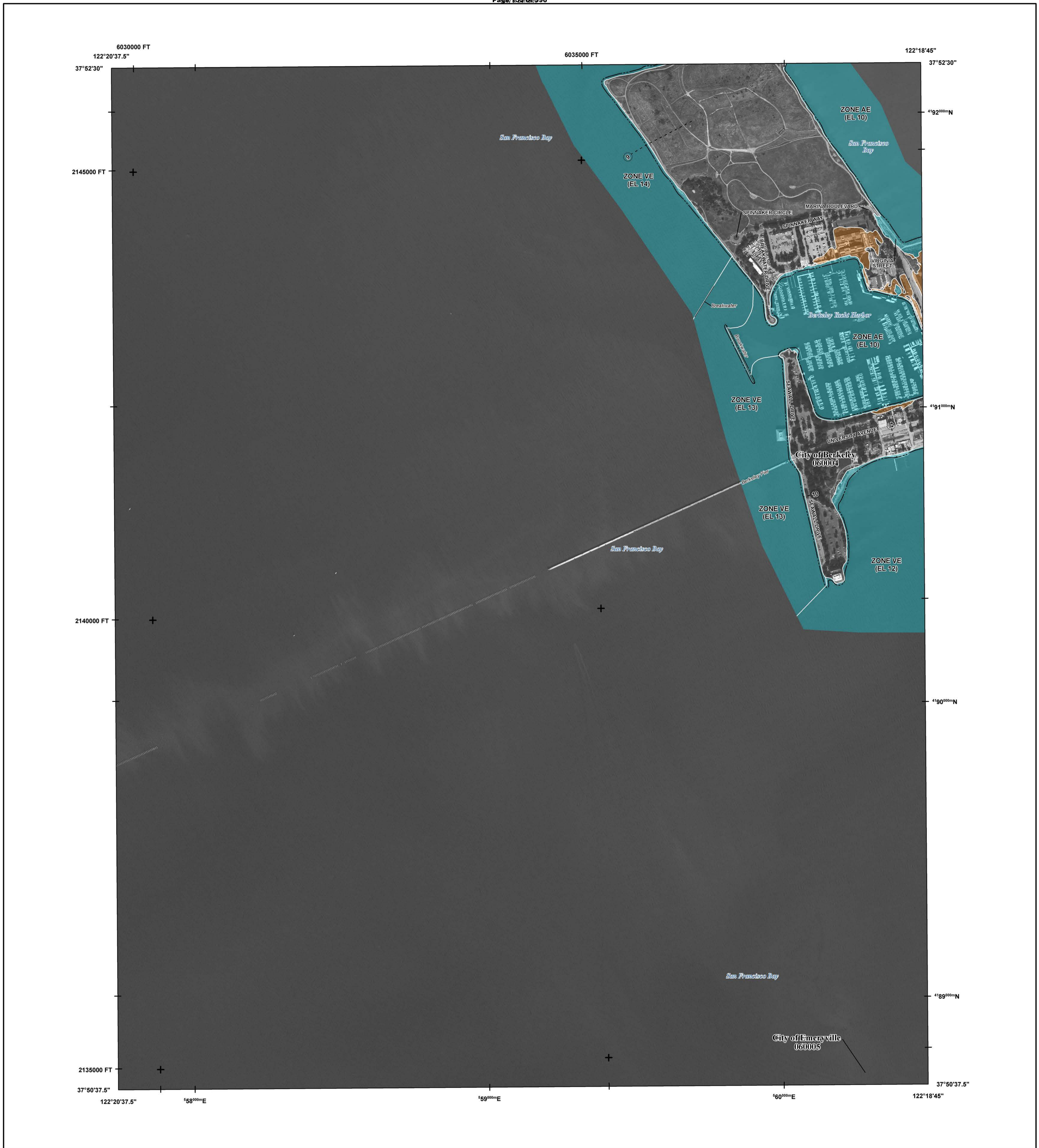
Notes to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
06001C0019G

**EFFECTIVE DATE**  
AUGUST 3, 2009

Federal Emergency Management Agency





**FLOOD HAZARD INFORMATION**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT  
**THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT**  
[HTTP://MSC.FEMA.GOV](http://msc.fema.gov)

<b>SPECIAL FLOOD HAZARD AREAS</b>		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes. Zone X
<b>OTHER AREAS OF FLOOD HAZARD</b>		Area with Flood Risk due to Levee Zone D
		Area of Minimal Flood Hazard Zone X
<b>OTHER AREAS</b>		Area of Undetermined Flood Hazard Zone D
<b>GENERAL STRUCTURES</b>		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
		Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
<b>OTHER FEATURES</b>		Limit of Study
		Jurisdiction Boundary

**NOTES TO USERS**

For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-338-2627) or visit the FEMA Map Service Center website at <http://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the FEMA Map Service Center website or by calling the FEMA Map Information eXchange.

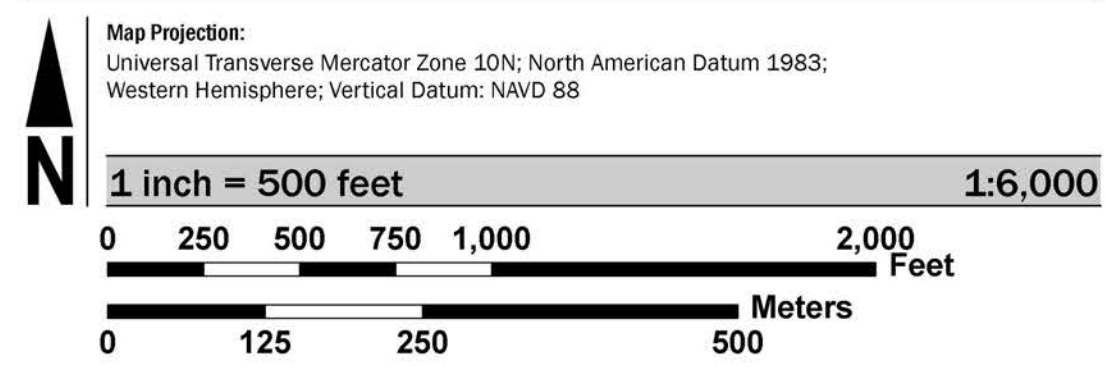
Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

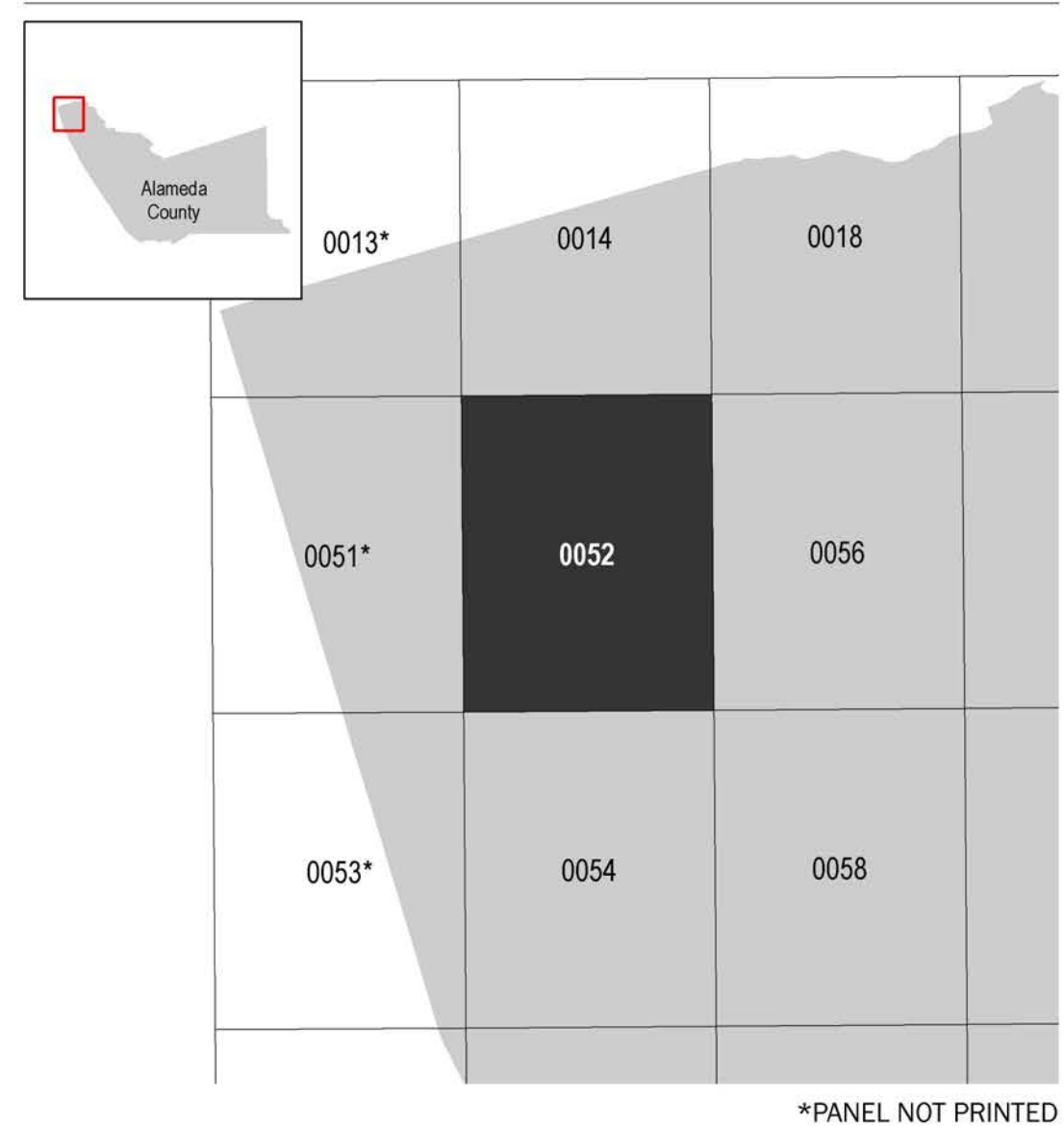
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Base map information shown on this FIRM was derived from Coastal California LIDAR and Digital Imagery dated 2011. USDA NAIP 2012 imagery is used in areas not covered by the Coastal California imagery.

**SCALE**



**PANEL LOCATOR**

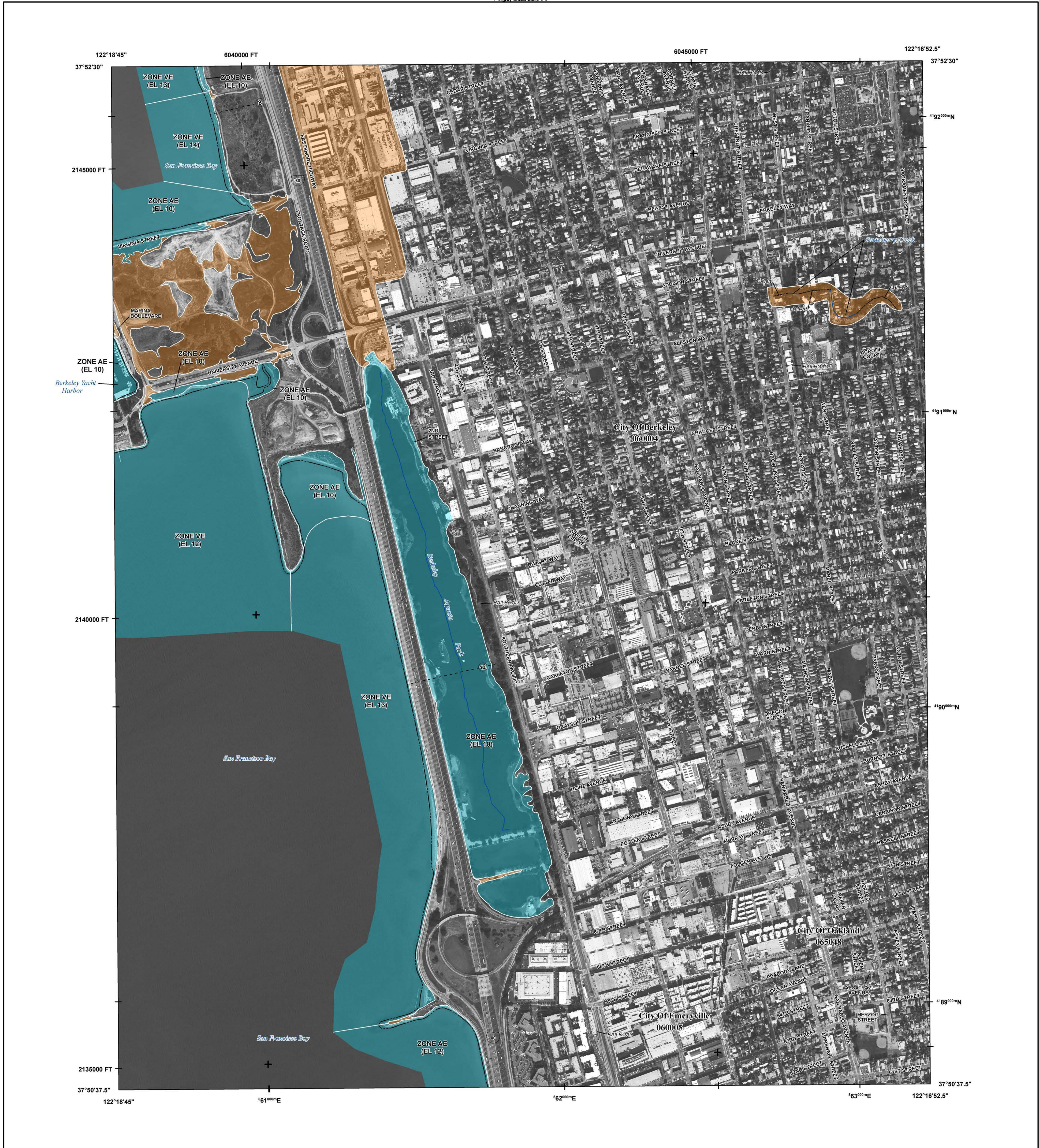


**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOOD INSURANCE RATE MAP**  
 ALAMEDA COUNTY, CALIFORNIA  
 and Incorporated Areas  
 PANEL 52 OF 725

Panel Contains:  
 COMMUNITY BERKELEY, CITY OF EMERYVILLE, CITY OF

NUMBER	PANEL	SUFFIX
060004	0052	H
060005	0052	H





**FLOOD HAZARD INFORMATION**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT  
**THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTP://MSC.FEMA.GOV](http://msc.fema.gov)**

	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes. Zone X
	Area with Flood Risk due to Levee Zone D
	Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

**NOTES TO USERS**

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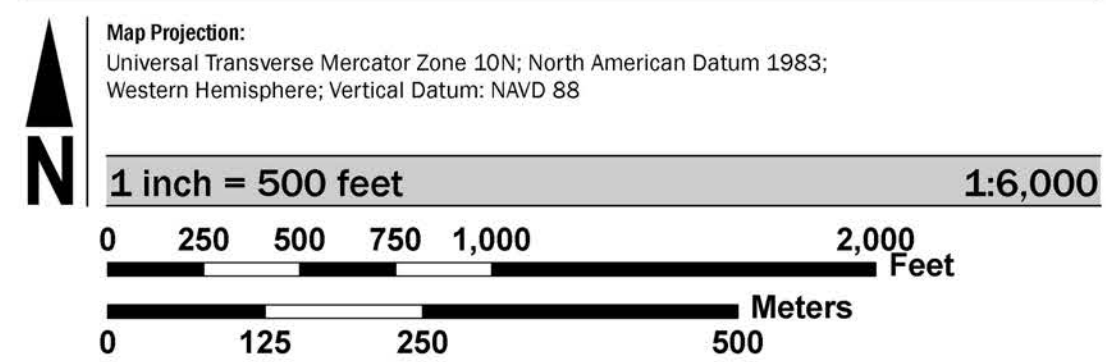
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For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

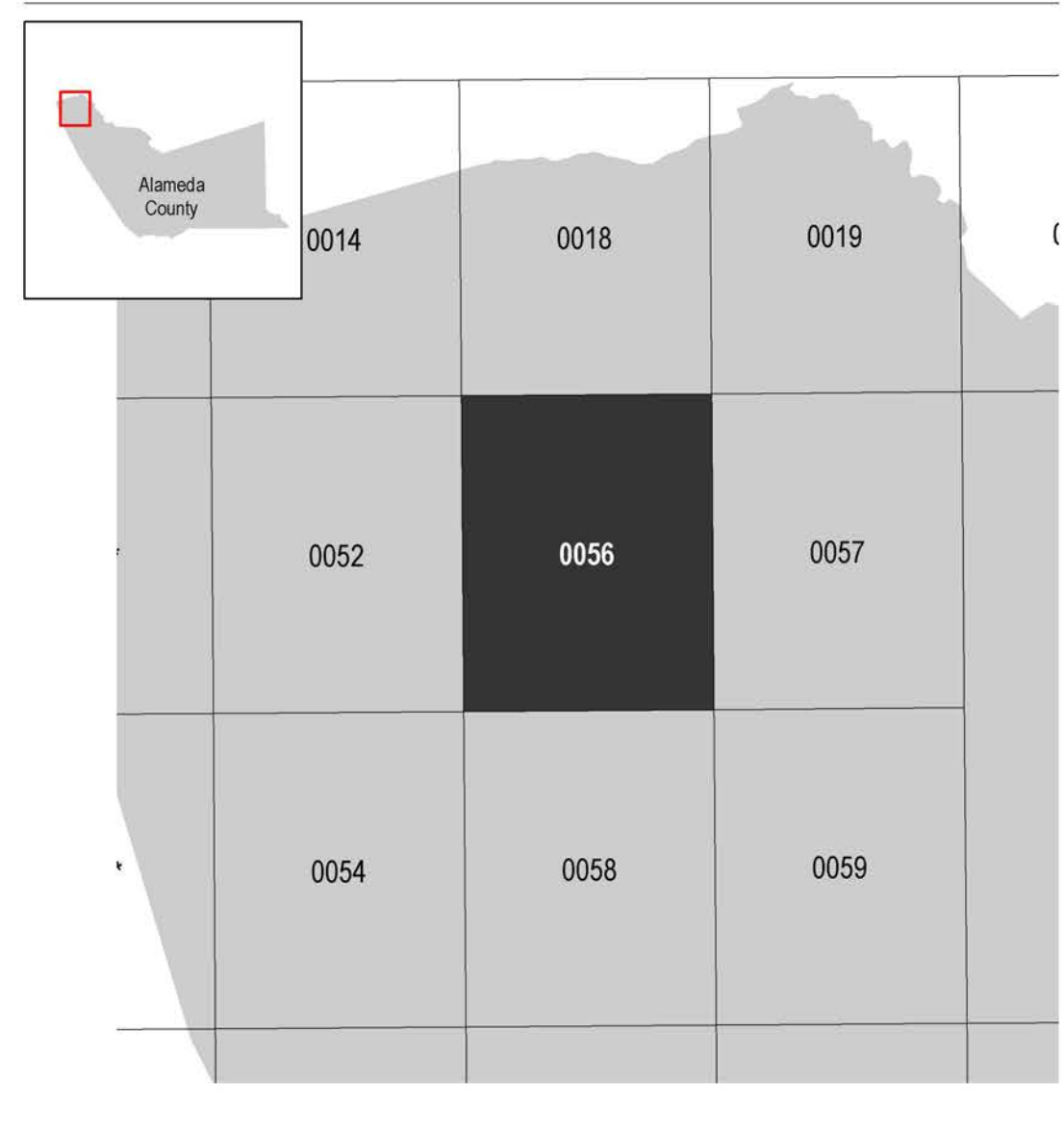
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was derived from Coastal California LIDAR and Digital Imagery dated 2011. USDA NAIP 2012 imagery is used in areas not covered by the Coastal California imagery.

**SCALE**



**PANEL LOCATOR**



**National Flood Insurance Program**

**NATIONAL FLOOD INSURANCE PROGRAM**  
**FLOOD INSURANCE RATE MAP**

**ALAMEDA COUNTY, CALIFORNIA**  
 and Incorporated Areas

PANEL 56 OF 725

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
BERKELEY, CITY OF	060004	0056	H
EMERYVILLE, CITY OF	060005	0056	H
OAKLAND, CITY OF	065048	0056	H

VERSION NUMBER  
2.3.2.0

MAP NUMBER  
06001C0056H

MAP REVISED  
DECEMBER 21, 2018



**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations (BFEs)** and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations tables in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations tables should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 10. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NINGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

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**LEGEND**

- SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD
- The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.
- ZONE A** No Base Flood Elevations determined.
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- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS
- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS
- Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\*
- Base Flood Elevation value where uniform within zone; elevation in feet\*
- \* Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- 87°07'45", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 2976mN 1000-meter Universal Transverse Mercator grid values, zone 10N
- 600000 FT 5000-foot grid ticks; California State Plane coordinate system, zone III (FIPSZONE 0403), Lambert Conformal Conic projection
- DX5510 x Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 River Mile

MAP REPOSITORY  
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTY-WIDE FLOOD INSURANCE RATE MAP  
August 3, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 500 1000 FEET  
150 0 150 300 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0057G

**FIRM**  
FLOOD INSURANCE RATE MAP  
ALAMEDA COUNTY,  
CALIFORNIA  
AND INCORPORATED AREAS

PANEL 57 OF 725  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
BERKELEY, CITY OF	06004	0057	G
OAKLAND, CITY OF	065048	0057	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER  
06001C0057G

EFFECTIVE DATE  
AUGUST 3, 2009

Federal Emergency Management Agency



**NOTES TO USERS**

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NGS Information Services  
NOAA, NIMS312  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

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- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.
- FLOODWAY AREAS IN ZONE AE
- The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.
- OTHER FLOOD AREAS**
- ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- OTHER AREAS**
- ZONE X Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D Areas in which flood hazards are undetermined, but possible.
- COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**
- OTHERWISE PROTECTED AREAS (OPAs)
- CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet\*
- \* Referenced to the North American Vertical Datum of 1988
- Cross section line
- Transect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 1000-meter Universal Transverse Mercator grid values, zone 10N
- 600000 FT 5000-foot grid ticks: California State Plane coordinate system, zone III (FIPSZONE 0403), Lambert Conformal Conic projection
- DX5510 x Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M.1.5 River Mile

MAP REPOSITORY  
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP  
August 3, 2009

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

PANEL 0080G

**FIRM**  
FLOOD INSURANCE RATE MAP

ALAMEDA COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 80 OF 725  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
BERKELEY, CITY OF	060004	0080	G
OAKLAND, CITY OF	065048	0080	G

Note to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER 06001C0080G

EFFECTIVE DATE AUGUST 3, 2009

Federal Emergency Management Agency



## Storm Drain Overflow Exposure

In 2011, the Engineering Division of the City's Public Works Department developed the Watershed Management Plan (WMP). The WMP examined two of the watersheds in the City, represented in Map 27. The Potter and Codornices Watersheds were selected because they represent the full range of the urban drainage spectrum in Berkeley.<sup>100</sup> The modeling identified locations of predicted overflows. See [Watershed Resources - City of Berkeley, CA](#) for information on the WMP.

Map 26. **Berkeley Area Watersheds**



Source: Stormwater Plan (1984) identified 10 major drainage systems in Berkeley. Last updated 2004.  
 Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

 Watershed

### Potter Watershed

The Potter Watershed is the largest in the City. It experiences localized flooding in many areas, and contributes some runoff to the Aquatic Park Lagoons. Localized flooding can be expected in varying degrees at several locations including:

- San Pablo Avenue between Ward and Murray
- California Street between Woolsey and Harmon
- Woolsey Street between California and Adeline
- Woolsey Street at Dana
- Ashby Avenue between California and King
- Martin Luther King, Jr. Way between Russell and Woolsey
- Parker Street between Seventh and Fourth
- Fulton Street at Derby
- Ellsworth Street between Blake and Parker
- Telegraph Avenue between Ashby and Woolsey
- Telegraph Avenue at Stuart
- College Avenue at Dwight

Many of these locations were confirmed as chronic nuisance flooding sites by Public Works Maintenance staff and correspond well with City experiences during the storms of February 25, 2004 and the El Nino events of the 2005-06 rainy season.

Additionally, tidal effects from the Bay influence flooding issues in the Potter Watershed. This is due to the water surface of the Bay effectively reducing the discharge ability of the storm drain outfall to the Bay.

### Codornices Watershed

The Codornices Watershed is regionally significant as Codornices Creek is one of the least culverted creeks in the East Bay; and is one of the few with a salmonid population. Localized flooding can be expected in varying degrees at several locations including:

- Second Street, Creek corridor to Gilman

- Railroad tracks, Creek corridor to Gilman and to Albany
- Gilman Street between Sixth and Second
- Codornices Creek at Sixth, at most street crossings west of San Pablo, at Glen
- Ninth Street between Harrison and Creek Corridor
- Monterey Ave between Posen and Hopkins
- Hopkins Street at Carlotta
- The Alameda between Napa and Yolo
- Sonoma Ave between Fresno and Hopkins
- Spruce Street, Eunice to Creek corridor
- Euclid Ave, Cragmont to Codornices Park
- Various locations on LaLoma, Glendale, Campus Drive, Queens, Shasta Road

The City plans to develop hydraulic models of the remaining eight watersheds within Berkeley.

#### Watershed Management Plan

In October 2012, Council adopted the Watershed Management Plan (WMP). The mission of the WMP is to promote a healthier balance between the urban environment and the natural ecosystem, including the San Francisco Bay. One of the WMP's four goals is to reduce urban flooding, with associated objectives as follows:

- Maintain and operate appropriately sized storm drain pipe infrastructure.
- Reduce peak runoff volumes and velocities.
- Keep storm water inlets free of obstructions.
- Collect/analyze data to better understand issues and plan accordingly.

To this end, the WMP recommends analysis and rehabilitation of existing storm drain pipes, along with landscape-based retrofits within the public right-of-way or open space areas. Studies have indicated that when these landscape-based retrofits are combined with other traditional approaches, a number of WMP goals can be met for a capital cost similar to merely upsizing storm drain pipes to convey flow.

Until 2018, no funding was identified to implement the Watershed Management Plan. Voting property owners approved the 2018 Clean Stormwater Fee, which Council adopted through



Resolution No. 68,483-N.S. on June 12, 2018. Revenues collected through this fee will provide a stable funding source to move Watershed Management Plan activities forward.

### B.8.d Flood Risk and Loss Estimates

A 2004 analysis explored Berkeley’s flood exposure and vulnerabilities to a one percent annual chance flood occurred in Berkeley.

The 2004 analysis used FEMA’s standard loss curves to determine the percent of replacement value of damage caused by various heights of creek flooding. These curves are based on years of data from flood losses on insured properties around the country. Single-story structures with one foot of floodwater are estimated to have structural damage equal to 14% of their replacement value and damage to 21% of the structures contents. Single-story structures with three feet of water on average experience 27% loss of their replacement value and 40% loss to their contents.

In the 2004 plan, flood losses were estimated using the following calculations:

**Table 15. 2004 Flood Loss Analysis**

	Three Feet Flood Waters			One Foot Flood Waters			Totals (2004)	Totals (2018) <sup>101</sup>
	Value	% Damage	Damage	Value	% Damage	Damage		
Structures	\$70 mill	27%	\$19 mill	\$250 mill	14%	\$35 mill	\$54 mill	\$72 mill
Contents <sup>102</sup>	\$35 mill	40%	\$14 mill	\$250 mill	21%	\$53 mill	\$67 mill	\$90 mill
<i>Totals (2004)</i>	\$105 mill		\$33 mill	\$500 mill		\$88 mill	<b>\$121 mill</b>	<b>\$162 mill</b>

The estimated losses to properties in Berkeley from a one percent annual chance flood total \$162 million in 2018 dollars. Approximately \$72 million is damage to the building structures, including walls, finishes, etc. \$90 million is losses to contents, including damage to furniture in homes and equipment and inventory in commercial and industrial properties.

Berkeley’s exposure to a one percent annual chance flood has likely increased since 2004 but resources are not available at this time to perform a new analysis.

Few Berkeley homeowners are known to carry flood insurance, presumably because of negligible flood damage in recent decades, so those losses would be borne almost entirely by building owners. Some of these losses could be avoided if property owners were able to protect properties through sandbagging or other activities, particularly in areas expected to receive one foot or less of flood water. The City offers free sandbags to city occupants. Remediation

activities like sandbagging require property owners to have adequate warning time and manpower.

Due to the small watersheds and paved, urban environment, floodwaters in Berkeley are likely to both rise and recede quickly. This means residents and business owners may have only a short warning period for impending floodwaters, but they should be able to begin the cleanup and repair process quickly. Building cleanup will occur within a handful of days; repairing and replacing furniture and equipment will take weeks to months.

It is possible that key underpasses and roads accessing Interstate 80 could be inaccessible during high floodwaters. This could cause significant traffic problems regionally.

## B.9 Tsunami

### B.9.a Historical Tsunamis

The most recent tsunami to impact Berkeley was associated with the March 2011 earthquake off the coast of Japan. As a result of the tsunami, a half-meter-tall surge was observed nearby in Oakland with 4-6 knot current<sup>103</sup>. The tsunami surge entered the Berkeley marina, causing \$158,000 of damage to docks and boats.

Tsunamis generally impact the Pacific Coast of California, and reports of tsunamis entering the San Francisco Bay are rare. Tsunamis, or seiches as they are called when they occur within an enclosed body of water, can also be generated within the Bay by the Hayward fault, which passes under San Pablo Bay. The 1868 Earthquake on the Hayward fault is reported to have created a seiche within the Bay. It is unknown whether the seiche impacted the City of Berkeley. The 1964 Alaska earthquake caused extensive tsunami damage that flooded and heavily damaged coastal northern California near Crescent City.

### B.9.b Tsunami Hazard

A tsunami occurs in a body of water when a rapid disturbance vertically displaces the water, causing a series of surges. These changes can be caused by an underwater fault rupture (that generates an earthquake) or underwater landslides (typically triggered by earthquakes).

Tsunamis affecting the Bay Area can result from offshore earthquakes within the Bay Area, or from very distant events. While it is most common for tsunamis impacting the Bay Area to be generated by faults in Washington and Alaska, local tsunamis can be generated from local faults running underwater (such as the small tsunami that was triggered by the 1906 earthquake). The San Andreas Fault runs along the coast off the Peninsula and the Hayward fault runs partially through San Pablo Bay.

The 2013 Science Application for Risk Reduction (SAFRR) Tsunami Scenario<sup>104</sup> outlines multiple mechanisms of tsunami damage, which are described below:

- Buildings affected by tsunamis can be damaged by either the inflow or outflow of water, which can affect building finishes, carpets, carpets, electrical wiring, computers and other contents. Tsunamis may deposit soil or other water-borne debris in or around buildings. Tsunamis can erode soil around the building, especially at corners. In more severe cases, the pressure of the moving water can damage a building's structural components, and can even displace the entire building. Additionally, buoyancy can lift and move a building off its foundation.
- Tsunami damage to coastal infrastructure can release complex debris, crude oil, various fuel types and other petroleum products, cargo, and diverse other pollutants into nearby coastal marine environments and onshore in the inundation zone.
- Fires often occur within the inundation zone of a tsunami. Ignitions can occur when spilled liquid fuels mingle with waterborne debris, which can spark when jostled.
- Tsunamis can damage roads through erosion ("scour") of the land beneath the

roadway, especially if the roadway is on a levee or embankment.

- Tsunamis can damage railroad embankments and tracks, which can be submerged, washed out-of-line, or washed out completely. Rolling stock can be overturned or derailed.
- Deaths are possible if individuals choose not to evacuate hazardous areas, do not understand tsunami warnings, or are unable to evacuate for various reasons. Injuries and illness can result from contact with tsunami surges, such as drowning and/or trauma from being struck by debris in the tsunami flow. Post-tsunami, mold can develop in inundated houses, buildings, and debris piles. Secondary infections can result from injuries or from living conditions following the disasters, such as an increase in pneumonia from water aspiration, as well as cellulitis from exposure of breaks in the skin to contaminated water.
- Physical damages, debris, and contamination can have short- and longer-term impacts on the environment and the health of coastal marine and terrestrial ecosystems. Marine habitats in intertidal zones, marshes, sloughs, and lagoons can be damaged by erosion or sedimentation, and can receive an influx of debris, metal and organic contaminants, and sewage-related pathogens. Debris and re-exposed contaminated sediments could pose chronic toxicity threats to ecosystems.

### **B.9.c Exposure and Vulnerability**

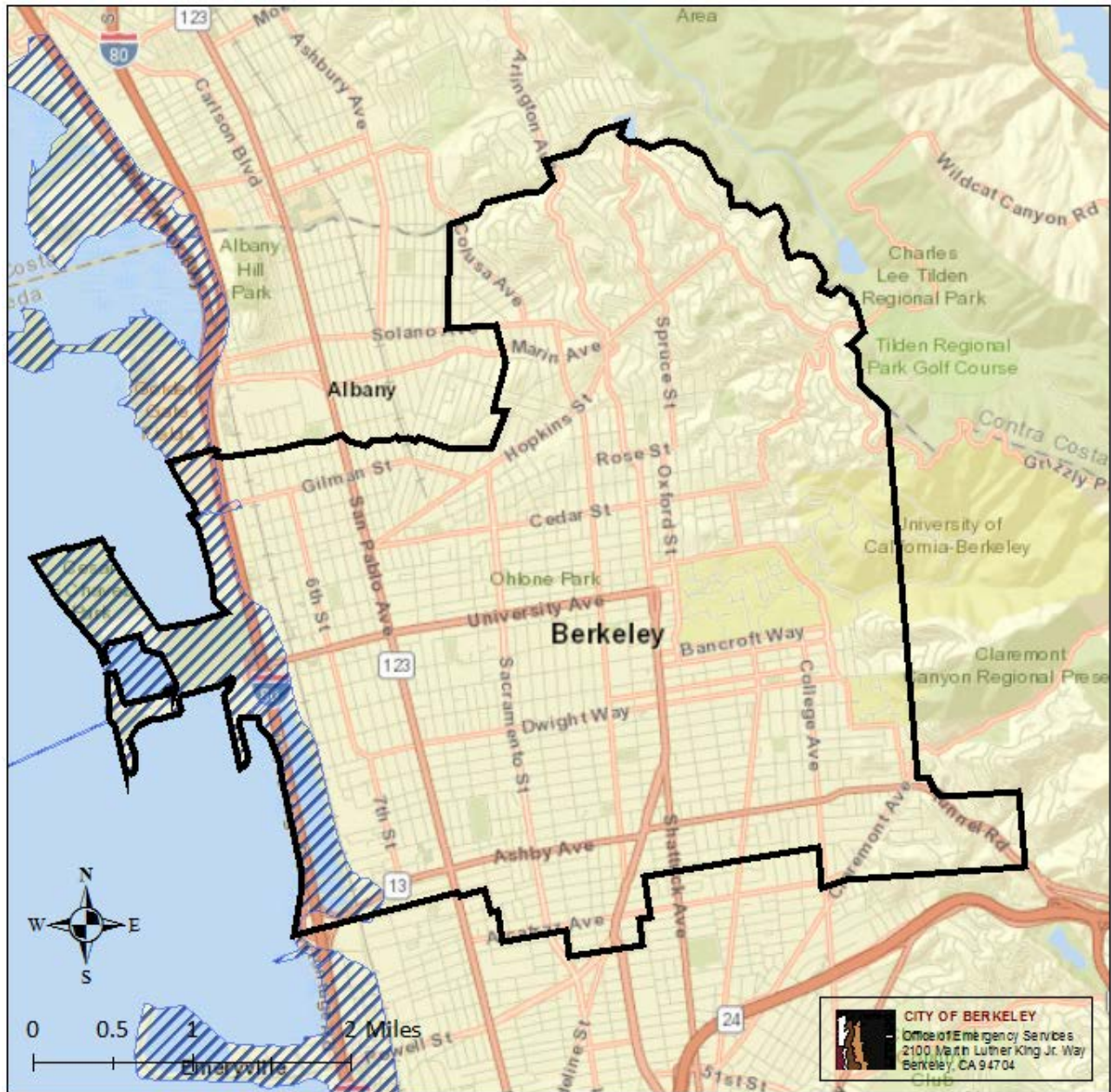
Given the known history of tsunamis within the San Francisco Bay, tsunamis are considered to be possible, but the severity of their impacts on Berkeley cannot be determined at this time.<sup>105</sup> In December 2010, the California Emergency Management Agency released the first ever tsunami inundation map within the San Francisco Bay, shown in Map 27. This map is based on current sea levels and land elevation. This map shows in blue hatched lines the area of potential tsunami inundation in Berkeley. It does not reflect the inundation area from any singular tsunami. Rather, it depicts the worst-case scenario run-up heights from all potential tsunami sources across the Pacific Rim. This map is intended to be used to evacuation planning purposes only.

Given Berkeley's sloping terrain and the Bay's waters at their current levels, tsunami inundation will not extend far inland from the shoreline. According to Map 27 and shaded in blue hatched lines the tsunami inundation zone extends along the entire shoreline of the Bay. Starting at the city's northern border, the zone stretches east from the Bay until it meets the western edge of Interstate 80. At Virginia Street, the edge of the zone crosses Interstate 80 and stretches as far east as Second Street. The edge of the zone runs south along Second Street and the eastern edge of Aquatic Park to Ashby/CA-13. In this area, the edge of the zone extends further east to Fifth Street and Hollis.



According to Map 27, the zone captures Golden Gate Fields, the Tom Bates Regional Sports Complex, Eastshore State Park, the Berkeley Marina, the Dona Spring Animal Shelter, portions of Interstate 80 and the frontage roads beside it, the San Francisco Bay Trail, and Aquatic Park.

Sea-level rise associated with climate change will increase the zone of potential inundation, but the future boundaries of the zone are not yet clear.

Map 27. *Berkeley Tsunami Inundation*



Source: Initial tsunami modeling was performed by the University of Southern California (USC) Tsunami Research Center funded through the California Emergency Management Agency (CalEMA) by the National Tsunami Hazard Mitigation Program. Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Tsunami Inundation Area

### **Tsunami Evacuation Playbooks**

In 2018, the California Geological Survey, the California Governor's Office of Emergency Services, and the National Ocean and Atmospheric Administration (NOAA) released the California Tsunami Evacuation Playbook for the City of Berkeley.

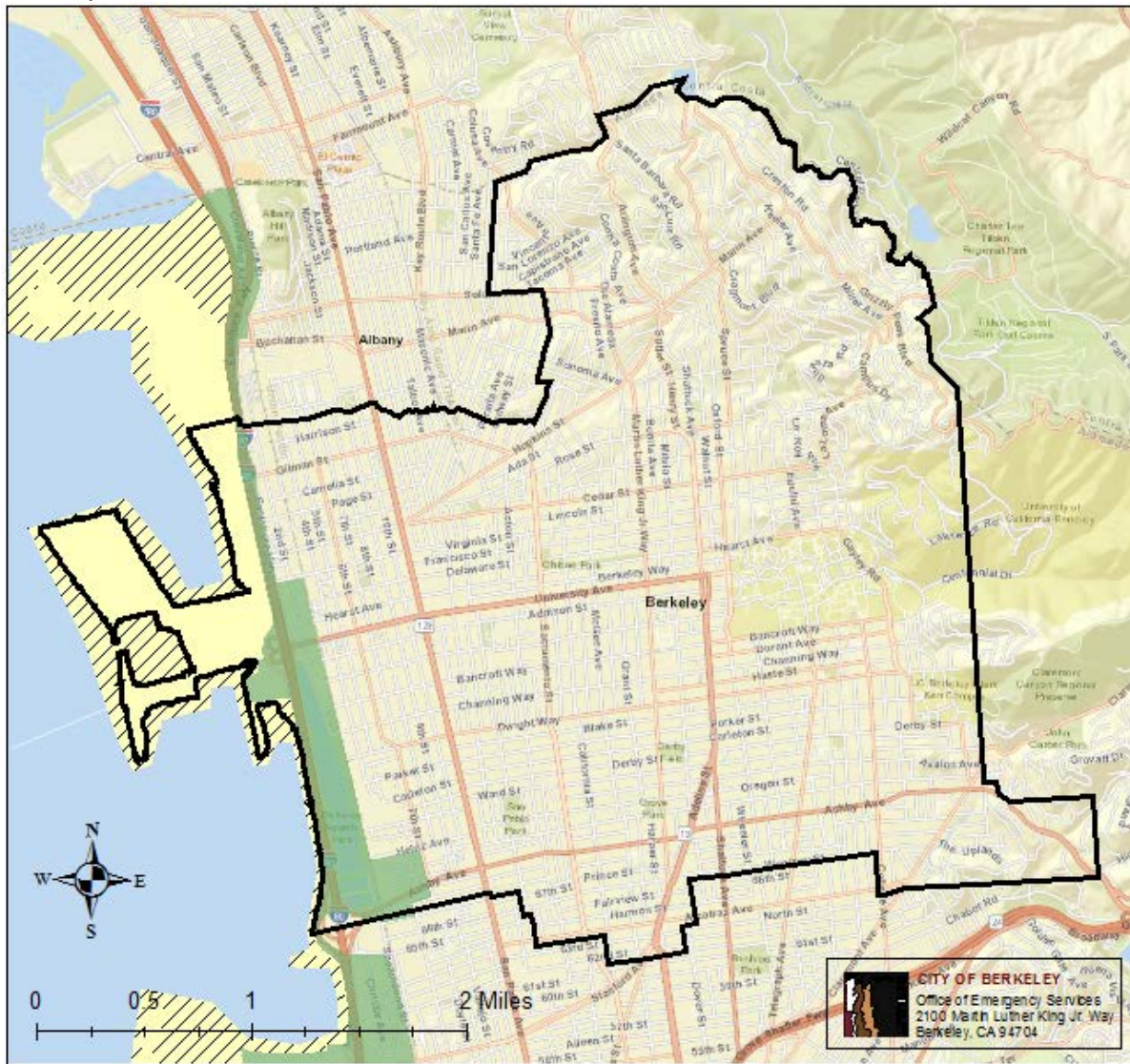
Tsunami Evacuation Playbooks reflect more refined and detailed planning, in which forecasted tsunami amplitudes, storm surge, and tidal information can help guide what areas might be inundated. This information helps NOAA to better predict inundation areas based on the specific tidal and storm conditions when the tsunami is predicted to arrive in Berkeley. Local emergency managers can use this information to better target evacuation areas.

Map 28 presents these Playbook zones, with expanding areas of evacuation:





- Phase 1 is not presented as it includes beaches, harbor docks and boats, and piers.
- Phase 2 is presented in yellow and black hatched lines and adds small areas of land south of University Avenue and west of the West Frontage Road.
- Phase 3 is presented in solid yellow and adds Golden Gate Fields, the Tom Bates Regional Sports Complex, Eastshore State Park, the Berkeley Marina, and portions of the San Francisco Bay Trail.
- The Maximum Evacuation Zone is presented in dark green and is based on areas presented on Map 27. The Maximum Evacuation Zone includes the Dona Spring Animal Shelter, portions of Interstate 80 and the frontage roads beside it, Aquatic Park, and the Police Department Traffic Substation.



Map 28. *Tsunami Evacuation Zones*



Source: California Geological Survey, California Governor's Office of Emergency Services, and National Oceanic and Atmospheric Administration, California Tsunami Evacuation Playbook No.2018-Alam-02. Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Phase 2 Tsunami Evacuation Zone
-  Phase 3 Tsunami Evacuation Zone
-  Maximum Phase Tsunami Evacuation Zone

**USGS Exposure Study<sup>106</sup>**

A USGS study of community exposure to tsunami hazards in California found that in Berkeley:

- Approximately 47 residents (23 households) live in the tsunami inundation zone.
  - Eight of the residents are over 65 and one is under five. Elderly and young residents as well as those in group homes may have a particular challenge evacuating from tsunamis.
  - Seven of the households are non-institutionalized group quarters, 20 households are owner-occupied, and 3 are rented.

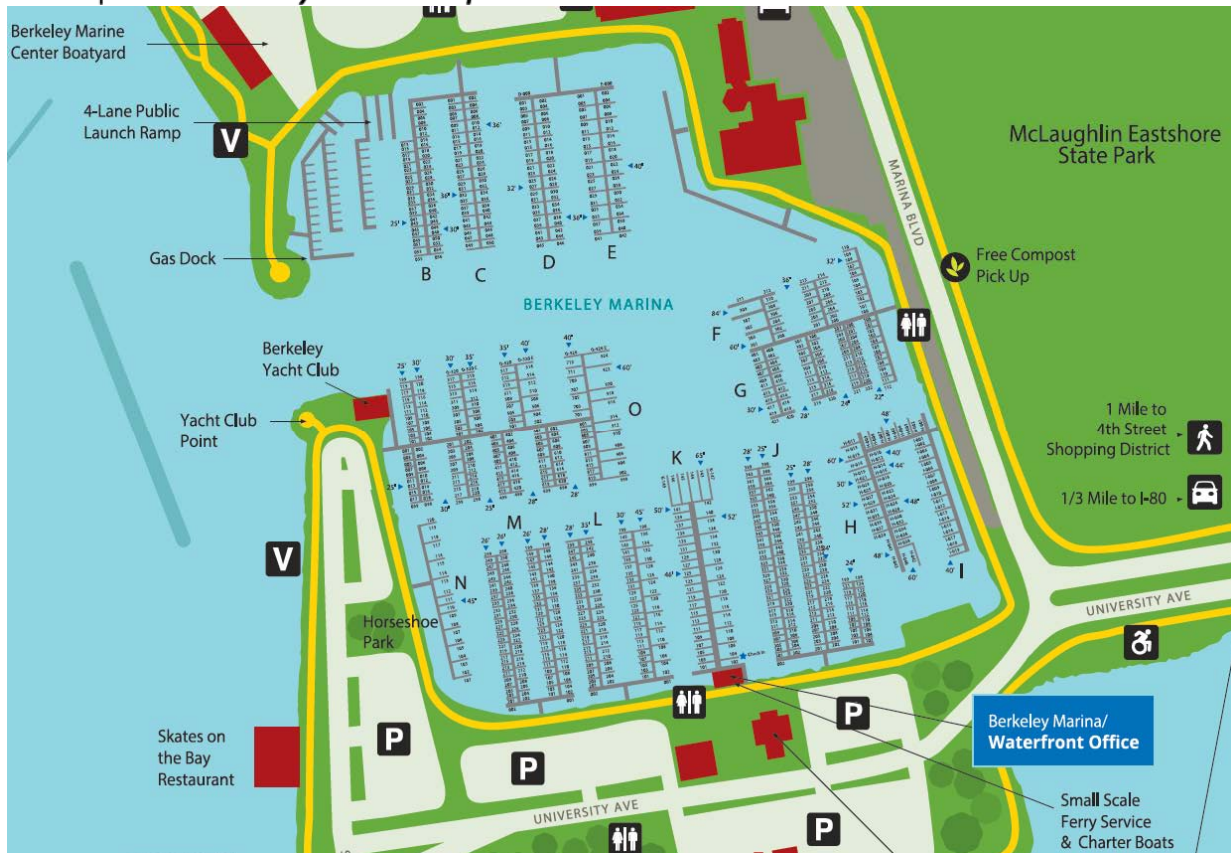
The study also found that:

- 77 businesses and 4 government offices with 1,664 employees are located in the tsunami inundation zone.
  - 80% of these businesses are estimated to have high visitor potential, including the DoubleTree hotel. Visitors may not be aware of what to do in case of a tsunami warning.

While this study examined the Berkeley Marina, its information on residents at the Marina and surrounding park area is not as detailed or accurate as City of Berkeley data. For example, figures do not include the 100 live aboard households, as well as 13 houseboats, at the Marina, for a total of 113 households. At least three children under 5 live on boats. In addition, these figures do not account for boaters who stay on board their vessels regularly up to 12 nights per month, but do not “live” aboard.

**Berkeley Marina**

Of primary concern to the City is the Marina, which is primarily used for recreational purposes, educational and environmental programming, industrial, non-profit, and commercial operations.

Map 29. **Berkeley Harbor Map**

### Infrastructure Vulnerabilities

Existing docks are more than 40 years old and in significantly deteriorated condition. Broken finger docks, utilities, and pilings pose a safety risk to Marina customers and their vessels. This deteriorating infrastructure exacerbates the area's vulnerability to tsunamis. D & E docks were damaged badly in the Tsunami of 2011, and many finger docks and piling are still unusable and have not been repaired or replaced. This results in lost revenue to the marina, lost capacity, and a reduction in the recreational resources available to the public.

Recent tsunami inundation models<sup>107</sup> have identified a moderate tsunami vulnerability in the Gas Dock, Docks B-K, and Dock O. Docks D and E as being the area's most vulnerable to modeled tsunami events, with a moderate level of vulnerability to all events. The next most vulnerable area is Docks B and C, which have a moderate vulnerability to particular scenario events.

In this study, moderate vulnerability was defined as damage to 10% - 90% of cleats and pile guides.

### Additional Vulnerabilities

The area includes a 378-room hotel, with many ground floor rooms; three restaurants, several offices, commercial boating operations, sailing clubs and businesses, nonprofit offices, two small-scale commuter ferry operations, the Adventure Playground, Shorebird Park Nature Center, Shorebird Park, and an industrial boat yard. Despite the area's low density, the area's

populations, roadways, and businesses will be vulnerable to a tsunami:

- Marina residents: The Berkeley Marina has 1,000 boat slips. Approximately 200 residents live onboard boats in these slips. An additional estimated 13 live on board houseboats, and regulations permit all slip holders to spend 12 nights per month on their boats.
- Marina businesses and visitors: A number of Marina restaurants, such as Skates on the Bay, often have large numbers of customers. The DoubleTree Hotel has 378 rooms, and regularly hosts events with 500-600 attendees, potentially making it the City's most densely-populated location with tsunami exposure.
- Roadways: Inundation maps show overtopping of parking areas and inundation of buildings in the Marina. The University Avenue access road is also within the inundation zone. The University Avenue overpass over Interstate 80 is also shown to be within the inundation zone. It is unlikely that the overpass itself would be inundated due to its height and its limited extent beyond Second Street. However, if water extends to Second Street, the access ramps on either end of the overpass would be covered, making the overpass impassable.

#### Evacuation Challenges

The numbers of people and assets exposed to a tsunami are relatively low as compared with other hazards presented in this Plan. However, evacuation routes for Marina residents and visitors are limited. Interstate 80 runs north-south along the eastern edge of the Marina, bisecting the area from the rest of the city. There are six access/egress routes from the Marina into Berkeley:

1. Via the University Avenue Bridge
2. Via the frontage road north to Gilman Street
3. Via the frontage road south to Ashby Avenue/CA-13
4. Via Interstate 80
5. Via the I-80 Bicycle/Pedestrian overcrossing<sup>108</sup>

In the event of a distant-source tsunami, where the underlying earthquake does not impact Berkeley, warnings can be issued before the tsunami arrives onshore in Berkeley. However, the limited number of egress routes will slow evacuations. Evacuations will also be slowed by the pinch point created on the stretch of University Avenue between Marina Boulevard to the west and West Frontage Road to the east. This stretch of roadway is the only driving option out of the Marina.

An earthquake occurring in the waters close to Berkeley could cause a near-source tsunami, which would allow for little to no time to provide warning to people in the inundation area. A near-source tsunami could severely compound evacuation challenges for individuals in the



Marina: all of the above listed routes lie within the tsunami inundation zone.

These evacuation challenges will disproportionately impact people with disabilities and people with access and functional needs. They may not have immediate transportation options to evacuate quickly. Additionally, in the event of a tsunami, they may be separated from their caregivers and may need assistance to evacuate.

### **B.9.d Tsunami Risk and Loss Estimates**

Estimating losses from tsunami inundation is difficult given that the inundation maps do not represent inundation from a single scenario event. Inundation from any single event will almost certainly be less severe than depicted in Map 27, which is intended to display worst-case scenario run-up heights from all potential tsunami sources across the Pacific Rim.

The 2013 SAFRR tsunami scenario<sup>109</sup> depicts a hypothetical but plausible tsunami, created by an earthquake offshore from the Alaska Peninsula. The study projected impacts on the California coast, which included:

- Pilings in the Berkeley Marina will not be overtopped by tsunami waters, but over one-half of the docks in California coastal marinas will be damaged or destroyed
- One-third of boats in California coastal marinas will be damaged or sunk
- In Alameda County, tsunami inundation will create \$20 million in building damage and \$164.4 million in damage to building contents
- Wastewater treatment plants in Alameda County will be inundated and could release raw or partially-treated sewage and wastewater-treatment chemicals.

#### **City of Berkeley Assets**

The most significant financial losses to the City of Berkeley in the event of a tsunami would be inundation of the following structures:

- City Animal Shelter<sup>110</sup>
- Marina Boat Docks
- Berkeley Yacht Club
- Shorebird Nature Center
- Marina Corporation Yard
- Marina Administration Building

Other City- and privately-owned facilities of significant value sit in the tsunami inundation zone. These facilities host a number of businesses and community recreation assets. Tsunami damage could also lead to a drop in revenue to the City from the buildings it leases to others, as well as a drop in tax revenue from businesses operating in the area.

Further research is needed to fully assess Berkeley's tsunami hazard, including the following:

- Definition of Berkeley's different areas of inundation for different tsunami

scenarios;

- Vulnerabilities of each evacuation route to tsunami inundation;
- Structural assessment of buildings and infrastructure in the inundation zone, to determine if they are designed and constructed with the strength and resilience needed to resist the effects of tsunami surges.

The City will leverage ongoing research and coordinate with regional, State and federal partners to help answer these questions.



## SECTION III: MANMADE HAZARDS OF CONCERN

The focus of this mitigation plan is on natural hazards as emphasized in the Disaster Mitigation Act of 2000 (DMA 2000).<sup>111</sup> However, a few manmade hazards are included. Climate change, known to be manmade, is included in the plan because its impacts are likely to exacerbate the natural hazards of concern described in Sections I and II. Next, extreme heat events are also included in this section because they are projected to increase exponentially in the next century as climate change continues. Then, hazardous materials release is addressed in this part of the mitigation plan as a potential impact from a natural hazard. Finally, terrorism is identified as a manmade hazard of concern but is not analyzed in-depth.

### B.10 *Climate Change*

Human activities have created a large quantities of greenhouse (GHG) emissions that have been and continue to be released into the atmosphere. The majority of the emissions come from burning fossil fuels. Other activities, such as deforestation and solid waste disposal, also play a role. Greenhouse gas (GHG) emissions, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), Ozone (O<sub>3</sub>) and water vapor, trap heat in the atmosphere and prevent the planet from cooling down at night<sup>112</sup>. This is known as the greenhouse effect. While it is a natural phenomenon, it is accelerated by a dangerous buildup of GHG emissions in the atmosphere resulting in climate change.

Earth's average temperature has increased by over 1° F during the past century, and average temperatures in California increased 1.7°F since 1985.<sup>113</sup> Because global greenhouse gas (GHG) emissions will likely continue to increase, scientists predict that average global surface temperatures will rise 2.5° to 10° F by the end of the century.<sup>114</sup> For the Bay Area, scientists estimate that average temperatures will increase about 3 - 6° F by century's end, compared to the average temperature during the historical period 1961 - 1990.<sup>115</sup>

This section identifies the main climate change impacts that Berkeley is currently experiencing, or is projected to experience in the future. This section also describes how climate change exacerbates natural hazards of concern identified in this plan. Where possible, the information provided here is specific to Berkeley, the Bay Area, and/or the state of California. For each climate impact, the associated historical events, hazard description, exposure and vulnerability analysis, and risk and loss estimates are presented, as available.

A discussion of many of the local climate impacts, and recommendations for mitigating those impacts, are also included in the Berkeley Climate Action Plan (CAP). The CAP was adopted by the Berkeley City Council in 2009, and is designed to guide community-wide efforts to achieve deep and sustained reductions in global warming emissions, and to help the community prepare for the impacts of the changing climate. Additional information on the CAP and its implementation is included at the end of this section. Ongoing updates on the CAP are available at [www.CityofBerkeley.info/climate](http://www.CityofBerkeley.info/climate).

## B.10.a Direct and Secondary Climate Change Impacts

Climate change is a global issue with local effects. Like regions across the globe, the San Francisco Bay Area is experiencing increasing impacts of the changing climate, including increased temperatures and sea level rise. Extreme heat events and heavy rains are exacerbated by high winds, sparking wildfires and increasing damage from flooding. These impacts affect the natural environment, but they also affect our infrastructure, local and regional economies, food security, and the health and safety of the people in our community, while disproportionately impacting people of color and the poor.<sup>116</sup> The impacts of climate change also exacerbate the natural hazards of concern in this plan, including extreme heat events, flooding<sup>117</sup>, wildland-urban interface fire,<sup>118</sup> and landslides.<sup>119</sup>

The next section focuses on the direct and indirect impacts from climate change.

### Extreme Heat

Extreme heat events will increase in the Bay Area due to climate change in intensity, length, and frequency. By the end of the century, Bay Area residents may average six heat waves annually, which will average a length of ten days<sup>120</sup>. Extreme heat threatens critical infrastructure, air quality, and public health. The urban heat island effect, where built surfaces absorb and retain heat causing higher nighttime temperatures, can exacerbate those health risks. See Section B11 *Extreme Heat* for further details.

### Precipitation and Drought

As GHG emissions continue to increase, more of the precipitation will fall as rain instead of snow in the mountains, and the snow that does fall will melt earlier.<sup>121</sup> This has significant implications for the Sierra Nevada spring snowpack. The water distribution system for the state, including Berkeley and many other parts of the Bay Area, depends on the snowpack for water during the dry spring and summer months. Rising temperatures and the change of precipitation from rain to snow could reduce the snowpack by as much as 70 to 90 percent by century's end.<sup>122</sup> A shrinking snowpack poses significant challenges for water managers and for all communities that depend on this vital water source. The loss of snowpack also poses challenges for hydropower generation, which contributes significantly to California's energy. Hydropower is an emissions-free source of energy, and currently plays a considerable role in the quest to reduce emissions from fossil fuel power generation.

Climate change is also likely to increase the severity and frequency of drought. Temperature increases and reduction in snowpack are the “two most direct effects of climate change that will result in a drier state with fewer natural water resources than historically have been available.”<sup>123</sup> Drought not only affects local water supply for urban, agricultural, and environmental uses, but can also increase wildfire hazard, and may be correlated with high heat conditions.<sup>124</sup>

California experienced a prolonged drought from 2012-2016. Record-setting temperatures induced by global warming may have amplified the drought.<sup>125</sup> The drought resulted in well-documented agricultural, physical (e.g. groundwater depletion-related subsidence), environmental (tree death) and wildlife impacts (e.g. fish mortality)<sup>126</sup>. To mitigate water supply impacts, surface and groundwater supplies were used, and water use restrictions were implemented at state and local levels.

### Atmospheric Rivers

Atmospheric rivers are relatively long, narrow regions in the atmosphere, like rivers in the sky, that transport most of the water vapor outside of the tropics. These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. When the atmospheric rivers make landfall, they often release this water vapor in the form of rain or snow.<sup>127</sup>

Atmospheric Rivers are characterized as a type of extreme storm (along with tropical storms, severe convection, and winter storms), and are increasing in occurrence and intensity with climate change. Atmospheric rivers have emerged recently as a subject of interest with the scientific community, water managers, emergency managers, media, the public, and policy makers. Atmospheric rivers bring extreme precipitation, flooding, and drought. The American Meteorological Society recently released a scale to characterize the strength and impacts of Atmospheric Rivers.<sup>128</sup>

The Bay Area experienced several Atmospheric Rivers in 2018, including heavy rain and wind.<sup>129</sup>

### Sea Level Rise

Warmer temperatures associated with climate change are causing global sea levels to rise through two processes:

1. Warmer temperatures are increasing the amount of ice melt from the world's glaciers, ice caps and ice sheets. This melted ice increases the volume of water in the ocean.
2. In a process termed "thermal expansion," warmer temperatures cause ocean water to expand, increasing the ocean's volume.

Sea level rise has multiple cascading impacts. When sea levels rise:

- Beaches and shoreline habitats become permanently inundated. These changes are expected to substantially alter the Bay ecosystem, reducing wetlands, affecting water quality, and adversely affecting wildlife.<sup>130</sup>
- Groundwater table and stream water levels rise, increasing areas subject to flooding.
- Storm surges rise, increasing risks in areas previously not susceptible to flooding.
- Coastal erosion increases, expanding areas susceptible to flooding and inundation<sup>131</sup>.
- Levees and storm walls have to endure increasing loads and may be susceptible to overtopping, making these traditional measures to address sea level rise no longer adequate or financially feasible.

Sea level rise is an ongoing challenge for communities surrounding the San Francisco Bay. It is estimated that the San Francisco Bay has already risen approximately eight inches since 1900.<sup>132</sup>

### *Carbon Emissions Scenarios and Sea Level Rise*

Sea level rise in the Bay Area will continuously rise in the next few decades, but most considerably in the latter half of the 21<sup>st</sup> century. Recent studies have suggested that the

Antarctic ice sheets are melting at rates much faster than previously reported. The Intergovernmental Panel on Climate Change has identified four scenarios, known as Representative Concentration Pathways (RCPs) that reflect different greenhouse gas concentrations of the atmosphere. They range from RCP 2.6, which represents not only stopping all current emissions but also significant carbon sequestration (a negative carbon output), to RCP 8.5, which represents continuing and increasing carbon emissions. Each scenario presents estimates for expected increase in sea level rise as the planet warms and melting rates increase. Below is a table of median probability projections of sea level rise for the state and the Bay Area under different climate scenarios in year 2100.<sup>133</sup>

**Table 16. Sea Level Rise Projections in year 2100**

Source	Projected Carbon Emissions Scenarios		
	Carbon Sequestration & Eliminate Carbon Emissions (RCP 2.6)	Significant Carbon Emissions Reductions (RCP 4 .5)	Carbon Emissions Increase (RCP 8.5)
State Projections (Fourth CA Climate Assessment) <sup>134</sup>	N/A	2.4 ft	4.5 ft
Bay Area Projections (Ocean Protection Council) <sup>135</sup>	1.6 ft	N/A	2.5 ft

*Sea Level Rise Exposure and Vulnerability*

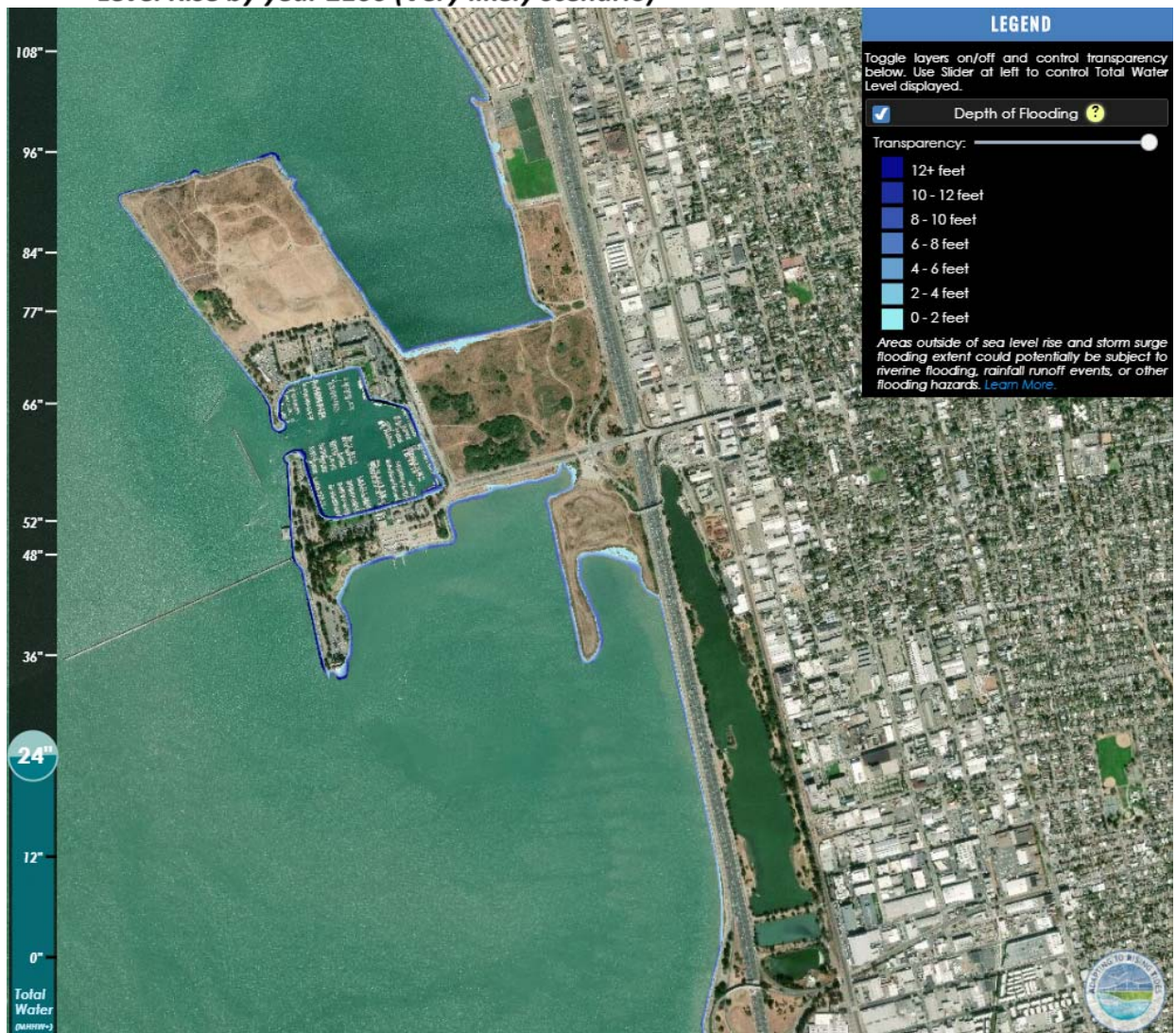
An interactive, Bay Area-specific map called the Bay Shoreline Flood Explorer (available at <https://explorer.adaptingtorisingtides.org/explorer>) was produced by Adapting to Rising Tides (ART) purely based on topography.

These maps do not take into account riverline flooding, wave hazards, groundwater, erosion and subsidence, marsh vegetation, and salt ponds and wetlands, which would require further hydrological modeling and mapping analysis to understand how they would affect inundation and flooding areas.<sup>136</sup>

Three maps below depict the permanent inundation that may occur based on sea level rise of 2 feet, 4 feet, and 5.5 feet. These maps indicate that sea level rise is expected to mainly affect the shoreline areas of Berkeley. The Berkeley Marina is the most vulnerable, as sea level rise will permanently inundate commercial and recreational areas.

Map 30 shows that with two feet of sea level rise, which is considered very likely by 2100, the edge of Berkeley shoreline will experience shallow inundation, with small sections of the northern and southern edges of McLaughlin Eastshore State Shoreline experiencing inundation further in. Deeper permanent inundation can be expected along edge of Berkeley Marina.

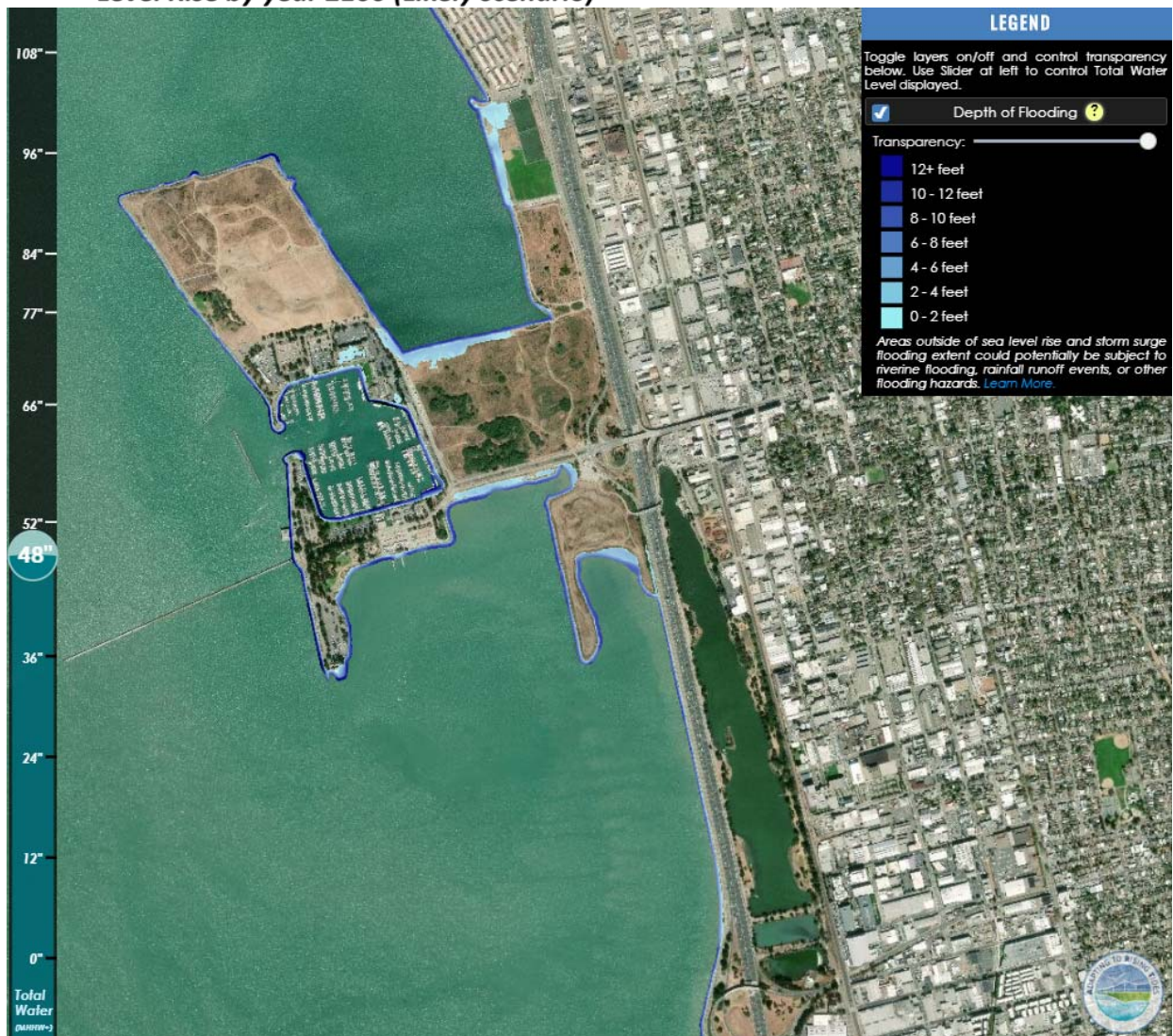
Map 30. **Berkeley Shoreline Areas Prone to Permanent Inundation due to 2-ft of Sea Level Rise by year 2100 (Very likely scenario)**





Map 31 shows that with four feet of sea level rise, which is considered likely by 2100, all edges of Berkeley will experience inundation, with further inward expansion in the inundation areas of McLaughlin Eastshore State Shoreline. Additionally, with four feet of sea level rise, portions of Tom Bates Regional Sports complex will experience shallow inundation.

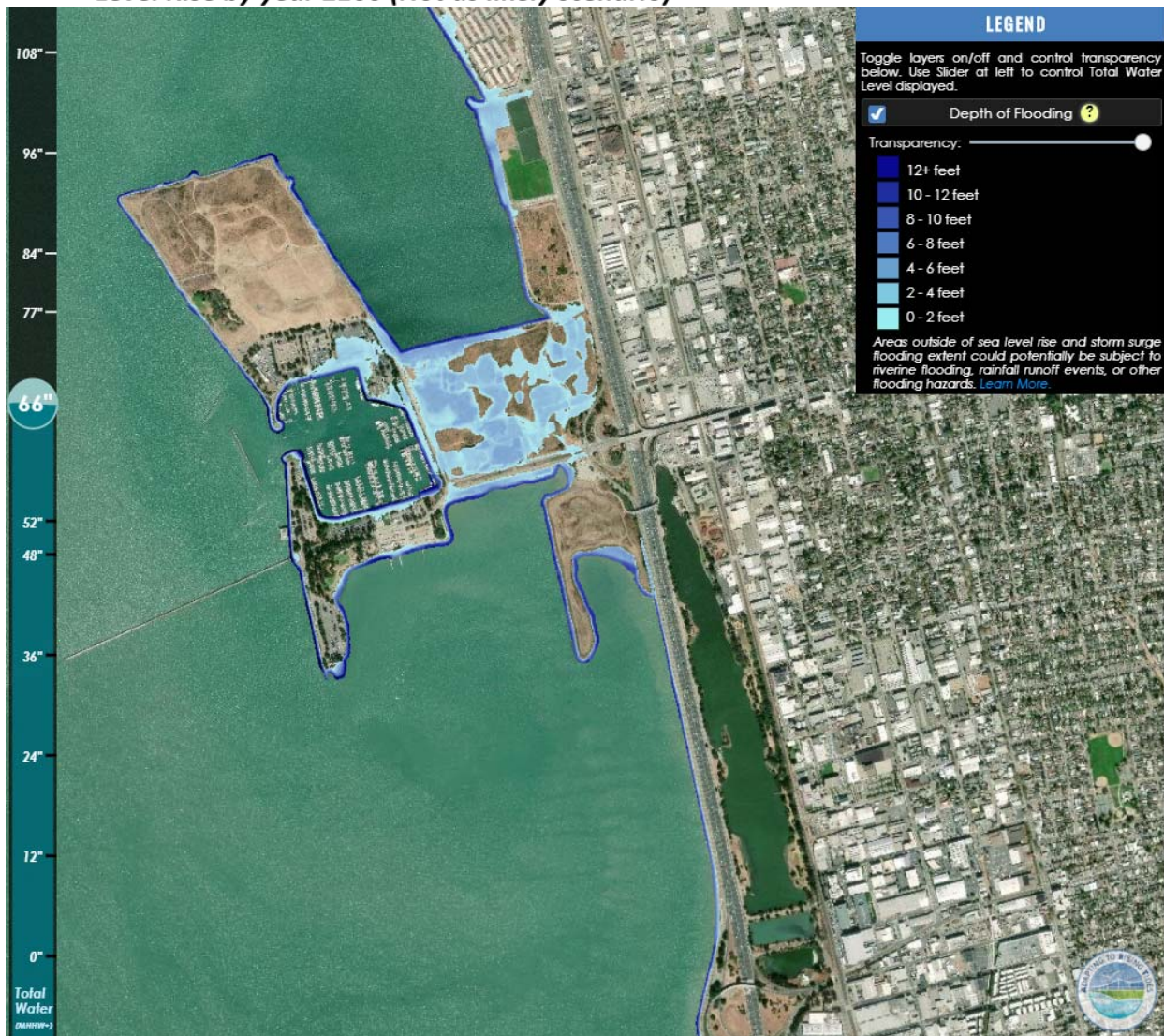
Map 31. **Berkeley Shoreline Areas Prone to Permanent Inundation due to 4-ft of Sea Level Rise by year 2100 (Likely scenario)**





This map shows that with 5.5 feet of sea level rise, which is considered not as likely by 2100, the shoreline of the entire Berkeley Marina peninsula will experience deep inundation, and the majority of the McLaughlin Eastshore State Seashore will be inundated with varying depths of water, along with similar portion of Tom Bates Regional Sports Complex as with four feet of sea level rise (as presented on the previous map).

Map 32. **Berkeley Shoreline Areas Prone to Permanent Inundation due to 5.5-ft of Sea Level Rise by year 2100 (Not as likely scenario)**

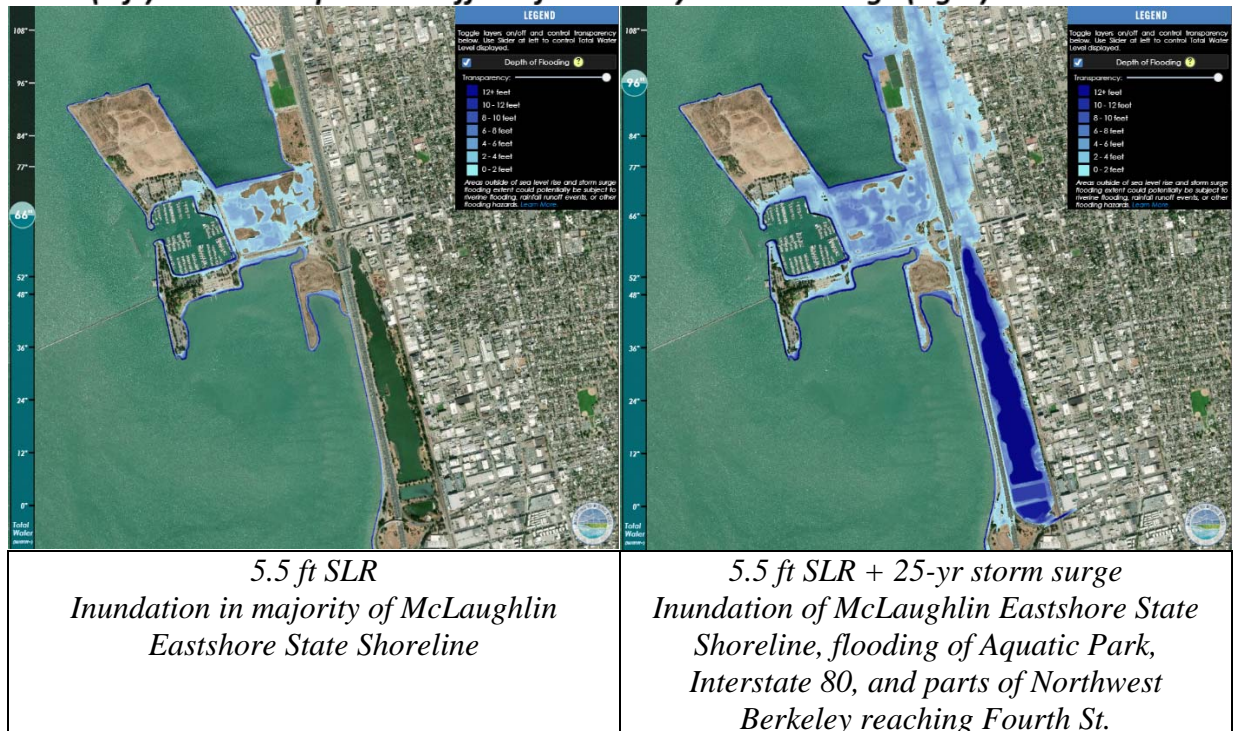


*Sea Level Rise and Severe Storms*

It is important to note that the maps above only present permanent inundation from sea level rise alone. Sea level rise causes permanent inundation that increases the areas of temporary flood exposure during severe storms and high tides.

Map 33 below considers a combined scenario of increased carbon emissions (per Table 16) resulting in 5.5 feet of sea level rise, combined with a 25-year design storm. Under these circumstances water could inundate Interstate 80 and potentially as far east as Fifth Street in Berkeley.

**Map 33. Comparison maps of Berkeley Shoreline with modeled 5.5 feet of sea level rise (left) and its compounded effects from a 25-year storm surge (right).**



As sea levels rise, storms could cause key underpasses and roads accessing Highway 80 to flood more often or be permanently inundated, impacting transportation on this major regional artery, including Ashby Avenue (State Highway 13). Other nearby infrastructure that is vulnerable to inundation includes Berkeley’s stormwater and sanitary sewer pipes, the Oakland International Airport, and the East Bay Municipal Utility District’s wastewater treatment plant, located just east of the Bay Bridge.

Consideration of storm surge and other compounding effects is increasingly important, particularly when designing infrastructure with finite effectiveness, such as sea walls or barriers. Both permanent inundation from sea level rise as well as more frequent and more extensive flooding will need to be considered in long-term planning along the City’s coast.

In addition, flooding resulting from sea level rise in combination with severe storms may threaten natural gas pipelines regionally. Prolonged and more frequent inundation from sea level



rise can accelerate structural failures and threaten functionality of California's natural gas distribution system<sup>137</sup>. This infrastructure vulnerability can lead to disrupted service and the leakage of methane gas from the system. Methane is both a health and safety hazard as well as a highly potent greenhouse gas, further contributing to climate change.

More comprehensive vulnerability assessments are necessary to clearly define the structures and infrastructures that will be affected with particular levels of sea level rise, and identify ways to address these issues. The Berkeley Marina Area Sea Level Rise Assessment is one such site-specific analysis currently underway in order to apply with state requirement AB691. The plan will include detailed analysis of potential sea level rise impacts, and will be used to inform future City of Berkeley projects and development at the Marina.

Land subsidence increases the areas that are exposed to sea level rise. Landfilled areas and areas experiencing drought—both common in the Bay Area—are particularly susceptible to land subsidence, which is the gradual settling or sudden sinking of land.<sup>138</sup> In the Bay Area, this includes developed areas that sit on top soft compressible bay mud<sup>139</sup>. Land subsidence can expand areas susceptible to sea level rise as these areas sink while sea levels are rising to meet them<sup>140</sup>.

#### Food-, Water-, and Vector-Borne Diseases<sup>141</sup>

Climate change may also accelerate the incidence and geographic distribution of diseases that are transmitted through food, water, and animals such as deer, birds, mice, and insects. Increases in air temperature and change in precipitation and humidity levels may expand the territory of many species, including pests. In California, three vector-borne diseases of particular concern are: West Nile virus, human hanta virus, and Lyme disease. Salmonella and other bacteria-related food illnesses also grow more rapidly in warm environments, causing gastrointestinal distress and, in severe cases, death. Flood events may also cause contamination from toxic materials stored in flood zones, and can also lead to the growth of harmful molds.<sup>142</sup> These molds can trigger allergies and asthma attacks in physically vulnerable populations, including children under the age of 5, health-impaired adults, and the elderly.<sup>143</sup>

### **B.10.b Climate Change Impacts to Natural Hazards of Concern**

Climate change is expected to exacerbate the natural hazards of concern identified in this plan. The ways that climate change affects Berkeley's natural hazards of concern are described below.

#### Earthquake (Section B5)

Sea level rise will cause the groundwater table and stream water levels to rise, increasing the areas subject to liquefaction risks in the event of an earthquake.<sup>144</sup>

#### Wildland-Urban Interface Fires (Section B6)

Climate change will bring higher temperatures and increased risk of drought, which will likely lengthen the fire season in our region.<sup>145</sup> The incidences of large wildfires in California could more than double by the end of the century.<sup>146</sup> Due to Berkeley's biophysical setting, climate, and other jurisdictional characteristics, scientists project little change to fire risk in Berkeley

specifically.<sup>147</sup> However, Berkeley is still at risk due to the increased vulnerability of surrounding jurisdictions to wildland fire. A wildland fire that ignites outside of Berkeley's borders could spread into Berkeley.

Further complicating matters, wildfires are a large contributor of greenhouse gases that will lead to further climate change impacts.

#### Landslides (Sections B7)

Increases in the intensity and frequency of extreme storms will cause more frequent landslides in the Berkeley hills.

#### Severe Storms and Floods (Section B8)

The effects of climate change will increase the frequency and severity of extreme storm and precipitation events<sup>148</sup>. As climate change impacts continue to intensify, rainfall events for California are expected to exhibit higher amounts of precipitation over shorter time periods coupled with longer dry spells.

Climate change will increase the frequency of flood events, and will expand the areas of Berkeley that are exposed to flooding. A confluence of factors contributes to these changes:

- More precipitation over a shorter period of time each year;<sup>149</sup>
- Frequent and more hazardous storms, combined with sea level rise and high tides, can lead to more frequent and amplified storm surge events;
- Freshwater outfalls in Berkeley go directly to the Bay, and are influenced by tidal effects. As the sea level rises, it will require less rain to cause upstream flooding.
- Under drought conditions, soil moisture decreases and makes natural areas that typically absorb water less permeable; this can contribute to flooding.

These factors will likely cause more frequent and extensive flooding events long before sea level rise leads to permanent inundation of the shoreline.<sup>150</sup> Further analysis is necessary to truly understand Berkeley's flooding exposure and vulnerability under the combined impacts of severe storms, storm surge, and sea level rise. This analysis could also impact flood insurance and development, and infrastructure safeguarding and building for the future.<sup>151</sup>

#### Tsunami (Section B9)

Rising sea levels will increase Berkeley's exposure to tsunami inundation, making more people and property vulnerable to tsunami impacts.

### **Notable Climate Change Mitigation and Adaptation Activities**

The Berkeley Climate Action Plan (CAP) provides policy and project recommendations to advance community-wide efforts to reduce, or mitigate, global warming emissions and to prepare

for and adapt to the climate change impacts identified above. The severity of climate change impacts are entirely dependent on the amount of emissions we continue to emit in the near future. Just as the challenges to adaptation and mitigation are often interrelated, the solutions overlap and provide multiple benefits.

CAP recommendations are implemented through City departments and community stakeholders. Outlined below are examples of specific CAP recommendations related to both mitigating global warming emissions and adapting to climate change impacts, and some explanation of how each of the identified recommendations is being implemented.<sup>152</sup>

### Water Efficiency and Recycling

The CAP recommends proactive efforts to mitigate vulnerabilities of the regional water supply to climate change, including the following:

*In preparation for the impacts of climate change on the region's water resources, partner with local, regional, and State agencies to encourage water conservation and efficiency and expand and diversify the water supply (see CAP, Adapting to a Changing Climate, Goal 1, Policy B).*

Water efficiency and reuse reduces global warming emissions and helps the community prepare for potential future water resource constraints. The City is advancing water efficiency and water recycling efforts in several ways. In 2010 the City developed a voluntary *Guide to Conserving Water through Rainwater Harvesting and Graywater Reuse for Outdoor Use*. The purpose of the guide is to give homeowners the information they need to install effective, safe, and legal rainwater and/or graywater irrigation systems. Rainwater and graywater systems can help residents save water (and money) by reducing demand for potable water. The City coordinates with regional agencies such as StopWaste to provide education and training on new State water requirements: the Water Efficiency Landscape Ordinance (WELo), reinforcing landscape irrigation and water conservation best practices for new and existing landscapes, and SB704, requiring low-flow plumbing fixtures at time of sale. Additionally, the City conducts regular water audits of its buildings and infrastructure. Since the drought began in 2012, several City buildings and parks have received the WaterSmart Certification from East Bay Municipal Utility District.

### Mitigating Vulnerabilities to Flooding and Coastal Erosion

The CAP recommends proactive efforts to prepare for potential flooding associated with climate change impacts, including:

*In preparation for rising sea levels and more severe storms, partner with local, regional, and State agencies to reduce the property damage associated with flooding and coastal erosion (see CAP, Adapting to a Changing Climate, Goal 1, Policy C).*

West Berkeley is particularly low-lying and vulnerable to sea level rise, as well as potentially increased flooding from severe storms. For all City-owned development projects, the City reviews and works to mitigate any risk from coastal flooding. The City needs to develop guidelines, regulations and review development standards to ensure new and existing public and private developments and infrastructure are protected from floods due to sea level rise.

The City's urban forestry program mitigates global warming emissions through a process called carbon sequestration. The program also mitigates the impacts of climate change, such as flooding and extreme heat events. For example, one of the benefits of the City's ongoing urban forestry program is stormwater management. Trees absorb rainwater, reducing runoff and delaying peak flows. Tree roots also draw and hold water in the soil, helping the soil retain moisture and helping keep nearby plants hydrated. Berkeley's urban forest also helps to mitigate the impacts of extreme heat events by shading buildings and paved and dark-colored surfaces, such as roads and parking lots that absorb and store heat. (See Section B11 *Extreme Heat* for more details.)

Another strategy designed to assist with stormwater management is installation of green roofs. A green roof, also known as a "living roof" or "vegetated roof," is a planted rooftop garden that offers an attractive and energy-saving alternative to a conventional rooftop. One of the many benefits of green roofs is that they help filter and retain rainwater onsite and alleviate stormwater management needs throughout the City. As part of the City's education and outreach efforts, the City developed a Permit Guide to Living Roofs, which is designed to assist residents and businesses to understand the benefits and permitting requirements associated with installing a green roof.

As part of an effort to increase green infrastructure in Berkeley, the City has installed bioswales to curb water runoff in several locations around Berkeley. Bioswales use a stepped grade and native plants to redirect water away from flowing directly downhill, into an earthen swale which catches the water, which allows the water to slowly penetrate into the soil over a longer period of time. This helps replenish the groundwater, and provides water for summertime use by trees. By reducing this direct runoff into stormwater drains, bioswales also help reduce flooding from storm drain overflow, as well as the amount of debris washed into storm sewers, keeping organic matter and trash out of the Bay. Along with these great benefits, increasing vegetation in the City helps address issues related to the urban heat island effect and water management as these are impacted by climate change.

#### Electrification and Energy Efficiency

As a climate mitigation and adaptation strategy, the City is promoting electrification as a method to reach the community's ambitious climate goals. State and local policy is working toward 100% carbon-free electricity, achieved through programs like East Bay Community Energy (EBCE), a community-governed, local power supplier, or through rooftop solar. As electricity reaches this goal, the remainder of our emissions will come from transportation (gasoline and diesel) and natural gas in buildings. Transitioning natural gas uses in buildings to electricity provides many co-benefits that address climate adaptation as well as reducing emissions, such as better health and safety for populations inside and outside buildings (as the natural gas system is susceptible to leaking methane), especially after a disaster which could cause breakage in the natural gas delivery system. Reducing our reliance on natural gas will reduce air quality issues during extreme heat events, our vulnerability to fire following earthquake, and vulnerability to pipeline infrastructure damage from flooding and inundation. This transition is complex and will require strategic investments. City staff is working to address technical and regulatory barriers, educate contractors and the community, and implement strategic investment to ensure clean, equitable, and reliable electricity for the entire Berkeley community.



A transition to clean electricity will require reducing our overall energy demands. This includes encouraging non-polluting modes of transportation, such as walking, biking, and public transit, while transitioning remaining cars to electricity. In buildings, this means continued work on energy efficiency. Beginning in 2015, the Office of Energy & Sustainable Development has been implementing the Building Energy Saving Ordinance (BESO), requiring buildings to complete energy efficiency opportunity assessments. The ordinance offers opportunity to incorporate electrification, battery storage, and building cooling capacity to address the natural hazards that are and will be felt throughout the community as climate change progresses.

In order to ensure accountability and progress on its emissions reduction and climate adaptation efforts, the City regularly reports on the status and outcomes of CAP implementation (see [www.CityofBerkeley.info/climate](http://www.CityofBerkeley.info/climate)). Effectively monitoring and reporting progress and working to engage the community in advancing CAP-related actions is fundamental to achieving the CAP goals. Actions outlined in this plan are designed to be consistent with CAP goals.

## B.11 Extreme Heat Events

### B.11.a Historical extreme heat events

In August 2017, the Bay Area experienced record-setting high temperatures.<sup>153</sup> A Berkeley weather station on the University of California, Berkeley campus near Hearst and Euclid avenues reported a temperature of 108.5°F.<sup>154</sup> The National Weather Service issued an excessive heat warning that lasted five days for the Bay Area, and during this time there were six heat-related deaths in nearby San Francisco and San Mateo Counties.

Additionally in July 2006, there were five consecutive days with temperatures above 110° F in the Bay Area, and approximately 75 heat-related deaths during this period. The last comparable extreme heat event prior to 2006 was in 1972, which lasted two days.<sup>155</sup>

### B.11.b Extreme Heat Hazard

According to Cal-Adapt, California's database of climate information, multiple factors contribute to the extreme heat hazard:

1. Extreme heat days: An extreme heat day is when temperatures reach the 98<sup>th</sup> percentile of historic maximum temperature. In Berkeley, an extreme heat day is a day above 88.3 degrees F.
2. Warm nights: A warm night in Berkeley is considered to be one that does not cool below 61.7 degrees F. Warm nights can increase health risks significantly, as people do not have the ability to cool down and recover.
3. Heat wave: When there are five or more days of extreme heat.
4. Extreme heat during unexpected times of year: When extreme heat occurs outside of historically hotter months.
5. Duration of heat wave: Longer heat waves have proportionally more negative impacts than shorter heat waves.

Projections indicate that the number of extreme heat days, warm nights, and heat waves will increase exponentially in the next century. In addition to this increased frequency and duration, heat waves are also expected to also occur in months not typically associated with extreme heat.

#### Urban Heat Island Effect

Extreme heat events can be further exacerbated by the urban heat island (UHI) effect, through which densely-built cities like Berkeley experience higher temperatures in comparison to surrounding more rural areas.

Factors contributing to the UHI effect include:

- A relative lack of vegetation;
- Reduced air flow;
- An abundance of hard, dark surfaces—such as buildings, streets, cars and sidewalks—which absorb heat rather than reflect it. These surfaces also slowly release that absorbed heat throughout the night, contributing to warmer nighttime temperatures as well.

The UHI effect can also worsen air quality (particularly ground-level ozone) in urban environments.<sup>156</sup> The UHI effect increases heat-related illnesses and fatalities, particularly after two to three days of extreme heat.<sup>157</sup>

Vegetation helps mitigate the UHI effect through evaporative cooling, making urban tree cover, parks, and green roofs essential to combatting the UHI effect. Green roofs, cool roofs, and cool pavements (light-colored materials that reflect, rather than absorb, solar energy) reduce the UHI effect, and can also lower cooling loads in buildings. Urban vegetation and increased urban tree cover reduce temperatures, with co-benefits such as improving air quality and providing needed shade (for buildings and people) during heat events.

## Secondary Hazards

### *Public health impacts*

Public health impacts associated with extreme heat events include premature death, cardiovascular stress and failure, and heat-related illnesses such as heat stroke, heat exhaustion, and kidney stones.<sup>158</sup>

### *Fire*

While hot temperatures do not necessarily start fires, they can decrease moisture in vegetation, increasing its flammability and the length and severity of the fire season.<sup>159</sup> Warming temperatures combined with increased development in the wildland-urban interface are projected to increase fire risk in most of the Bay Area.

### *Damage to critical facilities and infrastructure*

Extreme heat can lead to power outages. Due to Berkeley's historically mild climate, many buildings are not equipped with efficient cooling systems, and therefore rely on inefficient and sometimes ineffective methods of indoor cooling, such as window air conditioning units. This increases electricity demands that can overwhelm the power grid, causing power outages when people need their cooling devices the most. Power outages can lead to many cascading and significant consequences such as consequences to vulnerable infrastructure, inability to operate fuel and water systems that require electricity, communication, and service disruption, and loss of critical functions for people that rely on power, such as people with disability and people with access and functional needs that use medical devices.

High temperatures also damage critical infrastructure, such as transportation systems. During a fall 2017 extreme heat event, BART and Caltrain operated trains at reduced speeds in order to avoid damage to the tracks.<sup>160</sup> Unreliable public transit during extreme heat could cause more people to drive, adding to the heat and worsening air quality. Extreme heat events also create needs for additional infrastructure maintenance, particularly for roadways where heat can contribute to deformation or premature failure.<sup>161</sup>

As extreme heat becomes more frequent and severe, Berkeley buildings will need to add cooling capacity. This effort will need to be done strategically over the coming decades to find solutions that are clean, efficient, and functional during electrical grid outages. Approaches will include

natural ventilation and passive cooling techniques such as shading and orientation, particularly in new building design. For existing buildings and new construction, consideration may also be given to heat pump technology, a highly-efficient electric system (up to 400% efficient<sup>162</sup> in energy efficient buildings) with both heating and cooling capabilities. The California Energy Commission and City staff are working to promote this technology and to optimize usage to take advantage of California's abundant solar energy, even after the sun goes down and even during high-usage events without overwhelming the grid.

Strategic planning is also needed to ensure the readiness of critical City facilities during grid failure. The ability for these facilities to island off of the grid and rely on clean backup energy during a power outage would improve the City's energy assurance during extreme heat events.

#### *Worsened Air Quality*

While naturally-occurring ozone that exists higher in the Earth's atmosphere is beneficial to the climate, ground-level ozone can be extremely harmful to human health. Extreme heat can contribute to the formation of ground-level ozone, also known as smog, and other secondary air pollutants, when emissions from industrial facilities, power utilities, cars, trucks and other sources chemically react in the presence of heat and sunlight.

Extreme heat can also cause stagnant air conditions, causing the smog to stay low longer, and increase community exposure.<sup>163</sup> Community reactions to extreme heat – including use of cars for transport and use of cooling systems in buildings – can compound the already heightened creation of ozone. For this reason, the availability of non-polluting modes of transportation and ultra-efficient building systems can mitigate both the direct impacts of the heat on the community and the worsened air quality.

Exposure to increased ozone concentrations is associated with pneumonia, asthma, allergic rhinitis, and other respiratory diseases, as well as premature death, and the elderly, infants, and children are particularly susceptible to experiencing these impacts.<sup>164</sup>

### B.11.c Exposure and Vulnerability

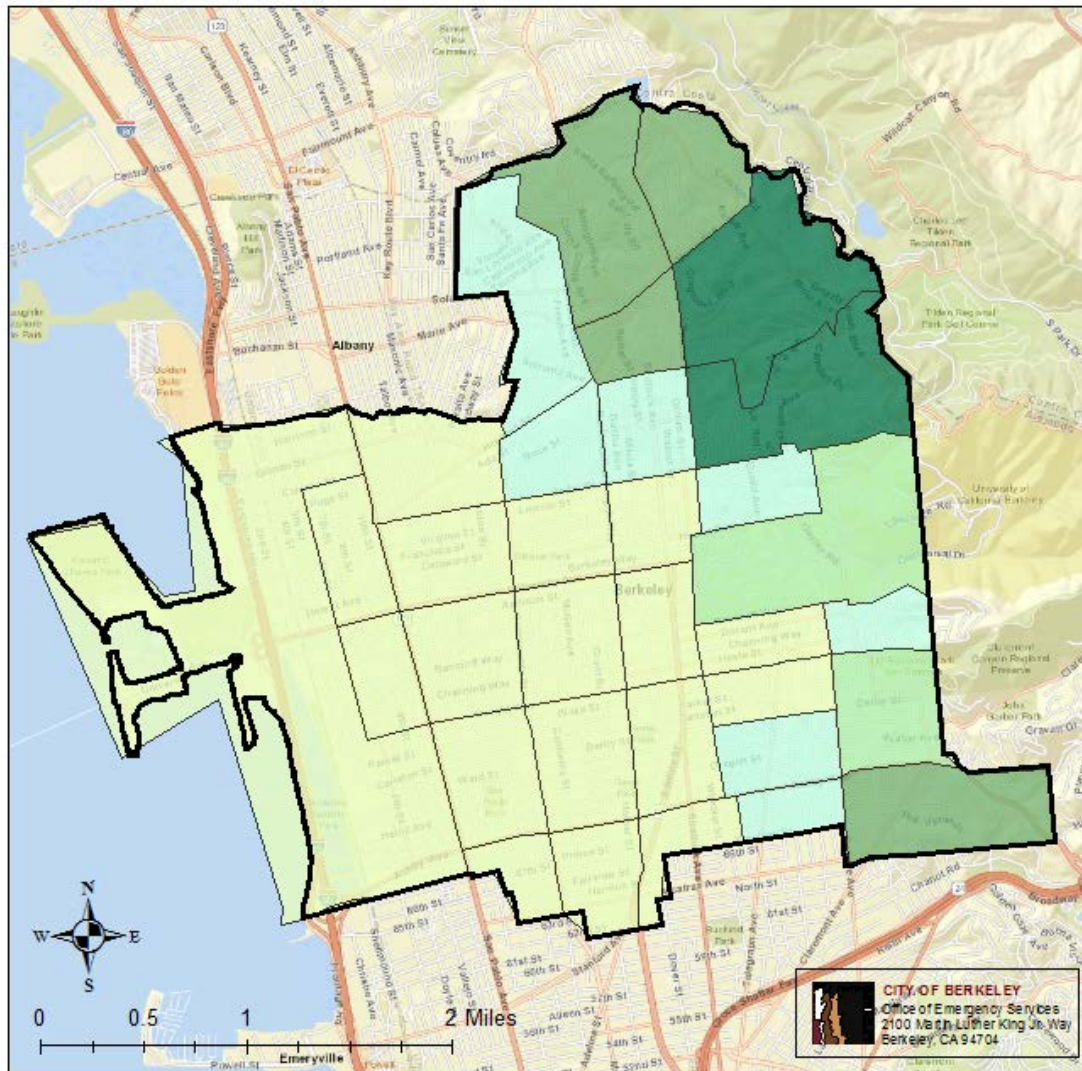
There are social, infrastructure and environmental factors that contribute to the Berkeley community's exposure and vulnerability to heat wave. These factors are explored further below.

#### Trees

A dense tree canopy can result in fewer heat related emergencies.<sup>165</sup> Urban tree canopy directly reduces surface and air temperatures through shading and absorption, directly combating the urban heat island effect. In addition, shading can reduce cooling loads in buildings and provide shade for individuals as well. Trees also improve air quality that often worsens during extreme heat.

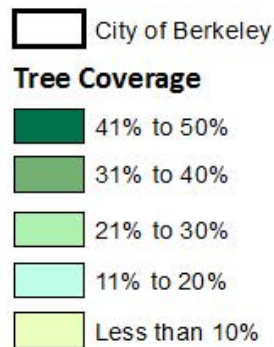
In Berkeley, census tracts have between 4% and 48% tree coverage. As of November 2018, Cal Adapt predicts that this coverage will decrease over time. Map 34 shows the current percentage of tree coverage for each census tract in Berkeley. The areas shaded in darker green, predominately in the hills in east Berkeley, have the greatest percentage of tree canopy, while west and south Berkeley have the smallest percentage of tree canopy, meaning that these buildings and communities will likely not benefit from reduced temperatures provided by urban tree cover.

Map 34. *Percentage of tree coverage in City of Berkeley*



Source: Cal Adapt <https://cal-adapt.org/>

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community





### ***Notable Mitigation Activity: City Tree Programs***<sup>166</sup>

The City of Berkeley's municipal forest is maintained by the Urban Forestry Unit of the Parks Division, which is part of the Parks, Recreation, and Waterfront Department. There are approximately 38,000 street, park, and median trees that comprise the municipal forest in Berkeley.

The City's Urban Forestry Unit plants trees on the public right-of-way, in City parks, and on City-owned property. The public right-of-way includes the planting strip between the curb and the sidewalk, and street medians.

Residents can submit a tree planting application to have the City plant a tree, or to purchase and plant a tree at their own expense. Based on Tree Planting Location Standards, the City will designate the species and location of any tree that is planted on the public right-of-way, regardless of who purchases and/or plants it.

The Urban Forestry Unit is actively engaged in diversifying the urban forest population. Various species have been planted to determine their viability as a street or park tree. Climate change, the potential for temperature increase, and drought are additional considerations that are also changing the tree species selection process.

### **Social Factors**

People with disabilities and people with access and functional needs, chronic diseases, the elderly, and children under five are the most at risk to heat-related illnesses.<sup>167</sup> Research also indicates that communities of color, and the poor suffer more during extreme heat events because of lack of access to common heat adaptation strategies, such as tree canopy for shading, air conditioning and insulation in buildings, or car ownership to travel to public cooling centers that allow them to escape the heat.<sup>168</sup> People working outdoors and homeless populations are also vulnerable.

Across California, the highest risk of heat-related illness occurs in the typically cooler regions found in coastal areas like Berkeley. Some of this vulnerability is because these communities are relatively unaccustomed to extreme heat. As a result, they are less acclimatized or potentially less aware of preventative behavior.<sup>169</sup>

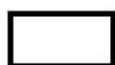

### **Infrastructure**

Having access to an air conditioner, or a building with ventilation, can make a huge difference to individuals during periods of extreme heat. Berkeley has public buildings that are equipped to provide relief from extreme heat and can serve as cooling centers during extreme heat events. Map 35 shows the location of these buildings with a blue dot throughout the city, but clustered in the center. There are only a few of them, mostly libraries and community centers, and they are clustered in a few neighborhoods.

Map 35. Location of Cooling Centers in City of Berkeley



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

-  City of Berkeley
-  Cooling Centers

### B.11.d Extreme Heat Event Risk and Loss Estimates

Based on climate models from Cal-Adapt, the average number of extreme heat days in Berkeley is projected to increase by more than 10 days by the end of the century. Table 17 shows how this number will gradually increase between now and 2099.

**Table 17. Predicted average number of extreme heat days in Berkeley by year**

2011-2030	2021-2040	2031-2050	2041-2060	2051-2070	2061-2080	2071-2090	2081-2099
5	6	7	8	10	12	15	18

Source: <https://cal-adapt.org/tools/extreme-heat/>

Note: In Berkeley, an extreme heat day is when daily maximum temperature is above 88.3 degrees F.

#### Social and Infrastructure Impacts

The specific impacts of future heat waves are difficult to predict, but may include illness, injury, death, and damage to critical infrastructure. According to California Climate Change Center, by mid-century, extreme heat in urban centers could cause two to three times more heat-related deaths than occur today.<sup>170</sup>

## **B.12 Hazardous Materials Release**

Because this plan is concerned with natural disasters, hazardous materials release is considered primarily as a secondary impact of the hazards presented in Sections B5 to B11. This section will identify how the natural hazards discussed in the plan can trigger the release of hazardous materials, as well as the potential impacts of those hazardous materials releases.

### **B.12.a Historical Hazardous Materials Releases**

Berkeley has not recently experienced significant hazardous materials releases secondary to a natural disaster. However, the city has experienced industrial accidents from both mobile and fixed sources. Truck accidents involving potentially harmful materials have occurred in the western part of the City, on Interstate 80 and its ramps. Industrial sites have released small amounts of dangerous substances, such as anhydrous ammonia from an ice rink and a sake brewery.<sup>171</sup> In 2011, an uncontrolled release of 1,600 gallons of diesel on the UC Berkeley campus resulted in diesel entering the stormwater system, and discharging into Strawberry Creek.<sup>172</sup> In 2017 a truck accident on Interstate 80 released approximately 200 gallons of diesel fuel on the roadway next to the estuary. The fuel was contained and the fuel did not release into the estuary. After the incident the roadway barriers have been strengthened and improved.

### **B.12.b Hazardous Materials Release Hazard**

Hazardous materials release could harm community members by exposing people to vapors that are toxic, suffocating, cause burns or are irritating. Hazardous materials release can threaten not only life and property, but also the environment, in areas such as creeks, the Aquatic Park lagoons and the San Francisco Bay.

The impacts of a release depend on its chemical characteristics, the amount and rate of substance spilled, the location, and its dispersion. Flammable and combustible materials can cause fires in areas that are largely constructed of wood; they may also cause explosions. Wind speed and direction, as well as topography, can greatly impact the dispersion plume of a release.

The City's Toxics Management Division (TMD), within the Department of Planning and Development, maintains the Hazardous Materials Area Plan, which identifies facilities that, in the event of a regional disaster, may pose the greatest risk to human health or the environment.

The Fire Department is the first responder for hazardous materials incidents within the City, and has access to chemical inventories, locations and emergency planning for all these facilities. The chemical inventories and facility maps are available electronically to the Fire Department.

The Department of Public Works manages the City's hazardous materials emergency response to spills on the right-of-way and also manages the hazardous materials emergency response contractor.

### **B.12.c Exposure and Vulnerability**

#### **Hazardous Materials Sites**

There are 513 facilities<sup>173</sup> within Berkeley that are regulated by TMD.<sup>174</sup> TMD has grouped these

facilities into Hazard Levels 1, 2 and 3:

- Level 1: Facilities that have substantial quantities of hazardous materials onsite, and/or have hazardous materials that can easily disperse or explode, and are toxic or pose other special hazards to human health and the environment.
- Level 2: Facilities that have medium to large quantities of hazardous materials onsite, and/or materials with known hazards.
- Level 3: Facilities for which Berkeley Fire Department engine companies can handle incidents without additional facility storage information, because the hazards are known or familiar (e.g., gas station without welding cylinders, or a facility with motor oil).

The majority of the 513 facilities in Berkeley are Level 3 automotive- or medically- related facilities with limited quantities of hazardous materials and hazardous waste.

Fifteen Hazard Level 1 facilities hold sufficiently large quantities of toxic chemicals to pose a high risk to the community.<sup>175</sup> TMD works directly with each of these sites to make sure they meet stringent safety requirements. Facilities in Table 18 are at the highest risk level.

**Table 18. Berkeley industrial sites with large quantities of extremely hazardous substances**

Site	Location
Alta Bates Summit Medical Center	2450 Ashby Avenue
Atlas Welding Supply, Inc.	1224 Sixth Street
Bayer Healthcare LLC	800 Dwight Way
Davlin Coatings	700 Allston Way
DSM Biomedical, Inc.	829 Heinz Avenue
Electro Coatings, Inc.	893 Carleton Street
Enthalpy Analytical LLC	2323 Fifth Street
Henkel Corporation	742 Grayson Street
Howlett Machine Works	746 Folger Avenue
Lawrence Berkeley National Lab	1 Cyclotron Road
Precision Technical Coatings, Inc.	800 Grayson Street
Ravago Chemical Distribution	2424 Fourth Street
The Polymer Technology Group	2810 Seventh Street
TPMG Regional Lab (Kaiser)	1725 Eastshore Highway
UC Berkeley – Main Campus	200 California Hall MC

### **Hazardous Materials Sources Outside of Berkeley**

Airborne toxic plumes, including smoke, can travel into Berkeley from surrounding cities. Petrochemical refineries and other large chemical facilities in Contra Costa County could release hazardous materials that could impact the Berkeley community.

### **Hazardous Materials Transportation**

Hazardous materials also travel through Berkeley by truck and rail. Specific routes known to carry hazardous chemicals are:



- Interstate 80
- San Pablo Avenue and the industrial areas to the west
- State Highway 13/Ashby Avenue
- Gilman Avenue
- University Avenue
- Union Pacific Railroad
- Fuel pipelines in the western edge of the City (see Map 12 *Gas Transmission Lines and Jet Fuel Line*)

Transportation accidents have occurred with trucks carrying dangerous materials. These accidents will undoubtedly occur in the future.<sup>176</sup> A release on the freeway or railway would most immediately impact the western industrial area of the city. Winds typically blow from the west to the east, meaning that a gaseous release could easily spread to the City's eastern residential areas.

The City has completed a Hazardous Materials Commodity Flow Study with a grant from the California Office of Emergency Services and the federal Department of Transportation. This study retrieved or collected data on bulk chemicals being transported on freeways, major city streets, and the railroad and through pipelines.

### **Links to Berkeley's Hazards of Concern**

Map 36 identifies the locations of Hazard Level 1 Industrial Sites, along with key hazardous materials transportation routes. Level 1 industrial sites are identified as square red, blue, white, and yellow icons on the map. Hazardous materials transportation routes are identified by thick purple lines, which include Shattuck Avenue, University Avenue, San Pablo Avenue, part of Gilman Street up to when it meets San Pablo Avenue, and Ashby Avenue.

In the wildland-urban interface (WUI) in the Berkeley hills, there are two major sources of dangerous chemicals: UC Berkeley and the Berkeley Lab. Both have significant amounts of flammable and toxic chemicals, including radioactive chemicals. While both sites have active disaster preparedness programs, WUI fires are notoriously difficult to fight and hazardous materials could be released in a major conflagration.

While business owners are required to secure and isolate hazardous chemicals, this may not prevent spills from causing fires or health hazards after an earthquake.

Flooding could cause hazardous materials release. The City requires some hazardous materials to be surrounded by berms to contain any spills. The Berkeley Municipal Code<sup>177</sup> requires development in flood-prone areas to be protected against flood damage at the time of initial construction.

Map 36. Level 1 Hazardous Materials Facilities and Transportation Systems



Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community

## Notable Mitigation Activities

The State of California requires engineering studies for facilities exceeding threshold quantities of extremely hazardous substances (EHS).<sup>178</sup> EHS regulations may also require mechanical and structural improvements to the respective facilities. Implementing State laws over the past twenty years has resulted in the decline of the number of EHS- regulated facilities in Berkeley by over 90 percent.

The City's Toxics Management Division regulates use and management of non- radioactive<sup>179</sup> hazardous materials at UC Berkeley and Berkeley Lab.<sup>180</sup> Both of these sites provide lists of the substances used in campus research to the TMD, which makes the information available to the Berkeley Fire Department in accordance with California Health and Safety Code. The TMD also makes these chemical types and volumes publicly available as part of its Community Right-to-Know program; however, locations of these chemicals are not disclosed to the public.

### Key Hazardous Materials Partners

#### *University of California at Berkeley*

Hazardous materials are dispersed throughout many laboratories on the UC Berkeley campus, which has comprehensive programs to secure hazardous materials during and after disasters. The UC Berkeley campus relies on the City for fire and search and rescue services.

#### *Berkeley Lab<sup>181</sup>*

There are hazardous materials at the Berkeley Lab, which consist of radiological materials, biological agents and toxins, and chemicals. The Emergency Management Program analyzes these materials to determine those that are a threat to workers and the public to ensure protective actions are predetermined and administrative and engineering controls are identified and implemented.

Although additional planning and response efforts are in place for hazardous material releases, response to earthquakes and WUI fires can be complicated with the presence of hazardous materials.

#### *Bayer Corporation<sup>182</sup>*

Bayer's headquarters for biotechnology manufacturing is located in Berkeley and employs over 1,000 workers. Bayer has been proactive in managing its disaster risk, focusing on both reducing risks to buildings and equipment and preparing for a robust emergency response. The entire site has been assessed for earthquake risk; buildings and other structures have been retrofitted on a risk-basis. All production-related buildings have been structurally strengthened to at least 1.5 times code requirements, all other structures meet or exceed earthquake standards, including the ammonia-based refrigeration facility. New buildings have been designed to exceed code requirements.

Bayer also trains its own emergency response team each year with the following capabilities:

- Industrial Firefighting

- Hazardous Materials Response (including ‘level A’ response)
- Advanced first aid
- Confined space rescue, including non-entry rescue

Bayer has a type-1 fire engine to bolster City’s fire suppression capabilities. Bayer conducts at least annual joint training sessions with the Berkeley Fire Department, which allows the two groups to understand the capabilities of each other’s organizations. Bayer has created plans and entered into contracts with vendors in order to mitigate the damage associated with earthquakes or other disasters. Internal and community-based communications plans are being updated to assure timely communications in the event of a range of emergencies.

#### **B.12.d Hazardous Materials Release Risk and Loss Estimates**

Because of the uncertain nature of industrial accidents, loss estimates are not presented in this plan. City staff uses PEAC software to plan for and respond to chemical emergencies.

## **B.13 Terrorism**

The City considers terrorism to be a hazard of concern. However, because this plan is concerned with natural disasters, an in-depth analysis of terrorism is not included, and mitigation actions for terrorism will not be identified.

It is not possible to estimate the probability of a terrorist attack. Experts prioritize terrorism readiness efforts by identifying critical sites and assessing these sites' vulnerability to terrorist attack. Critical sites include those that are essential to the functioning of the City, that contain critical assets, or which would cause significant impacts if attacked (e.g., a chlorine gas release). Vulnerability of these sites is determined subjectively by considering factors such as visibility (e.g., does the public know this facility exists in this location?), accessibility (e.g., is it easy for the public to access this site?) and occupancy (e.g., is there a potential for mass casualties at this site?)

City officials are currently working with State and regional groups to prevent and prepare for terrorist attacks. This effort involves the City's Police, Fire, Public Works, Public Health, and Toxics Management groups. The City also participates in the federal BioWatch program, designed to allow early detection of release of bioterrorism agents in the city.

The City's emergency response teams actively train to detect Pre-Incident indicators for all types of terrorist events including, but not limited to, bomb scenarios, hostage situations, infrastructure damage and a multitude of other terror-associated threats. Since any terrorist event has the potential to significantly impact the city and the region, City emergency response teams regularly conduct training with emergency response teams from neighboring jurisdictions to ensure seamless integration of resources and personnel should such a need arise.

Buildings and other structures constructed to resist earthquakes and fires usually have qualities that also limit damage from blasts and resist fire spread and spread of noxious fumes in the event of a terrorist attack.



## Endnotes

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<sup>1</sup> Climate-warming trends over the past century are extremely likely to have been caused by human activities (known as anthropogenic climate change). Future anthropogenic emissions will determine the degree of impacts felt by climate change, some of which are already being felt. Climate change may also be referenced as a natural hazard here because of its potential to exacerbate natural hazards described in this plan.

<sup>2</sup> Ackerly, David. 2018. California's Fourth Climate Change Assessment, San Francisco Bay Area Region Report. <http://www.climateassessment.ca.gov/regions/docs/20190116-SanFranciscoBayArea.pdf>

<sup>3</sup> <https://cal-adapt.org/tools/extreme-heat/>

<sup>4</sup> Documentation is on file at the Berkeley Planning Department

<sup>5</sup> Public Law 106-390

<sup>6</sup> Johnson, L. and Mahin, S. California Seismic Safety Commission Pacific Earthquake Engineering Research Center (PEER). 2016. The Mw 6.0 South Napa Earthquake of August 24, 2014: A Wake-up Call for Renewed Investment in Seismic Resilience across California. [http://peer.berkeley.edu/publications/peer\\_reports/reports\\_2016/CSSC1603-PEER201604\\_FINAL\\_7.20.16.pdf](http://peer.berkeley.edu/publications/peer_reports/reports_2016/CSSC1603-PEER201604_FINAL_7.20.16.pdf)

<sup>7</sup> Schwartz, Richard. Earthquake Exodus, 1906, 2006.

<sup>8</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.3.

<sup>9</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.4.

<sup>10</sup> Southern California Earthquake Center. *A Comparison of the February 28, 2001, Nisqually, Washington, and January 17, 1994, Northridge, California Earthquakes.* <http://www.scec.org/news/01news/feature010313.html>

<sup>11</sup> Information adapted from the United States Geological Survey: [http://earthquake.usgs.gov/learn/topics/mag\\_vs\\_int.php](http://earthquake.usgs.gov/learn/topics/mag_vs_int.php)

<sup>12</sup> [https://wim.usgs.gov/geonarrative/safrr/haywired\\_vol1/](https://wim.usgs.gov/geonarrative/safrr/haywired_vol1/)

<sup>13</sup> The State of California is required by two Acts of the State Legislature to establish and map three Seismic Hazard Planning Zones, depicting areas within the state with the potential to experience these types of ground failure.

Seismic Hazard Planning Zones, also known as Zones of Required Investigation, are regulatory maps that depict areas identified as having a high potential for earthquake-triggered ground failure caused by fault rupture, landsliding or soil liquefaction. These maps are used to guide land use planning and construction permitting for projects that fall within the area. Applicants for permits who are in one of the zones are required to have site-specific geotechnical investigations and use engineering measures to mitigate the hazard.

Seismic Hazard Planning Zones do not show effects of a particular earthquake scenario, but



rather, consideration of all future earthquakes affecting the area. They are used to support land use decisions by identifying areas where future earthquake-induced ground failure is more likely to occur, and to determine whether approval of more in-depth site-specific hazard investigation and mitigation may be required for certain projects during the construction permitting process.

<sup>14</sup> Charles Real, California Geological Survey

<sup>15</sup> Yasuhara K., Komine H., Murakami S., Chen G., Mitani Y. (2010) Effects of climate change on geo-disasters in coastal zones. *Journal of Global Environmental Engineering*, JSCE 15, 15–23.

<sup>16</sup> ATC 52-1. 2010. San Francisco Department of Building Inspection, Community Action Plan for Seismic Safety (CAPSS) Project. *Here Today Here Tomorrow: The Road to Earthquake Resilience in San Francisco*.

<http://www.sfgsa.org/modules/showdocument.aspx?documentid=9753>.

<sup>17</sup> Johnson, L. and Mahin, S. California Seismic Safety Commission Pacific Earthquake Engineering Research Center (PEER). 2016. The Mw 6.0 South Napa Earthquake of August 24, 2014: A Wake-up Call for Renewed Investment in Seismic Resilience across California.

[http://peer.berkeley.edu/publications/peer\\_reports/reports\\_2016/CSSC1603-PEER201604\\_FINAL\\_7.20.16.pdf](http://peer.berkeley.edu/publications/peer_reports/reports_2016/CSSC1603-PEER201604_FINAL_7.20.16.pdf)

<sup>18</sup> <http://www.sfmuseum.org/conflag/underwriters.html>

<sup>19</sup> City of Berkeley Budget Book FY2012-2013, Community Profile Data

<sup>20</sup> 2010 American Community Survey.

<sup>21</sup> The City has adopted Standard Plan Set A for wood frame homes of two stories or less that provides typical details and other guidance. This plan set simplifies the design of cripple wall retrofits for many homes in Berkeley.

<sup>22</sup> To create the City’s inventory of non-ductile concrete and rigid wall-flexible diaphragm buildings, staff did extensive research, including examining local Sanborn maps, Google Map images, building permit data obtained from Accela, real estate data from RealQuest, housing unit data from the Rent Stabilization Board, and City of Berkeley records such property cards, microfiche data, files from prior field surveys, and zoning data. Sanborn maps, which were originally created for assessing fire insurance liability, provide the approximate size, shape and construction material of each building within the city that existed at the time. The City of Berkeley’s Sanborn maps were last updated in the early 1980’s, and were therefore useful as a starting point for identifying older buildings constructed of concrete or reinforced masonry that may be vulnerable in a seismic event.

After identifying concrete buildings on the Sanborn maps, staff investigated each building’s current status. Buildings confirmed to still be in existence were researched for construction material and year built, as well as for any permit history indicating whether alterations and/or seismic retrofits might have occurred. Information was also gathered for each building’s use classification, APN, alternate addresses, square footage, number of stories and residential units, historic registry list data, and property ownership information required for conducting outreach.

<sup>23</sup> During a sidewalk survey in November 2017, contracted EERI engineers visually assessed over 250 buildings to validate the City’s inventory of seismically vulnerable buildings and identify common structural deficiencies. Additionally, two teams of experienced structural

engineers were hired to help develop engineering guidelines and establish minimum standards for retrofits of non-ductile concrete and other rigid wall-flexible diaphragm buildings supported by FEMA-funded Retrofit Grants, in an effort to improve their performance during an earthquake.

<sup>24</sup> To help identify soft story buildings with 3-4 residential units or commercial uses, staff utilized a Rental Housing Safety Program database and field survey sheets of nonresidential buildings from the original Soft Story inventory conducted in the 1990s. Staff undertook a “virtual” survey of each building using Google maps aerial and street view imagery to identify potential Soft Story buildings, and then verified the unit count and building configuration for each property by consulting City and county property records.

<sup>25</sup> Information provided by Steven Frew, Elizabeth Bialek, Jose Rios, and Mike Ambrose, EBMUD.

<sup>26</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Engineering Implications: U.S. Geological Survey Scientific Investigations Report 2017-5013-I-Q, p.6.

<sup>27</sup> Information provided by Manuel Ramirez, City Environmental Health Division Manager, and Dr. Janet Berreman, City Health Officer, as of November 2012

<sup>28</sup> Interceptors are sewer pipes, as large as 10 feet in diameter, which form the backbone of the wastewater transport system.

<sup>29</sup> Methane Emissions (EPA, 2018) <https://www.epa.gov/ghgemissions/overview-greenhouse-gases#methane>

<sup>30</sup> Information provided by Stuart Nishenko, Senior Seismologist, and PG&E

<sup>31</sup> National Transportation Safety Board, 2011. *Pipeline Accident Report: Pacific Gas and Electric Company Natural Gas Transmission Pipeline Rupture and Fire San Bruno, California, September 9, 2010*, Washington D.C.

<sup>32</sup> Information provided by Nicole Stewart, Area Manager Brisbane Terminal & Richmond Station of the Kinder Morgan, Inc., as of December 2018.

<sup>33</sup> Karl Busche, City Toxics Management Division, August 2018.

<sup>34</sup> Evacuation routes are designated in the City’s General Plan, Transportation Element policy T-28: Emergency Access.

<sup>35</sup> Information provided by Craig Whitman, Office of Earthquake Engineers, Steve Prey, Energy Conservation Program Coordinator, and Robert Braga (January 2012), Branch Chief Maintenance Services/Emergency Management: Planning & Training, all at Caltrans.

<sup>36</sup> BART information provided by Tracy Johnson, Seismic Engineering Manager, BART, June 2013. BART earthquake early warning system information provided by John McPartland, BART Board of Directors.

<sup>37</sup> P-waves are non-destructive, earthquake-generated waves. They travel faster than secondary waves (S-waves), which create the strong shaking responsible for structural damage in earthquakes.

<sup>38</sup> Information provided by Rochelle Pollard Account Manager for AT&T, in March 2018.

<sup>39</sup> Information provided by Ken Fattlar, Director of Network Operations for Verizon Wireless in

Northern California, in April 2013.

<sup>40</sup> Bryan Byrd, Comcast, Director, Communications, June 2013

<sup>41</sup> A “headend” is a master facility for receiving television signals for processing and distribution over a cable television system.

<sup>42</sup> In a hierarchical telecommunications network, the “backhaul” portion of the network comprises the intermediate links between the core network, or backbone network and the small sub-networks at the “edge” of the entire hierarchical network.

<sup>43</sup> Carl Scheuerman, Director of Regulatory Affairs, Sutter Health Facility Planning & Development, personal communication February 23, 2012

<sup>44</sup> These buildings are categorized as SPC-2 according to the Hospital Seismic Safety Act. Structural Performance Category (SPC) 1 is the most vulnerable ranking for buildings. Many SPC 1 hospitals pose significant collapse risks. SPC 5 hospitals pose the least structural risk. Significant changes impacting life safety were made to the Building Code in 1973, particularly regarding reinforced concrete buildings. These changes built on lessons learned in California earthquakes, including the 1971 San Fernando earthquake. According to state law, SPC-2 buildings must comply with standards intended to keep hospitals open and providing medical care following a severe earthquake by 2030.

<sup>45</sup> These buildings are categorized as SPC-3 and SPC-4. Structural Performance Category (SPC) 1 is the most vulnerable ranking for buildings. Many SPC 1 hospitals pose significant collapse risks. SPC 5 hospitals pose the least structural risk.

<sup>46</sup> These buildings are categorized as SPC-1. Structural Performance Category (SPC) 1 is the most vulnerable ranking for buildings. Many SPC 1 hospitals pose significant collapse risks. SPC 5 hospitals pose the least structural risk.

<sup>47</sup> California Seismic Safety Commission. *The Field Act and Public School Construction: A 2007 Perspective*. February 2007.

<sup>48</sup> California Seismic Safety Commission. *Seismic Safety in California’s Schools: Findings and Recommendations on Seismic Safety Policies and Requirements for Public, Private, and Charter Schools*. December 2004.

<sup>49</sup> John Calise, Executive Director of Facilities, Berkeley Unified School District

<sup>50</sup> Shirley Slaughter, Berkeley City College Business Officer and Safety Committee Co-Chair, December 2018.

<sup>51</sup> Camerio, Mary. “The Economic Benefits of a Disaster Resistant University: Earthquake Loss Estimation for UC Berkeley.” April 12 2000, Institute of Urban Design and Regional Development.

<sup>52</sup> See <http://www.berkeley.edu/administration/facilities/safer/index.html> for more information on UC Berkeley’s SAFER program.

<sup>53</sup> [www.berkeley.edu/administration/facilities/safer/](http://www.berkeley.edu/administration/facilities/safer/)

<sup>54</sup> Office of the Vice Provost and the Disaster Resistant University Steering Committee. *Strategic Plan for Loss Reduction and Risk Management: University of California, Berkeley*. Working Paper 2000-03. University of California, Berkeley, July 2000.

<sup>55</sup> Information provided by Dr. Tonya Petty, Emergency Manager and Continuity Manager, Lawrence Berkeley National Laboratory, as of October 2018.

<sup>56</sup> City of Berkeley, Office of Economic Development, Economic Dashboard, September 2018.

<sup>57</sup> The 2004 scenario was calculated using HAZUS-MH. The program's default data on buildings (types and economic values) and soils (for liquefaction and landslides) were used. 2004 shelter figures are taken from a previous analysis conducted by the Association of Bay Area Governments. HAZUS estimates of shelter populations were lower. Special thanks to Rich Eisner for help preparing these estimates.

<sup>58</sup> This 2013 LHMP Update includes impacts described in the 2008 FEMA/Cal EMA (Cal OES) Catastrophic Earthquake Incident Scenario. This scenario is based on a HAZUS-MH™ study completed by Charles A. Kircher, Hope A. Seligson, Jawhar Bouabid, and Guy C. Morrow as part of a series of papers presented at the 100th Anniversary Conference on the 1906 San Andreas Fault Earthquake. Descriptions of damage in this scenario is based on impacts expected from a magnitude 7.7 to 7.9 earthquake on the San Andreas fault, but the general level and type of impacts are expected to be similar for a Hayward fault event. The report was based on the most accurate data available at the time and the results were reviewed by peers. Additional analysis and data were prepared by Kircher, et al. for Golden Guardian 2006.

<sup>59</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Engineering Implications: U.S. Geological Survey Scientific Investigations Report 2017-5013-I-Q, p.1.

<sup>60</sup> About 20% of ignitions typically occur within the first hour after the earthquake, 50% within about 6 hours and almost all ignitions occur within the first day.

Risk, S. P. A. "Enhancements in HAZUS-MH Fire Following Earthquake, Task 3: Updated Ignition Equation pp. 74pp. *SPA Risk LLC, Berkeley CA. Principal Investigator C.Scawthorn. Prepared for PBS&J and the National Institute of Building Sciences, San Francisco* (2009).

<sup>61</sup> Estimation derived from Ch. 10, particularly Eqn. 10-1, of HAZUS Earthquake Tech Manual MR 4: FEMA, 2003. Multi-hazard Loss Estimation Methodology, Earthquake Model, HAZUS-MH MR4 Technical Manual. Developed by: Department of Homeland Security, Federal Emergency Management Agency, Mitigation Division, Under a contract with: National Institute of Building Sciences Washington, D.C., p. 712.

<sup>62</sup> In 2004, estimate was \$20 million damage from 5 estimated fires. This plan estimates 6-12 fires. If \$4 million/ignition assumed, \$24 million - \$48 million damage is estimated in 2004 dollars. This figure was then updated for 2018 to \$32 million - \$64 million using Consumer Price Index Inflation Calculator at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

<sup>63</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Engineering Implications: U.S. Geological Survey Scientific Investigations Report 2017-5013-I-Q, p.2.

<sup>64</sup> In 2004, estimate was \$1.5 billion. Updated for 2018 using Consumer Price Index Inflation Calculator at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

<sup>65</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Engineering Implications: U.S. Geological Survey Scientific Investigations Report 2017-5013-I-Q, p.6.

<sup>66</sup> Information provided by Bill Cain (ret.), EBMUD

<sup>67</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Engineering Implications: U.S. Geological Survey Scientific Investigations Report 2017-5013-I-Q, p.390.

<sup>68</sup> Per Rochelle Pollard, Account Manager for AT&T, in March 2018. For Prioritization and Preemption of the Berkeley first responders, the cornerstone of the AT&T Mobile solution is FirstNet.

### First Priority™ & Preemption Capability

First Priority™, which means first responders connect first – they don't have to compete with non-emergency users for a connection. Delivery of priority and preemption capabilities, an exclusive public safety core, application ecosystem, deployables and mission critical services – all required by the government contract

### Highly reliable and extensive coverage

- A contractual commitment to build a network designed to meet a 99.99% end-to-end service availability objective – a standard unmatched by any other large-scale LTE network in the world today.
- A commitment to grow coverage to rural, tribal and
- U.S. territories specifically for public safety
- Public safety Band 14 deployment to 95% of America's population
- Deployables dedicated exclusively for public safety
  - for planned activities and disaster recovery
- Local control of users and applications and the ability to give others priority access to the network
- A network backbone that supports integration with Next Generation 9-1-1 and Smart Cities public safety applications – ensuring emergency work/call flows are available to public safety.
- Preemption will make sure first responders have the bandwidth they need by detouring others off the network. This works like vehicle traffic being routed off the highway to make room for emergency personnel.

### Unprecedented level of network security

- Building a physically separate dedicated core with end-to-end encryption
- Single-sign-on and federated identity, providing ease of use and integration between the network, applications and public safety databases
- A robust and highly secure device ecosystem – with a broad portfolio of devices enabled for multiple bands, including Band 14
- Dedicated security operations center to monitor the network (24/7/365) and mitigate threats

### Critical interoperability

- Building a dedicated, interoperable network, and ecosystem
- Building a dedicated public safety application store with certified, public-safety relevant, highly secure and interoperable applications

<sup>69</sup> In 2004, estimate was \$215 million. Updated for 2018 using Consumer Price Index Inflation Calculator at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

<sup>70</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>71</sup> Updated for 2018 using Consumer Price Index Inflation Calculator at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

<sup>72</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>73</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>74</sup> United States Fire Administration. *The East Bay Hills Fire, Oakland-Berkeley, California (October 19-22, 1991): Report 60 of the Major Fires Investigation Project*.

<sup>75</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>76</sup> Judson Jones. “One of the California Wildfires Grew so Fast It Burned the Equivalent of a Football Field Every Second.” CNN. Accessed May 16, 2019. <https://www.cnn.com/2018/11/09/us/california-wildfires-superlatives-wcx/index.html>.

<sup>77</sup> California Department of Public Health. 2008. Public Health Climate Change Adaptation Strategy for California. [http://resources.ca.gov/climate\\_adaptation/docs/Statewide\\_Adaptation\\_Strategy.pdf](http://resources.ca.gov/climate_adaptation/docs/Statewide_Adaptation_Strategy.pdf)

<sup>78</sup> Pacific Institute. (2010). A Review of Social and Economic Factors that Increase Vulnerability to Climate Change Impacts in California.

<sup>79</sup> 2010 CBC Chapter 7A: Materials and Construction Methods for Exterior Wildfire Exposure, and 2010 CRC Section R327: Materials and Construction Methods for Exterior Wildfire Exposure

<sup>80</sup> Per Dan Gallagher, Senior Forestry Supervisor, City of Berkeley: The Fire Fuel Chipper Program collected green waste vegetation in the following amounts in the following years:

- 2005: 264.35 tons
- 2006: 237.59 tons
- 2007: 189.06 tons
- 2008: 175.16 tons
- 2009: 167.17 tons
- 2010: 161.31 tons
- 2011: 187.24 tons
- 2012: 155.94 tons
- 2013: 141.27 tons
- 2014: 119.72 tons
- 2015: 130.26 tons
- 2016: 430 cubic yards of wood chips and 34.28 tons of loose vegetation



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- <sup>81</sup> Information provided by Susan Ferrera, Superintendent of Parks, City of Berkeley, as of November 2018
- <sup>82</sup> Information provided by Greg Apa, Solid Waste and Recycling Manager of Zero Waste Division, City of Berkeley, as of September 2018
- <sup>83</sup> Information provided by Greg Apa, Solid Waste and Recycling Manager of Zero Waste Division, City of Berkeley, as of September 2018
- <sup>84</sup> <http://firecenter.berkeley.edu/>
- <sup>85</sup> Information provided by Dr. Tonya Petty, Emergency Manager and Continuity Manager, Lawrence Berkeley National Laboratory, as of October 2018.
- <sup>86</sup> Total square footage of buildings in burn area is 9,386,281 square feet.
- <sup>87</sup> In 2004, estimate was \$500 million.
- <sup>88</sup> Finacom, Steven. "Berkeley, A Look Back: Thorsen Home Becomes Frat House." Accessed April 17, 2019. <https://www.eastbaytimes.com/2017/07/25/berkeley-a-look-back-thorsen-house-turned-from-private-home-to-fraternity-house/>.
- <sup>89</sup> Ellen et al. "Map showing principal debris-flow source areas in Alameda County, California." USGS Open-File Report 97-745 E.
- <sup>90</sup> Pike et al. "Map and map database of susceptibility to slope failure by sliding and earth flow in the Oakland area, California." USGS MF-2385.
- <sup>91</sup> In Berkeley, culverted creeks are below ground and within a pipe or box-shaped conduit in a creek bed.
- <sup>92</sup> The City of Berkeley Watershed Management Plan Appendix D, Page 9 lists design storms. The depth of the 10-year, 6 hour duration event varies from 1.81" to 2.27" depending on if the desired location is in the Bay Plains or in the hills.
- <sup>93</sup> The City uses a 10-year design storm as representation of a rainfall event that reflects local conditions.
- <sup>94</sup> California Adaptation Planning Guide, July 2012.
- <sup>95</sup> There are no wastewater treatment facilities located in Berkeley. The East Bay Municipal Utility District (EBMUD) operates multiple potable water reservoirs within the City limits. EBMUD is responsible for protecting their facilities and ensuring their proper function.
- <sup>96</sup> California Adaptation Planning Guide, July 2012.
- <sup>97</sup> Revisions effective December 21, 2018 present the results of revised coastal hazard analysis and resulting flood elevations and flood depths. These revisions result in reissued Flood Insurance Rate Map, Panel numbers 14, 18, 52, 54, and 56.
- <sup>98</sup> The FIRM map was created by the Federal Emergency Management Agency (FEMA) for the National Flood Insurance Program. Data current as of 2009, with revisions effective December 18, 2018.
- <sup>99</sup> Repetitive loss properties are those that have submitted claims for flood reimbursement through the National Flood Insurance Program at least twice in the last ten years. The goal of mapping these properties is to identify what locations flood repetitively and seek to mitigate the problem to reduce flood damage.

<sup>100</sup> The Potter Watershed drains approximately one-third of the land area of the City through storm drain pipe infrastructure. The Codornices Watershed drains about one-tenth of the City through open watercourses and creek culverts. Findings from these two watersheds could be extrapolated to the other watersheds, but it is preferable to continue hydraulic modeling of the remaining watersheds.

<sup>101</sup> In 2018, loss estimates quoted in the narrative were updated using Consumer Price Index Inflation Calculator at <http://data.bls.gov/cgi-bin/cpicalc.pl>.

<sup>102</sup> Contents were assumed to be worth 50% of the total structural replacement value for single-family homes and 100% of the total structural replacement value for commercial and industrial properties. The majority of structures in the zone with up to 3 feet of floodwaters are residential, so contents for all structures in this zone were estimated at 50% of structure value. The majority of structures in the zone with up to 1 foot of water are commercial or industrial, and contents value was assumed to equal structure value for these properties.

<sup>103</sup> Wilson, R., Ewing, L., Dengler, L., Boldt, E., Evans, T., Miller, K., Nicolini, T., and Ritchie, A. Effects of the February 27, 2010 Chilean Tsunami on the Harbors, Ports, and the Maritime Community in California With Comparison to Preliminary Evaluation of March 11, 2011 Tsunami. Proceedings from ASCE Coasts, Oceans, Ports, and Rivers Institute Conference, Alaska, June 2011.

<sup>104</sup> The SAFRR Tsunami Modeling Working Group, 2013, Modeling for the SAFRR Tsunami Scenario—Generation, propagation, inundation, and currents in ports and harbors, chap. D in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013– 1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.

<sup>105</sup> A team of scientists from California Geological Survey, US Geological Survey and the California Office of Emergency Services are in the process of developing a methodology for estimating tsunami hazard to the west coast. In 2013 they expect to begin two pilot studies to test the methodology in Crescent City and Huntington Beach. Following validation of the pilot studies, probabilities for the rest of the state will be developed.

<sup>106</sup> Wood, N., Ratliff, J., and Peters, J., 2013, Community exposure to tsunami hazards in California: U.S. Geological Survey Scientific Investigations Report 2012-5222, 49p.

<sup>107</sup> California Geological Survey, University of Southern California, California State Lands Commission, California Governor’s Office of Emergency Services: February 2018 DRAFT Harbor Improvement Report (HIR) No. 2018-Alam-01

<sup>108</sup> Overcrossing provides non-automobile access between the residential and business districts on the east side of I-80 and the Berkeley waterfront, Bay Trail and Eastshore State Park (Addison St and Bolivar Drive) to the west of the freeway (West Frontage Road and University Avenue).

<sup>109</sup> The SAFRR Tsunami Modeling Working Group, 2013, Modeling for the SAFRR Tsunami Scenario—Generation, propagation, inundation, and currents in ports and harbors, chap. D in Ross, S.L., and Jones, L.M., eds., The SAFRR (Science Application for Risk Reduction) Tsunami Scenario: U.S. Geological Survey Open-File Report 2013– 1170, 136 p., <http://pubs.usgs.gov/of/2013/1170/d/>.

<sup>110</sup> The Dona Spring animal shelter, opened in 2012, is built above the 100-year flood plain but is

still in the tsunami inundation zone

<sup>111</sup> Public Law 106-390

<sup>112</sup> Diurnal asymmetry to the observed global warming (Royal Meteorological Society, 2016)

<https://rmets.onlinelibrary.wiley.com/doi/abs/10.1002/joc.4688>

<sup>113</sup> Our Changing Climate 2012 (California Climate Change Center, 2012)

<http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>

<sup>114</sup> How Climate is Changing (NASA, Updated December 6, 2018)

<https://climate.nasa.gov/effects/>

<sup>115</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017)

<sup>116</sup> Morello-Frosch, R; Pastor, M; Sadd, J; Shonkoff, S. The Climate Gap: Inequalities in How Climate Change Hurts Americans & How to Close the Gap. May 2009.

<sup>117</sup> Our Changing Climate 2012 (California Climate Change Center, 2012)

<http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>  
<http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>

<sup>118</sup> McKenzie, D.; Heinsch, F.A.; Heilman, W.E. 2011. Wildland Fire and Climate Change. (January 17, 2011). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. <http://www.fs.fed.us/ccrc/topics/wildland-fire.shtm>

<sup>119</sup> Our Changing Climate 2012 (California Climate Change Center, 2012).

<sup>120</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017, p58-59)

[http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

<sup>121</sup> Our Changing Climate 2012 (California Climate Change Center, 2012).

<sup>122</sup> Our Changing Climate 2012 (California Climate Change Center, 2012).

<sup>123</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017, p53)

<sup>124</sup> Ibid.

<sup>125</sup> Causes and Predictability of the 2011-14 California Drought (NOAA, 2014)

<https://cpo.noaa.gov/Meet-the-Divisions/Earth-System-Science-and-Modeling/MAPP/MAPP-Task-Forces/Drought/Drought-Task-Force-I/Causes-and-Predictability-of-the-2011-2014-California-Drought>

<sup>126</sup> 2012-2016 California Drought: Historical Perspective (USGS, Updated 2018)

<https://ca.water.usgs.gov/california-drought/california-drought-comparisons.html>

<sup>127</sup> “What Are Atmospheric Rivers? | National Oceanic and Atmospheric Administration.” Accessed April 22, 2019. <https://www.noaa.gov/stories/what-are-atmospheric-rivers>.

<sup>128</sup> Ralph, F. Martin, Jonathan J. Rutz, Jason M. Cordeira, Michael Dettinger, Michael Anderson, David Reynolds, Lawrence J. Schick, and Chris Smallcomb. “A Scale to Characterize the Strength and Impacts of Atmospheric Rivers.” *Bulletin of the American Meteorological Society* 100, no. 2 (February 1, 2019): 269–89. <https://doi.org/10.1175/BAMS-D-18-0023.1>.

<sup>129</sup> Staff, KRON4. “Another Atmospheric River to Batter Bay Area with Heavy Rain, Wind.” KRON, February 26, 2019. <https://www.kron4.com/weather/another-atmospheric-river-will-bring-heavy-rain-to-bay-area/1807183265>.

<sup>130</sup> San Francisco Bay Conservation and Development Commission, 2011, p. 5

<sup>131</sup> Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project (ART, 2017) <http://www.adaptingtorisingtides.org/project/regional-sea-level-rise-mapping-and-shoreline-analysis/>

<sup>132</sup> California’s Fourth Climate Change Assessment San Francisco Bay Area Region Report (State of California, 2018) <http://www.climateassessment.ca.gov/regions/docs/20180827->

[SanFranciscoBayArea.pdf](#)

<sup>133</sup> California's Fourth Climate Change Assessment San Francisco Bay Area Region Report (State of California, 2018) [http://www.climateassessment.ca.gov/regions/docs/20180827-](http://www.climateassessment.ca.gov/regions/docs/20180827-SanFranciscoBayArea.pdf)

[SanFranciscoBayArea.pdf](#)

<sup>134</sup> California's Fourth Climate Change Assessment San Francisco Bay Area Region Report (State of California, 2018) [http://www.climateassessment.ca.gov/regions/docs/20180827-](http://www.climateassessment.ca.gov/regions/docs/20180827-SanFranciscoBayArea.pdf)

[SanFranciscoBayArea.pdf](#)

<sup>135</sup> State of California Sea-Level Rise Guidance 2018 Update (California Ocean Protection Council, 2018).

[http://www.opc.ca.gov/webmaster/ftp/pdf/agenda\\_items/20180314/Item3\\_Exhibit-](http://www.opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A OPC SLR Guidance-rd3.pdf)

[A OPC SLR Guidance-rd3.pdf](#). This is the median probabilistic projections, meaning 50% probability sea-level rise will meet or exceed this level.

<sup>136</sup> Adapting to Rising Tides (ART) Bay Shoreline Flood Explorer

<https://explorer.adaptingtorisingtides.org/explorer>

<sup>137</sup> Assessment of California's Natural Gas Pipeline Vulnerability to Climate Change (California Energy Commission, 2017). <http://www.energy.ca.gov/2017publications/CEC-500-2017-008/CEC-500-2017-008.pdf>

<sup>138</sup> Land Subsidence in the United States, USGS Fact Sheet (USGS, 2000).

<https://water.usgs.gov/ogw/pubs/fs00165/>

<sup>139</sup> <http://www.adaptingtorisingtides.org/wp-content/uploads/2018/07/BATA-ART-SLR-Analysis-and-Mapping-Report-Final-20170908.pdf>

<sup>140</sup> Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project (ART, 2017) <http://www.adaptingtorisingtides.org/project/regional-sea-level-rise-mapping-and-shoreline-analysis/>

<sup>141</sup> California Adaptation Planning Guide, July 2012.

<sup>142</sup> 2017 Clean Air Plan (BAAQMD, 2017, Chapter 3, pg 10)

[http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en)

<sup>143</sup> Climate and Health Understanding the Risk: An Assessment of San Francisco's Vulnerability to Flooding & Extreme Storms (SF Dept of Public Health, 2016)

[https://extxfer.sfdph.org/gis/Flooding/SFDPH\\_FloodHealthVulnerability2016.pdf](https://extxfer.sfdph.org/gis/Flooding/SFDPH_FloodHealthVulnerability2016.pdf)

<sup>144</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017) [http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

<sup>145</sup> McKenzie, D.; Heinsch, F.A.; Heilman, W.E. 2011. Wildland Fire and Climate Change. (January 17, 2011). U.S. Department of Agriculture, Forest Service, Climate Change Resource Center. <http://www.fs.fed.us/ccrc/topics/wildland-fire.shtml>.

<sup>146</sup> Our Changing Climate 2012 (California Climate Change Center, 2012)

[http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-](http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf)

[007.pdf](http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf)<http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>

<sup>147</sup> Alameda County Climate Change and Health Profile Report (California Department of Public Health, 2017).

[https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR001Alameda\\_County2-23-17.pdf](https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CHPRs/CHPR001Alameda_County2-23-17.pdf)

<sup>148</sup> 2017 Clean Air Plan (BAAQMD, 2017, p.3/6)

[http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_-proposed-final-cap-vol-1-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en)

- <sup>149</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017, p58-59)  
[http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)
- <sup>150</sup> Living with a Rising Bay: Vulnerability and Adaptation in San Francisco Bay and on the Shoreline. October 6, 2011. San Francisco Bay Conservation and Development Commission
- <sup>151</sup> [http://www.flseagrant.org/coastalplanning/sea\\_level-rise-and-climate-change-to-be-considered-in-flood-mapping/](http://www.flseagrant.org/coastalplanning/sea_level-rise-and-climate-change-to-be-considered-in-flood-mapping/)
- <sup>152</sup> Recommendations related to mitigating climate change impacts are contained in Climate Action Plan Chapter 5 (p. 101).
- <sup>153</sup> California Statewide Heat Wave September 2017 (Climate Signals Beta, Updated July 20, 2018) <http://www.climatesignals.org/headlines/events/california-statewide-heat-wave-september-2017>
- <sup>154</sup> <https://www.kqed.org/news/11614957/what-you-need-to-know-about-bay-areas-heat-wave>
- <sup>155</sup> <https://www.sfgate.com/news/article/THAT-WAS-THE-WAVE-THAT-WAS-Bay-Area-string-of-2492288.php>
- <sup>156</sup> Excessive Heat Events Guidebook (EPA, 2006, Updated Appendix A 2016)  
[https://www.epa.gov/sites/production/files/2016-03/documents/ehguide\\_final.pdf](https://www.epa.gov/sites/production/files/2016-03/documents/ehguide_final.pdf)
- <sup>157</sup> 2017 Clean Air Plan (BAAQMD, 2017, Chapter 3, pg 11)  
[http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a\\_proposed-final-cap-vol-1-pdf.pdf?la=en](http://www.baaqmd.gov/~media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_proposed-final-cap-vol-1-pdf.pdf?la=en)
- <sup>158</sup> California Adaptation Planning Guide, July 2012.
- <sup>159</sup> <http://www.climateassessment.ca.gov/>
- <sup>160</sup> <https://sanfrancisco.cbslocal.com/2017/09/01/bart-trains-heat-wave-track-concerns/>
- <sup>161</sup> Reducing Urban Heat Islands: Compendium of Strategies - Draft (2008, US EPA, Chapter 5, page 24) <https://www.epa.gov/heat-islands/heat-island-compendium>.
- <sup>162</sup> Electric Heat Pumps Can Slash Emissions in California Homes (NRDC Pierre Delforge, 2018) <https://www.nrdc.org/experts/pierre-delforge/electric-heat-pumps-can-slash-emissions-california-homes>
- <sup>163</sup> Rising Temperatures, Worsening Ozone Pollution, Union of Concerned Scientists (2011), p7  
[https://www.ucsusa.org/sites/default/files/legacy/assets/documents/global\\_warming/climate-change-and-ozone-pollution.pdf](https://www.ucsusa.org/sites/default/files/legacy/assets/documents/global_warming/climate-change-and-ozone-pollution.pdf)
- <sup>164</sup> Rising Temperatures, Worsening Ozone Pollution, Union of Concerned Scientists (2011), p12.
- <sup>165</sup> <https://www.sciencedirect.com/science/article/pii/S161886671630348X>
- <sup>166</sup> [https://www.cityofberkeley.info/urban\\_forestry\\_information/](https://www.cityofberkeley.info/urban_forestry_information/)
- <sup>167</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017) [http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)
- <sup>168</sup> 2017 Clean Air Plan (BAAQMD, 2017, Chapter 3, pg 11).
- <sup>169</sup> 2017 Clean Air Plan (BAAQMD, 2017, Chapter 3, pg 9).
- <sup>170</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017).
- <sup>171</sup> Both of these accident sites no longer store anhydrous ammonia.
- <sup>172</sup> UC Berkeley and Berkeley Lab have since evaluated their storm water systems as potential hazardous materials conduits to the creeks.
- <sup>173</sup> Of the 513 facilities indicated, 481 meet chemical minimums; the remainder are smaller hazardous waste only generators that do not meet volume thresholds quotes. There are many

more facilities that have some sort of hazardous materials on their sites, but they are not regulated by the City's Toxics Management Division (per Karl Busche, City Toxics Management Division, August 2018).

<sup>174</sup> These facilities have a minimum of 55 gallons of aggregate liquid chemicals, 500 pounds of aggregate solid chemicals, or 200 cubic feet of aggregate gaseous chemicals, or they may generate hazardous waste.

<sup>175</sup> City Toxics Management Division, as of July 2018.

<sup>176</sup> The Northridge earthquake derailed a train carrying 2,000 gallons of sulfuric acid that began leaking. Firefighters were on the scene within two hours and the situation was stabilized with three and a half hours.

<sup>177</sup> Berkeley Municipal Code Section 17.12.030.C.2 requires uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction. This requirement applies to future businesses but does address existing facilities. BMC 17.12.030 does not recognize areas exposed to sea-level rise in the flood exposure area.

<sup>178</sup> Per Nabil Al-Hadithy (March 2018), the engineering study is a Risk Management Plan, which includes safety information, process hazard analysis/hazard review, operating procedures, training, maintenance, compliance audits and incident investigations, along with documents and records showing that the facility is implementing the program. Scenarios for release including earthquake, operator error and fire are studied and corrections are made. The technical severity of these studies depends on the quantity and type of hazardous substances at the facility.

<sup>179</sup> The City has limited regulatory authority over radioactive material use and management. Radioactive materials are managed by the federal Department of Energy and Nuclear Regulatory Commission.

<sup>180</sup> Per Karl Busche, Toxics Management Division, City of Berkeley: Per the State's Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, the City's Toxics Management Division is the agency responsible for administering six of the State's hazardous materials and waste programs for Berkeley. The City of Berkeley regulates both UC Berkeley and Berkeley Lab for the following six State programs:

1. Hazardous Materials Release Response Plans and Inventories (HMBP) Program, Health and Safety Code, Division 20, Chapter 6.95, Article 1, with supplemental regulations in California Code of Regulations Title 19, Sections 2620-2732.
2. California Accidental Release Prevention (CalARP) Program, Health and Safety Code, Division 20, Chapter 6.95, Article 2, with supplemental regulations in California Code of Regulations, Title 19, Sections 2735-2785.
3. Underground Storage Tank (UST) Program, Health and Safety Code, Division 20, Chapter 6.7, with accompanying regulations in the California Code of Regulations, Title 23.
4. Aboveground Petroleum Storage Act Requirement for Spill Prevention, Control and Countermeasure (SPCC) Plans, Health and Safety Code, Division 20, Chapter 6.67, Section 25270-25270.13.



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5. Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs, Health and Safety Code, Division 20, Chapter 6.5, with accompanying regulations in the California Code of Regulations, Title 22.

6. California Fire Code: Hazardous Materials Management Plans (HMMP) and Hazardous Materials Inventory Statements, California Code of Regulations, Title 27, Division 2, Chapter 4.5.

The Toxics Management Division also enforces City codes regarding hazardous materials and waste. These codes are often more stringent than CUPA codes.

<sup>181</sup> Information provided by Dr. Tonya Petty, Emergency Manager and Continuity Manager, Lawrence Berkeley National Lab, as of October 2018.

<sup>182</sup> Information provided by Jeffrey Bowman, CHMM Senior Manager - Health, Safety, Environment, and Security

## C. Mitigation Strategy

Berkeley aims to be a disaster-resilient community that can survive, recover from, and thrive after a disaster while maintaining its unique character and way of life. Berkeley envisions a community in which the people, buildings, and infrastructure, in and serving Berkeley, are resilient to disasters; City government provides critical services in the immediate aftermath of a devastating event of any kind; and basic government and commercial functions resume within thirty days of a damaging earthquake or other significant event.

Disaster mitigation reduces or eliminates long-term risks to people and property from hazards and their effects, and/or provides passive protection at the time of disaster impact. Disaster mitigation is a foundational element of disaster resilience.

Elements C.3-C.6 of this plan outline Berkeley’s mitigation strategy, and how it connects to Berkeley’s disaster resilience vision. The strategy identifies and analyzes a comprehensive range of specific mitigation actions and activities being considered to reduce the effects of each hazard described in Element B: Hazard Analysis. It is based on existing authorities, policies, programs, and resources, as well as Berkeley’s ability to expand on and improve these existing mitigation tools as described in Elements C.1-C.2 of this plan.

### ***C.1 Authorities, Policies, Programs, and Resources***

The table on the following pages highlights some of the regulatory authorities, policies, programs and other resources that support Berkeley’s hazard mitigation efforts. The “Category” columns indicate whether the resource includes Planning and Policy, Financial, Administrative and Technical, and Training and Outreach Elements. The “Ability to support Mitigation Activities” column overviews the City’s ability to use the highlighted resource to expand on and improve mitigation activities.

Following the table is a detailed discussion of these and other authorities, policies, programs, and resources. Finally, this section provides a table of State and federal requirements related to hazard mitigation and describes how Berkeley complies with these requirements.

Name of Authority, Policy, Program, or Resource	Category				Ability to support mitigation activities
	Planning and Policy	Financial	Admin & Technical	Training & Outreach	
Guiding Policies and Goals	x				Many City policies shape Berkeley’s growth. In addition to disaster resilience, City goals include protecting the environment, promoting sustainable development, providing low-income housing, preserving historic structures, and maintaining City infrastructure. Some of these policies directly support mitigation efforts; together they all ensure that mitigation activities account for City values.
Public Works	x		x		The City of Berkeley’s Public Works Department is the largest department in the City and provides both direct services to the community, as well as critical support services to the City organization. Public Works is responsible for maintaining the City’s physical assets and infrastructure in a safe and serviceable condition. Public Works provides services ranging from refuse and recycling collection, diversion and disposal, to property management, infrastructure improvements, and improving safety in the public right-of-way. Mitigation actions include the seismic retrofit of the North Berkeley Senior Center, the complete remodel of the City’s Mental Health Clinic, implementing computerized maintenance management system for Operation’s activities, and procuring a global positioning system for tracking the City’s fleet.
Emergency Management	x		x	x	The City’s Fire Department - Office of Emergency Services (OES) works to increase the Berkeley’s readiness through community education, staff support to the Disaster and Fire Safety Commission, and coordination of the City’s emergency management activities. OES staff meets regularly with City’s designated emergency response staff to provide training and coordination. OES develops, maintains, and exercises the City’s Emergency Operations Plan as well as the Local Hazard Mitigation Plan.
City Budget					The City’s budget process assigns resources to address the goals, objectives, and community priorities set by the City Council. This process determines if and when money is spent on mitigation actions.

x

Name of Authority, Policy, Program, or Resource	Category				Ability to support mitigation activities
	Planning and Policy	Financial	Admin & Technical	Training & Outreach	
Municipal Building Improvements	x	x	x		The City, supported by an active public, local and State bond measure funding and FEMA grants, has strengthened and rebuilt numerous key buildings in Berkeley. Since 2014, the City has continued its program to strengthen or replace key at-risk structures.
Building Code	x		x		The City enforces disaster-resistant development through the application of the California Building Code, as well as more stringent local code amendments. The Provisions of the California Building Code are applicable to all new construction, additions, alterations and repairs. Mitigation actions include periodically updating the building code with local amendments based on the latest science and design standards.
Mandatory Retrofit Ordinances	x				The City has approved ordinances requiring owners of unreinforced masonry buildings and soft story buildings with five or more units to evaluate their buildings, obtain retrofit permits and complete seismic retrofits according to a schedule based on each building's risk categorization. Future mitigation actions include ensuring that these retrofits happen and exploring future ordinances for other hazardous buildings.
Financial Incentives	x	x	x	x	The Building and Safety Division developed a new Retrofit Grants program with funding from a Hazard Mitigation Grant from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES). Mitigation actions include issuing the grants and expanding the programs to reach additional owners.

Name of Authority, Policy, Program, or Resource	Category				Ability to support mitigation activities
	Planning and Policy	Financial	Admin & Technical	Training & Outreach	
City Transfer Tax Rebate Program	x	x	x	x	By ordinance, the City created a program to rebate up to one-third of the transfer tax amount to be applied to earthquake upgrades on homes. The process begins once the homeowner makes seismic safety improvements. When the owner wishes to sell the house and the sale amount has been determined, the buyer and seller place a portion of the real estate transfer tax amount in an escrow account to be drawn down after improvements are complete. Mitigation actions include advertising this program and conducting outreach to homeowners.
Earthquake Brace + Bolt	x	x	x	x	The City participates in the Earthquake Brace + Bolt (EBB) program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of owner-occupied residential buildings with 1-4 dwelling units. Mitigation actions include advertising this program and conducting outreach to building owners.
Expanded Inventory of Seismically Vulnerable Buildings	x		x		With the launch of the Retrofit Grants Program, staff conducted extensive research to update and refine the City’s inventory of seismically vulnerable buildings. In addition to soft story buildings not currently subject to mandatory retrofit such as those with 3-4 residential units or commercial uses, Berkeley has numerous non-ductile concrete and tilt-up or other rigid wall-flexible diaphragm (RWFD) buildings. These additional building types may also be highly susceptible to adverse effects from earthquakes. Mitigation actions include conducting research to determine other hazardous buildings that should be inventoried and exploring additional mandatory retrofit ordinances.

Name of Authority, Policy, Program, or Resource	Category				Ability to support mitigation activities
	Planning and Policy	Financial	Admin & Technical	Training & Outreach	
Hazardous Fire Area Zones	x		x		The City has established and adjusted fire zones in Berkeley. While the zones were initially established to address urban fire issues, they have evolved to designate the City’s WUI fire hazard. Currently, the Berkeley Fire Department has divided the city into Fire Zones 1, 2, and 3, designated in order of ascending fire risk. Fire Zones 2 and 3 are in the hills area of the City. Mitigation actions include the strictest fire prevention standards and vegetation management measures.
Fire Inspections	x		x		The Berkeley Fire Department annually inspects designated high fire risk zones for hazards such as excess vegetation. The Fire Department inspects over 1,400 parcels in Fire Zones 2 and 3, in addition to complaint-driven inspections throughout the City. Future mitigation actions could include expanding the number of parcels, pending available resources.
Vegetation Management	x		x	x	The City also runs a number of vegetation management programs to reduce fuel loads. Future mitigation actions could include expanding resources available to help people with vegetation management.
Community Readiness	x		x	x	The City runs a number of programs aimed to help enhance the resilience of the people of Berkeley by providing disaster preparedness outreach, training, and materials. A number of these programs teach residents about mitigation actions that they could take individually, such as preparing their homes for wildfire season.



### ***C.1.a. Guiding Policies and Goals***

Many City policies shape Berkeley's growth. In addition to disaster resilience, City goals include protecting the environment, promoting sustainable development, providing low-income housing, preserving historic structures, and maintaining City infrastructure. Key policies impacting development are detailed below.

#### ***Sustainable Development***

Berkeley promotes sustainable development policies. The General Plan includes policies to maintain sufficient land zoned for high-and medium-density residential development. These policies allow for sufficient new construction to meet Berkeley's fair share of regional housing needs. Policies are coordinated to ensure that all new development is sensitive to Berkeley's unique physical character and scale, and that new housing and future development occur in areas of the city that are best served by public transportation services.

#### ***Affordable Housing***

Berkeley also promotes affordable, seismically-safe housing. The General Plan includes policies promoting access to quality housing for people at the lowest income levels, and inclusion of low-income groups in new housing development. The General Plan also encourages maintenance and improvements to prepare buildings for a major seismic event, with the expectation that improvements do not necessitate substantial rent increases for tenants. In March 2016, the City Council modified the Demolition Ordinance to account for the loss of affordable housing that can occur with building demolition. That ordinance established the City's authority to set and collect a fee for each dwelling unit demolished in a building constructed prior to June 1980. It also allows for projects to provide one for one replacement units in lieu of fee payment as long as the units are restricted in perpetuity at a below market rate.

#### ***Restoration of Natural Waterways***

The General Plan's Environmental Management section encourages the restoration of natural waterways. Many Berkeley streams were culverted in the 1960s as a flood control measure. Any change in the status of these culverts, already in a weakened state, would alter the Berkeley's flood risk.

#### ***Climate Mitigation and Adaptation***

As outlined in Berkeley's 2009 Climate Action Plan, Berkeley has community-wide goals to reduce emissions and mitigate our impact on global anthropogenic climate change. This includes reducing energy and water usage, moving toward clean energy in our buildings and transportation, reducing our waste, and ensuring sustainable and equitable development. In addition, the Berkeley community must adapt to the current impacts the community is already facing from the changing climate, as well as plan for future impacts projected to occur. Climate mitigation strategies are outlined in the Climate Action Plan, and continue to be implemented City-wide. The City's climate adaptation strategies are included in the Local Hazard Mitigation Plan and Resilience Strategy, as they are closely aligned and should be integrated with hazard mitigation.

#### ***Preserving Historic Character***

The City has a strong value for preserving historic character. Any hazard, and earthquakes and fires in particular, could destroy many historic structures, which tend to be more vulnerable to these

hazards than newly-constructed buildings. The General Plan's Urban Design and Preservation Element encourages support of long-term protection of historically- or architecturally-significant buildings to preserve neighborhood and community character through maintenance of the historic resources inventory, and use of the State Historical Building Code, Rehabilitation Tax Credits, and Mills Act contracts preservation incentives.

### ***Disaster Resilience***

The Berkeley community recognizes that disasters have the potential to undercut all of the City's goals. As stated in the General Plan:

The city's healthy environment with its unique character and quality of life based on cultural, social and economic diversity could be dramatically and enduringly altered by a serious hazard event. Berkeley must protect what we already have as well as what we build through employing sound development practices and building and planning code enforcement, and continuously working to reduce the vulnerability of existing buildings and infrastructure, to improve emergency response and to prepare for recovery. Without these measures, disasters will occur and the other goals of the General Plan will be lost.

### ***C.1.b. Public Works***

The City of Berkeley's Public Works Department is the largest department in the City and provides both direct services to the community, as well as critical support services to the City organization. Public Works is responsible for maintaining the City's physical assets and infrastructure in a safe and serviceable condition. Public Works provides services ranging from refuse and recycling collection, diversion and disposal, to property management, infrastructure improvements, and improving safety in the public right-of-way.

Public Works Divisions and staffing allocations (measured in Full Time Equivalent (FTE) positions) are as follows:

- Office of the Director (6 FTE)
- Operations (98 FTE)
- Engineering (34 FTE)
- Zero Waste (90 FTE)
- Transportation (15.6 FTE)
- Administrative & Fiscal Services (16 FTE)

Significant objectives expected to be accomplished by the department during FY 2020 include the seismic retrofit of the North Berkeley Senior Center, the complete remodel of the City's Mental Health Clinic, implementing computerized maintenance management system for Operation's activities, and procuring a global positioning system for tracking the City's fleet. The Zero Waste Division has begun the feasibility process to replace the existing Transfer Station Facility. In addition the City plans to submit the Debris Management Plan to FEMA for approval.

Four publicly-staffed commissions provide community oversight over Public Works activities:

- Commission on Disability

- Public Works Commission
- Transportation Commission
- Zero Waste Commission

### **C.1.c. Emergency Management**

The City's Fire Department - Office of Emergency Services (OES) works to increase the Berkeley's readiness through community education, staff support to the Disaster and Fire Safety Commission, and coordination of the City's emergency management activities. OES staff meets regularly with City's designated emergency response staff to provide training and coordination. OES develops, maintains and exercises the City's Emergency Operations Plan. OES has 3.5 FTE positions.

Emergency management is a shared responsibility among all City departments. Department Directors are responsible for ensuring their respective departments' readiness to contribute to disaster response activities. All City staff members are Disaster Service Workers and are required to provide services in the event of an emergency or disaster.

The Disaster and Fire Safety Commission provides community oversight over emergency management activities. The Commission participates in the review of emergency, disaster and mutual aid plans and agreements and makes recommendations to the City Council regarding legislation and regulations needed to implement such plans and agreements.

### **C.1.d. Taxing Authorities**

The City's General Fund gets the majority of its money from: a) property taxes and property-based revenues; b) economically sensitive revenues such as sales tax, business license tax, transient occupancy tax, etc.; and c) interest and fees such as ambulance fees; and parking and traffic fines. The balance of the City budget is comprised of other funding sources such as grants, special tax revenue (e.g. parks, libraries and paramedic services), and fees for specific services (marina berth fees, garbage and sewer fees, building permits, etc.).

California property taxes are set at 1% of the assessed value of the property. The City receives about a third of every property tax dollar collected in Berkeley, and schools get 43% of every property tax dollar. These proportions have been about the same since 1979.

Sales tax is 9.75 cents on every dollar. Of that, the State gets 7 cents, Alameda County gets 1.75 cents, and the City gets a penny. Berkeley's sales tax revenue has decreased during the economic downturn, but is expected to remain steady going forward because of the City's efforts to retain its diverse retail mix.

The change in property transfer tax is an example of the impact of the economy on City budgets. Property tax revenue goes into the General Fund. This revenue is dependent on the fluctuating real estate market, and can vary dramatically from year to year. To protect City services from this volatility, much of this revenue is used for one-time infrastructure needs, such as streets and transportation projects.

### **C.1.e. City Budget**

The City's budget process assigns resources to address the goals, objectives, and community priorities set by the City Council. The City's FY 2018 & FY 2019 budget was adopted by the Berkeley City Council at their June 27, 2017 meeting. The City's budget follows the fiscal year - beginning on July 1st and ending on June 30th.

The City's General Fund budget is approximately \$184.2 million. The balance of the City's budget is made up of special funds (\$277.4 million combined), which are dedicated to specific services. While special fund revenue is dedicated, it is not guaranteed. Special funds also shrink in tough economic times.

There are three broad categories of special funds:

1. Special Revenue and Grant Funds are legally restricted to a specific service, e.g.: Federal transportation funds, State public health funds, and the Parks, Library, and Paramedic Tax Funds.
2. Special Assessment Funds are for the financing of public improvements or services, such as the Clean Storm Water Fund and the Streetlight Assessment District Fund. Those two funds are examples of special funds where the revenues have not kept pace with the cost of delivering the service.
3. Enterprise Funds come from the collection of the fees associated with providing the service or program. For example, the Refuse Fund pays for the pickup and collection of garbage, recycling, and green waste. Services in this category include the Permit Service Center, the Sanitary Sewer Fund, and the Marina Enterprise Fund.

Additionally, the City has deferred maintenance on much of its capital infrastructure. As the economy begins to slowly recover, the City is being mindful of the need to address deferred maintenance, as well as to remain prepared to address the impacts of future cost increases in areas such as health and pension benefits.

The City Council has adopted budget development policies that have served Berkeley well over the long term, including:

- Focusing on the long-term fiscal health of the City by adopting a two-year budget and conducting multi-year planning;
- Building a prudent reserve;
- Developing long-term strategies to reduce unfunded liabilities;
- Controlling labor costs while minimizing layoffs;
- Allocating one-time revenue for one-time expenses;
- Requiring enterprise and grant funds to balance and new programs to pay for themselves; and
- Any new expenditure requires either additional revenue or expenditure reductions.

The City also used the "fix it first" approach in developing the budget, through which current capital improvements are funded before funding new projects.

### ***C.1.f. City Buildings and Systems***

#### ***Municipal Building Improvements***

The City, supported by an active public, local and State bond measure funding and FEMA grants, has strengthened and rebuilt numerous key buildings in the city. Since 2014, the City has continued its program to strengthen or replace key at-risk structures.

In 2017, work was completed on the James Kenney Recreation Center and the Center Street Garage. The James Kenney Community Center Seismic Retrofit project was made possible by a Pre-Disaster Mitigation Program grant for \$727,499 and involved seismic strengthening of the Recreation and Gym Building, as well as fire protection sprinklers throughout the building, and necessary ADA upgrades throughout. The replacement of the Center Street Garage was one of the City's high priority downtown projects. The preexisting 5-story structure did not meet current seismic standards and retrofit was determined to be infeasible.

Additionally, since 2004 the City has strengthened or rebuilt all seven of the City's fire stations, the historic Ratcliff Building (which houses the Public Works Department Operations Center), the Civic Center (which houses many key government functions), the Public Safety Building, a new animal shelter, and all libraries. The City is currently assessing vulnerabilities of other key City buildings and is developing funding strategies to upgrade buildings with known vulnerabilities.

### ***Emergency Water Supply for Firefighting***

In 2010, the City put into operation an aboveground, portable water system that can pump water from any source, including the San Francisco Bay, in the event of drained tanks or damaged pipelines. This system is designed to carry up to 20,000 gallons of water per minute for a distance of one mile and elevation gain of 100 feet; it will also carry smaller flows to higher elevations.

### ***C.1.g. Privately-Owned Buildings***

The City offers a comprehensive suite of programs to encourage the community to strengthen buildings to be more hazard-resistant. A number of City incentive programs and educational efforts promote seismic strengthening activities.

#### ***Building Codes***

The City enforces disaster-resistant development through the application of the California Building Code, as well as more stringent local code amendments. The Provisions of the California Building Code are applicable to all new construction, additions, alterations and repairs.

#### ***Plan Set A***

The City's adoption of Standard Plan Set A<sup>1</sup> educates homeowners and contractors about measures to improve seismic resistance of their homes. Contractors' adherence to this Standard simplifies the City's plan review and inspection process.

#### ***Mandatory Retrofit Ordinances***

The City of Berkeley has worked diligently to enhance public safety and reduce physical threats from earthquakes by requiring owners of soft story and unreinforced masonry buildings to retrofit their structures. Berkeley Municipal Code (BMC) Chapter 19.39, effective January 4, 2014, mandated owners of soft story (also known as soft, weak or open front / "SWOF") buildings with five or more dwelling units to apply for a building permit for a seismic retrofit by December 31, 2016. Owners were given two years to complete the work upon submission of the permit application. Previously, the City approved an ordinance in 1991 (BMC 19.38) requiring owners of unreinforced masonry (URM) buildings to evaluate their buildings, obtain retrofit permits and complete seismic retrofits according to a schedule based on each building's risk categorization but in all cases no later than 2001.

Through these hazard mitigation measures, the City of Berkeley hopes to increase the safety and resilience of the city’s building stock to prevent injury and loss of life and reduce post-disaster recovery time.

**Soft Story Ordinance for Buildings with Five or More Dwelling Units**

Soft story buildings are characterized as multi-story wood-frame buildings with extensive ground story openings such as windows, storefronts, garage openings, or open-air spaces such as parking. These buildings may have few perimeter or interior walls at the ground level, leading to a relatively soft or weak lateral load resisting system in this lower story. Since the collapse of soft story buildings in the 1989 Loma Prieta and the 1994 Northridge earthquakes, there has been considerable concern in California about tenant safety and the seismic deficiencies in these buildings. In 2005, Berkeley was the first city in the country to pass an ordinance to address this potentially unsafe condition.

Berkeley’s original 2005 ordinance added Chapter 19.39 to the Berkeley Municipal Code, requiring owners of soft story buildings with five or more dwelling units to submit a seismic engineering evaluation report analyzing the ability of the building to resist earthquake forces and describing possible work to remedy weaknesses. The ordinance also required owners to notify tenants of the building’s soft, weak or open front (SWOF) condition and post an earthquake warning notice at the building entrance. The initial wood-frame SWOF inventory included 321 buildings. The inventory has since increased to 332 buildings, containing 3,665 units.

On December 3, 2013, Council adopted amendments to Berkeley Municipal Code Section 19.39.110 establishing mandatory seismic retrofit requirements for soft story buildings with five or more dwelling units. The ordinance established December 31, 2016 as the deadline for property owners to apply for a building permit. Owners must complete retrofits within two years of submitting the permit application. The table below describes the status of the 332 soft story buildings subject to mandatory retrofit as of December 2018.

**Table 1. Berkeley Soft-Story Building Status as of December 2018**

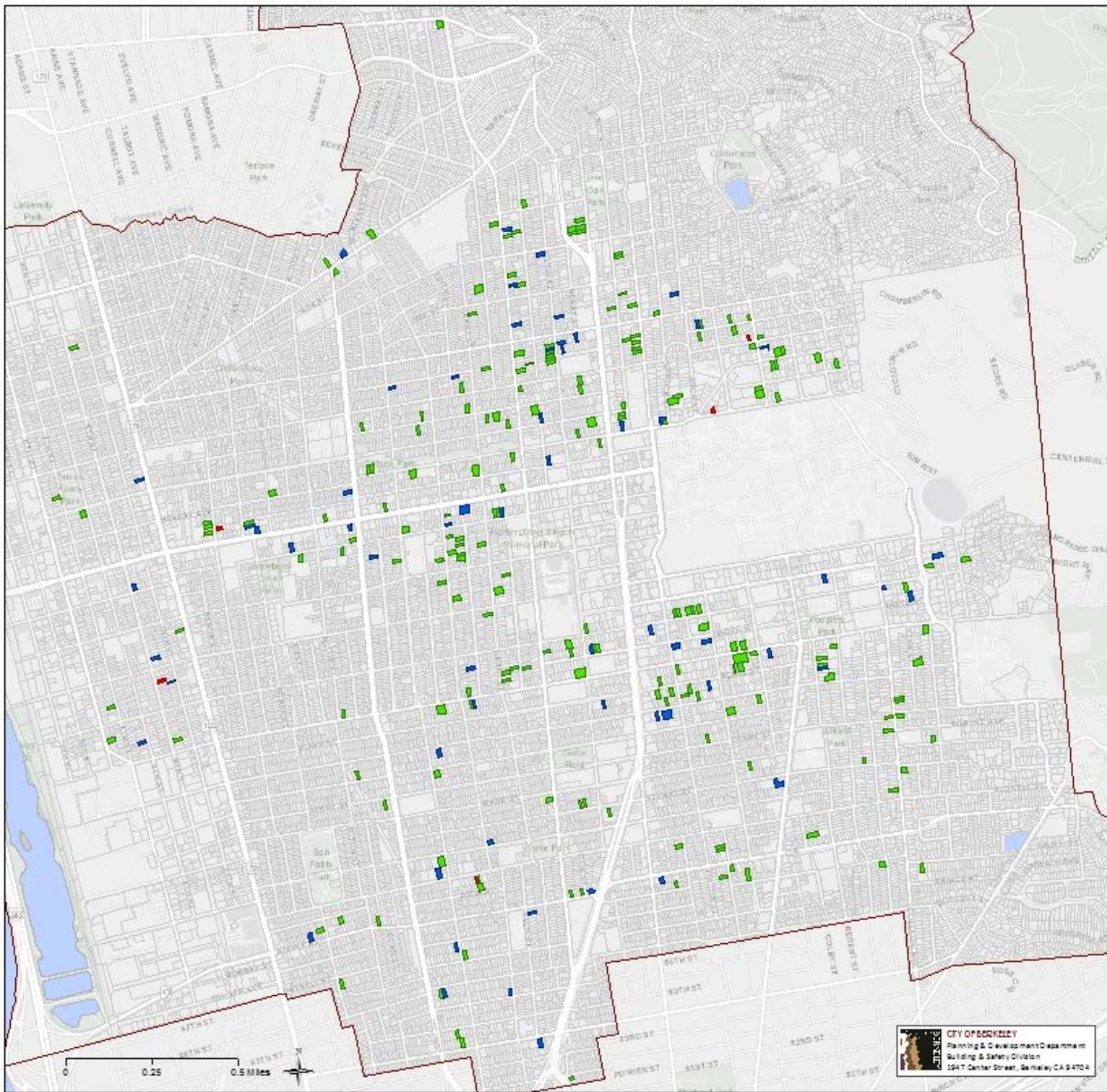
<b>Number of buildings</b>	<b>Percent*</b>	<b>Status</b>
204	61	Retrofit Complete
34	10	Permit
30	9	Applied for Permit
6	2	Not Compliant or Received Extension
58	17	Removed from Inventory for Other Reasons
332	100%	<i>Total buildings identified as soft-story</i>

\*Due to rounding, percentages do not add up to 100 percent.

Map 1 below shows the retrofit status of soft story buildings subject to mandatory retrofit, as of December 2018. Green symbols depict parcels with retrofit buildings, blue indicates parcels containing one or more buildings with permits issued or currently under review, and red shows parcels with extensions filed or buildings out of compliance.



Map 1. Status of Soft Story Buildings Subject to Mandatory Retrofit (December 2018)



- RETROFIT COMPLETED
- PERMIT ISSUED OR IN REVIEW
- NOT COMPLIANT OR RECEIVED EXTENSIONS

### ***Unreinforced Masonry (URM) Ordinance***

Unreinforced masonry (URM) buildings are generally constructed of brick, block, tile, stone, or other types of masonry, and were built prior to modern earthquake-resistant design. During an earthquake, unreinforced masonry walls that were originally built with inadequate reinforcement (embedded steel bars) are susceptible to collapse. In addition, URM buildings often include unreinforced masonry parapets, chimneys, and high brick veneers that tend to disconnect from the building and fall outward, creating a hazard for people below and in some instances causing the building to collapse. Weak or nonexistent connections between the masonry walls and the floors and roofs place occupants, pedestrians, and adjacent buildings in harm's way.

Although unreinforced masonry buildings are no longer constructed today, existing URM buildings can be retrofitted to reduce risks caused by earthquake activity. If these buildings are not retrofitted and suffer major damage in an earthquake, the costs of repair after the earthquake could be prohibitively high and may result in demolition or loss of use.

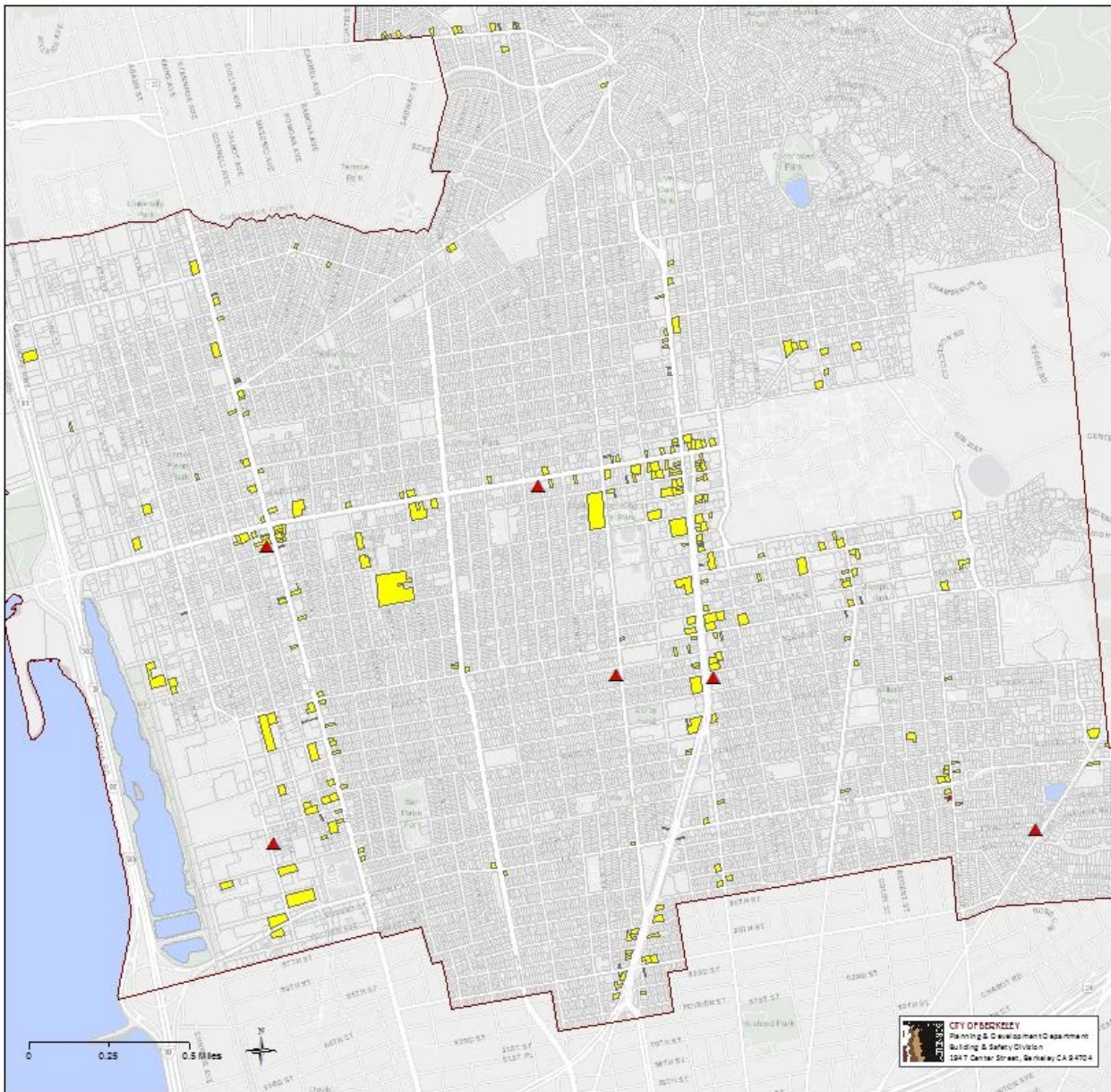
In response to State law, the City of Berkeley compiled an inventory of unreinforced masonry buildings in 1989, identifying approximately 700 residential and commercial URM buildings that were built prior to 1956. In 1991, the City adopted the Unreinforced Masonry Ordinance 6088-N.S. Subsequent amendments to the ordinance required owners of unreinforced masonry buildings to evaluate their buildings, obtain necessary permits and complete seismic retrofits by 2001.

Of the approximately 700 buildings originally included in the City's unreinforced masonry (URM) inventory, hundreds were removed from the list after owners provided evidence the buildings adequately met building standards or that the buildings were not unreinforced masonry structures. Of the original list, roughly 99% have been seismically retrofitted, demolished or demonstrated to have adequate reinforcement. As of August 2018, six buildings are still required to retrofit in order to avoid further penalties. Five of the six building owners have applied for retrofit permits.

Map 10 shows the unreinforced masonry (URM) inventory as of June 2018. Parcels in yellow contain buildings that are compliant with the Unreinforced Masonry Ordinance 6088-N.S. Red triangular symbols denote unreinforced masonry buildings still subject to mandatory retrofit, including those currently in the permitting process.



Map 2. Berkeley Parcels with Unreinforced Masonry Building Types (June 2018)



COMPLIANT WITH URM ORDINANCE

NOT COMPLIANT WITH URM ORDINANCE (INCLUDING THOSE IN PERMIT REVIEW PROCESS)

## C.1.a Financial Incentives

### ***Retrofit Grants***

In early 2017, the Building and Safety Division developed a new Retrofit Grants program with funding from a Hazard Mitigation Grant from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES). In the first round of the Retrofit Grants program, the City offered grants of up to \$25,000 to owners of soft story buildings with five or more units, and unreinforced masonry buildings. During the first round of the grant program, owners of 48 buildings containing over 400 housing units applied for grants, amounting to over \$1 million in federal funding.

The Building and Safety Division launched the second round of grant funding in May 2018, offering design and construction grants to owners of other seismically vulnerable buildings: rigid wall - flexible diaphragm buildings (RWFD) with walls made of concrete or masonry and wood or steel roofs, non-ductile concrete buildings (NDC), and soft story buildings with 3-4 residential units and non-residential uses, which are not covered under the mandatory soft story retrofit program. In the second round of the grant program, as of August 2018, owners of 66 buildings applied for an additional \$1.3 million in FEMA funding. These buildings contain almost 300 housing units in addition to a variety of retail, commercial, and educational occupancies.

In the spring of 2018, City staff conducted outreach to promote the second round of grant funding and assist owners with the application process. Information packets, including applications, fact sheets about relevant building types and grant program details were mailed to property owners of nearly 1,000 potentially vulnerable buildings. The application deadline for the second phase of the Retrofits Grants Program was June 25, 2018.

Although single-family homes and duplexes were not eligible for this program, other programs are available for property owners and are detailed below.

### ***City Transfer Tax Rebate Program***

By ordinance, the City created a program to rebate up to one-third of the transfer tax amount to be applied to earthquake upgrades on homes. The process begins once the homeowner makes seismic safety improvements. When the owner wishes to sell the house and the sale amount has been determined, the buyer and seller place a portion of the real estate transfer tax amount in an escrow account to be drawn down after improvements are complete. Since July 2002, the City has distributed over \$12 million to homeowners through this program.

**Table 2. Transfer Tax Rebate Program**

<b>Fiscal Year</b>	<b>Property Transfer Rebates</b>	<b>Total Funds Issued</b>
2003	382	\$1,133,047
2004	467	\$ 1,539,738
2005	385	\$ 1,459,510
2006	262	\$ 1,168,654
2007	144	\$ 611,433
2008	152	\$ 681,002
2009	138	\$ 533,061
2010	150	\$ 592,539
2011	157	\$ 593,974
2012	166	\$ 623,502
2013	159	\$ 766,746
2014	164	\$ 798,370
2015	138	\$ 773,697
2016	147	\$ 859,831
2017	55	\$ 423,586
2018 <sup>1</sup>	31	\$ 165,010
Total (FY 2003-2018)	3,097	\$12,723,700

**Earthquake Brace + Bolt**

The City participates in the Earthquake Brace + Bolt (EBB) program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of owner-occupied residential buildings with 1-4 dwelling units.

The EBB program provides incentives to homes most vulnerable to severe damage in an earthquake, typically those built before 1979 with raised foundations and unbraced “cripple walls,” the wood-framed walls which surround the crawl space. Bracing the cripple walls with plywood and using

<sup>1</sup> As of September 2018. Taxpayers may still claim seismic-related refunds for properties purchased in FY 2018.

anchor bolts to improve the connection between a home's wood framing and its foundation are seismic improvements that can help reduce potential damage to a home during an earthquake.

The program supplements other programs to subsidize or finance seismic improvements in Berkeley homes; these programs can be used in combination or separately.

### ***Property Assessed Clean Energy (PACE)***

Additionally, the PACE program provides financing for seismic improvements, and allows owners to pay back costs over time on their property tax bills with no upfront costs.

## **C.1.b Expanded Inventory of Seismically Vulnerable Buildings**

With the launch of the Retrofit Grants Program, staff conducted extensive research to update and refine the City's inventory of seismically vulnerable buildings. In addition to soft story buildings not currently subject to mandatory retrofit such as those with 3-4 residential units or commercial uses, Berkeley has numerous non-ductile concrete and tilt-up or other rigid wall-flexible diaphragm (RWFD) buildings. These additional building types may also be highly susceptible to adverse effects from earthquakes.

Although no ordinance currently requires property owners of these building types to retrofit, the City of Berkeley has encouraged owners to apply for grant money under the City's Retrofit Grants Program.

### ***Non-Ductile Concrete Buildings***

Non-ductile concrete buildings built prior to the mid-1970's and modern seismic code standards have performed very poorly in recent earthquakes, and have resulted in catastrophic collapses. In older concrete buildings, the detailing and construction of the reinforcing steel may be inadequate to safely resist large seismic forces caused by ground motions on these heavy structures. The most vulnerable buildings contain elements like columns, wall piers, and joints of beams and slabs that can fail in an earthquake. These buildings are considered "non-ductile" (i.e. brittle) concrete buildings and pose a high risk during a major earthquake. Retrofits of these buildings can vary widely in terms of scope and level of difficulty, and are often expensive to retrofit or rebuild.

### ***Rigid Wall-Flexible Diaphragm (RWFD) Buildings Including Tilt-Up Buildings***

Tilt-up or other rigid wall-flexible diaphragm building types are typically one or two story commercial buildings with reinforced concrete or reinforced masonry (brick or concrete block) walls. A "tilt-up" building is a specific type of building with precast concrete walls and is distinguished by its method of construction. RWFD have "flexible" roof diaphragms that consist of wood or steel beams, trusses, or rafters with wood sheathing or metal decking above. They may also have flexible diaphragms at intermediate floor levels. These buildings commonly include warehouses, manufacturing facilities, large retail stores, and other similar structures. The most common deficiency is an inadequate connection between the rigid walls and the roof (and floors) leading walls to pull away and collapse during ground shaking. Buildings designed under codes that predated the 1998 California Building Code are of primary concern.

### ***Soft Story Buildings Not Subject to Mandatory Retrofit***

Similar to Soft Story buildings subject Berkeley Municipal Code Section 19.39.110, those with only 3-4 unit or commercial uses are also vulnerable to collapse in the event of an earthquake due to weak lateral load resisting systems.



Since the initial phase of the project, the grant program has expanded to include Soft Story buildings with 3-4 residential units, and some mixed-use or nonresidential Soft Story buildings that are not mandated to retrofit.

### ***Process for Updating the Inventory of Seismically Vulnerable Buildings***

The City has worked diligently to update and broaden its inventory of seismically vulnerable buildings to include non-ductile concrete buildings, rigid wall-flexible diaphragm buildings, and soft story buildings with 3-4 residential units or commercial uses. This effort began with extensive staff research to identify vulnerable buildings using City and other data sources.<sup>ii</sup> It was followed by a field study with the Earthquake Engineering Research Institute (EERI) to assess a portion of the newly identified non-ductile concrete and rigid-wall flexible-diaphragm buildings<sup>iii</sup>, and a “virtual survey” to identify potential soft story buildings.<sup>iv</sup>

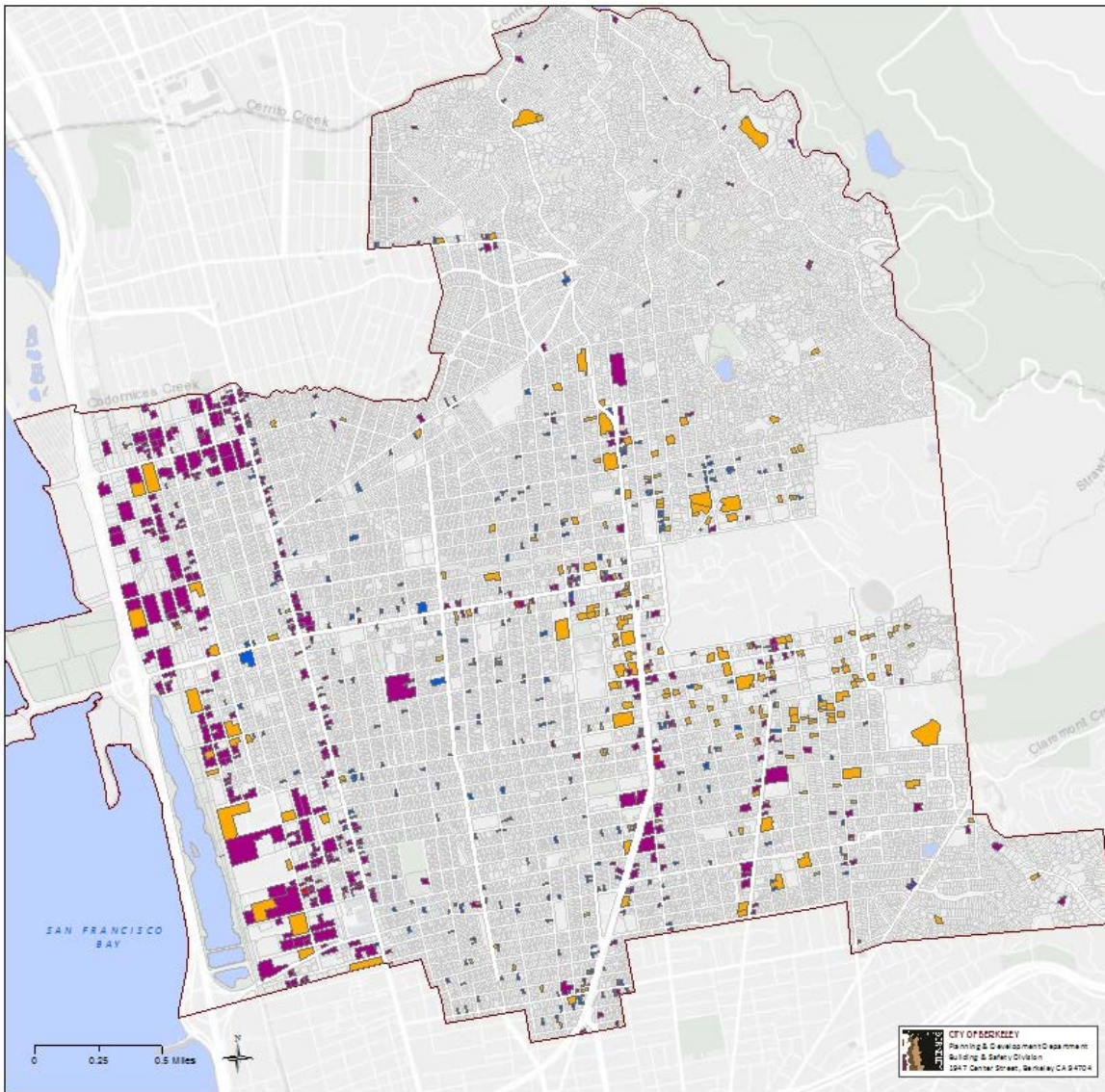
### ***Updated Inventory of Seismically Vulnerable Buildings (2018)***

As of June 2018, the City identified 1,047 potentially seismically vulnerable buildings that did not already appear on the soft story or URM inventories. The updated inventory includes 230 potentially non-ductile buildings and nearly 550 buildings that may be rigid wall-flexible diaphragm, including tilt-ups. The City has also added to the inventory approximately 240 soft story buildings not subject to mandatory retrofit under Chapter 19.39 of the Berkeley Municipal Code.

Map 11 shows Berkeley’s updated Inventory of Seismically Vulnerable buildings, as of June 2018. Soft story buildings are somewhat evenly spread throughout the City. Potentially non-ductile concrete buildings and rigid wall-flexible diaphragm buildings are more heavily concentrated along commercial corridors and west of San Pablo Avenue. Non-ductile concrete buildings are also clustered in central Berkeley, and near the UC Berkeley Campus. Soft story buildings are depicted in blue, non-ductile concrete buildings in orange, rigid wall-flexible diaphragm buildings in purple, and unreinforced masonry buildings in red.

This map reflects properties that are eligible for the Cal OES/FEMA Grant Program.

Map 3. Updated Inventory of Potentially Seismically Vulnerable Buildings (June 2018)



- POTENTIALLY NON-DUCTILE CONCRETE
- POTENTIALLY SOFT STORY AND WOOD FRAMED BUILDINGS
- POTENTIALLY TILT-UP OR OTHER RIGID WALL-FLEXIBLE DIAPHRAGM
- UNREINFORCED MASONRY

### **C.1.h. Fire Risk Reduction**

The City, working together with key partners, is using a comprehensive strategy to aggressively mitigate Berkeley's wildland-urban interface (WUI) fire hazard. These approaches include prevention through development regulations; natural resource protection through vegetation management; improvement of access and egress routes; and infrastructure maintenance and improvements to support first responders' efforts to reduce fire spread.

#### **Hazardous Fire Area Zones**

Since before the 1920s, the City of Berkeley has established and adjusted fire zones in Berkeley. While the zones were initially established to address urban fire issues, they have evolved to designate the City's WUI fire hazard. Currently, the Berkeley Fire Department has divided the city into Fire Zones 1, 2, and 3, designated in order of ascending fire risk. Fire Zones 2 and 3 are in the hills area of the City and have the strictest fire prevention standards for issues such as building materials for new structures. The City also enforces vegetation management measures in these areas.

#### **Fire Inspections**

The Berkeley Fire Department annually inspects designated high fire risk zones for hazards such as excess vegetation. The Fire Department inspects over 1,400 parcels in Fire Zones 2 and 3, in addition to complaint-driven inspections throughout the City. Residents must clear combustible brush and vegetation adjacent to building property lines and roadsides. Tree branches must be cleared from any chimney, stovepipe or overhang over a building. All leaves, needles, and dead vegetation must be swept from roofs. This program is done in cooperation with the East Bay Regional Park District, which has programs to limit combustible material in the wildland-urban interface zone on its property.

#### **Vegetation Management Programs**

The City also runs a number of vegetation management programs to reduce fuel loads, including:

- The Fire Fuel Chipper Program, a popular yard waste collection service. The Program serves properties in the hills from June through September each year. Since 2014, over 100 tons of vegetation was collected and recycled, on average, each year.<sup>v</sup>
- A fire fuel abatement program on public land. This Program was maintained in order to reduce fire fuel on public property. From May to mid-August each year, an average of 125 tons of debris are removed from approximately 98 public sites, including parks, pathways and landscaped medians.<sup>vi</sup>
- The Fire Fuel Debris Bin Program is coordinated by the Department of Public Works' Zero Waste Division, which delivers and removes 30 yard roll-off boxes from requesting neighborhoods. This effort yields an average of 132 tons of plant debris per year.<sup>vii</sup>
- Additionally, 30,000 tons of residential and commercial plant debris and commercial food waste<sup>viii</sup> is collected each year through weekly curbside collection and converted to compost.
- The City of Berkeley's Zero Waste Division has expanded staffing to include a full-time Recycling Program Manager, and is working to hire additional field representatives to help educate the community about its vegetation management programs. Additionally, the Division is performing a Feasibility Study to reimagine the City's Solid Waste and Recycling Transfer

Station to achieve its goal of Zero Waste. This re-envisioned facility will help to support outreach staff in their efforts to promote vegetation management programs.

### **C.1.i. Community Readiness**

#### **Community Emergency Response Team (CERT) Program**

CERT classes are offered free through the Fire Department to all Berkeley residents and those who work in Berkeley. Trained volunteers can help douse small fires, conduct light search and rescue, help with first aid, and communicate with City emergency responders. Neighborhoods have organized response teams and conducted drills with City emergency responders.

#### **Community Resilience Center Program (CRC)**

The CRC Program's goal is to enhance the resilience of the people of Berkeley by strengthening the organizations they depend on day-to-day and providing disaster preparedness outreach and training through organizations they know and trust. CRC organizations agree to host trainings and participate in disaster preparedness-related events that are customized to fit their audiences. In return for hosting training they receive a cache of emergency supplies to help them serve their community following a disaster. The City selected CRC organizations based on their connection to Berkeley community members who have not been reached by the City's existing preparedness programs. Current Community Resilience Centers are:

- Ed Roberts Campus
- Berkeley Youth Alternatives
- McGee Baptist Church
- La Pena Cultural Center
- Harriet Tubman Terrace Apartments
- YMCA Head Start
- Easy Does It Emergency Services
- Oregon Park Apartments
- Berkeley Humane

#### **Neighborhood Caches**

The Disaster Cache Program incentivizes community-building for disaster readiness. To date, the City has awarded caches of disaster response equipment to neighborhoods, congregations, and UC Berkeley Panhellenic groups that have undertaken disaster readiness activities.

#### **Community Oversight**

The Disaster and Fire Safety Commission closely monitors the City's disaster readiness efforts. Members are safety advocates appointed by the Mayor and City Council.

### **C.1.j. State and Federal Programs**

Many City ordinances and programs are based on State requirements. The State has numerous laws that regulate issues ranging from hospital seismic safety to coastal development. The table below highlights important State laws related to hazards, and describes how Berkeley complies with these laws.

**Table 3. State Mitigation Requirement and Berkeley Implementation**

Statewide Requirements	Berkeley Implementation
<p><b>Mandatory Building Code.</b> The State requires all communities to enforce the State-mandated building code. The building code applies to new buildings and additions, renovations and remodeling of existing buildings. The effectiveness of designs based on the code to resist earthquakes has improved incrementally over time. The code is not applied retroactively, meaning that building owners do not have to retrofit existing buildings to improve earthquake, fire or flood resistance unless the work proposed exceeds previously-defined thresholds. Certain types of buildings designed to early codes have characteristics that make them vulnerable to collapse in catastrophic earthquakes.</p>	<p>Berkeley enforces the State building code with additional local provisions for seismic and fire safety. The City has adopted the 2016 California Building Code and 2016 California Residential Code. Berkeley’s application of WUI fire standards exceeds current State requirements.</p>
<p><b>Essential Services Buildings.</b> State law requires that new essential services buildings, such as police, fire, and emergency operation and communications centers, meet a higher safety standard than other buildings. The standards include backup utilities and design and construction checks by inspectors following State guidelines.</p>	<p>The Public Safety Building, which houses the 9-1-1 emergency communications center and Emergency Operations Center, along with all seven fire stations, the Fire Warehouse and the Ratcliff building, have all been built or retrofitted to meet essential services requirements.</p>
<p><b>Safety Element and General Planning Requirement.</b> State law requires all cities and counties to prepare, adopt and keep current a general plan. Part of the plan is the “Safety Element” which defines the community approach to disaster preparedness and mitigation.</p>	<p>Berkeley completed updates to the General Plan, including the Disaster Preparedness and Safety Element, in 2003. One of the plan’s key goals is to make a disaster-resilient community. The Safety Element has a mitigation approach and significant policy and action recommendations. The 2004 mitigation plan built directly from the General Plan, and this 2019 update continues to use the General Plan as a strategic guide.</p>

<p><b>Environmental Review.</b> The California Environmental Quality Act requires that government entities consider the environmental consequences of discretionary decisions having a substantial environmental impact. CEQA guidelines require evaluation of the effect of hazards on development and the resulting consequences for the environment.</p> <p>On occasion, certain emergency safety projects are exempted from the CEQA process.</p>	<p>The City of Berkeley complies with State CEQA requirements.</p>
<p><b>Fault Zones.</b> Alquist-Priolo Earthquake Fault State requirements prohibit construction of public schools and buildings within the designated fault zones. Houses with three or fewer units are exempt from these provisions. Real estate law requires disclosure of the fault zone at the time of sale, and requires zone maps to be available for review by the public.</p>	<p>The California Geological Survey created maps that delineate a ¼-mile-wide fault zone through the east side of the city, where the Hayward Fault is located. The Hazard Analysis of this mitigation plan replicates these maps. Because of the well- defined surface expression of this fault, it is reasonable to expect ground surface rupture in this area during future earthquakes.</p>
<p><b>Seismic Hazards Maps.</b> The California Geologic Survey mapped seismic zones where earthquake-induced landslides and liquefaction are likely. The State requires site-specific investigations for new building in these zones.</p>	<p>Seismically-induced landslide risk maps are available in the Hazard Analysis of this plan. The City enforces State requirements by requiring site-specific investigations and feasible mitigation measures.</p>
<p><b>Bayfront Development.</b> The City of Berkeley abuts San Francisco Bay. All land inundated by the highest tides is within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC).</p>	<p>Developments within the City-owned and -operated Berkeley Marina require a permit from BCDC. The BCDC’s Engineering Criteria Review Board subjected the restaurants, harbormaster building and piers to rigorous independent review before construction. Full consideration is given to the effects of deep- saturated, bay mud soils and fill material. All development in this zone must be elevated one foot over flood levels.</p>



<p><b>Hospital Seismic Safety Act.</b> The Office of Statewide Health Planning and Development (OSHPD) regulates hospital construction and renovation. By 2013, all hospital buildings built before 1973 must be replaced or retrofitted so they can reliably survive earthquakes without collapsing or posing threats of significant loss of life. By 2030, all existing hospitals (including those built after 1973) must be seismically evaluated and retrofitted, if needed, so they are reasonably capable of providing services to the public after disasters.</p>	<p>There is one acute care hospital in Berkeley, Alta Bates, owned and operated by the Sutter Health Corporation. The corporation is planning to close by 2030.</p>
<p><b>Unreinforced Masonry Building Law.</b> The State required all jurisdictions to identify unreinforced masonry (URM) buildings, to notify owners regarding the expected performance of these buildings, and to adopt a plan to deal with the threat.</p>	<p>Berkeley identified 700 URMs and designated a mandatory retrofit ordinance. Of the original list, roughly 99% have been seismically retrofitted, demolished or demonstrated to have adequate reinforcement.</p>
<p><b>Disclosure of Earthquake Risk.</b> Four State laws work in tandem with State real estate requirements that mandate full disclosure of information pertinent to building purchase decisions. Owners of homes built before 1960 and certain commercial buildings are required to provide information on seismic vulnerability. Sellers must also disclose if the parcel is located in a mapped fault zone or seismic hazard area.</p>	<p>The City of Berkeley complies with this State law.</p>
<p><b>Emergency Response Plans.</b> In the wake of the 1991 Tunnel Fire, the State requires that all jurisdictions practice the Standardized Emergency Management System (SEMS), a uniform approach to disaster response based on the fire service's Incident Command System (ICS).</p>	<p>The City complies with all State requirements.</p>

<p><b>Field Act.</b> Originally passed in 1933, the Field Act regulates the design, construction and renovation of public school buildings, and the inspection of existing school buildings. Many subsequently adopted State laws, amendments to the Field Act, and supplementary laws, call for additional safety measures for all public K- 12 schools in the state. California has the most stringent safety codes for school buildings in the U.S.</p>	<p>All public schools have been upgraded to the standards of the Field Act and its amendments.</p>
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## C.2 National Flood Insurance Program

Berkeley's creek flooding exposure is assessed through the National Flood Insurance Program (NFIP), which makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. Participants in the NFIP must regulate development in floodplain areas in accordance with NFIP criteria.

Berkeley has participated in the NFIP since September 1, 1978 and is currently in good standing with the Program. NFIP compliance is monitored by FEMA regional staff and by the California Department of Water Resources under a contract with FEMA.

As part of Berkeley's effort to comply with the requirements of the NFIP, Berkeley has adopted various floodplain management measures. Thanks to the fact that the City has abided by and enforced federal flood insurance program requirements since the 1970s, flood insurance claims have been extremely low.

Berkeley's Flood Zone Development Ordinance regulates development in areas identified in the Flood Insurance Study and Flood Insurance Rate Maps.

Current Flood Insurance Rate Maps are presented in this Plan's Hazard Analysis (Element B.8.c *Exposure and Vulnerability* to review maps in detail.)

To file insurance claims with FEMA for flood damage, owners of parcels in this area must have FEMA flood insurance, and comply with the terms and conditions of the insurance. Few Berkeley homeowners are known to carry flood insurance, presumably because of negligible flood damage in recent decades, so those losses would be borne almost entirely by building owners.

The City last updated Berkeley Municipal Code (BMC) Chapter 17.12: *Flood Zone Development Ordinance* in September 2009 to maintain Berkeley's continued compliance with FEMA National Flood Insurance Program requirements. The Ordinance regulates all publicly- and privately-owned land within the areas of special flood hazard. BMC 17.12 automatically incorporates new FIRM panels. BMC 17.12 establishes the Director of the Public Works Department as the Floodplain Administrator for the City and addresses standards for construction, utilities, subdivisions, manufactured homes and recreational vehicles.

The City of Berkeley will maintain participation in the National Flood Insurance Program under the Public Works Department's Engineering Division and the Planning and Development Department's Land Use Planning and Building and Safety Divisions. The Supervising Civil Engineer will work with FEMA and other partners to continue to update and revise flood maps for the City, and to continue to incorporate FEMA guidelines and suggested activities into City plans and procedures for managing flood hazards. The Zoning Officer and Building Official are responsible for applying BMC requirements to private property projects.

### **C.3 Disaster Mitigation Goals and Objectives**

Berkeley will focus on three goals to reduce and avoid long-term vulnerabilities to the hazards identified in Element B: *Hazard Analysis*:

1. The City will evaluate and strengthen all City-owned properties and infrastructure, particularly those needed for critical services, to ensure that the community can be served adequately after a disaster.
2. The City will establish and maintain incentive programs and standards to encourage local residents and businesses to upgrade the hazard resistance of their own properties.
3. The City will actively engage other local and regional groups to collaboratively work towards mitigation actions that help maintain Berkeley's way of life and its ability to be fully functional after a disaster event.

Five objectives guide the mitigation strategy:

- A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
- B. Increase City government's ability to serve the community during and after hazardous events by mitigating risk to key City functions.
- C. Protect Berkeley's historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.
- D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
- E. Preserve Berkeley's unique character and values from being compromised by hazardous events.

### **C.4 Overview of Actions**

This plan identifies and analyzes 27 mitigation actions to reduce the impacts from hazards described in Element B: *Hazard Analysis*. This suite of actions addresses every natural hazard posing a threat to Berkeley, with an emphasis on new and existing buildings and infrastructure.

Plan actions were developed through a multi-step, broadly-inclusive process. The City convened an interdepartmental planning team, which reviewed the actions identified in the 2014 mitigation plan, as well as Berkeley's progress on these actions since 2014. This Team then revised these actions, created new actions, and established priorities to guide Berkeley's mitigation strategy for the next five years. At a meeting in December 2018, staff presented proposed 2019 actions to Institutional Community Partners, who offered feedback and identified opportunities for collaboration to further strengthen these actions. Staff revised actions and incorporated them into the 2019 First Draft Plan, which went through further public review. Additional detail on the process used to identify 2019 actions is provided in Element A: *Planning Process*.

Tables 4, 5, and 6 below summarize all of the actions. The tables group actions by their priority level (see Element C.5.a for details on prioritization of actions), and identify the hazard(s) and each action addresses.

**Table 4. High-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Building Assessment</b>	Continue appropriate seismic and fire safety analysis based on current and future use for all City-owned facilities and structures.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Strengthen and Replace City Buildings</b>	Strengthen or replace City buildings in the identified prioritized order as funding is available.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Buildings</b>	Reduce hazard vulnerabilities for non-City-owned buildings throughout Berkeley.	Earthquake Wildland-Urban Interface Fire Landslide Floods Climate Change Extreme Heat
<b>Retrofit Grants</b>	Implementation of the Retrofit Grants Program which helps Berkeley building owners increase safety and mitigate the risk of damage caused by earthquakes	Earthquake
<b>Soft Story</b>	Continued Implementation of the Soft Story Retrofit Program, which mandates seismic retrofit of soft story buildings with 5+ residential units.	Earthquake

Name	Action	Hazards
<b>Unreinforced Masonry (URM)</b>	Complete the ongoing program to retrofit all remaining non-complying Unreinforced Masonry (URM) buildings.	Earthquake
<b>Concrete Retrofit Ordinance Research</b>	Monitor passage and implementation of mandatory seismic retrofit ordinances for concrete buildings in other jurisdictions to assess best practices.	Earthquake
<b>Gas Safety</b>	Improve the disaster-resistance of the natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami
<b>Fire Code</b>	Reduce fire risk in existing development through fire code updates and enforcement.	Wildland-Urban Interface Fire
<b>Vegetation Management</b>	Reduce fire risk in existing development through vegetation management.	Wildland-Urban Interface Fire Climate Change
<b>Hills Pedestrian Evacuation</b>	Manage and promote pedestrian evacuation routes in Fire Zones 2 and 3.	Earthquake Wildland-Urban Interface Fire
<b>Hills Roadways and Parking</b>	Improve responder access and community evacuation in Fire Zones 2 and 3 through roadway maintenance and appropriate parking restrictions.	Earthquake Wildland-Urban Interface Fire
<b>Undergrounding</b>	Coordinate with PG&E for the construction of undergrounding in the Berkeley Hills within approved Underground Utility Districts (UUDs).	Earthquake Wildland-Urban Interface Fire
<b>EBMUD</b>	Work with EBMUD to ensure an adequate water supply during emergencies and disaster recovery.	Earthquake Wildland-Urban Interface Fire
<b>Extreme Heat</b>	Reduce Berkeley’s vulnerability to extreme heat events and associated hazards.	Climate Change Extreme Heat



Name	Action	Hazards
<b>Hazardous Materials</b>	Mitigate hazardous materials release in Berkeley through inspection and enforcement programs.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change
<b>Air Quality</b>	Define clean air standards for buildings during poor air quality events and use those standards to assess facilities for the Berkeley community.	Wildland-Urban Interface Fire Climate Change Extreme Heat
<b>National Flood Insurance Program (NFIP)</b>	Maintain City participation in the National Flood Insurance Program.	Floods
<b>Hazard Information</b>	Collect, analyze and share information with the Berkeley community about Berkeley hazards and associated risk reduction techniques.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Partnerships</b>	Coordinate with and encourage mitigation actions of key City partners.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat

**Table 5. Medium-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Severe Storms</b>	Reduce Berkeley’s vulnerability to severe storms and associated hazards through proactive research and planning, zoning regulations, and improvements to stormwater drainage facilities.	Landslide Floods Climate Change
<b>Energy Assurance</b>	Implement energy assurance strategies at critical facilities.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Climate Change Integration</b>	Mitigate climate change impacts by integrating climate change research and adaptation planning into City operations and services.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami Climate Change Extreme Heat
<b>Sea Level Rise</b>	Mitigate the impacts of sea level rise in Berkeley.	Climate Change
<b>Water Security</b>	Collaborate with partners to increase the security of Berkeley’s water supply from climate change impacts.	Climate Change

**Table 6. Low-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Tsunami</b>	Mitigate Berkeley's tsunami hazard.	Tsunami
<b>Streamline Rebuild</b>	Streamline the zoning permitting process to rebuild residential and commercial structures following disasters.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami

## C.5 Details of Actions

The 2019 LHMP Mitigation Strategy is detailed below. First, the document describes the process used to prioritize the actions. Next, the document overviews the constituent parts of each action, including responsibility, potential funding sources, and expected timeframes. Third, each action is presented in detail.

### C.5.a Action Prioritization

The City incorporated eight key factors into the prioritization strategy used for 2019 mitigation actions. These criteria are described below and summarized in the table that follows.

#### Key Factors

1. Support of goals and objectives

Actions that support multiple goals and objectives are prioritized.

2. Cost/benefit relationship

A detailed benefit cost analysis is required for FEMA grant eligibility. A less formal approach is taken here to weigh the relative costs and benefits of various actions. Because some projects may not be implemented for up to 10 years, the associated costs and benefits may change significantly over time. The following parameters were used to establish high, medium and low costs and benefits.

#### Costs:

- *High:* Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases)
- *Medium:* The project could be implemented with existing funding but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years
- *Low:* The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

#### Benefits:

- *High:* Project will provide an immediate reduction of risk exposure for life of property.
- *Medium:* Project will have a long-term impact on the reduction of risk exposure for life of property, or project will provide an immediate reduction in the risk exposure for property.
- *Low:* Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

3. Funding availability

Actions with secured funding are prioritized.

4. Hazards addressed

Actions addressing the Plan’s hazards of greatest concern (earthquake and wildland-urban interface fire) are prioritized.

5. Public and political support

Actions with public and political support are prioritized.

6. Adverse environmental impact

Actions with low environmental impact are prioritized.

7. Environmental benefit

Actions that provide an environmental benefit are prioritized.

8. Timeline for completion

Actions that are ongoing, or that can be completed in the short-term, are prioritized.

- Ongoing: Currently being funded and implemented under existing programs
- Short-term: To be completed in 1-5 years
- Long-term: To be completed in more than 5 years

The following table summarizes prioritization criteria. Using these factors, mitigation actions have been divided into high, medium, and low priorities. Some actions may not meet all criteria within their prioritization category. In these cases, the City’s Core Planning Team assigned the most suitable category.

**Table 7. 2019 Action Prioritization Structure**

Factors	Priority		
	High	Medium	Low
<b>1. Support of goals and objectives</b>	Supports multiple goals and objectives	Supports goals and objectives	Will mitigate the risk of a hazard
<b>2. Cost/benefit relationship<sup>2</sup></b>	Benefits exceed cost	Has benefits that exceed costs	Benefits do not exceed the costs or are difficult to quantify
<b>3. Funding availability<sup>3</sup></b>	Funding has not been secured, but the action is grant eligible under identified grant programs	Funding has not been secured, but the action is grant eligible under identified grant programs	Funding has not been secured, and a grant funding source has not been identified
<b>4. Hazards addressed</b>	Addresses hazards of greatest concern	May not address hazards of greatest concern	Addresses hazards identified in Hazard Analysis
<b>5. Public and political support</b>	Has public and political support	Has public and political support	May not have public and political support
<b>6. Adverse environmental impact</b>	No environmental impact	Low environmental impact	May not have a low environmental impact
<b>7. Environmental benefit</b>	Environmental benefit	No environmental benefit	No environmental benefit
<b>8. Timeline for completion</b>	Can be completed in the short term (1 to 5 years) or is ongoing	Can be completed in the short-term, once funding is secured	Timeline for completion is long-term (6-10 years)

<sup>2</sup> Actions that address other hazards, but for which benefits exceed costs, may also be considered high priority.

<sup>3</sup> Medium priority projects will become high priority projects once funding is secured.



## C.5.b Details of Actions

Mitigation actions identified by the Berkeley community are presented in the following pages. Actions are presented per their high, medium- or low-priority designation.

The following information is provided for each action:

- *Action Title*: Short title to identify the action
- *Action*: Proposed action
- *Proposed Activities*: Specific projects or efforts that support the action
- *Related Natural Hazard(s)*: Lists hazards whose impacts would be mitigated by the action
- *Associated LHMP Objective(s)*: Mitigation objectives that the action supports
- *Related Policies from the General Plan or Climate Action Plan*: General Plan or Climate Action Plan policies that the action supports
- *Lead Organization(s) and Staff Lead(s)*: City departments and divisions, along with particular City staff positions, which will be responsible for implementing and administering the action
- *Priority*: High, Medium or Low priority assigned to the action using criteria outlined in Appendix E: *Prioritization Structure*
- *Timeline*: Outlines expected timeframes for completion of the action
- *Additional Resources Required*: Identifies if funding is not yet available to complete the action
- *Potential Funding Sources*: Identifies potential funding sources to complete the action. Includes all sources that could possibly fund any element of the action, including staff time, contracted work, equipment purchase, etc. **Note: Funding allocations are made through the City-wide budget process. Listing a specific potential funding source does not commit resources to the action.**
- *Activity Type(s)*: If the action could be eligible for federal mitigation grant funding, identifies federally-defined activity type for grant purposes

**C.5.b.i High-Priority Actions**

<p><b>2019 Building Assessment</b></p>	<p><b>Continue appropriate seismic and fire safety analysis based on current and future use for all City-owned facilities and structures.</b></p>
<p>Proposed Activities</p>	<ul style="list-style-type: none"> <li>a) Continue analysis of structures supporting critical emergency response and recovery functions, and make recommendations for structural and nonstructural improvements.</li> <li>b) Continue to prioritize analysis of remaining structures based on occupancy and structure type, taking historic significance into consideration. Use analysis to make recommendations for structural and nonstructural improvements.</li> <li>c) Continue to integrate unsafe structures into a prioritized program for retrofit or replacement.</li> </ul>
<p>Related Natural Hazard(s)</p>	<p>Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat</p>
<p>Associated LHMP Objective(s)</p>	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.</li> </ul>
<p>Related Policies from the General Plan or Climate Action Plan</p>	<p>General Plan Policy S-10, Action B General Plan Policy S-20, Actions G and H General Plan Policy UD-7, Actions A and B General Plan Policy UD-12, Actions A and C</p>

Lead Organization(s) and Staff Lead(s)	Public Works Department: Facilities Division Staff Lead: Supervising Civil Engineer (for facilities)
Priority	High
Timeline	Ongoing
Additional Resources Required	Resources have been identified to perform some of this work; however, additional resources could allow for more facilities and structures to be analyzed in the coming five years.
Potential Funding Sources	General Fund T1 Bond

<b>2019</b>	<b>Strengthen or replace City buildings in the identified prioritized order as funding is available.</b>
<b>Strengthen or Replace City Buildings</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Retrofit North Berkeley Senior Center</li> <li>b) West Berkeley Service Center</li> <li>c) Old City Hall</li> <li>d) Veterans Memorial Building</li> <li>e) Live Oak Community Center</li> <li>f) Seek funding to seismically strengthen or replace additional City buildings in a prioritized order.</li> </ul>
Related Natural Hazard(s)	<ul style="list-style-type: none"> <li>Earthquake</li> <li>Wildland-Urban Interface Fire</li> <li>Landslide</li> <li>Floods</li> <li>Tsunami</li> <li>Climate Change</li> <li>Extreme Heat</li> </ul>

Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.</p> <p>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-20, Action H</p> <p>General Plan Policy UD-12, Actions A and C</p>
Lead Organization(s) and Staff Lead(s)	<p>Public Works Department – Engineering Division Staff Lead: Supervising Civil Engineer (for facilities)</p> <p>Parks, Recreation and Waterfront Department Staff Lead: Department Director</p>
Priority	High
Timeline	<p>North Berkeley Senior Center: Completion in 2010</p> <p>Other projects: Funding-dependent</p> <p>Live Oak Community Center: Start construction in 2019 (funding-dependent)</p> <p>Frances Albrier Community Center: Funding-dependent</p> <p>Seek funding: Ongoing</p>
Additional Resources Required	<p>North Berkeley Senior Center: No additional resources required</p> <p>West Berkeley Service Center: To be determined</p> <p>Old City Hall retrofit: To be determined</p> <p>Veterans Memorial Building retrofit: To be determined</p> <p>Live Oak Community Center: Additional resources required</p> <p>Frances Albrier Community Center: Additional resources required</p> <p>Seek funding: No additional resources required</p>

Potential Funding Sources	Pre-Disaster Mitigation Grant Program (PDM) Hazard Mitigation Grant Program (HMGP) General Fund T1 Bond Other City-Issued Bonds
Activity Type(s) (Federal Mitigation Grant Funding only)	Mitigation: Structural Retrofitting of existing buildings Mitigation: Nonstructural retrofitting of existing buildings and facilities

<b>2019 Buildings</b>	<b>Reduce hazard vulnerabilities for non-City-owned buildings throughout Berkeley.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Periodically update and adopt the California Building Standards Code with local amendments to incorporate the latest knowledge and design standards to protect people and property against known seismic, fire, flood and landslide risks in both structural and non-structural building and site components.</li> <li>b) Explain requirements and provide guidance to owners of potentially hazardous structures to facilitate retrofit, including owners participating in the Earthquake Brace and Bolt program and those applying for Transfer Tax rebates.</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Floods</p> <p>Climate Change</p> <p>Extreme Heat</p>
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</li> <li>D. Connect with residents, community-based organizations,</li> </ul>

	institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-15, Action A General Plan Policy S-20, Actions D and E General Plan Policy UD-7, Actions A and B General Plan Policy UD-12, Actions A and C
Lead Organization and Staff Lead	Planning and Development Department – Building and Safety Division (Building Code and Retrofit Guidance) Staff lead: Building Official  Planning and Development Department – Office of Energy and Sustainable Development (Earthquake Brace and Bolt Program) Staff lead: Sustainability Planner  Finance Department – Revenue Collection Division (Transfer Tax Rebate Program) Staff lead: Revenue Collection Manager
Priority	High
Timeline	Enactment of 2019 Building Code: January 1, 2020 Technical assistance: Ongoing
Additional Resources Required	No additional resources required

<b>2019 Retrofit Grants</b>	<b>Implementation of the Retrofit Grants Program which helps Berkeley building owners increase safety and mitigate the risk of damage caused by earthquakes</b>
Proposed Activities	a) Assist participating property owners with the grant process, including dissemination of program rules and guidelines.  b) Project Manager will:  a. Respond to inquiries from owners, tenants, engineers and contractors about the grant



	<p>program, including FEMA compliance procedures and requirements</p> <p>b. Environmental and Historic Preservation Reviews (EHP) for specified projects</p> <p>c. Review plan submittals for compliance with City guidelines and FEMA requirements</p> <p>d. If more funding is secured, conduct outreach to property owners to offer additional <i>Retrofit Grants</i> to increase tenant safety</p>
Related Natural Hazard(s)	Earthquake
Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-20, Actions D</p> <p>General Plan Policy S-15, Action A</p> <p>General Plan Policy-17, Action A</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning and Development Department: Building &amp; Safety Division</p> <p>Staff Lead: Program and Administration Manager</p>
Priority	High
Timeline	<p>April 1, 2019: Building Permit deadline for Retrofit Grants applicants</p> <p>August 1, 2019: Deadline for obtaining building permit or permit with a status “ready for issuance”</p> <p>Complete construction within nine (9) months of receiving notification of FEMA approval</p> <p>If a second grant is secured, an additional three-year timeline will be established for that grant.</p>

Additional Resources Required	The Planning and Development Department is seeking additional Hazard Mitigation Grant funding from Cal OES / FEMA.
Potential Funding Sources	Hazard Mitigation Grant Program (HMGP)
Activity Type(s) (Federal Mitigation Grant Funding only)	Mitigation: Structural Seismic Retrofitting of existing buildings

<b>2019 Soft Story</b>	<b>Continued Implementation of the Soft Story Retrofit Program, which mandates seismic retrofit of soft story buildings with 5+ residential units.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Continue to inform impacted property owners of the requirement to seismically retrofit their building</li> <li>b) Designated project manager will: <ul style="list-style-type: none"> <li>a. Respond to inquiries from owners, tenants, engineers, contractors and realtors about the mandatory program, compliance procedures and requirements</li> <li>b. Review plan submittals for soft-story seismic retrofits</li> <li>c. Issue permits and perform field inspections</li> <li>d. Remove retrofitted buildings from the Soft-Story Inventory</li> <li>e. Review appeals to accommodate unique circumstances preventing owners from meeting program requirements; consider time extensions, etc.</li> <li>f. Enforce soft story ordinance; issue citations to owners who are out of compliance.</li> </ul> </li> </ul>
Related Natural Hazard(s)	Earthquake
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</li> </ul>

	<p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-20, Actions B, C, D, E, and F</p> <p>General Plan Policy S-15, Action A</p>
Lead Organization and Staff Lead	<p>Planning and Development Department – Building and Safety Division</p> <p>Staff Lead: Program and Administration Manager</p>
Priority	<p>High</p>
Timeline	<p>January 2017: Deadline for soft-story building owners to submit a permit application for retrofit</p> <p>January 2019 OR two years after permit application: Deadline for soft-story retrofit completion</p>
Additional Resources Required	<p>No additional resources required</p>
Potential Funding Sources	<p>Permit Service Center Enterprise Fund</p>
Activity Type(s) (Federal Mitigation Grant Funding only)	<p>Not eligible for federal mitigation grant funding</p>

<b>2019 URM</b>	<b>Complete the ongoing program to retrofit all remaining non-complying Unreinforced Masonry (URM) buildings.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Work with owners of remaining potentially hazardous URM buildings to obtain structural analyses of their buildings and to undertake corrective mitigation measures to improve seismic resistance or to remove the buildings and replace them with safer buildings.</li> <li>b) Apply available legal remedies, including but not limited to citations, to owners who fail to comply with the URM ordinance.</li> </ul>
Related Natural Hazard(s)	Earthquake
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</li> </ul>
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-20, Action A
Lead Organization and Staff Lead	<p>Planning and Development Department - Building and Safety Division</p> <p>Staff Lead: Program and Administration Manager</p>
Priority	High
Timeline	Complete all remaining URM retrofits/demolitions by January 2020
Additional Resources Required	No additional resources required
Potential Funding Sources	<p>Permit Service Center Enterprise Fund</p> <p>Hazard Mitigation Grant Program (HMGP)</p>

<p><b>2019</b> <b>Concrete Retrofit Ordinance Research</b></p>	<p><b>Monitor passage and implementation of mandatory seismic retrofit ordinances for concrete buildings in other jurisdictions to assess best practices.</b></p>
<p>Proposed Activities</p>	<ul style="list-style-type: none"> <li>a) Monitor mandatory seismic retrofit ordinances for concrete buildings passed by other municipalities for effectiveness and best practices</li> <li>b) Communicate and collaborate with other cities and Structural Engineers Association of California (SEAOC) regarding implementation challenges and successes</li> </ul>
<p>Related Natural Hazard(s)</p>	<p>Earthquake</p>
<p>Associated LHMP Objective(s)</p>	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</li> <li>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</li> </ul>
<p>Related Policies from the General Plan or Climate Action Plan</p>	<p>General Plan Policy S-10, Action C</p>
<p>Lead Organization(s) and Staff Lead(s)</p>	<p>Planning and Development Department: Building &amp; Safety Division Staff Lead: Program and Administration Manager</p>
<p>Priority</p>	<p>High</p>
<p>Timeline</p>	<p>Monitor effectiveness of mandatory seismic retrofit ordinances for concrete buildings: Ongoing Outreach to other municipalities regarding best practices: Ongoing</p>

Additional Resources Required	No additional resources required
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<b>2019</b>	<b>Improve the disaster-resistance of the natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster.</b>
<b>Gas Safety</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Maintain a program to provide free automatic gas shutoff valves to community members who attend disaster readiness training. Provide subsidized permit fee waivers for low-income homeowners.</li> <li>b) Promote electrification of buildings, both existing buildings and new construction, to mitigate hazards associated with natural gas usage and the impacts of damage to infrastructure after a hazard occurs.</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Tsunami</p>
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>B. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</li> <li>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</li> </ul>
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-12, Action C
Lead Organization(s) and	<p>Fire Department – Office of Emergency Services</p> <p>Staff Lead: Emergency Services Coordinator (Shutoff</p>



Staff Lead(s)	Valve Program) Planning Department – Office of Energy and Sustainable Development (Electrification) Staff Lead: Climate Action Program Coordinator (Electrification)
Priority	High
Timeline	Ongoing
Additional Resources Required	Shutoff Valve Program: No additional resources required Promoting electrification: Additional funding required for implementation
Potential Funding Sources	General Fund Measure GG Special Revenue Fund Ratepayer funds from PG&E or East Bay Community Energy Grants from Energy Foundation, Urban Sustainability Directors Network, California Energy Commission, California Air Resources Board, Bay Area Air Quality Management District, U.S. Department of Energy

<b>2019 Fire Code</b>	<b>Reduce fire risk in existing development through fire code updates and enforcement.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Periodically update the Berkeley Fire Code and adopt the California Fire Code with local amendments to incorporate the latest knowledge and State regulations to protect people and property against known risks in both structural and non- structural building and site components.</li> <li>b) Evaluate Fire Prevention Division staffing necessary to adequately perform and enforce required inspections for both Annual and HFA inspections.</li> <li>c) Consider expansion of the number of properties to be included in the Hazardous Fire Area inspection program.</li> <li>d) Explore possibility of a program to inspect vacant lots throughout the city.</li> <li>e) Maintain Fire Department efforts to reduce fire</li> </ul>

	<p>risk through inspections:</p> <ul style="list-style-type: none"> <li>a. Annual building inspections in all Fire Zones</li> <li>b. Hazardous Fire Area inspections</li> <li>c. Multi-unit-residential building inspections in all Fire Zones</li> </ul> <ul style="list-style-type: none"> <li>f) Create a standard for written vegetation management plans for major construction projects in Fire Zones 2 and 3.</li> <li>g) Evaluate inspection procedures and adjust inspection cycle annually based on changing climatic conditions.</li> <li>h) Develop and enforce Fire Code requirement for fire fuel clearance on public roadways.</li> </ul>
Related Natural Hazard(s)	Wildland-Urban Interface Fire
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, heat waves, and their secondary impacts.</li> <li>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</li> </ul>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-21: Fire Preventative Design Standards, Action A</p> <p>General Plan Policy S-23: Property Maintenance, Action B</p> <p>General Plan Policy UD-7, Actions A and B</p> <p>General Plan Policy UD-12, Actions A and C Climate Action Plan – Adaptation, Goal 1D, Action 3</p>
Lead Organization(s) and Staff Lead(s)	<p>Fire Department – Division of Fire Prevention</p> <p>Staff Lead: Fire Marshal</p>
Priority	High
Timeline	<p>Fire Code Adoption: May and November 2019, and November 2022</p> <p>Staffing evaluation: Ongoing</p> <p>HFA expansion research: February 2019</p> <p>Inspections: Ongoing/Funding-dependent</p> <p>Vegetation Management Standard: Funding-dependent</p>

Additional Resources Required	<p>Inspection system evaluation: Funding-dependent</p> <p>Roadway clearance: Conceptual Plan in 2020, Implement Pilot with Community Education in 2021, Plan Enforcement in 2022</p> <p>Inspections: Additional staffing required</p> <p>Vegetation Management Standard: Additional staffing required</p> <p>Inspection system evaluation: Additional staffing required</p> <p>Roadway clearance code: Additional staffing required</p>
Potential Funding Sources	<p>Pre-Disaster Mitigation Grant Program (PDM)</p> <p>Hazard Mitigation Grant Program (HMGP)</p> <p>General Fund</p> <p>New City tax</p>
Activity Type(s) (Federal Mitigation Grant Funding only)	<p>Mitigation: Hazardous Fuels Reduction</p>

<p><b>2019</b></p> <p><b>Vegetation Management</b></p>	<p><b>Reduce fire risk in existing development through vegetation management.</b></p>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Maintain Fire Fuel Chipper Program</li> <li>b) Maintain Fire Fuel Abatement Program on Public Land</li> <li>c) Maintain Fire Fuel Debris Bin Program</li> <li>d) Maintain Weekly Curbside Plant Debris Collection</li> <li>e) Pursue external funding to increase education and awareness of vegetation management standards for fire fuel reduction</li> <li>f) Work with partners and stakeholders to identify fire fuel reduction zones and to promote and facilitate removal of vegetation in those zones to mitigate fire spread.</li> <li>g) Pursue external funding to perform vegetation management on public and private property</li> <li>h) Develop and enforce Fire Code requirement for fire fuel clearance on public roadways (see Fire Code action for</li> </ul>

	details)
Related Natural Hazard(s)	Wildland-Urban Interface Fire Climate Change
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, heat waves, and their secondary impacts.  D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-23, Action A
Lead Organization(s) and Staff Lead(s)	Department of Parks Recreation and Waterfront – Parks Division  Fire Fuel Chipper Program Staff Lead: Senior Landscape Gardener (Senior Forestry Supervisor)  Fire Fuel Abatement Program on Public Land Staff Lead: Senior Landscape Supervisor  Fire Fuel Debris Bin Program and Weekly Curbside Plant Debris Collection: Department of Public Works – Zero Waste Division  Staff Lead: Solid Waste and Recycling Manager  Fire Department  Staff Lead: Captain of Professional Standards Division (Pursue funding for education and vegetation management)  Fire Chief (Fire Fuel Reduction Zones)
Priority	High
Timeline	Ongoing
Additional	Fire Fuel Chipper Program: Additional resources required,

Resources Required	<p>amount to be determined</p> <p>Fire Fuel Abatement Program on Public Land: No additional resources required</p> <p>Vegetation management activities on public/private lands: Additional resources required, amount to be determined</p> <p>Fire fuel reduction zones: Additional resources required, amount to be determined</p>
Potential Funding Sources	<p>City General Fund Refuse Fee</p> <p>Pre-Disaster Mitigation Grant Program (PDM)</p> <p>Hazard Mitigation Grant Program (HMGP)</p> <p>Assistance to Firefighters Grant</p> <p>California Climate Investments Fire Prevention Grant Program</p>
Activity Type(s) (Federal Mitigation Grant Funding only)	<p>Mitigation: Hazardous Fuels Reduction</p>

<b>2019 Hills Pedestrian Evacuation</b>	<b>Manage and promote pedestrian evacuation routes in Fire Zones 2 and 3.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Public Works Staff will maintain paths on an as-needed basis, and will coordinate with the Berkeley Path Wanderers to maintain public pathways to provide safe pedestrian evacuation routes from the hill areas.</li> <li>b) Maintain signage for public pathways to identify safe and accessible pedestrian evacuation routes from the hill areas.</li> <li>c) Update City maps of all emergency access and evacuation routes to include pedestrian pathways.</li> <li>d) Publicize up-to-date maps of all emergency access and evacuation routes.</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p>

Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-1 Response Planning, Action B General Plan Policy S-22 Fire Fighting Infrastructure, Action A General Plan Policy T-28 Emergency Access, Actions B and C
Lead Organization(s) and Staff Lead(s)	Department of Public Works (Maintenance) Paths: Engineering Division – Assistant Public Works Engineer Signage: Transportation Division – City Traffic Engineer Department of Information Technology (Mapping) GIS Division GIS Coordinator Fire Department (Outreach) Office of Emergency Services - Emergency Services Coordinator
Priority	High
Timeline	Ongoing
Additional Resources Required	No additional resources required (additional funding could facilitate additional activities)

<b>2019 Hills Roadways and Parking</b>	<b>Improve responder access and community evacuation in Fire Zones 2 and 3 through roadway maintenance and appropriate parking restrictions.</b>
Proposed Activities	a) Maintain and improve roadways in Fire Zones 2 and 3. b) Maintain community-driven process to identify and consider areas for parking restrictions and red curbing. c) Explore options for comprehensive parking restrictions in Fire Zones 2 and 3 during Red Flag and/or Extreme Fire Weather conditions.



	d) Develop and enforce Fire Code requirement for fire fuel clearance on public roadways (see Fire Code action for details)
Related Natural Hazard(s)	Earthquake Wildland-Urban Interface Fire
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.  B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.  D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-16, Action A General Plan Policy T-25, Action A General Plan Policy T-28, Action D General Plan Policy S-22, Action A
Lead Organization(s) and Staff Lead(s)	Roadway maintenance Public Works Department: Engineering Division Staff Lead: Supervising Civil Engineer  Community-driven parking restrictions Public Works Department: Transportation Division Staff Lead: Supervising Traffic Engineer  Fire weather parking restrictions Fire Department: Office of Emergency Services Staff Lead: Assistant Chief  Fire Department: Fire Prevention Division Staff Lead: Fire Marshal
Priority	High

Timeline	Roadway maintenance: Ongoing Community-driven parking restrictions: Ongoing Fire weather parking restrictions: Conceptual Plan in 2020, Implement Pilot with Community Education in 2021, Plan Enforcement in 2022
Additional Resources Required	No additional resources required

<b>2019 Undergrounding</b>	<b>Reduce the potential threat of overhead utility wires in the Berkeley Hills.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Construction of undergrounding in the Berkeley Hills within UUD No. 48 (portions of Grizzly Peak Blvd., Summit Rd., Avenida Dr., Fairlawn Dr., and Senior Ave.)</li> <li>b) Construction of undergrounding of overhead utility wires within UUD No. 35A (Vistamont Ave., Rochdale Way, and Rosemont Ave from Woodmont Ave. to Vistamont Ave.)</li> <li>c) Construction of undergrounding of overhead utility wires on Bayview Place</li> <li>d) Complete the Phase 3 undergrounding study spearheaded by the Undergrounding Subcommittee in collaboration with Public Works Department, Fire Department, and Public Works Commission. This is a citywide study to underground overhead wires on arterial and collector streets as a component of maintaining ingress and egress on roads during a major disaster.</li> <li>e) Explore other strategies for reducing the potential threats of overhead utility wires</li> </ul>
Related Natural Hazard(s)	Earthquake Wildland-Urban Interface Fire

Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>B. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy T-28, Action E</p> <p>General Plan Policy S-1, Actions B and C</p> <p>General Plan Policy S-12, Action B</p> <p>General Plan Policy S-22, Action A</p> <p>General Plan Policy UD-8, Action A</p>
Lead Organization(s) and Staff Lead(s)	<p>Public Works Department- Engineering</p> <p>Staff Lead: City Engineer</p>
Priority	High
Timeline	<p>UUD No. 48</p> <p>Hold Community Meeting for Lighting Selection: November 2018</p> <p>Secure Easements for Above Ground Structures: November 2018 - March 2019</p> <p>Advertise for Bids: February 2019</p> <p>Construction Contract Award: Late Spring 2019</p> <p>Construction Start: Summer 2019</p> <p>UUD No. 35A</p> <p>On hold</p> <p>UUD Bayview Place</p> <p>On hold</p>
Additional Resources Required	<p>Funding for UUD No.48:</p> <p>General Fund for staff time, consultant services, lighting, and payment for easements if it is required</p> <p>Assessed fees for lighting</p> <p>Rule 20A Funds for construction</p>

	<p>Funding for UUD 35A:                  General Fund                  Remaining Rule 20A Funds</p> <p>Funding for UUD Bayview Place:                  Property Owner Funds (20B)                  General Fund for consultant services</p>
Potential Funding Sources	<p>Funding for UUD No.48:                  General Fund                  Rule 20A Funds</p> <p>Funding for UUD 35A:                  General Fund                  Rule 20A Funds</p> <p>Funding for UUD Bayview Place:                  Property Owner Funds</p>
Activity Type(s) (Federal Mitigation Grant Funding only)	Federal mitigation grant funding is not anticipated

<b>2019 EBMUD</b>	<b>Work with EBMUD to ensure an adequate water supply during emergencies and disaster recovery.</b>
Proposed Activities	<p>a) Coordinate with EBMUD regarding plans to install a new 48-inch aqueduct by 2020 to be able to continue potable and firefighting water supply following a seismic event.</p> <p>b) Explore project approaches with EBMUD to expedite replacement of problem pipelines in Berkeley neighborhoods exposed to wildland-urban interface fire and seismic ground failure.</p> <p>c) Coordinate with EBMUD to ensure that pipeline replacement projects and upgrades are coordinated with the City’s five-year street paving program and other City programs.</p>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p>

Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p>
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-12: Utility and Transportation Systems, Action A
Lead Organization(s) and Staff Lead(s)	Department of Public Works – Engineering Division Staff Lead: City Engineer
Priority	High
Timeline	Ongoing
Additional Resources Required	No additional resources required

<b>2019 Extreme Heat</b>	<b>Reduce Berkeley’s vulnerability to extreme heat events and associated hazards.</b>
Proposed Activities	<p>a) Monitor and support regional and State-level efforts to forecast the impact of climate change on temperatures and incidence of extreme heat events in Berkeley and the region, and integrate extreme heat event readiness, focusing on the most vulnerable populations impacted and improving access to resources, into City operations and services.</p> <p>b) Continue to create and maintain shading by maintaining the health of existing trees and sustaining municipal tree planting with a focus on efforts in areas where there are fewer trees.</p> <p>c) Continue to implement energy efficiency ordinances for existing residential and commercial buildings to improve building comfort, including in extreme</p>

	<p>weather conditions, and to reduce energy use.</p> <p>d) Encourage cooling strategies for the built environment through voluntary programs to mitigate the urban heat island effect. This can include strategies like green roofs, cool roofs, and cool pavements, increased vegetation, as well as electric heat pumps and natural ventilation which can provide cooling to buildings in an extreme heat event.</p>
Related Natural Hazard(s)	<p>Climate Change</p> <p>Extreme Heat</p>
Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
Related Policies from the General Plan or Climate Action Plan	<p>Climate Action Plan - Adaptation Goal 1, Policies A and D</p> <p>General Plan Policy EM-29: Street and Park Trees</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning Department – Office of Energy and Sustainable Development (Monitor Impacts, Energy Efficiency Ordinances, Cooling Technologies)</p> <p>Staff Lead: Climate Action Program Coordinator</p> <p>Department of Parks, Recreation and Waterfront – Parks Division (Tree Planting)</p> <p>Staff Lead: Parks Superintendent</p>
Priority	High
Timeline	Ongoing
Additional	Scientific monitoring, energy efficiency ordinances, cooling



Resources Required	technologies: Additional funding required for implementation Tree planting: Dependent on State of California Environmental Enhancement Mitigation Program Grant
Potential Funding Sources	City General Fund Tree planting grants City Parks Tax Fund 450 Ratepayer funds from PG&E or East Bay Community Energy Grants from Energy Foundation, Urban Sustainability Directors Network, California Energy Commission, California Air Resources Board, Bay Area Air Quality Management District, U.S. Department of Energy

<b>2019 Hazardous Materials</b>	<b>Mitigate hazardous materials release in Berkeley through inspection and enforcement programs.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Implement Hazardous Materials Release Response Plans and Inventories (HMRRP) Program</li> <li>b) Implement California Accidental Release Prevention (CalARP) Program</li> <li>c) Implement Underground Storage Tank (UST) Program</li> <li>d) Implement Aboveground Petroleum Storage Act Requirement for Spill Prevention</li> <li>e) Implement Hazardous Waste Generator and Onsite Hazardous Waste Treatment Programs</li> <li>f) Implement Hazardous Materials Management Plans (HMMP) and Hazardous Materials Inventory Statements per California Fire Code</li> <li>g) Enforce California Fire Code for Hazardous Materials Compliance (See Fire Code Action)</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Floods</p> <p>Tsunami</p>

Climate Change	
Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy EM-12, Action A</p> <p>General Plan Policy EM-13, Action A</p> <p>General Plan Policy EM-14, Actions A and B</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning: Toxics Division (all programs except Fire Code enforcement)</p> <p style="padding-left: 40px;">Staff Lead: Hazardous Materials Manager</p> <p>Fire Department: Fire Prevention Division (Fire Code)</p> <p style="padding-left: 40px;">Staff Lead: Fire Marshal</p>
Priority	High
Timeline	Ongoing
Additional Resources Required	No additional resources required

<b>2019</b>	<b>Define clean air standards for buildings during poor air quality events and use those standards to assess facilities for the Berkeley community.</b>
<b>Air Quality</b>	
Proposed Activities	<p>a) Participate in regional efforts to define standards and tools to predict buildings' ability to deliver clean air to occupants during poor air quality events.</p> <p>b) Apply standards and tools to assess City facilities' ability</p>

	<p>to provide clean air to occupants during poor air quality events.</p> <p>c) Coordinate with willing Berkeley partners to apply standards and tools to partner facilities.</p> <p>d) Use findings to develop a list of potential clean air facilities (City-run and partner-run) to the community.</p>
Related Natural Hazard(s)	<p>Wildland-Urban Interface Fire</p> <p>Climate Change</p> <p>Extreme Heat</p>
Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-20</p>
Lead Organization(s) and Staff Lead(s)	<p>Standards Development: Department of Health, Housing and Community Services: Public Health and Environmental Health Divisions</p> <p>Staff Leads: Health Officer/Environmental Health Division Manager</p> <p>Standards Implementation at City Facilities: Department of Public Works:</p> <p>Staff Lead: Facilities Division – Supervising Civil Engineer</p> <p>Staff Lead: Building Maintenance Supervisor</p> <p>Partner Coordination and Community Outreach: Fire Department: Office of Emergency Services</p>

Staff Lead: Chief of Special Operations	
Priority	High
Timeline	To be determined
Additional Resources Required	To be determined

<b>2019 NFIP</b>	<b>Maintain City participation in the National Flood Insurance Program.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Continue to use the most current FEMA information defining flood areas.</li> <li>b) Continue to incorporate FEMA guidelines and suggested activities into City plans and procedures for managing flood hazards.</li> </ul>
Related Natural Hazard(s)	Floods
Associated LHMP Objective(s)	<ul style="list-style-type: none"> <li>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</li> <li>B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.</li> <li>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</li> </ul>
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-28 Flood Insurance, Actions B and C
Lead Organization(s) and Staff Lead(s)	Public Works Department: Engineering Division (NFIP application to City projects; Program Management)

	<p>Staff Leads: Manager of Engineering, Director of Public Works</p> <p>Planning Department (application to private projects):</p> <p>Land Use Planning Division (determines if new project is subject to NFIP regulations)</p> <p>Staff Lead: Land Use Manager</p> <p>Building and Safety Division (coordinates to ensure that projects are compliant with Flood Zone Development Ordinance)</p> <p>Staff Lead: Senior Plan Check Engineer</p>
Priority	High
Timeline	Ongoing
Additional Resources Required	No additional resources required

<b>2019 Hazard Information</b>	<b>Collect, analyze and share information with the Berkeley community about Berkeley hazards and associated risk reduction techniques.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Track changes in hazard risk using the best-available information and tools.</li> <li>b) Collect and share up-to-date hazard maps identifying areas subject to heightened risk from hazards.</li> <li>c) Publicize financial and technical assistance resources for risk reduction.</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Floods</p> <p>Tsunami</p> <p>Climate Change</p> <p>Extreme Heat</p>
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from

	<p>earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>B. Increase City government’s ability to serve the community during and after hazard events by mitigating risk to key City functions.</p> <p>C. Preserve Berkeley’s unique character and values from being compromised by hazard events.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-13: Hazards Identification, Action A</p> <p>General Plan Policy S-19: Risk Analysis, Action A</p> <p>General Plan Policy UD-12, Actions A and C</p> <p>Climate Action Plan: Adaptation Action A</p>
Lead Organization(s) and Staff Lead(s)	<p>Fire Department – Office of Emergency Services</p> <p>Lead Staff: Emergency Services Coordinator</p> <p>Office of Energy and Sustainable Development (Climate Change Hazards)</p> <p>Lead Staff: Climate Action Program Coordinator</p>
Priority	High
Timeline	Ongoing
Additional Resources Required	No additional resources required
Potential Funding Sources	<p>General Fund</p> <p>Measure GG Special Revenue Fund</p>



<p><b>2019 Partnerships</b></p>	<p><b>Coordinate with and encourage mitigation actions of key City partners.</b></p>
<p>Proposed Activities</p>	<p>a) Coordinate with and encourage mitigation actions of:</p> <ul style="list-style-type: none"> <li>• Institutions serving the Berkeley community</li> <li>• Berkeley organizations and nonprofits</li> <li>• Other partners whose actions affect the Berkeley community</li> </ul>
<p>Related Natural Hazard(s)</p>	<p>Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat</p>
<p>Associated LHMP Objective(s)</p>	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.</p> <p>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
<p>Related Policies from the General Plan or Climate Action Plan</p>	<p>General Plan Policy S-5 The City’s Role in Leadership and Coordination, Actions A and B General Plan Policy UD-7, Actions A and B General Plan Policy UD-12, Actions A and C General Plan Policy S-12 Utility and Transportation</p>

	Systems, Action A
Lead Organization(s) and Staff Lead(s)	Fire Department: Office of Emergency Services Staff Lead: Assistant Chief of Special Operations
Priority	High
Timeline	Ongoing
Additional Resources Required	To be determined
Potential Funding Sources	General Fund Measure GG Special Revenue Fund

**C.5.b.ii Medium-Priority Actions**

<b>2019</b>	<b>Reduce Berkeley’s vulnerability to severe storms and associated hazards through proactive research and planning, zoning regulations, and improvements to stormwater drainage facilities.</b>
<b>Severe Storms</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Use development standards to ensure that new development does not contribute to an increase in flood potential.</li> <li>b) Complete the Watershed Management Plan to recommend improvements to problem areas in individual watersheds, and develop a Stormwater Master Plan to perform hydraulic analysis and condition assessment, and identify flow capacity and flooding issues as basis for the Watershed Management Plan.</li> <li>c) Design public improvements such as streets, parks and plazas, for retention and infiltration of stormwater by diverting urban runoff to bio-filtration systems.</li> </ul>
Related Natural Hazard(s)	<p>Landslide</p> <p>Floods</p> <p>Climate Change</p>
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy S-26, Actions B and C</p> <p>General Plan Policy S-27 New Development</p> <p>Climate Action Plan - Adaptation Goal 1, Policy C</p>
Lead Organization and Staff Lead	<p>Planning Department – Land Use Planning Division (Development Standards)</p> <p>Staff Lead: Land Use Manager</p> <p>Public Works Department – Engineering Division</p> <p>Staff Lead: Supervising Civil Engineer (Watershed Management Plan and Public Improvements)</p>
Priority	Medium

Timeline	Ongoing
Additional Resources Required	Development Standards: To be determined Watershed Management Plan/Stormwater Master Plan: To be determined Public Improvements Design: To be determined
Potential Funding Sources	City General Fund Permit Service Center Enterprise Fund Measure M Bond Funds Pre-Disaster Mitigation Grant Program (PDM) Hazard Mitigation Grant Program (HMGP)
Activity Type(s)	Mitigation: Infrastructure Retrofit

<b>2019 Energy Assurance</b>	<b>Implement energy assurance strategies at critical facilities.</b>
Proposed Activities	<ul style="list-style-type: none"> <li>a) Identify potential actions to mitigate energy assurance vulnerabilities at critical City facilities during planning/conceptual design of both retrofits and new construction</li> <li>b) Provide guidance to help the City consider opportunities to design, finance and implement clean energy assurance strategies (e.g., photovoltaic-supplemented generation, energy efficiency activities, and/or mobile charging stations).</li> <li>c) Work with partners to identify additional non-City critical facilities and develop strategies to provide clean backup power at these sites.</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Floods</p> <p>Tsunami</p> <p>Climate Change</p> <p>Extreme Heat</p>

Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>B. Increase City government’s ability to serve the community during and after hazardous events by mitigating risk to key City functions.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan - Disaster Preparedness and Safety Element: Objective 1</p> <p>General Plan Policy S-8: Continuity of Operations Climate Action Plan – Chapter 4, Goal 5: Increase Energy Efficiency and Renewable Energy Use in Public Buildings – Policies 5a and 5b</p>
Lead Organization(s) and Staff Lead(s)	<p>Department of Public Works – Facilities Division (Identify actions)</p> <p>Staff Lead: Supervising Civil Engineer (for facilities)</p> <p>Planning Department – Office of Energy and Sustainable Development (Clean Energy Opportunities)</p> <p>Staff Lead: Climate Action Program Manager</p>
Priority	Medium
Timeline	Ongoing
Additional Resources Required	Additional resources to analyze specific energy assurance options for individual projects.
Potential Funding Sources	<p>General Fund</p> <p>T1 Bond</p> <p>Measure GG Special Revenue Fund</p> <p>Ratepayer funds from PG&amp;E or East Bay Community Energy</p> <p>Grants from Energy Foundation, Urban Sustainability Directors Network, California Energy Commission, California Air Resources Board, Bay Area Air Quality Management District, U.S. Department of Energy</p>

<b>2019</b>	<b>Mitigate climate change impacts by integrating climate change research and adaptation planning into City operations and services.</b>
<b>Climate Change Integration</b>	
Proposed Activities	<ol style="list-style-type: none"> <li>a) Determine staffing needs to monitor research and oversee integration of climate change adaptation into City operations and services</li> <li>b) Develop and implement a process to integrate adaptation planning into City operations. Activities include: <ol style="list-style-type: none"> <li>a. Train City staff on the basic science and impacts of climate change and on climate adaptation strategies</li> <li>b. Develop policy and programs to address potential climate impacts in municipal capital and land use planning</li> </ol> </li> </ol>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Tsunami</p> <p>Climate Change</p> <p>Extreme Heat</p>
Associated LHMP Objective(s)	<p>A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p>
Related Policies from the General Plan or Climate Action Plan	<ul style="list-style-type: none"> <li>• Climate Action Plan – Adaptation, Goal 1A</li> <li>• Climate Action Plan – Community Outreach and Empowerment, Goal 1A</li> <li>• Climate Action Plan – Implementation, Monitoring and Reporting, Goals 2, 3 and 4</li> </ul>
Lead Organization(s) and Staff Lead(s)	<p>Planning Department – Office of Energy and Sustainable Development</p> <p>Staff Lead: Climate Action Program Manager</p>
Priority	Medium



Timeline	Determine staffing needs: 3-4 years Staff Training: Ongoing Address climate impacts in municipal planning processes: 1-2 years
Additional Resources Required	To be determined
Potential Funding Sources	General Fund Permit Service Center Enterprise Fund

<b>2019</b>	<b>Mitigate the impacts of sea level rise in Berkeley.</b>
<b>Sea Level Rise</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Monitor and participate in regional and State-level research on projected sea-level rise in Berkeley and the region.</li> <li>b) Develop guidelines, regulations, and review development standards to ensure new and existing public and private developments and infrastructure are protected from floods due to sea-level rise.</li> </ul>
Related Natural Hazard(s)	Climate Change
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
Related Policies from the General Plan or Climate Action Plan	<p>Climate Action Plan, Adaptation Policies A and C</p> <p>General Plan Goal 6: Make Berkeley a disaster-resistant community that can survive, recover from, and thrive after a disaster – Utilize Disaster-Resistant Land Use Planning</p> <p>General Plan Policy S-27: New Development</p> <p>General Plan Policy S-14: Land Use Regulation, Action E</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning Department – Office of Energy and Sustainable Development (Monitor Research/Integrate Considerations)</p> <p>Staff Lead: Climate Action Program Manager</p> <p>Planning Department – Land Use Planning Division</p>

	(Development Regulations) Staff Lead: Division Director
Priority	Medium
Timeline	Research: Ongoing Policy Development: 2 years
Additional Resources Required	Research: Additional staff capacity or funding needed for further analysis. Policy Development: Additional staff capacity to develop regulations and standards.
Potential Funding Sources	General Fund Permit Service Center Enterprise Fund Adapting to Rising Tides, San Francisco Bay Conservation & Development Commission, National Oceanic & Atmospheric Administration, Urban Sustainability Director’s Network, or Resource Legacy Fund

<b>2019</b>	<b>Collaborate with partners to increase the security of Berkeley’s water supply from climate change impacts.</b>
<b>Water Security</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Partner with East Bay Municipal Utility District (EBMUD) to provide and market incentives for residents, businesses and institutions to conserve water.</li> <li>b) Partner with agencies such as EBMUD and StopWaste to encourage private property owners and public agencies (including the City government) to use sustainable landscaping techniques that require less water and energy to maintain.</li> <li>c) Encourage water efficiency and conservation in existing buildings, such as incorporating water assessments into existing policies or creating a compliance program for SB407.</li> </ul>
Related Natural Hazard(s)	Climate Change
Associated LHMP	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from

Objective(s)	<p>earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.</p> <p>D. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.</p>
Related Policies from the General Plan or Climate Action Plan	<p>Climate Action Plan - Adaptation Goal 1, Policy B General Plan Policy EM-25: Groundwater</p> <p>General Plan Policy EM-26: Water Conservation</p> <p>General Plan Policy EM-31: Landscaping</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning Department – Office of Energy and Sustainable Development</p> <p>Staff Lead: Climate Action Program Coordinator (Water Recycling/Incentives)</p> <p>Staff Lead: Sustainability Planner (Landscaping Techniques)</p> <p>Staff Lead: Climate Action Program Coordinator (Water Efficiency and Conservation)</p>
Priority	Medium
Timeline	Encourage water efficiency in existing policies: 2-3 years
Additional Resources Required	Additional staff capacity.
Potential Funding Sources	<p>General Fund</p> <p>Permit Service Center Enterprise Fund</p>

**C.5.b.iii Low-Priority Actions**

<b>2019</b>	<b>Mitigate Berkeley’s tsunami hazard.</b>
<b>Tsunami</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Fund and replace damaged finger docks.</li> <li>b) Secure funding for replacement of D and E docks; begin the permitting process once funding is secure</li> <li>c) Begin the permitting process for piling replacement.</li> <li>d) Repair University Avenue, Marina Boulevard, and Spinnaker Way in order to mitigate tsunami vulnerabilities.</li> <li>e) Collaborate with the California Office of Emergency Services, the California Geological Survey, and the Federal Emergency Management Agency to document and explore additional tsunami hazard mitigation measures for Berkeley’s maritime communities.</li> </ul>
Related Natural Hazard(s)	Tsunami
Associated LHMP Objective(s)	A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
Related Policies from the General Plan or Climate Action Plan	General Plan Policy S-19: Risk Analysis, Action A
Lead Organization(s) and Staff Lead(s)	<p>All activities: Parks, Recreation and Waterfront Department – Marina Division</p> <p>Staff Lead: Waterfront Manager, Alexandra Endress, and Waterfront Supervisor, Stephen Bogner.</p> <p>Cal OES/CGS/FEMA collaboration: Fire Department – Office of Emergency Services</p> <p>Staff Lead: Emergency Services Coordinator</p>
Priority	Low

Timeline	Activities a) - d): funding-contingent Activity e) To be determined
Additional Resources Required	a) Finger Dock Replacement: estimated \$100k-\$500k b) D and E Dock Replacement: estimated \$4-7 million c) Piling replacement: estimated \$50k for permitting only d) Roadway repair: estimated \$4-6 million e) No additional resources required
Potential Funding Sources	Pre-Disaster Mitigation Grant Program (PDM) Hazard Mitigation Grant Program (HMGP) General Fund City-Issued Bonds
Activity Type(s) (Federal Mitigation Grant Funding only)	Mitigation: Infrastructure Retrofit

<b>2019</b>	<b>Streamline the zoning permitting process to rebuild residential and commercial structures following disasters.</b>
<b>Streamline Rebuild</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Explore a Zoning Amendment to BMC 23C.04.100 that streamlines the Zoning permitting process to allow damaged industrial and commercial buildings, and dwelling units to rebuild by right following disasters.</li> <li>b) Consider different treatment for buildings in high-risk areas, such as:             <ul style="list-style-type: none"> <li>a. Imposing higher standards of building construction for rebuilding that incorporate SRA Fire Safety Regulations (Title 14, CCR, Division 1.5, Chapter 7, Subtitle 2, Articles 1-5) and Fire Hazard Reduction Around Building and Structures Regulations (Title 14, CCR, Division 1.5, Chapter 7, Subchapter 3, Article 3).</li> <li>b. Excluding buildings in these areas from the amendment (by excluding buildings in high risk areas from the amendment proposed by this activity- rebuilding will need to be re-evaluated according to new code and new regulations. The city will</li> </ul> </li> </ul>

	<p>therefore have discretion to evaluate future development).</p> <ul style="list-style-type: none"> <li>c) Define the standard for documentation of current conditions for residential and commercial property owners to rebuild by right (in conformity with current applicable codes, specifications and standards) following disasters.</li> <li>d) Define the process for the City to accept and file this documentation.</li> <li>e) Outreach to property owners about this documentation process.</li> <li>f) Evaluate location of essential public facilities prior to rebuild in order to prioritize development outside high risk areas when feasible.</li> <li>g) Explore how other cities provide protections for people that may be vulnerable during the rebuilding process</li> </ul>
Related Natural Hazard(s)	<p>Earthquake</p> <p>Wildland-Urban Interface Fire</p> <p>Landslide</p> <p>Floods</p> <p>Tsunami</p>
Associated LHMP Objective(s)	<p>C. Preserve Berkeley’s unique character and values from being compromised by hazardous events.</p> <p>E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.</p>
Related Policies from the General Plan or Climate Action Plan	<p>General Plan Policy LU-26: Neighborhood Commercial Areas</p> <p>General Plan Policy LU-27: Avenue Commercial Areas</p> <p>General Plan S-9: Pre-Event Planning, Action B</p> <p>General Plan policy UD-7, Action C</p>
Lead Organization(s) and Staff Lead(s)	<p>Planning Department – Land Use Planning Division</p> <p>Staff Lead: Division Manager</p>
Priority	<p>Low</p>
Timeline	<p>2 years</p>



Additional Resources Required	Staff with capacity to focus on this effort
Potential Funding Sources	General Fund

## **C.6 Mitigation Plan Integration**

The 2014 Plan was well-integrated into the City's existing plans and planning mechanisms. Upon its adoption on December 16, 2014, it became an appendix to the City's Disaster Preparedness and Safety Element of the City's General Plan.

Many actions outlined in the 2014 Mitigation Strategy were funded by the City's Biennial Budget. Also included in the Biennial budget is the City's Capital Improvement Program Budget, which funded many building and infrastructure-related actions outlined in the 2014 Mitigation Strategy. The City Council adopted the FY 2016 and FY 2017 Biennial Budget on June 30, 2015. The City Council adopted the FY 2018 and FY 2019 Biennial Budget on June 27, 2017.

Actions from the 2014 LHMP were integrated into the City's Resilience Strategy, released in April 2016. The Resilience Strategy is a plan to advance preparedness and equity in Berkeley.

Additionally, each year, the City assessed potential capital improvement projects and available funding as it implemented its Five-Year Capital Improvement Plan. Capital improvement actions in this 2019 Plan will be assessed as part of this annual process.

As with prior LHMP updates, this Plan will be well-integrated into the City's existing and future plans and planning mechanisms.

### **C.6.a General Plan**

Upon its adoption by the Berkeley City Council, the 2019 LHMP will be incorporated as an appendix to the Disaster Preparedness and Safety Element of the City's General Plan. The Berkeley General Plan is a comprehensive, and long-range statement of community priorities and values developed to guide public decision-making in future years. The Plan's goals, objectives, and policies serve as a guide day-to-day decisions that are essential for responsive government. Decisions made by Berkeley City Council and its advisory boards, and commissions about the physical development of the City should be consistent with the goals, objectives, and policies of the General Plan. The City Council and Planning Commission will use the General Plan when evaluating land use changes and making funding and budget decisions. It will be used by the Zoning Adjustments Board and City staff to help regulate development proposals and make decisions on projects. The policies of the Plan apply to all property, both public and private, within the Berkeley city limits.

### **C.6.b City of Berkeley Strategic Plan**

On January 16, 2018, the City Council adopted the City of Berkeley 2018-2019 Strategic Plan. Many actions outlined in this Mitigation Strategy come from the Strategic Plan. For upcoming fiscal years, the City's Office of Emergency Services will be responsible for working with Department leaders to further incorporate actions from this Mitigation Strategy into the Strategic Plan. City staff indicated under "Lead Organizations and Staff Leads" will be responsible for further developing the project plans, schedules and budgets outlined for actions in the Mitigation Strategy. Implementation of many of these actions will be dependent on outside funding sources.

### C.6.c Capital Improvement Plan

Each year, the City assesses potential capital improvement projects and available funding as it implements its Five-Year Capital Improvement Plan. Capital improvement actions in this Plan will be assessed as part of this annual process. Many actions presented in the 2019 LHMP Mitigation Strategy are already a part of the City's Five-Year Capital Improvement Plan. Implementation of many of these actions will be dependent on outside funding sources.

### C.6.d Climate Action Plan

The 2014 and 2019 updates to the LHMP support concepts outlined in the Berkeley Climate Action Plan, which was written through a community-wide process and was adopted by City Council on June 2, 2009. The Climate Action Plan outlines a vision, goals and policies to reduce community-wide greenhouse gas emissions by 33 percent below 2000 levels.

Because climate change impacts can cause or exacerbate many of Berkeley's hazards of concern, in 2014 the LHMP was updated to include climate change as a hazard of concern. The City of Berkeley uses the Climate Action Plan to present activities to mitigate climate change itself, and the LHMP to present climate adaptation actions. In this way both plans reflect and support one another. The Mitigation Strategy of the LHMP identifies for each action the related policies from the Climate Action Plan.

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<sup>i</sup> The City has adopted Standard Plan Set A for wood frame homes of two stories or less that provides typical details and other guidance. This plan set simplifies the design of cripple wall retrofits for many homes in Berkeley.

<sup>ii</sup> To create the City's inventory of non-ductile concrete and rigid wall-flexible diaphragm buildings, staff did extensive research, including examining local Sanborn maps, Google Map images, building permit data obtained from Accela, real estate data from RealQuest, housing unit data from the Rent Stabilization Board, and City of Berkeley records such property cards, microfiche data, files from prior field surveys, and zoning data. Sanborn maps, which were originally created for assessing fire insurance liability, provide the approximate size, shape and construction material of each building within the city that existed at the time. The City of Berkeley's Sanborn maps were last updated in the early 1980's, and were therefore useful as a starting point for identifying older buildings constructed of concrete or reinforced masonry that may be vulnerable in a seismic event.

After identifying concrete buildings on the Sanborn maps, staff investigated each building's current status. Buildings confirmed to still be in existence were researched for construction material and year built, as well as for any permit history indicating whether alterations and/or seismic retrofits might have occurred. Information was also gathered for each building's use classification, APN, alternate addresses, square footage, number of stories and residential units, historic registry list data, and property ownership information required for conducting outreach.

<sup>iii</sup> During a sidewalk survey in November 2017, contracted EERI engineers visually assessed over 250 buildings to validate the City's inventory of seismically vulnerable buildings and

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identify common structural deficiencies. Additionally, two teams of experienced structural engineers were hired to help develop engineering guidelines and establish minimum standards for retrofits of non-ductile concrete and other rigid wall-flexible diaphragm buildings supported by FEMA-funded Retrofit Grants, in an effort to improve their performance during an earthquake.

<sup>iv</sup> To help identify soft story buildings with 3-4 residential units or commercial uses, staff utilized a Rental Housing Safety Program database and field survey sheets of nonresidential buildings from the original Soft Story inventory conducted in the 1990s. Staff undertook a “virtual” survey of each building using Google maps aerial and street view imagery to identify potential Soft Story buildings, and then verified the unit count and building configuration for each property by consulting City and county property records.

<sup>v</sup> Per Dan Gallagher, Senior Forestry Supervisor, City of Berkeley: The Fire Fuel Chipper Program collected green waste vegetation in the following amounts in the following years:

2005: 264.35 tons

2006: 237.59 tons

2007: 189.06 tons

2008: 175.16 tons

2009: 167.17 tons

2010: 161.31 tons

2011: 187.24 tons

2012: 155.94 tons

2013: 141.27 tons

2014: 119.72 tons

2015: 130.26 tons

2016: 430 cubic yards of wood chips and 34.28 tons of loose vegetation

<sup>vi</sup> Information provided by Susan Ferrera, Superintendent of Parks, City of Berkeley, as of November 2018

<sup>vii</sup> Information provided by Greg Apa, Solid Waste and Recycling Manager of Zero Waste Division, City of Berkeley, as of September 2018

<sup>viii</sup> Information provided by Greg Apa, Solid Waste and Recycling Manager of Zero Waste Division, City of Berkeley, as of September 2018

## D. Plan Review, Evaluation, and Implementation

### D.1 Community Profile and Trends

The people and structures of Berkeley are continually changing. This section examines changes that have occurred in hazard-prone areas and increased or decreased the vulnerability of Berkeley since 2014. First, this section discusses changes to the group of people who make up the Berkeley community, and how their characteristics will influence the population's hazard vulnerability, necessary approaches to mitigation and response. Next, changes in development are discussed, including description of recent and potential development throughout Berkeley. Next, the effects of this development of population and structures on Berkeley's vulnerability to natural hazards are discussed. Last, key City policies and goals that affect development are outlined.

#### D.1.a Community

According to the 2010 Census, the number of people living in Berkeley grew by almost 10,000 people in the last decade, to 112,580. As Berkeley's population of Berkeley has grown, the number of jobs in the city has increased from about 50,000 in 1970 to approximately 64,500 today.<sup>1</sup> Additionally, UC Berkeley's Long Range Development Plan projects that as a result of growth in both education and research, by 2020 the total campus headcount during the regular academic year may increase to 51,260 – a 12% increase over 2001-2002 levels. These population increases means that more Berkeley residents and visitors will be exposed to the area's hazards.

Berkeley has a mobile population including many people moving to Berkeley from out of the area, meaning that community disaster awareness activities need to be ongoing to penetrate the population. This figure also reflects community members moving within Berkeley, meaning that community-building activities must be constant as residents join new neighborhoods.

Much of Berkeley's mobility is due to its large college student population, with about 30 percent of city residents (34,000 enrolled in college or graduate school according to the 2016 American Community Survey).

Students represent a significant portion of Berkeley's rental market and support a variety of local merchants. Large losses in rental units after an earthquake could force students to move to other nearby cities, which would profoundly affect Berkeley's character and economics. The University of California, Berkeley faces significant earthquake risks, and a closure of this campus for any length of time would greatly impact the city overall.

Over one quarter (28 percent according to the 2016 American Community Survey) of Berkeley residents use a language other than English at home. Over 10,000 people in Berkeley have disability status (9 percent according to the 2017 American Community Survey). As discussed throughout this plan, people with disabilities are disproportionately affected before, during, and after disasters. Nearly one quarter (24 percent according to the 2017 American Community Survey) of Berkeley residents are over the age of 55. It is critical for the city to make sure that emergency responders are prepared to communicate with limited- English speakers, people with

disabilities, and seniors. This includes communicating emergency and evacuation warnings as well as mitigation strategies.

### **D.1.b Recent and Potential Development**

Berkeley is a densely-populated city with well-established land use patterns. Many private homes have been expanded and renovated, but few new lots have been developed due to Berkeley's already built-up state.

Nonetheless, development activity is ongoing. Since 2014, Berkeley has seen a significant increase in housing units. Typically, this development represents densification of commercial areas, rather than development of new sites. Before the global recession of 2009, the City issued discretionary permits for many high-occupancy mixed-use commercial/residential structures in commercial corridors on Shattuck, San Pablo and University Avenues. In the years that followed, these projects were not pursued. Now in 2018, many projects are once again moving forward. Zoning changes from the City's Downtown Area Plan have encouraged upgrades to and replacement of vulnerable buildings in the downtown area. The plan also allows for construction of three 180-foot-tall buildings and four 120-foot-high building in the downtown core.

As reported in the October 31, 2017 Housing Pipeline Report,

- 910 units have been built since 2014 across 11 projects that are now occupied.
- 525 units are under construction, or with secured building permits, in nine projects.
- About 1,400 units, in 20 projects, have been submitted and are pending review.
- About 1,134 units have been approved since 1999 but are without building permits.

The University of California, Berkeley has expanded its facilities both on and off the campus. UC Berkeley's 2020 Long Range Development Plan projects space demands for campus academic and support programs may grow by up to 18%, or 2,200,000 GSF, over 2005 levels. This includes classrooms, libraries, research facilities and student services centers. These estimates of future space needs are both future growth and compensation for existing shortages.

### **D.1.c Effects on Berkeley's Risks and Vulnerabilities**

As more people join the Berkeley community, the city will have more people who are exposed to the area's hazards. However, because of Berkeley's built-out nature, new development tends not to add new geographic areas of hazard exposure. All of Berkeley is exposed to earthquake shaking. While commercial corridors are becoming denser, density in the eastern hills, which are exposed to wildland-urban interface fire and landslides, is stable. The city's western edge will be exposed to sea-level rise from climate change. However, the actual areas of sea-level rise exposure, as well as the impacts of sea-level rise on the area's liquefaction and flooding hazards, are not yet clear.

New development generally reduces Berkeley's vulnerability to natural hazards. New construction adheres to modern design codes, including regulations for structural resistance to earthquakes, landslide mitigation efforts, fire-resistant materials, and elevation above flood



levels. Replacing or significantly renovating older structures significantly increases the Berkeley community’s protection from natural hazards. For example, pursuant to the Seismic Hazards Mapping Act codified in the Public Resources Code as Division 2, Chapter 7.8 and Guidelines for Evaluations and Mitigating Seismic Hazards in California (Special Publication 117), much of the new construction in the City’s west must have site-specific geological and geotechnical investigations, due to the area’s mapped potential liquefaction hazard. These investigations result in recommendations for design professionals to design new or rehabilitated buildings for human occupancy to mitigate the potential effects of liquefaction caused by earthquakes to a level that does not cause the collapse of the buildings. This means that a new or rehabilitated building will be equipped to better withstand potential liquefaction impacts than an old building.

## D.2 Progress in Mitigation Efforts: Status of 2014 Actions

This Plan was last adopted on December 16, 2014. Since that date, Berkeley has made steady progress on implementing 2014 plan actions and supporting activities. This section describes Berkeley’s progress on the actions and activities identified in the 2014 plan. It also identifies where some 2014 actions and activities have been incorporated into this new plan.

In the following pages, Berkeley’s progress on each 2014 mitigation activity is described using a detailed narrative. Progress on each activity is summarized in Table 2 using the categories presented below.

**Table 1. Progress Categories**

Category	Description	2019 Inclusion
Completed	Activity has been completed as written.	No
Completed with Modifications	Over the course of completing this action, the City modified the activity to better meet the associated objective.	No
In progress	Progress has been made since 2014, but the activity has not been fully completed.	Yes
Deferred	Progress has not been made since 2014, but the activity is still relevant.	Yes
Deleted	Progress has not been made since 2014, and the activity is no longer relevant.	No

*In Progress* or *Deferred* activities have been incorporated into the 2019 plan’s mitigation strategy. Table 2 shows where in the 2019 strategy the 2014 *In Progress* or *Deferred* activities have been incorporated. Following the table, progress on 2014 actions is presented in detail based on the order presented in the table.

**Table 2. 2014 Actions and Activity Status Summary**

2014 Actions/Priority	2014 Activity							
	a	b	c	d	e	f	g	h
<b>High Priority Actions</b>								
Building Assessment	In progress	Deferred	In progress	Completed with modifications				
Strengthen and Replace City Buildings	Deleted	Completed	In progress					
Soft-Story	Completed	Completed	In progress	Completed with modifications	In progress	In progress	In progress	In progress
URM Buildings	In progress	In progress	In progress					
Fire Code	Completed	Deferred	Completed with modifications	Deferred				
Vegetation Management	In progress	In progress	In progress	In progress	Deferred			
Hazard Information	In Progress	In Progress	Completed with modifications	In progress				
Partnerships	Completed with modifications	In progress						
EBMUD	In progress	In progress	In progress					
Hills Evacuation	In progress	In progress	Completed	In progress				
Climate Change Integration	In progress	Completed/In progress						
<b>Medium Priority Actions</b>								

2014 Actions/Priority	2014 Activity							
	a	b	c	d	e	f	g	h
Energy Assurance	Completed/in progress	In progress						
Gas Safety	Completed with modifications	Completed						
Stormwater System	Deferred	Completed						
Tsunami	Completed	In progress						
Extreme Heat	In progress	In progress	In progress					
Severe Storms	Completed	In progress/Deferred/Completed						
Water Security	Deleted	Completed	Completed with modifications	In progress	In progress			
NFIP	In progress	In progress						
Streamline Rebuild	Deferred	Deferred	Deferred	Deferred				
<b>Low Priority Actions</b>								
Sea-Level Rise	In progress	In progress						
HazMat Floods	Deleted	Deleted	Deleted					

## D.2.a 2014 High-Priority Actions

<p><b>2014 Building Assessment</b> Proposed Activities</p>	<p><b>Perform appropriate seismic and fire safety analysis based on current and future use for all City-owned facilities and structures.</b></p> <ul style="list-style-type: none"> <li>a) First, complete analysis of structures supporting critical emergency response and recovery functions, and make recommendations for structural and nonstructural improvements.</li> <li>b) Prioritize analysis of remaining structures based on occupancy and structure type, taking historic significance into consideration. Use analysis to make recommendations for structural and nonstructural improvements.</li> <li>c) Integrate unsafe structures into a prioritized program for retrofit or replacement.</li> <li>d) Develop emergency guidelines for buildings with structural deficiencies.</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>Public Works Department: Facilities Division Staff Lead: Facility Maintenance Superintendent</p>
<p>Priority</p>	<p>High</p>
<p>Timeline</p>	<p>Analysis of critical structures: December 2013 Analysis of remaining structures: Funding-dependent Emergency guideline development: Ongoing as identified</p>
<p>Progress on Action Between 2014-2019</p>	<p><b>a) First, complete analysis of structures supporting critical emergency response and recovery functions, and make recommendations for structural and nonstructural improvements.</b></p> <p><b>In Progress</b></p> <p>In 2015, a contractor (Kitchell) completed the Facilities Condition Assessments Report. The report provided a comprehensive review of the maintenance and repair needs of 28 City-owned capital facilities. The assessed facilities included those supporting critical emergency response and recovery functions, such as community shelters. Elements studied included life safety and fire/life safety protection systems. The report did not specifically assess seismic vulnerabilities, however, identified vulnerabilities in substandard buildings could be exacerbated by seismic events.</p> <p>Seismic upgrades are performed for buildings as they undergo major maintenance and repair indicated in the Kitchell Report.</p>

- b) Prioritize analysis of remaining structures based on occupancy and structure type, taking historic significance into consideration. Use analysis to make recommendations for structural and nonstructural improvements.**

**Deferred**

As additional funding becomes available, the City will pursue further analysis of remaining structures not included in the 2015 Kitchell Report. Analysis is prioritized at the direction of Public Works staff based on known structural or general building deficiencies, as well as code requirements.

- c) Integrate unsafe structures into a prioritized program for retrofit or replacement.**

**In Progress (Ongoing)**

The Kitchell Report established a list of maintenance and repair priorities among assessed facilities and analyzed cost implications based on facility life-cycle cost analysis or construction cost estimates, prepared for each facility. The City uses the Kitchell report as a first step in prioritizing capital projects; from there a project will go through a thorough public process for prioritization.

- d) Develop emergency guidelines for buildings with structural deficiencies.**

**Completed with Modifications**

City Safety Officers in the Human Resources Department regularly update the Emergency Action Plan Manual, which addresses evacuation procedures and provides guidelines for response to various emergencies including earthquake and fire.

<b>2014</b>	<b>Strengthen or replace City buildings in the identified prioritized order as funding is available.</b>
<b>Strengthen and Replace City Buildings</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Seismically strengthen 2180 Milvia Civic Center</li> <li>b) Replace the Center Street Garage</li> <li>c) Seek funding to seismically strengthen or replace additional City buildings in a prioritized order</li> </ul>
Lead Organization and Staff Lead	Public Works Department – Engineering Division Staff Lead: Supervising Civil Engineer
Priority	High
Timeline	2180 Milvia Civic Center retrofit by 2019

<p>Progress on Action Between 2014-2019</p>	<p>Center Street Garage replacement by 2019 Funding identification: Ongoing</p> <p><b>a) Seismically strengthen 2180 Milvia Civic Center Deleted</b> The Civic Center Building’s isolation system and retrofit elements were designed to provide life safety and limited repairable damage in a Design Basis Earthquake (DBE), and life safety and repairable damage in the Maximum Considered Earthquake (MCE). This action refers to bringing the Civic Center building to Essential Services Standards. The City is focusing efforts on retrofit of hazardous buildings.</p> <p><b>b) Replace the Center Street Garage Completed</b> Construction on the new Center Street Garage began in 2016. The garage is scheduled to reopen in October 2019. The new garage will meet current standards for seismic safety.</p> <p><b>c) Seek funding to seismically strengthen or replace additional City buildings in a prioritized order In Progress</b> Construction of the new Center Street Garage is being funded by a combination of 2016 Parking Revenue Bond Funds (\$28.3 million) and the Off Street Parking Fund (Fund 835) (\$8.2 million). The City has sought out and received funding to strengthen/replace City buildings through the City of Berkeley Infrastructure and Public Facilities Bond Measure T1, which was approved by the voters in fall of 2016. Additionally, the City has received grants to seismically strengthen or replace additional facilities:</p> <ul style="list-style-type: none"> <li>• The James Kenney Retrofit (\$3,050,512 total) was supported by grants from FEMA’s Pre-Disaster Mitigation Program (\$727,499), as well as a Department of Housing and Community Development grant of \$1,036,700.</li> <li>• In 2016 the City was awarded a FEMA Pre-Disaster Mitigation Program Grant of \$1.875 million for retrofit of North Berkeley Senior Center. Work on this project is expected to begin in February 2019.</li> </ul> <p>The City will continue to seek out funding for remaining projects.</p>
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<p><b>2014</b> <b>Soft-Story</b> Proposed Activities</p>	<p><b>Implement Phase Two of the Soft-Story Retrofit Program, mandating retrofit of soft-story residences.</b></p> <ol style="list-style-type: none"> <li>a) Develop and publish Framework Guidelines calibrating, delineating and detailing technical requirements to be used for building retrofits.</li> <li>b) Inform impacted property owners of the requirement to retrofit their building</li> <li>c) Designated project manager will:             <ul style="list-style-type: none"> <li>• Prepare handouts and correspondence</li> <li>• Respond to inquiries from owners, tenants, engineers, contractors and realtors about the mandatory program, compliance procedures and requirements</li> </ul> </li> <li>d) Investigate and adopt financial, procedural, and land use incentives to facilitate retrofit.             <ul style="list-style-type: none"> <li>• The Rent Board will review requests for pass-through of capital improvement expenses for seismic retrofits. They will determine on a case-by-case basis if rent increases to tenants can be approved.</li> <li>• Explore establishment of a loan program to assist landlords who cannot access financing to retrofit their buildings.</li> </ul> </li> <li>e) Review plan submittals for soft-story seismic retrofits</li> <li>f) Issue permits and perform field inspections</li> <li>g) Remove retrofitted buildings from the Soft-Story Inventory</li> <li>h) Review appeals to accommodate unique circumstances preventing owners from meeting program requirements; consider time extensions, etc.</li> </ol>
<p>Lead Organization and Staff Lead</p>	<p>Planning and Development Department – Building and Safety Division Staff Lead: Program and Administration Manager</p>
<p>Priority Timeline</p>	<p>High January 2017: Deadline for soft-story owners to submit a permit application for retrofit January 2019: Final deadline for soft-story retrofit completion (2 years after permit application)</p>
<p>Progress on Action Between 2014-2019</p>	<p><b>a) Develop and publish Framework Guidelines calibrating, delineating and detailing technical requirements to be used for building retrofits. Completed</b> Framework Guidelines were published in 2014.</p>

**b) Inform impacted property owners of the requirement to retrofit their building**

**Completed**

Following passage of mandatory retrofit requirements in November 2013, the City mailed impacted property owners a notice informing them of the requirement to retrofit their buildings.

**c) Designated project manager will:**

- **Prepare handouts and correspondence**
- **Respond to inquiries from owners, tenants, engineers, contractors and realtors about the mandatory program, compliance procedures and requirements**

**In Progress**

Description: Owners were notified of the requirement to retrofit their buildings and sent handouts and correspondence. Staff continues to enforce the ordinance and provide information about compliance. When properties are sold, staff work with new owners to assist them with completing retrofits.

**d) Investigate and adopt financial, procedural, and land use incentives to facilitate retrofit.**

- **The Rent Board will review requests for pass-through of capital improvement expenses for seismic retrofits. They will determine on a case-by-case basis if rent increases to tenants can be approved.**
- **Explore establishment of a loan program to assist landlords who cannot access financing to retrofit their buildings.**

**Completed with Modifications**

Description: The Rent Board revised its capital pass-through requirements to allow pass-throughs in certain cases of seismic retrofit costs for mandatory retrofits for owners who own fewer than 12 residential units in Berkeley.

The City of Berkeley opted into the Property Assessed Clean Energy (PACE) program that provides financing for seismic retrofits.

The City obtained a Hazard Mitigation grant from FEMA and established a retrofit grant program, offering grants of up to \$25,000 for mandatory soft story retrofits.

**e) Review plan submittals for soft-story seismic retrofits**

**In Progress**

	<p>Description: The City is continuing to review plan submittals for soft story retrofits as building owners apply for permits.</p> <p><b>f) Issue permits and perform field inspections In Progress</b></p> <p><b>g) Description: The City is continuing to issue permits and perform inspections for the remaining required retrofits. As of November 2018, of the 331 buildings on the inventory of potentially hazardous Soft Story buildings, 72 owners still need to retrofit. Of those, 66 have either obtained permits or submitted permit applications, and 6 building owners have not yet applied for permits. Remove retrofitted buildings from the Soft-Story Inventory In Progress</b></p> <p>Description: As retrofits are completed, buildings are removed from the Soft Story Inventory. Since 2014, 95 buildings have been removed from the inventory and ten buildings have been added.</p> <p><b>h) Review appeals to accommodate unique circumstances preventing owners from meeting program requirements; consider time extensions, etc. In Progress</b></p> <p>Owners who have submitted applications for a use permit to make changes to their property at the same time as completing a seismic retrofit have been granted extensions. Where properties have changed hands, new owners have also received additional time.</p>
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<b>2014</b>	<b>Complete the ongoing program to retrofit all remaining non-complying Unreinforced Masonry (URM) buildings.</b>
<b>URM</b>	
Proposed Activities	<p>a) Begin by working with owners of remaining potentially hazardous URM buildings to obtain structural analyses of their buildings and to undertake corrective mitigation measures to improve seismic resistance or to remove the buildings and replace them with safer buildings.</p> <p>b) Apply available legal remedies, including but not limited to citations, to owners who fail to comply with the URM ordinance.</p> <p>c) Maintain program notification to building occupants and owners.</p>
Lead Organization and Staff Lead	Planning Department - Building and Safety Division Staff Lead: Program and Administration Manager
Priority	High

<p>Timeline</p>	<p>Engage all remaining URM building owners by January 2015 Complete all remaining URM retrofits/demolitions by January 2019</p>
<p>Progress on Action Between 2014-2019</p>	<p>a) <b>Begin by working with owners of remaining potentially hazardous URM buildings to obtain structural analyses of their buildings and to undertake corrective mitigation measures to improve seismic resistance or to remove the buildings and replace them with safer buildings.</b> <b>In Progress</b> Description: Of 587 buildings placed on the URM inventory, 20 buildings remained on the inventory in 2014. Since 2014, 15 have complied and been removed. One additional URM building was identified and added to the inventory. There are currently six URM buildings that need to be retrofitted. All owners have received multiple communications from the City including citation penalties. Five of the six building owners have applied for permits.</p> <p>b) <b>Apply available legal remedies, including but not limited to citations, to owners who fail to comply with the URM ordinance.</b> <b>In Progress</b> Description: The Building and Safety Division continues to cite the remaining owners of unreinforced masonry buildings. In addition, staff established a Retrofit Grants program and has worked to incentivize retrofits with financial assistance.</p> <p>c) <b>Maintain program notification to building occupants and owners.</b> <b>In Progress</b> Description: Owners are required to post signs in the main entrance of the building indicating their building is on the URM inventory and constitutes a severe threat to life safety in the event of an earthquake of moderate to high magnitude. Additionally, the City maintains and regularly updates its List of Unreinforced Masonry Buildings that still need to be retrofitted, available for public review on the City website.</p>

<p><b>2014 Buildings</b></p>	<p><b>Reduce hazard vulnerabilities for non-City-owned buildings throughout Berkeley.</b></p>
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Proposed Activities	<ul style="list-style-type: none"> <li>a) Periodically update and adopt the California Building Standards Code with local amendments to incorporate the latest knowledge and design standards to protect people and property against known seismic, fire, flood and landslide risks in both structural and non-structural building and site components.</li> <li>b) Explain requirements and provide guidance to owners of potentially hazardous structures to facilitate retrofit.</li> </ul>
Lead Organization and Staff Lead	<p>Planning Department – Building and Safety Division Staff lead: Building Official</p>
Priority	High
Timeline	<p>Enactment of 2013 Building Code: January 1, 2014 Enactment of 2016 Building Code: January 1, 2017 Technical assistance: Ongoing</p>
Progress on Action Between 2014-2019	<ul style="list-style-type: none"> <li>a) <b>Periodically update and adopt the California Building Standards Code with local amendments to incorporate the latest knowledge and design standards to protect people and property against known seismic, fire, flood and landslide risks in both structural and non-structural building and site components.</b> <b>In Progress</b> Description: Each three-year code cycle, the Building and Safety Division adopts local technical amendments and updated standards addressing local fire and seismic hazards.</li> <li>b) <b>Explain requirements and provide guidance to owners of potentially hazardous structures to facilitate retrofit.</b> <b>In Progress</b> The City has identified additional categories of potentially hazardous buildings including rigid wall - flexible diaphragm buildings, non-ductile concrete buildings and soft-story buildings with three or four residential units or commercial uses that are not subject to mandatory retrofit requirements. The City published technical guidelines regarding retrofits of these building types and eligible building owners were invited to apply for a FEMA-funded retrofit grant. The City also participated in the Earthquake Brace + Bolt program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of buildings with 1-4 dwelling units.</li> </ul>

<b>2014</b>	<b>Reduce fire risk in existing development through fire code updates and enforcement.</b>
<b>Fire Code</b>	
Proposed Activities	<p>a) Periodically update and adopt the Berkeley Fire Code with local amendments to incorporate the latest knowledge and design standards to protect people and property against known risks in both structural and non-structural building and site components.</p> <p>b) Maintain Fire Department efforts to reduce fire risk through inspections:</p> <ul style="list-style-type: none"> <li>• Annual inspections in all Fire Zones</li> <li>• Hazardous Fire Area inspections</li> <li>• Multi-unit-residential building inspections in all Fire Zones</li> </ul> <p>c) Create a standard for written vegetation management plans for major construction projects in Fire Zones 2 and 3.</p> <p>d) Evaluate inspection procedures and adjust inspection cycle annually based on changing climatic conditions.</p>
Lead Organization and Staff Lead	Fire Department – Division of Fire Prevention Staff Lead: Deputy Fire Chief (Fire Marshal)
Priority	High
Timeline	<p>Fire Code Adoption: Complete by January 2014 and January 2017</p> <p>Inspections: Ongoing</p> <p>Vegetation Management Standard: 1-2 years</p> <p>Inspection system evaluation: Ongoing</p>
Progress on Action Between 2014-2019	<p><b>a) Periodically update and adopt the Berkeley Fire Code with local amendments to incorporate the latest knowledge and design standards to protect people and property against known risks in both structural and non-structural building and site components.</b></p> <p><b>Completed (Ongoing)</b></p> <p>The City of Berkeley updated the Berkeley Fire Code on November 29, 2016 (Ordinance No. 7,518-N.S)</p> <p><b>b) Maintain Fire Department efforts to reduce fire risk through inspections:</b></p> <ul style="list-style-type: none"> <li>• <b>Annual inspections in all Fire Zones</b></li> </ul> <p><b>Deferred</b></p> <p>The Fire Department was not able to complete all annual inspections in 2014 - 2018 due to lack of staff. The Fire Department has improved its efficiency and as of 2018 completed approximately 90% of required inspections.</p>

While Fire Prevention Division staffing has not increased, Berkeley's population has grown and the city has seen a substantial increase in new construction and associated density. These additional services demand more staffing that has not yet been appropriated in the budget.

- **Hazardous Fire Area inspections Completed with modifications (Ongoing)**

From 2014-2016, Fire Department personnel completed required inspections in the Hazardous Fire Area (HFA). In 2017 and 2018, the Fire Prevention Division added over 300 properties to the HFA Program. This was an approximate increase of 30% without additional staffing allocations.

In 2017, the Fire Department completed inspections of all HFA properties and found violations in approximately half of the 300+ newly-added properties. These violations were subsequently abated.

The Fire Department will complete all HFA Program inspections in 2018.

The Fire Department is undergoing a thorough review of this program and will possibly further increase the number of properties to be included in the HFA Program if additional staffing is provided.

- **Multi-unit-residential building inspections in all Fire Zones**

**Deferred**

See item (a) above.

**c) Create a standard for written vegetation management plans for major construction projects in Fire Zones 2 and 3.**

**Deferred**

The Fire Prevention Division was unable to complete this activity due to lack of staffing resources.

However, the City has adopted the State-mandated regulations, California Building Code Chapter 7A, which requires ignition-resistant exterior construction.

**d) Evaluate inspection procedures and adjust inspection cycle annually based on changing climatic conditions.**

**Deferred**



The Fire Prevention Division was unable to carry out this activity due to lack of staffing resources.

<p><b>2014 Vegetation Management</b></p>	<p><b>Reduce fire risk in existing development through vegetation management.</b></p>
<p>Proposed Activities</p>	<ul style="list-style-type: none"> <li>a) Maintain Fire Fuel Chipper Program</li> <li>b) Maintain Fire Fuel Abatement Program on Public Land</li> <li>c) Maintain Fire Fuel Debris Bin Program</li> <li>d) Maintain Weekly Curbside Plant Debris Collection</li> <li>e) Pursue external funding to increase education and awareness of vegetation management standards for fire fuel reduction</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>Department of Parks Recreation and Waterfront – Parks Division</p> <p style="padding-left: 40px;">Fire Fuel Chipper Program Staff Lead: Senior Forestry Supervisor</p> <p style="padding-left: 40px;">Fire Fuel Abatement Program on Public Land Staff Lead: Senior Landscape Supervisor</p> <p>Department of Public Works – Zero Waste Division (Fire Fuel Debris Bin Program and Weekly Curbside Plant Debris Collection)</p> <p style="padding-left: 40px;">Staff Lead: Zero Waste Manager</p> <p>Fire Department – Division of Support Services (Funding for education)</p> <p style="padding-left: 40px;">Staff Lead: Deputy Fire Chief (Fire Marshal)</p>
<p>Priority Timeline</p>	<p>High Ongoing</p>
<p>Progress on Action Between 2014-2019</p>	<p><b>a) Maintain Fire Fuel Chipper Program In Progress (Ongoing)</b></p> <p>The City maintained this yard waste collection program, which reduced fire fuels on private properties. The Program serves properties in the hills from June through September each year. Since 2014, over 100 tons of vegetation was collected and recycled, on average, each year.</p>

- b) Maintain Fire Fuel Abatement Program on Public Land  
In Progress/Ongoing**  
This Program was maintained in order to reduce fire fuel on public property. From May to mid-August each year, an average of 125 tons of debris are removed from approximately 98 public sites, including parks, pathways and landscaped medians.
- c) Maintain Fire Fuel Debris Bin Program  
In Progress (Ongoing)**  
The Fire Fuel Debris Bin Program is coordinated by the Department of Public Works' Zero Waste Division, which delivers and removes 30 yard roll-off boxes from requesting neighborhoods. This effort yields an average of 132 tons of plant debris per year.
- d) Maintain Weekly Curbside Plant Debris Collection  
In Progress (Ongoing)**  
30,000 tons of residential and commercial plant debris and commercial food waste is collected each year through weekly curbside collection and converted to compost.
- e) Pursue external funding to increase education and awareness of vegetation management standards for fire fuel reduction  
Deferred**  
The Fire Prevention Division was unable to carry out this activity due to lack of staffing resources. In September 2018, the Fire Department established the Professional Standards Division, which will support the Department in seeking out external funding to perform these activities.

<p><b>2014 Hazard Information</b> Proposed Activities</p>	<p><b>Collect, analyze and share information with the Berkeley community about Berkeley hazards and associated risk reduction techniques.</b></p> <ul style="list-style-type: none"> <li>a) Track changes in hazard risk using the best-available information and tools.</li> <li>b) Collect and share up-to-date hazard maps identifying areas subject to heightened risk from hazards.</li> <li>c) Partner with the Association of Bay Area Governments to incorporate Berkeley's vulnerabilities onto regionally-managed hazard maps.</li> </ul>
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Lead Organization and Staff Lead	<p>d) Publicize financial and technical assistance resources for risk reduction.</p> <p>Fire Department – Office of Emergency Services                  Lead Staff: Emergency Services Coordinator</p> <p>Office of Energy and Sustainable Development (Climate Change Hazards)                  Lead Staff: Climate Action Coordinator</p>
Priority Timeline	High Ongoing
Progress on Action Between 2014-2019	<p><b>a) Track changes in hazard risk using the best-available information and tools.</b>  <b>In Progress (Ongoing)</b></p> <p>Earthquake: The City of Berkeley is a HayWired Coalition Partner, having provided input in development of the USGS’s HayWired Earthquake Scenario. USGS scientists presented findings to staff at two meetings in 2017. HayWired findings have been integrated into this 2019 Local Hazard Mitigation Plan. Additionally, emergency managers have used the HayWired scenario as a basis for staff emergency response exercises.</p> <p>Tsunami: The Office of Emergency Services adopted the <i>California Maritime Tsunami Response Playbook</i> and the <i>California Tsunami Evacuation Playbook</i>. These Playbooks address appropriate response actions for different tsunami scenarios, considering Berkeley’s specific geography. These documents were produced by the California Geological Survey, National Oceanic and Atmospheric Administration, and California Office of Emergency Services. City staff met with representatives from these organizations in 2018 to discuss implementation of these products in Berkeley. These tools enable Berkeley to have scaled responses to different expected tsunami flood levels.</p> <p>Climate Science: The Office of Energy &amp; Sustainable Development (OESD) continues to track the latest science, information and tools related to climate change impacts, including but not limited to sea-level rise and extreme heat. Some of this new research is incorporated into the 2019 LHMP Update.</p> <p><b>b) Collect and share up-to-date hazard maps identifying areas subject to heightened risk from hazards.</b>  <b>In Progress (Ongoing)</b></p>

The 2019 Local Hazard Mitigation Plan incorporates up-to-date hazard maps. Additionally, the Office of Emergency Services has created web pages with hazard maps for earthquake, seismic-induced landslide, wildfire, and tsunami.

Hazard maps have been incorporated into community outreach presentations, including the 1-hour Disaster Preparedness presentation and the 3-hour Community Emergency Response Team Disaster Preparedness Course.

OESD continues to track and share any new information that can inform hazard maps.

**c) Partner with the Association of Bay Area Governments to incorporate Berkeley’s vulnerabilities onto regionally-managed hazard maps. Completed with Modifications**

ABAG’s website provides hazard maps for earthquake, flooding, wildfire, and landslide.

Berkeley vulnerabilities are presented in this 2019 Local Hazard Mitigation Plan update.

**d) Publicize financial and technical assistance resources for risk reduction.**

**In progress**

The Building & Safety Division has developed a comprehensive website for Seismic Safety Information and Programs, which links to resources for the following:

Funding for Seismic Retrofits:

- Transfer Tax Reductions for Qualifying Seismic Work
- Retrofit Grants for Seismically Vulnerable Buildings
- Earthquake Brace + Bolt
- PACE Financing for Seismic Retrofits

Berkeley's Mandatory Seismic Retrofit Programs

- Soft Story Program
- Unreinforced Masonry Program

Earthquake and Disaster Preparedness

- Building Occupancy Resumption Program (BORP)
- Community Emergency Response Team (CERT) Training

The City has hosted multiple community workshops for these and other programs.

OESD continues to promote Property Assessed Clean Energy (PACE) financing. More information at: <https://www.cityofberkeley.info/PACE/>

<p><b>2014 Partnerships</b></p>	<p><b>Ensure that the City provides leadership and coordinate with the private sector, public institutions, and other public bodies in disaster mitigation.</b></p>
<p>Proposed Activities</p>	<p>a) Support and encourage efforts undertaken by key lifeline providers to plan for and finance seismic retrofit and other disaster-resistance measures, including:</p> <ul style="list-style-type: none"> <li>• Utility providers</li> <li>• Transportation agencies</li> <li>• Communication providers</li> <li>• Healthcare facilities</li> </ul> <p>b) Coordinate with and encourage mitigation actions of:</p> <ul style="list-style-type: none"> <li>• Institutions serving the Berkeley community</li> <li>• Berkeley organizations and nonprofits</li> <li>• Other partners whose actions affect the Berkeley community</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>City Manager’s Office (Advocacy)                  Staff Lead: Deputy City Manager                  Fire Department – Office of Emergency Services (Coordination)                  Staff Lead: Office of Emergency Services Captain</p>
<p>Priority</p>	<p>High</p>
<p>Timeline</p>	<p>Ongoing</p>
<p>Progress on Action Between 2014-2019</p>	<p>a) <b>Support and encourage efforts undertaken by key lifeline providers to plan for and finance seismic retrofit and other disaster-resistance measures, including:</b></p> <ul style="list-style-type: none"> <li>• <b>Utility providers</b></li> <li>• <b>Transportation agencies</b></li> <li>• <b>Communication providers</b></li> <li>• <b>Healthcare facilities</b></li> </ul> <p><b>Completed with Modifications</b>                  City staff coordinate regularly on disaster planning and preparedness activities with emergency management staff from partner agencies. Support and encouragement as written in this action is primarily undertaken by elected officials.</p>



Avenue. EBMUD produced 65% drawings for City review and comments. EBMUD’s project timeline is for construction in 2019-2020 timeframe.

**b) Explore project approaches with EBMUD to expedite replacement of problem pipelines in Berkeley neighborhoods exposed to wildland-urban interface fire and seismic ground failure.**

**In Progress (Ongoing)**

The City and EBMUD meet on a quarterly basis to exchange information on projects to allow timely coordination and minimize conflicts between City, EBMUD, and private projects within Berkeley. In 2018, EBMUD completed an extensive pipeline replacement project in the Panoramic Hill area, which is exposed to both wildland-urban interface fire hazards and seismic hazards. They have also prepared to construct a Pumping Plant Project on Panoramic Hill in late 2019 and 2020.

**c) Coordinate with EBMUD to ensure that pipeline replacement projects and upgrades are coordinated with the City’s five-year street paving program.**

**In Progress (Ongoing)**

In quarterly meetings the coordination of EBMUD projects with City stormwater projects, sanitary sewer projects, traffic management projects, paving projects, 5-year paving program, and known significant private projects is discussed. An example of this is coordinating the sequencing of the construction of the Panoramic Pumping Plant with the City’s Panoramic Street Rehabilitation Project in an effort to minimize impacts to the residents and provide the residents with high quality paved streets in their neighborhood.

**2014 Hills Evacuation**

**Proposed Activities**

**Manage and promote pedestrian evacuation routes in Fire Zones 2 and 3.**

- a) Ensure that all public pathways and associated signage are maintained to identify and provide safe and



Lead Organization and Staff Lead	<p>accessible pedestrian evacuation routes from the hill areas.</p> <ul style="list-style-type: none"> <li>b) Update City maps of all emergency access and evacuation routes to include pedestrian pathways.</li> <li>c) Coordinate with UC Berkeley and Berkeley Lab to ensure that evacuation route options account for paths on UC and Berkeley Lab property.</li> <li>d) Publicize up-to-date maps of all emergency access and evacuation routes.</li> </ul> <p>Department of Public Works – Engineering Division (Maintenance)</p> <p>Public Works Staff Lead: Associate Civil Engineer Information Technology GIS Division (Mapping) IT Staff Lead: GIS Coordinator</p> <p>Fire Department Office of Emergency Services (Outreach) Fire-OES Staff Lead: Emergency Services Coordinator</p>
Priority Timeline	<p>High</p> <p>Maintenance: Ongoing</p> <p>Mapping: 1 year to include pathways in public maps, then ongoing updates</p> <p>Publicizing Maps: Ongoing</p>
Progress on Action Between 2014-2019	<ul style="list-style-type: none"> <li>a) <b>Ensure that all public pathways and associated signage are maintained to identify and provide safe and accessible pedestrian evacuation routes from the hill areas.</b></li> </ul> <p><b>In Progress (Ongoing)</b></p> <p>In spring 2015 the City performed repair work on Bret Harte Path; work included the removal and replacement of damaged concrete stairs, removal and replacement of damaged concrete walkway, and the installation of handrails.</p> <p>In spring/summer 2016 the City developed the previously undeveloped John Muir Path.</p> <p>In winter 2017 the Berkeley Path Wanderers Association (BPWA) installed approximately thirty 4’-wide wooden stairs at the bottom steep section of Dwight Way Path.</p> <p>When the City develops a previously undeveloped path, a “street” sign is installed at either end with the path’s name. Path name signs are maintained in the same manner as street name signs. Specifically if a sign is brought to the City’s attention as needing replacement due to deterioration, damage, or theft, it is added to the work list and replaced as funding and competing priorities permit.</p>

**b) Update City maps of all emergency access and evacuation routes to include pedestrian pathways.**

**Complete**

The City has worked with the Berkeley Path Wanderers to create a GIS map of Berkeley's pedestrian pathways. This map has been included in the 2019 LHMP.

**c) Coordinate with UC Berkeley and Berkeley Lab to ensure that evacuation route options account for paths on UC and Berkeley Lab property.**

**Completed**

Because the location and anticipated spread of a wildfire are by nature unpredictable, the City coordinates with UC Berkeley and the Lawrence Berkeley National Lab to be ready to consider evacuation route options through both UC Berkeley and LBNL property.

Authority to open or close these campuses rests with the campuses themselves. The City is ready to coordinate with these campuses at both the Field and Emergency Operations Center level should a fire threaten Berkeley community members in or proximal to these locations. The City coordinates regularly with these agencies. In December 2017, City staff supported the LBNL's Evacuation Exercise, including coordination between the City of Berkeley Police Department and the UC Berkeley Police Department (which provides protective services to LBNL.)

Additionally, the City instructs community members to select and practice multiple evacuation routes, considering both car-based and foot-based paths. These evacuation routes may cross into UC Berkeley territory. Because of the sensitive and hazardous materials at the LBNL site, the facility is not open to the community and would be unlikely to be opened during a wildfire evacuation.

**d) Publicize up-to-date maps of all emergency access and evacuation routes.**

**In Progress (Ongoing)**

The City's Wildfire Evacuation website recommends that community members be ready to evacuate on foot, and links to the Berkeley Path Wanderers (BPWA) website.

The Office of Emergency Services (OES) produced a Household Wildfire Evacuation Plan flyer. OES uses this flyer in wildfire evacuation community meetings. The flyer is tailored to include a relevant selection from the Berkeley Path Wanderers Map, and instructs the user to highlight multiple car- and foot-based evacuation routes. BPWA regularly communicates path locations to Google, which makes them publicly available online through Google Maps.

<p><b>2014</b> <b>Climate Change Integration</b></p>	<p><b>Mitigate climate change impacts by integrating climate change research and adaptation planning into City operations and services.</b></p>
<p>Proposed Activities</p>	<p>a) Determine staffing needs to monitor research and oversee integration of climate change adaptation into City operations and services</p> <p>b) Develop and implement a process to integrate adaptation planning into City operations. Activities include:</p> <ul style="list-style-type: none"> <li>• Integrate climate change adaptation actions into the Citywide Work Plan</li> <li>• Integrate climate change adaptation considerations into templates for staff reports to City Council and City commissions</li> <li>• Train City staff on the basic science and impacts of climate change and on climate adaptation strategies</li> <li>• Develop a staff recognition and award program to encourage staff to integrate climate change considerations into City projects and programs</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>City Manager’s Office through Sustainability Working Group (Process Management) Staff Lead: Deputy City Manager Planning Department – Office of Energy and Sustainable Development (Support) Staff Lead: Climate Action Coordinator</p>
<p>Priority</p>	<p>Medium</p>
<p>Timeline</p>	<p>Staffing: 2-3 years Work Plan Integration: 1 year Council/Commission Report Integration: 1 year Funding Mechanisms: 2-3 years Staff Training: 2-3 years</p>
<p>Progress on Action Between 2014-2019</p>	<p>- <b>Determine staffing needs to monitor research and oversee integration of climate change adaptation into City operations and services</b></p>

**In Progress**

OESD has a current staff of 7 part- and full-time employees, and 3 interns, but additional support is needed in order to achieve Climate Action Plan goals, including the integration of climate change adaptation into City operations and services. Transferred this action to Sustainability Office from the City Manager’s Working Group.

- **Develop and implement a process to integrate adaptation planning into City operations. Activities include:**

- **Integrate climate change adaptation actions into the Citywide Work Plan**

**Completed**

Sustainability was included in the Citywide Work Plan for one budget cycle. Climate adaptation is addressed in the City’s Resilience Strategy, and resilience and sustainability are included as long-term goals of the City’s Strategic Plan.

- **Integrate climate change adaptation considerations into templates for staff reports to City Council and City commissions**

**Completed with modifications**

Environmental sustainability was incorporated to all staff reports as part of the City Council template.

- **Train City staff on the basic science and impacts of climate change and on climate adaptation strategies**

**In Progress**

Sustainability staff will continue to develop training for staff on climate change and climate adaptation strategies. OESD has also applied for funding from the Urban Sustainability Directors Network to create a training for City staff on implementing adaptation practices with an equity lens.

- **Develop a staff recognition and award program to encourage staff to integrate climate change considerations into City projects and programs**

**Completed with modifications**

In 2014, the City created the Berkeley Environmental Achievement Awards to recognize employees that showed innovation and creativity, leadership and collaboration, and achievement of a clear environmental benefit in their work.

OESD plans to continue to coordinate this annual award program in the future.

## D.2.b Medium-Priority Actions

<b>2014</b>	<b>Develop an Energy Assurance Plan for City operations.</b>
<b>Energy Assurance</b>	
Proposed Activities	<p>a) Develop a plan to assist the City of Berkeley to prepare for, respond to, and recover from disasters that include energy emergencies.</p> <ul style="list-style-type: none"> <li>• Identify the key City facilities that support emergency operations.</li> <li>• Estimate those facilities’ energy supply and demand during emergencies to assess those facilities’ vulnerabilities to power loss.</li> <li>• Identify potential actions to mitigate those vulnerabilities (e.g., photovoltaic-supplemented emergency generation, energy efficiency activities, and/or mobile charging stations).</li> </ul> <p>b) Integrate energy assurance actions into Citywide planning processes.</p>
Lead Organization and Staff Lead	<p>Fire Department – Office of Emergency Services (Plan Development and Gap Analysis)          Staff Lead: Emergency Services Coordinator</p> <p>Planning Department – Office of Energy and Sustainable Development (Energy Profile)          Staff Lead: Sustainability Outreach Specialist</p> <p>Department of Public Works – Facilities Division (City Infrastructure)          Staff Lead: Facility Maintenance Superintendent</p>
Priority	Medium
Timeline	<p>Plan Development: 1 year          Project implementation: To be determined</p>
Progress on Action Between 2014-2019	<p>a) <b>Develop a plan to assist the City of Berkeley to prepare for, respond to, and recover from disasters that include energy emergencies.</b></p> <ul style="list-style-type: none"> <li>• <b>Identify the key City facilities that support emergency operations.</b>  <b>Completed</b>              The City identified 48 City facilities that support emergency operations in an assessment of Municipal Energy Assurance Vulnerabilities.</li> <li>• <b>Estimate those facilities’ energy supply and demand during emergencies to assess those facilities’ vulnerabilities to power loss.</b>  <b>Completed</b></li> </ul>

The assessment of Municipal Energy Assurance Vulnerabilities included a basic analysis of gas and electric usage at each facility, along with estimated runtimes for any generators positioned at these facilities.

For four of the key City facilities (Center Street Garage, Public Safety Building, 2180 Milvia, and 1947 Center Street) more detailed analysis of energy supply and demand was created through the Berkeley Energy Assurance Transformation (BEAT) project.

- **Identify potential actions to mitigate those vulnerabilities (e.g., photovoltaic-supplemented emergency generation, energy efficiency activities, and/or mobile charging stations).**

**In Progress**

OESD worked on feasibility analysis and design for downtown microgrid (BEAT project). The feasibility study completed as part of the BEAT project investigated the potential for a microgrid to connect critical facilities in downtown Berkeley. The results of the feasibility study now show that solar + storage at singular facilities is more feasible than a microgrid. OESD is now seeking to identify potential financing opportunities to expand this solution beyond downtown.

OESD will also evaluate solar + storage options at critical facilities.

**b) Integrate energy assurance actions into Citywide planning processes.**

**In Progress (Ongoing)**

Energy assurance planning is integrated into Citywide planning processes at the planning/conceptual design phase. For example, with the upcoming retrofit of the North Berkeley Senior Center, staff considered options for increasing energy efficiency and assurance of the facility, including keeping the building solar and generator ready. Solar battery backups were determined to be infeasible due to cost and challenges in placing the batteries on the site. Instead, the North Berkeley Senior



Center will be constructed with hookups for portable generators.

<p><b>2014</b> <b>Gas Safety</b></p>	<p><b>Improve the disaster-resistance of the natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster.</b></p>
<p>Proposed Activities</p>	<p>a) Work with the Public Utilities Commission, utilities, and oil companies to strengthen, relocate, or otherwise safeguard natural gas and other pipelines where they extend through areas of high liquefaction potential, cross potentially active faults, or traverse potential landslide areas, or areas that may settle differentially during an earthquake.</p> <p>b) Establish a program to provide free automatic gas shutoff valves to community members who attend disaster readiness training. Provide subsidized permit fee waivers for low-income homeowners.</p>
<p>Lead Organization and Staff Lead</p>	<p>Fire Department – Office of Emergency Services                  Staff Lead: Office of Emergency Services Captain (Coordination)                  Staff Lead: Associate Management Analyst (Shutoff Valve Program)</p>
<p>Priority Timeline</p>	<p>Medium                  Coordination: Ongoing                  Gas Valve Shutoff Program: July 2014</p>
<p>Progress on Action Between 2014-2019</p>	<p>a) <b>Work with the Public Utilities Commission, utilities, and oil companies to strengthen, relocate, or otherwise safeguard natural gas and other pipelines where they extend through areas of high liquefaction potential, cross potentially active faults, or traverse potential landslide areas, or areas that may settle differentially during an earthquake.</b></p> <p><b>Completed with Modifications</b>                  City staff regularly coordinate with PG&amp;E and EBMUD on emergency response planning, training, and exercise activities.</p> <p>Additionally, City staff participated in extensive discussions with Berkeley High School Safety Committee regarding opportunities to strengthen or add an automatic or electronic shutoff valves to the transmission pipeline on Allston Way. In June 2018, staff participated in PG&amp;E exercise on the topic.</p>

**b) Establish a program to provide free automatic gas shutoff valves to community members who attend disaster readiness training. Provide subsidized permit fee waivers for low-income homeowners.**  
**Completed (Ongoing)**  
 The Automatic Gas Shutoff Valve Program distributes valves to homeowners and renters with building owner approval. In order to qualify, applicants must take two City of Berkeley-offered disaster preparedness trainings. All qualified applicants receive a free shutoff valve, and low-income applicants do not have to pay for the permit. As of 10/15/18, 11 valves have been distributed through the program.

<b>2014</b>	<b>Rehabilitate the City’s stormwater system to reduce local flooding caused by inadequate storm drainage.</b>
Stormwater System	
Proposed Activities	<p>a) Complete the hydraulic analysis of watersheds in the city to predict areas of insufficient capacity.</p> <p>b) Seek funding to perform system capacity and disaster resistance improvements.</p>
Lead Organization and Staff Lead	Public Works Department – Engineering Division Staff Lead: Associate Civil Engineer
Priority	Medium
Timeline	Complete the hydraulic analysis: funding-dependent System improvements: funding-dependent
Progress on Action Between 2014-2019	<p><b>a) Complete the hydraulic analysis of watersheds in the city to predict areas of insufficient capacity.</b>  <b>Deferred</b>                  The 2018 Clean Stormwater Fee was put to a vote of property owners in Spring 2018. The property owners approved the fee enabling City Council to adopt Resolution No. 68,483—N.S. on June 12, 2018 enabling the fee to be collected through the County Tax Roll for Fiscal Year 2018-2019. A portion of the revenue generated by the 2018 Clean Stormwater Fee will be used to complete the Watershed Management Plan and produce an overall storm water master plan.</p> <p><b>b) Seek funding to perform system capacity and disaster resistance improvements.</b>  <b>Completed</b>                  The 2018 Clean Stormwater Fee provides the City with much needed funding to operate and maintain stormwater</p>

drainage facilities, reduce pollutant discharges from the City, and improve the financial health of the stormwater program. Some funding will be available for system improvements, but this funding will not be enough to address all of the required improvements. The City continues to look for funding opportunities to supplement City funding sources.

<b>2014</b>	<b>Define and mitigate Berkeley's tsunami hazard.</b>
<b>Tsunami</b>	
Proposed Activities	<ul style="list-style-type: none"> <li>a) Collaborate with the California Office of Emergency Services to define Berkeley's different areas of inundation for different tsunami scenarios.</li> <li>b) Collaborate with the California Office of Emergency Services, the California Geological Survey, and the Federal Emergency Management Agency to document and explore potential tsunami hazard mitigation measures for Berkeley's maritime communities.</li> </ul>
Lead Organization and Staff Lead	<p>Fire Department – Office of Emergency Services (Scenarios)                  Staff Lead: Emergency Services Coordinator</p> <p>Parks, Recreation and Waterfront Department – Marina Division (Mitigation Measures)                  Staff Lead: Waterfront Manager</p>
Priority	Medium
Timeline	<p>Scenarios: 2 years</p> <p>Mitigation Measures: To be determined</p>
Progress on Action Between 2014-2019	<ul style="list-style-type: none"> <li>a) <b>Collaborate with the California Office of Emergency Services to define Berkeley's different areas of inundation for different tsunami scenarios.</b>  <b>Completed</b>  <i>See Hazard Information Action above.</i></li> <li>b) <b>Collaborate with the California Office of Emergency Services, the California Geological Survey, and the Federal Emergency Management Agency to document and explore potential tsunami hazard mitigation measures for Berkeley's maritime communities.</b>  <b>In Progress</b>                  The City of Berkeley met with the California Office of Emergency Services and the California Geological Survey to review tsunami playbooks. At this meeting</li> </ul>

State representatives provided a DRAFT Harbor Improvement Report for the Berkeley Marina, which mitigation measures that minimize loss of life and damage from future tsunamis. Staff plans to use this guidance to consider potential mitigation measures.

<p><b>2014</b> <b>Extreme Heat</b> Proposed Activities</p>	<p><b>Reduce Berkeley’s vulnerability to extreme heat events and associated hazards.</b></p> <ul style="list-style-type: none"> <li>a) Monitor and support regional and State-level efforts to forecast the impact of climate change on temperatures and incidence of extreme heat events in Berkeley and the region, and integrate extreme heat event readiness into City operations and services.</li> <li>b) Create and maintain shading by sustaining municipal tree planting efforts and continuing to maintain the health of existing trees.</li> <li>c) Continue to implement energy efficiency ordinances for existing residential and commercial buildings to improve building comfort, including in extreme weather conditions, and to reduce energy use.</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>Planning Department – Office of Energy and Sustainable Development (Monitor Impacts) Staff Lead: Climate Action Coordinator</p> <p>Department of Parks, Recreation and Waterfront – Parks Division (Tree Planting) Staff Lead: Parks Superintendent</p>
<p>Priority Timeline</p>	<p>Medium Other Activities: Ongoing</p>
<p>Progress on Action Between 2014-2019</p>	<ul style="list-style-type: none"> <li>a) <b>Monitor and support regional and State-level efforts to forecast the impact of climate change on temperatures and incidence of extreme heat events in Berkeley and the region, and integrate extreme heat event readiness into City operations and services.</b> <b>In Progress (Ongoing)</b> OESD continues to track the latest science and information related to extreme heat events. This includes tracking new reports, such as the San Francisco Bay Area 2017 Risk Profile by the Association of Bay Area Governments, the EPA’s 2016 Extreme Heat Guidebook, and the Air District’s 2017 Clean Air Plan.</li> <li>b) <b>Create and maintain shading by sustaining municipal tree planting efforts and continuing to maintain the health of existing trees.</b> <b>In Progress (Ongoing/Funding-Dependent)</b> Since 2014, at least 857 trees have been planted using funding from a State of California Environmental Enhancement Mitigation Program grant.  Since July 18, 2014, over 5,743 trees have been pruned.</li> </ul>

c) **Continue to implement energy efficiency ordinances for existing residential and commercial buildings to improve building comfort, including in extreme weather conditions, and to reduce energy use.**  
**In Progress**  
 The City continues implement the Building Energy Saving Ordinance (BESO), which aims to motivate upgrades in existing buildings in Berkeley. The ordinance requires an energy assessment for buildings less than 25,000 sq ft at time of sale. For buildings over 25,000 sq ft, BESO requires an assessment as well as annual energy benchmarking data. OESD is exploring opportunities to integrate building vulnerability to extreme heat events into BESO.

<p><b>2014</b>  <b>Severe Storms</b></p>	<p><b>Reduce Berkeley’s vulnerability to severe storms and associated hazards.</b></p>
<p>Proposed Activities</p>	<p>a) Support and monitor research on climate change impacts on local rainfall patterns and incidences of severe storms.</p> <p>b) Integrate considerations of severe storms into City operations and services:</p> <ul style="list-style-type: none"> <li>• Use development review to ensure that new development does not contribute to an increase in flood potential.</li> <li>• Complete the hydraulic analysis of watersheds in the city to predict areas of insufficient capacity.</li> <li>• Design public improvements such as streets, parks and plazas, for retention and infiltration of stormwater by diverting urban runoff to bio-filtration systems such as greenescapes.</li> <li>• Continue to encourage use of permeable surfaces and other techniques as appropriate in both greenscape and hardscape areas for retention and infiltration of stormwater.</li> <li>• Continue to encourage the development of green roofs by providing local outreach and guidelines consistent with the Building Code.</li> </ul>
<p>Lead Organization and Staff Lead</p>	<p>Planning Department – Office of Energy and Sustainable Development                  Staff Lead: Climate Action Coordinator (Monitor Research)                  Staff Lead: Sustainability Outreach Specialist (Green Roof outreach)</p> <p>Planning Department – Land Use Planning Division (Development Review)</p>

<p>Priority Timeline Progress on Action Between 2014-2019</p>	<p>Staff Lead: Division Director Department of Public Works – Engineering Division (Watershed Management Plan, Permeable Surfaces, Public Improvements) Staff Lead: Supervising Civil Engineer</p> <p>Medium Ongoing</p> <ul style="list-style-type: none"> <li>- <b>Support and monitor research on climate change impacts on local rainfall patterns and incidences of severe storms.</b> <b>Completed</b> Research has indicated that climate change will not significantly affect total rainfall, but may contribute to a more abbreviated and intense wet season, which has associated impacts.</li> <li>- <b>Integrate considerations of severe storms into City operations and services:</b> <ul style="list-style-type: none"> <li>• <b>Use development review to ensure that new development does not contribute to an increase in flood potential.</b> <b>In Progress/Ongoing</b> Land Use Planning Division, Building and Safety Division, Office of Energy and Sustainable Development, and Department of Public Works coordinate efforts to ensure stormwater management best practices described below are followed.</li> <li>• <b>Complete the hydraulic analysis of watersheds in the city to predict areas of insufficient capacity.</b> <b>Deferred</b> The City is monitoring developing sea level rise discussions and requirements, and changes in rainfall event intensities. These characteristics will be incorporated in the Watershed Management Plan and other appropriate planning documents, and design standards for the City.</li> <li>• <b>Design public improvements such as streets, parks and plazas, for retention and infiltration of stormwater by diverting urban runoff to bio-filtration systems such as greenscapes.</b> <b>In Progress (Ongoing)</b></li> </ul> </li> </ul>
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Public Works has been using Measure M funds and other City funds to implement green infrastructure retain, treat, and infiltrate stormwater. Since 2014 the City installed bioswales at the intersections of Rose Street/Hopkins Street and at Hearst Avenue/Oxford Street, and a permeable paver bus pad at the intersection of Shattuck Avenue/University Avenue. In addition the City will have the Woolsey LID project under construction in 2019.

- Continue to encourage use of permeable surfaces and other techniques as appropriate in both greenscape and hardscape areas for retention and infiltration of stormwater. In Progress (Ongoing)**

The City requires green infrastructure on public and private regulated projects through the zoning and building permitting processes. These include bio-swales, permeable paving systems, and controlling peak runoff. The City continues to explore use of permeable surfaces such as permeable concrete and pavers in future projects.

Ongoing guides will be available on City’s sustainability website.

- Continue to encourage the development of green roofs by providing local outreach and guidelines consistent with the Building Code. Completed**

The City maintains a webpage that serves as an introductory guide to green roofs including the benefits, types, building factors to consider and permit requirements.

<p><b>2014 Water Security</b></p>	<p><b>Collaborate with local, State, regional and federal partners to increase the security of Berkeley’s water supply from climate change impacts.</b></p>
<p>Proposed Activities</p>	<p>a) Support efforts by the U.S. Forest Service and its partners to improve water security through restoration of the Headwaters Forest and Mokelumne River.</p>

<p>Lead Organization and Staff Lead</p>	<p>b) Encourage water recycling and gray water use through the distribution of outreach materials and local guidelines that are consistent with the Building Code.</p> <p>c) Encourage the use of water conservation technologies and techniques in the design of new buildings and landscapes, such as waterless urinals and cisterns, through the development of local guidelines that are consistent with the Building Code.</p> <p>d) Partner with East Bay Municipal Utility District (EBMUD) to provide and market incentives for residents, businesses and institutions to conserve water.</p> <p>e) Partner with agencies such as EBMUD and StopWaste.org to encourage private property owners and public agencies (including the City government) to use sustainable landscaping techniques that require less water and energy to maintain.</p> <p>City Manager’s Office via Sustainability Working Group (Partner Support)</p> <p>Staff Lead: Deputy City Manager</p> <p>Planning Department – Office of Energy and Sustainable Development</p> <p>Staff Lead: Climate Action Coordinator (Community Awareness)</p> <p>Staff Lead: Sustainability Outreach Specialist (Water Recycling/Incentives)</p> <p>Staff Lead: Sustainability Coordinator (Guidelines and Landscaping)</p>
<p>Priority Timeline</p>	<p>Medium Ongoing</p>
<p>Progress on Action Between 2014-2019</p>	<p><b>a) Support efforts by the U.S. Forest Service and its partners to improve water security through restoration of the Headwaters Forest and Mokelumne River.</b></p> <p><b>Deleted</b></p> <p>Regularly reached out to US Forest Service to understand actions being taken for water security, but ongoing efforts were not continued due to lack of resources.</p> <p><b>b) Encourage water recycling and gray water use through the distribution of outreach materials and local guidelines that are consistent with the Building Code.</b></p> <p><b>Completed</b></p> <p>Information will continue to be available on the City’s sustainability website.</p>

- c) **Encourage the use of water conservation technologies and techniques in the design of new buildings and landscapes, such as waterless urinals and cisterns, through the development of local guidelines that are consistent with the Building Code.**

**Completed with modifications**

The State Energy Code and Water Efficiency Landscape Ordinance incorporated minimum water requirements before local guidelines were developed. City staff now encourage water conservation technologies and techniques as part of implementation of the new code and encourage enforcement through roundtables. Note: Waterless urinals and cisterns are no longer considered best practice.

- d) **Partner with East Bay Municipal Utility District (EBMUD) to provide and market incentives for residents, businesses and institutions to conserve water.**

**In progress**

Although focused on during the recent drought, ongoing efforts remain to continue coordination. City staff continuously refer members of the public to available EBMUD resources, such as free water efficiency technologies or rebate programs.

- e) **Partner with agencies such as EBMUD and StopWaste.org to encourage private property owners and public agencies (including the City government) to use sustainable landscaping techniques that require less water and energy to maintain.**

**In progress**

Water Efficiency Landscape Ordinance (WELO) became effective December 2015 with new requirements that are being implemented. Jurisdictions are required to report annually to the State, and coordination with EBMUD on implementation is ongoing. StopWaste has prepared general materials that can be tailored by each jurisdiction and plans to do additional training on compliance and enforcement, which the City of Berkeley will utilize.

<b>2014 NFIP</b>	<b>Maintain City participation in the National Flood Insurance Program.</b>
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Proposed Activities	<p>a) Continue to update and revise flood maps for the City.</p> <p>b) Continue to incorporate FEMA guidelines and suggested activities into City plans and procedures for managing flood hazards.</p>
Lead Organization and Staff Lead	<p>Public Works – Engineering Division Staff Lead: Supervising Civil Engineer</p>
Priority	Medium
Timeline	Ongoing
Progress on Action Between 2014-2019	<p><b>a) Continue to update and revise flood maps for the City. In Progress (Ongoing)</b> The most recent map updates took effect December 21, 2018. These maps were updated to include new detailed coastal analyses for the San Francisco Bay shoreline of Alameda County north of the San Mateo Bridge.</p> <p><b>b) Continue to incorporate FEMA guidelines and suggested activities into City plans and procedures for managing flood hazards. In Progress (Ongoing)</b> The City performs the suggested actions by keeping the Berkeley Municipal Code Chapter 17.12: Flood Zone Development Ordinance in consistent with FEMA National Flood Insurance Program requirements. Most recently updated in 2009, the Ordinance regulates all publicly- and privately-owned land within the areas of special flood hazard. It establishes the Director of the Public Works Department as the Floodplain Administrator for the City. The Building Official ensures construction standards are addressed for projects in flood zones.</p>

<b>2014 Streamline Rebuild</b>	<b>Streamline the zoning permitting process to rebuild residential and commercial structures following disasters.</b>
Proposed Activities	<p>a) Explore a Zoning Amendment to BMC 23C.04.100 that streamlines the Zoning permitting process to allow industrial and commercial buildings, and multiple-family dwellings to rebuild by right following disasters. Consider different treatment for buildings in high-risk areas, such as:</p> <ul style="list-style-type: none"> <li>• Imposing higher standards of building construction for rebuilding</li> <li>• Excluding buildings in these areas from the amendment</li> </ul>

<p>Lead Organization and Staff Lead</p> <p>Priority</p> <p>Timeline</p> <p>Progress on Action Between 2014-2019</p>	<p>b) Define the standard for documentation of current conditions for residential and commercial property owners to rebuild by right (in conformity with current applicable codes, specifications and standards) following disasters.</p> <p>c) Define the process for the City to accept and file this documentation.</p> <p>d) Outreach to property owners about this documentation process.</p> <p>Planning Department – Land Use Planning Division Staff Lead: Division Director</p> <p>Medium</p> <p>1 year</p> <p><b>a) Explore a Zoning Amendment to BMC 23C.04.100 that streamlines the Zoning permitting process to allow industrial and commercial buildings, and multiple-family dwellings to rebuild by right following disasters. Consider different treatment for buildings in high-risk areas, such as:</b></p> <ul style="list-style-type: none"> <li>• <b>Imposing higher standards of building construction for rebuilding</b></li> <li>• <b>Excluding buildings in these areas from the amendment</b></li> </ul> <p><b>Deferred</b> The Land Use Planning Division begun research to address this proposal.</p> <p><b>b) Define the standard for documentation of current conditions for residential and commercial property owners to rebuild by right (in conformity with current applicable codes, specifications and standards) following disasters.</b></p> <p><b>Deferred</b> See (a) above.</p> <p><b>c) Define the process for the City to accept and file this documentation.</b></p> <p><b>Deferred</b> See (a) above.</p> <p><b>d) Outreach to property owners about this documentation process.</b></p> <p><b>Deferred</b> See (a) above.</p>
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### D.2.c Low-Priority Actions

<p><b>2014</b></p>	<p><b>Mitigate the impacts of sea-level rise in Berkeley.</b></p>
<p><b>Sea-Level Rise</b></p>	
<p>Proposed Activities</p>	<p>a) Monitor and participate in regional and State-level research on projected sea-level rise in Berkeley and the region.</p> <p>b) Develop guidelines, regulations, and development review procedures to protect new and existing public and private developments and infrastructure from floods due to expected sea-level rise.</p>
<p>Lead Organization and Staff Lead</p>	<p>Planning Department – Office of Energy and Sustainable Development (Monitor Research/Integrate Considerations)                  Staff Lead: Climate Action Coordinator</p> <p>Planning Department – Land Use Planning Division (Development Regulations)                  Staff Lead: Division Director</p>
<p>Priority</p>	<p>Low</p>
<p>Timeline</p>	<p>To be determined</p>
<p>Progress on Action Between 2014-2019</p>	<p>a) <b>Monitor and participate in regional and State-level research on projected sea-level rise in Berkeley and the region.</b>  <b>In Progress (Ongoing)</b>                  New research incorporated into the 2019 LHMP Hazard Analysis. This includes the Adapting to Rising Tides Bay Area Sea Level Rise Analysis and Mapping Project completed in 2017 for local mapping, as well as the State of California Sea-Level Rise Guidance document published in 2018.</p> <p>b) <b>Develop guidelines, regulations, and development review procedures to protect new and existing public and private developments and infrastructure from floods due to expected sea-level rise.</b>  <b>In Progress (Ongoing)</b>                  Ongoing efforts to integrate consideration of climate impacts into capital and land use planning are underway, including research on other cities’ similar efforts as well as beginning cross-departmental conversations on what such requirements would entail.</p>
<p><b>2014</b></p>	<p><b>Explore local legislation to require hazardous materials stored in the flood zones to be elevated or otherwise protected from floodwaters.</b></p>
<p><b>HazMat Floods</b></p>	

Proposed Activities:	<p>a) Conduct cost/benefit evaluation to determine if hazardous materials should be elevated/protected in existing development in flood hazard zones:</p> <ul style="list-style-type: none"> <li>• Assess potential impacts from hazardous materials release due to flooding</li> <li>• Consult with federal, State and regional partners to identify legislative best practices and lessons learned</li> <li>• Work with Berkeley Building Official to identify engineering solutions and potential permitting requirements for hazardous materials</li> <li>• Identify potential costs to hazardous materials owners</li> </ul> <p>b) If cost/benefit evaluation is positive, work with City Manager’s Office and City Council to determine and implement path forward.</p> <p>c) If cost/benefit is not positive, consider alternative methods of compliance such relocation or modification of business activities.</p>
Lead Organization and Staff Lead:	<p>Planning Department – Toxics Management Division Staff Lead: Hazardous Materials Specialist II</p>
Priority:	<p>Low</p>
Timeline:	<p>Complete assessment of existing legislation: January 2014 Complete Cost-benefit evaluation for assessment by City Manager’s Office: To be determined</p>
Progress on Action Between 2014-2019	<p><b>a) Conduct cost/benefit evaluation to determine if hazardous materials should be elevated/protected in existing development in flood hazard zones:</b></p> <ul style="list-style-type: none"> <li>• <b>Assess potential impacts from hazardous materials release due to flooding</b></li> <li>• <b>Consult with federal, State and regional partners to identify legislative best practices and lessons learned</b></li> <li>• <b>Work with Berkeley Building Official to identify engineering solutions and potential permitting requirements for hazardous materials</b></li> <li>• <b>Identify potential costs to hazardous materials owners</b></li> </ul> <p><b>b) If cost/benefit evaluation is positive, work with City Manager’s Office and City Council to determine and implement path forward.</b></p> <p><b>c) If cost/benefit is not positive, consider alternative methods of compliance such relocation or modification of business activities.</b></p>



**Deleted**

This flooding scenario is unlikely and resources are not identified or likely to become available to perform this work.

### **D.3 2019 Changes in Priorities**

While the City's goals and objectives have remained very similar to the 2014 plan, the 2019 LHMP reflects thorough revisions from the 2014 document. Those revisions have resulted in some actions in the 2019 Mitigation Strategy receiving different priority levels than in 2014. The 2019 Hazard Analysis accounts for newly-available science and research and emerging hazards. The associated 2019 mitigation actions account for progress made on mitigation actions since 2014, changes in development in Berkeley, and our new understanding of the hazards we face.

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<sup>i</sup> <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html#CCD>

## Element E: Plan Adoption

The public review process is considered a key step in the City Council's adoption of the 2019 Local Hazard Mitigation Plan. To that end, City staff has engaged with City Commissions and the City Council and throughout the process to develop this plan. Two City Commissions play a key role in plan review and adoption:

### Disaster and Fire Safety Commission

The Disaster and Fire Safety Commission (DFSC) is made up of nine members appointed by the City Council, per the guidance of a local ordinance. This Commission meets in public monthly, and advises the City Council on all matters affecting fire safety and/or disaster resilience within Berkeley. For this reason, following FEMA's issuance of Approval Pending Adoption for the Final Draft 2019 LHMP, staff will request the Commission's recommendation to Council on the Final Draft 2019 LHMP.

### Planning Commission

The Planning Commission oversees and reviews the planning process and planning issues. Revisions to the General Plan come before the Planning Commission, which meets twice each month in public. Because the Local Hazard Mitigation Plan is an appendix to the City of Berkeley's General Plan, following FEMA's issuance of Approval Pending Adoption for the Final Draft 2019 LHMP, staff will request the Commission's recommendation to Council on the Final Draft 2019 LHMP.

### Additional Commissions

Concerned citizens staff nearly forty Berkeley commissions, boards and committees addressing a wide range of issues important to the community. All of these commissions meet in public.

Because of the wide scope of issues covered in the mitigation plan, the City invited all commissions to review the First Draft Plan during the public comment period from December 18, 2018, through February 28, 2019. In addition to the Planning Commission and the Disaster and Fire Safety Commission, 9 commissions reviewed the Plan's executive summary and mitigation strategy in detail and discussed it at a public meeting during this period.

Table 1. *LHMP Commission Meetings During the First Draft Plan Public Comment Period*

Date/Time	Commission
January 3, 2019	Housing Advisory Commission
January 9, 2019	Parks and Waterfront Commission
January 9, 2019	Commission on Disability
January 10, 2019	Public Works Commission
January 16, 2019	Commission on Aging
January 16, 2019	Planning Commission
January 23, 2019	Disaster and Fire Safety Commission
January 23, 2019	Energy Commission
February 4, 2019	Peace and Justice Commission
February 7, 2019	Landmarks Preservation Commission
February 14, 2019	Community Environmental Advisory Commission

Following the February 28 public feedback deadline, City staff reviewed feedback from Commissions and community members, and incorporated appropriate changes into the Final Draft Plan.

Following FEMA’s issuance of approval pending adoption, City staff will bring the Final Draft 2019 LHMP to the City’s Disaster and Fire Safety Commission and Planning Commission for their recommendations to City Council to adopt the Final Draft Plan. Following those meetings, staff will bring the Final Draft 2019 LHMP to the Berkeley City Council for adoption.

## RESOLUTION NO. ##,###-N.S.

AMEND THE BERKELEY GENERAL PLAN TO UPDATE REFERENCE TO THE  
LOCAL HAZARD MITIGATION PLAN (LHMP)

WHEREAS, the Council of the City of Berkeley has the authority to approve plans by reference into the General Plan; and

WHEREAS, the Council adopted the Disaster Mitigation Plan on June 22, 2004; and

WHEREAS, the Plan was updated in 2014; and

WHEREAS, the 2014 Plan has expired; and

WHEREAS, the adoption of a current LHMP as an appendix to the Disaster Preparedness and Safety Element of the City's General Plan will maintain the City's compliance with 44 CFR Part 201, Section 201.6, and Government Code 65302.6 requirements, and associated eligibility for mitigation grant funding; and

WHEREAS, City staff has collaborated with numerous partner representatives, scientists and hazard experts to develop a First Draft Plan; and

WHEREAS, from December 18, 2018 through February 28, 2019, the community and all City commissions and boards were invited to provide feedback on the First Draft Plan, and these comments were reviewed and incorporated into the Final Draft 2019 LHMP; and

WHEREAS, at its meeting on June 11, 2019, the State of California Board of Forestry and Fire Protection reviewed the Final Draft LHMP and the Disaster Preparedness and Safety Element of the General Plan and determined that they met requirements of Government Code 65302.5; and

WHEREAS, on September 20, 2019, the Federal Emergency Management Agency determined the Final Draft Plan to be eligible for final approval pending its adoption by the Berkeley City Council; and

WHEREAS, on October 23, 2019, the Disaster and Fire Safety Commission reviewed the Final Draft 2019 LHMP and voted unanimously to recommend adoption of the LHMP; and

WHEREAS, on November 6, 2019, the Planning Commission held a duly noticed Public Hearing to consider public input and comment on the Final Draft LHMP and to consider changes to the Disaster Preparedness and Safety Element of the General Plan to update the LHMP reference in the General Plan; and

WHEREAS the Planning Commission voted to recommend adoption of the LHMP;

WHEREAS, the City Council held a duly noticed public hearing on December 10, 2019;  
and

WHEREAS, the proposed amendment to the General Plan will allow the LHMP to be  
incorporated into the General Plan; and

WHEREAS, all documents constituting the record of this proceeding are and shall be  
retained by the City of Berkeley Planning and Development Department, Land Use  
Planning Division, at 2120 Milvia Street, Second Floor, Berkeley, California.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the  
General Plan is hereby amended to update the LHMP reference and to remove the  
reference to the update year; as shown in Exhibit A.

Exhibit A: Proposed Amendments to The General Plan To Update Reference to the  
Local Hazard Mitigation Plan (LHMP)

**PROPOSED AMENDMENTS TO THE GENERAL PLAN TO UPDATE REFERENCE  
TO THE LOCAL HAZARD MITIGATION PLAN (LHMP)**

Changes would be made to the fifth paragraph on page S-3 of the Disaster Preparedness and Safety Element as follows:

*In 2004, the City adopted its first Hazard Mitigation Plan. It is part of the Disaster Preparedness and Safety Element of the General Plan. The City updated the Disaster Mitigation Plan in 2014 and renamed it the Local Hazard Mitigation Plan (LHMP). On 12/16/14, the City Council adopted the LHMP (by reference) into the General Plan. The LHMP will be updated periodically, as required by State and Federal regulations.*



**BOARD OF FORESTRY AND FIRE PROTECTION**

P.O. Box 944246  
SACRAMENTO, CA 94244-2460  
Website: [www.bof.fire.ca.gov](http://www.bof.fire.ca.gov)  
(916) 653-8007



Sarah Lana  
Emergency Services Coordinator  
Office of Emergency Services  
City of Berkeley Fire Department

Via email

July 29, 2019

Dear Ms. Lana,

The Board of Forestry and Fire Protection reviewed the City of Berkeley General Plan Safety Element at their Resource Protection Committee meeting on June 11, 2019 pursuant to Government Code 65302.5.

Enclosed is the final review and recommendations for the Berkeley General Plan Safety Element submitted to the Board for review on June 3, 2019. The Board has prepared this document in cooperation with members of the CAL FIRE Land Use Planning Program.

Thank you for the opportunity to participate in your planning process and we look forward to working with you on these recommendations. We hope this input leads to greater protection and reduced cost and losses from wildfires to Berkeley and the adjacent wildland-urban interface.

If Berkeley decides not to accept the recommendations enclosed, they must communicate in writing to the Board its reasons. The Board appreciates the opportunity to provide recommendations on the City's Safety Element, and efforts by the City to protect its citizens from wildfires.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. Keith Gilliss", is written over a light blue horizontal line.

J. Keith Gilliss  
Chair

# General Plan Safety Element Assessment

## Board of Forestry and Fire Protection



### Table of Contents

Purpose and Background.....	1
Methodology for Review and Recommendations.....	2
Safety Element Assessment.....	3
Sample Safety Element Recommendations .....	6
Fire Hazard Planning in Other Elements of the General Plan .....	8

## Purpose and Background

Upon the next revision of the housing element on or after January 1, 2014, the safety element is required to be reviewed and updated as necessary to address the risk of fire for land classified as state responsibility areas and land classified as very high fire hazard severity zones. (Gov. Code, § 65302, subd. (g)(3).)

The safety element is required to include:

- Fire hazard severity zone maps available from the Department of Forestry and Fire Protection.
- Any historical data on wildfires available from local agencies or a reference to where the data can be found.
- Information about wildfire hazard areas that may be available from the United States Geological Survey.
- The general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities. The location and distribution of planned uses of land shall not require defensible space compliance measures required by state law or local ordinance to occur on publicly owned lands or open space designations of homeowner associations.
- The local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services. (Gov. Code, § 65302, subd. (g)(3)(A).)

Based on that information, the safety element shall include goals, policies, and objectives that protect the community from the unreasonable risk of wildfire. (Gov. Code, § 65302, subd. (g)(3)(B).) To carry out those goals, policies, and objectives, feasible implementation measures shall be included in the safety element, which include but are not limited to:

- Avoiding or minimizing the wildfire hazards associated with new uses of land.
- Locating, when feasible, new essential public facilities outside of high fire risk areas, including, but not limited to, hospitals and health care facilities, emergency shelters, emergency command centers, and emergency communications facilities, or identifying construction methods or other methods to minimize damage if these facilities are located in the SRA or VHFHSZ.
- Designing adequate infrastructure if a new development is located in the SRA or VHFHSZ, including safe access for emergency response vehicles, visible street signs, and water supplies for structural fire suppression.
- Working cooperatively with public agencies with responsibility for fire protection. (Gov. Code, § 65302, subd. (g)(3)(C).)

The safety element shall also attach or reference any fire safety plans or other documents adopted by the city or county that fulfill the goals and objectives or contains the information required above. (Gov. Code, § 65302, subd. (g)(3)(D).) This might include Local Hazard Mitigation Plans, Unit Fire Plans, Community Wildfire Protection Plans, or other plans.

There are several reference documents developed by state agencies to assist local jurisdictions in updating their safety elements to include wildfire safety. The Fire Hazard Planning, General Plan Technical Advice Series from the Governor's Office of Planning and Research, referenced in Government Code section 65302, subdivision (g)(3) and available at

1400 Tenth Street  
Sacramento, CA 95814  
(916) 322-2318

[https://www.opr.ca.gov/docs/Final\\_6.26.15.pdf](https://www.opr.ca.gov/docs/Final_6.26.15.pdf)

provides policy guidance, information resources, and fire hazard planning examples from around California that shall be considered by local jurisdictions when reviewing the safety element of its general plan.

The Board of Forestry and Fire Protection (Board) utilizes this Safety Element Assessment in the Board's

review of safety elements under Government Code section 65302.5. At least 90 days prior to the adoption or amendment of their safety element, counties that contain SRAs and cities or counties that contain VHFHSZs shall submit their safety element to the Board. (Gov. Code, § 65302.5, subd. (b).) The Board shall review the safety element and respond to the city or county with its findings regarding the uses of land and policies in SRAs or VHFHSZs that will protect life, property, and natural resources from unreasonable risks associated with wildfires, and the methods and strategies for wildfire risk reduction and prevention within SRAs or VHFHSZs. (Gov. Code, § 65302.5, subd. (b)(3).)

The CAL FIRE Land Use Planning team provides expert fire protection assistance to local jurisdictions statewide. Fire captains are available to work with cities and counties to revise their safety elements and enhance their strategic fire protection planning.

## **Methodology for Review and Recommendations**

Utilizing staff from the CAL FIRE Land Use Planning team, the Board has established a standardized method to review the safety element of general plans. The methodology includes

- 1) reviewing the safety element for the requirements in Government Code section 65302, subdivision (g)(3)(A),
- 2) examining the safety element for goals, policies, objectives, and implementation measures that mitigate the wildfire risk in the planning area (Gov. Code, § 65302, subd. (g)(3)(B) & (C)), and
- 3) making recommendations for methods and strategies that would reduce the risk of wildfires (Gov. Code, § 65302.5, subd. (b)(3)(B)).

The safety element will be evaluated against the attached Assessment, which contains questions to determine if a safety element meets the fire safety planning requirements outlined in Government Code, section 65302. The reviewer will answer whether or not a submitted safety element addresses the required information, and will recommend changes to the safety element that will reduce the wildfire risk in the planning area. These recommended changes may come from the list of sample goals, policies, objectives, and implementation measures that is included in this document after the Assessment, or may be based on the reviewer's knowledge of the jurisdiction in question and their specific wildfire risk. By answering the questions in the Assessment, the reviewer will determine if the jurisdiction's safety element has adequately addressed and mitigated their wildfire risk. If it hasn't, any specific recommendations from the reviewer will assist the jurisdiction in revising the safety element so that it does.

Once completed, the Assessment should provide clear guidance to a city or county regarding any areas of deficiency in the safety element as well as specific goals, policies, objectives, and implementation measures the Board recommends adopting in order to mitigate or reduce the wildfire threat in the planning area.

General Plan Safety Element Assessment

Jurisdiction: City of Berkeley	Notes:	CAL FIRE Unit: SCU	Date Received: 4/15/2019
County: Alameda	LUPP Reviewer: Jeff Hakala	UNIT CONTACT: Mike Marcucci	Date Reviewed: 2/25/2019

**Background Information Summary**  
 Specific background information about fire hazards in each jurisdiction.  
*Indicate whether the safety element includes the specified information. If YES, indicate in the comments where that information can be found; if NO, provide recommendations to the jurisdiction regarding how best to include that information in their revised safety element.*

	Yes	No	Comments/Recommendations
Are Fire Hazard Severity Zones Identified? <i>CAL FIRE or Locally Adopted Maps</i>	X		Figure 14, page S-14
Is historical data on wildfires or a reference to where the data can be found, and information about wildfire hazard areas that may be available from the United States Geological Survey, included?	X		<b>Fire Hazards and Vulnerabilities</b> , page S-13 – S-16
Has the general location and distribution of existing and planned uses of land in very high fire hazard severity zones (VHFHSZs) and in state responsibility areas (SRAs), including structures, roads, utilities, and essential public facilities, been identified?	X		Figure 14, page S-14
Have local, state, and federal agencies with responsibility for fire protection, including special districts and local offices of emergency services, been identified?	X		<b>Policy Background</b> page S-2 – S-4.
Are other fire protection plans, such as Community Wildfire Protection Plans, Local Hazard Mitigation Plans, CAL FIRE Unit or Contract County Fire Plans, referenced or incorporated into the Safety Element?	X		The City of Berkeley’s City Council adopted the LHMP (by reference) into the General Plan 12/2014, page S-2
Any other relevant information regarding fire hazards in SRAs or VHFHSZs?	N/A		

**Goals, Policies, Objectives, and Feasible Implementation Measures**  
 A set of goals, policies, and objectives based on the above information to protect the community from unreasonable risk of wildfire and implementation measures to accomplish those stated goals, policies, and objectives.  
*Critically examine the submitted safety element and determine if it is adequate to address the jurisdiction’s unique fire hazard. Answer YES or NO appropriately for each question below. If the recommendation is irrelevant or unrelated to the jurisdiction’s fire hazard, answer N/A. For NO, provide information in the Comments/Recommendations section to help the jurisdiction incorporate that change into their safety element revision. This information may utilize example recommendations from Sample Safety Element Recommendations and Fire Hazard Planning in Other Elements of the General Plan below, may indicate how high of a priority this recommendation is for a jurisdiction, or may include other jurisdiction-specific information or recommendations.*

**Avoiding or minimizing the wildfire hazards associated with new uses of land.**

	Yes	No	N/A	Comments/Recommendations
<b>Land Use</b>				
Does local ordinance require development standards that meet or exceed title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 1-5 (commencing with section 1270) ( <b>SRA Fire Safe Regulations</b> ) and title 14, CCR, division 1.5, chapter 7, subchapter 3, article 3 (commencing with section 1299.01) ( <b>Fire Hazard Reduction Around Buildings and Structures Regulations</b> ) for SRAs and/or VHFHSZs?	X			2019 LHMP Draft Section C.5.b.iii Low-Priority Action: b) Consider different treatment for buildings in high risk areas, such as: a. Imposing higher standards of building construction for rebuilding that incorporate <b>SRA Fire Safety Regulations</b> (Title 14, CCR, Division 1.5, Chapter 7, Subtitle 2, Articles 1-5) and <b>Fire Hazard Reduction Around Building and Structures Regulations</b> (Title 14, CCR, Division 1.5, Chapter 7, Subchapter 3, Article 3). Excluding buildings in these areas from the amendment <i>[by excluding buildings in high risk areas from the amendment proposed by this activity – rebuilding will need to be re-evaluated according to new code and new regulations. The city will t therefore have discretion to evaluate future development.]</i>
Are there goals and policies to avoid or minimize new residential development in VHFHSZs?	X			Page S-26, Policy S-16 <b>Residential Density in the Hills</b> Actions: A.
Has fire safe design been incorporated into future development requirements?	X			Page S-25, Policy S-15 <b>Construction Standards</b> Actions: A and B
Are new essential public facilities located outside high fire risk areas, such as VHFHSZs, when feasible?	X			2019 LHMP Draft Section C.5.b.iii Low-Priority Action: <b>2019 Streamline Rebuild</b> Streamline the zoning permitting process to rebuild residential and commercial structures following disasters. c) Define the standard for documentation of current conditions for residential and commercial property owners to rebuild by right (in conformity with current applicable codes, specifications and standards) following disasters. d) Define the process for the City to accept and file this documentation. e) Outreach to property owners about this documentation process. Evaluate location of essential public facilities prior to rebuild in order to prioritize development outside high risk areas when feasible.
Are there plans or actions identified to mitigate existing non-conforming development to contemporary fire safe standards, in terms of road standards and vegetative hazard?	X			Page S-28, Policy S-22 <b>Fire Fighting Infrastructure</b> Action: A Page S-28, 29 Policy S-23 <b>Property Maintenance</b> Action: A and B
Does the plan include policies to evaluate re-development after a large fire?	X			a. 2019 LHMP Draft Section C.5.b.iii Low-Priority

			<p>Action: b) Consider different treatment for buildings in high risk areas, such as: Imposing higher standards of building construction for rebuilding that incorporate SRA Fire Safety Regulations (Title 14, CCR, Division 1.5, Chapter 7, Subtitle 2, Articles 1-5) and Fire Hazard Reduction Around Building and Structures Regulations (Title 14, CCR, Division 1.5, Chapter 7, Subchapter 3, Article 3).                  Excluding buildings in these areas from the amendment <i>[by excluding buildings in high risk areas from the amendment proposed by this activity – rebuilding will need to be re-evaluated according to new code and new regulations. The city will therefore have discretion to evaluate future development.]</i></p>
<b>Fuel Modification</b>			
Is fuel modification around homes and subdivisions required for new development in SRAs or VHFHSZs?	X		<p>Page S-28, Policy S-21 Fire Prevention Design Standards Action A, and the Berkeley Fire Code Chapter 49. Page S-25, Policy S-14 Land Use Regulation Actions: A,D,E                  The policy is vague, recommend adding language that targets VHFHSZ's specifically.</p>
Are fire protection plans required for new development in VHFHSZs?			<p>Page S-28, Policy S-21 Fire Prevention Design Standards Action A, and the Berkeley Fire Code Section 4902.1.</p>
Does the plan address long term maintenance of fire hazard reduction projects, including community fire breaks and private road and public road clearance?	X		<p>Page S-27, Policy S-21 <b>Fire Preventative Design Standards</b> Action: C and Page S-28, Policy S-23 <b>Property Maintenance</b> Action: A and B</p>
<b>Access</b>			
Is there adequate access (ingress, egress) to new development in VHFHSZs?	X		<p><b>Page S-26, Policy S-16 Residential Density in the Hills, Action B. Page S-27 and S-28 Policy S-21 Fire Preventative Design Standards</b> Action: C The policy addresses ingress and egress, recommend adding language that targets VHFHSZ's specifically.</p>
Are minimum standards for evacuation of residential areas in VHFHSZs defined?	X		<p>Page S-20 Policy S-1 <b>Response Planning</b> Action: B, Page S-26 Policy S-16 <b>Residential Density in the Hills</b> Action: B, Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: A</p>
If areas exist with inadequate access/evacuation routes, are they identified? Are mitigation measures or improvement plans identified?	X		<p>Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: A</p>
Are there policies or programs promoting public outreach about defensible space or evacuation routes? Are there specific plans to reach at-risk populations?	X		<p>Page S-20 Policy S-1 <b>Response Planning</b> Action: B                  Page S-22 Policy S-4 <b>Special Needs Communities</b> Action: A</p>



<b>Fire Protection</b>				
Does the plan identify future water supply for fire suppression needs?	X			Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: B
Does new development have adequate fire protection?	X			Page S-28 Policy -21 Fire Prevention Design Standards Actions A, B, C, D, and E. Policy S-22 Fire Fighting Infrastructure Action: C Recommend language addressing fire protection for new development.

**Develop adequate infrastructure if a new development is located in SRAs or VHFHSZs.**

	Yes	No	N/A	Comments/Recommendations
Does the plan identify adequate infrastructure for new development related to:				
Water supply and fire flow?	X			Page S-28 Policy S-21 <b>Fire Preventative Design Standards</b> Action: D
Location of anticipated water supply?	X			Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: B
Maintenance and long-term integrity of water supplies?	X			Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: B
Evacuation and emergency vehicle access?	X			Page S-28 Policy S-21 <b>Fire Preventative Design Standards</b> Action: C
Fuel modification and defensible space?	X			Page S-28 Policy S-23 <b>Property Maintenance</b> Action: A and B
Vegetation clearance maintenance on public and private roads?	X			Page S-28, Policy S-21 Fire Prevention Design Standards Action C.
Visible home and street addressing and signage?	X			Page S-25, Policy S-15 Construction Standards Action A. The California Fire Code Section 505 requires premises identification.
Are community fire breaks identified in the plan? Is there a discussion of how those fire breaks will be maintained?	X			Page S-26, Policy S-16 Residential Density in the Hills, Actions A, B, and the Berkeley Fire Code Section 4907.2. A meaningful wildland urban interface fire break for the City Of Berkeley relies on external partners such EBRP, UC Berkeley and the Moraga-Orinda, Oakland, and Kensington Fire District to construct and maintain adequate fire breaks. The density of housing and construction within city limits reduces the possibility of effective physical fire breaks as seen in other state high fire hazard severity zones.

**Working cooperatively with public agencies responsible for fire protection.**

	Yes	No	N/A	Comments/Recommendations
Is there a map or description of existing emergency service facilities and areas lacking service, specifically noting any areas in SRAs or VHFHSZs?	X			Figure 14, page S-14

Does the plan include an assessment and projection of future emergency service needs?	X		Page S-28 Policy S-22 <b>Fire Fighting Infrastructure</b> Action: C
Are goals or standards for emergency services training described?	X		Page S-20 Policy S-1 <b>Response Planning</b> Action: G
Does the plan outline inter-agency preparedness coordination and mutual aid multi-agency agreements?	X		Page S-29 Policy S-24 <b>Mutual Aid</b> Action: A and B

### Sample Safety Element Recommendations

These are examples of specific policies, objectives, or implementation measures that may be used to meet the intent of Government Code sections 65302, subdivision (g)(3) and 65302.5, subdivision (b). Safety element reviewers may make recommendations that are not included here.

<b>A. Maps, Plans and Historical Information</b>
1. Include or reference CAL FIRE Fire Hazard Severity Zone maps or locally adopted wildfire hazard zones.
2. Include or reference the location of historical information on wildfires in the planning area.
3. Include a map or description of the location of existing and planned land uses in SRAs and VHFHSZs, particularly habitable structures, roads, utilities, and essential public facilities.
4. Identify or reference a fire plan that is relevant to the geographic scope of the general plan, including the Unit/Contract County Fire Plan, Local Hazard Mitigation Plan, and any applicable Community Wildfire Protection Plans.
5. Align the goals, policies, objectives, and implementation measures for fire hazard mitigation in the safety element with those in existing fire plans, or make plans to update fire plans to match the safety element.
6. Create a fire plan for the planning area.
<b>B. Land Use</b>
1. Develop fire safe development codes to use as standards for fire protection for new development in SRAs or VHFHSZs that meet or exceed the statewide minimums in the SRA Fire Safe Regulations.
2. Adopt and have certified by the Board of Forestry and Fire Protection local ordinances which meet or exceed the minimum statewide standards in the SRA Fire Safe Regulations.
3. Identify existing development that do not meet or exceed the SRA Fire Safe Regulations or certified local ordinances.

4. Develop mitigation measures for existing development that does not meet or exceed the SRA Fire Safe Regulations or certified local ordinances or identify a policy to do so.
<b>C. Fuel Modification</b>
1. Develop a policy to communicate vegetation clearance requirements to seasonal, absent, or vacation rental owners.
2. Identify a policy for the ongoing maintenance of vegetation clearance on public and private roads.
3. Include fuel breaks in the layout/siting of subdivisions.
4. Identify a policy for the ongoing maintenance of existing or proposed fuel breaks.
5. Identify and/or map existing development that does not conform to current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance in SRAs or VHFHSZs.
6. Identify plans and actions for existing non-conforming development to be improved or mitigated to meet current state and/or locally adopted fire safety standards for access, water supply and fire flow, signing, and vegetation clearance.
<b>D. Access</b>
1. Develop a policy that approval of parcel maps and tentative maps in SRAs or VHFHSZs is conditional based on meeting the SRA Fire Safe Regulations and the Fire Hazard Reduction Around Buildings and Structures Regulations, particularly those regarding road standards for ingress, egress, and fire equipment access. (See Gov. Code, § 66474.02.)
2. Develop a policy that development will be prioritized in areas with an adequate road network and associated infrastructure.
3. Identify multi-family housing, group homes, or other community housing in SRAs or VHFHSZs and develop a policy to create evacuation or shelter in place plans.
4. Include a policy to develop pre-plans for fire risk areas that address civilian evacuation and to effectively communicate those plans.
5. Identify road networks in SRAs or VHFHSZs that do not meet title 14, CCR, division 1.5, chapter 7, subchapter 2, articles 2 and 3 (commencing with section 1273.00) or certified local ordinance and develop a policy to examine possible mitigations.
<b>E. Fire Protection</b>
1. Develop a policy that development will be prioritized in areas with adequate water supply infrastructure.
2. Plan for the ongoing maintenance and long-term integrity of planned and existing water supply infrastructure.
3. Map existing emergency service facilities and note any areas lacking service, especially in SRAs or VHFHSZs.
4. Project future emergency service needs for the planned land uses.
5. Include information about emergency service trainings or standards and plans to meet or maintain them.
6. Include information about inter-agency preparedness coordination or mutual aid agreements.

### Fire Hazard Planning in Other Elements of the General Plan

When updating the General Plan, here are some ways to incorporate fire hazard planning into other elements. Wildfire safety is best accomplished by holistic, strategic fire planning that takes advantage of opportunities to align priorities and implementation measures within and across plans.

<b>Land Use Element</b>
Goals and policies include mitigation of fire hazard for future development or limit development in very high fire hazard severity zones.
Disclose wildland urban-interface hazards, including fire hazard severity zones, and/or other vulnerable areas as determined by CAL FIRE or local fire agency.
Design and locate new development to provide adequate infrastructure for the safe ingress of emergency response vehicles and simultaneously allow citizen egress during emergencies.
Describe or map any Firewise Communities or other fire safe communities as determined by the National Fire Protection Association, Fire Safe Council, or other organization.
<b>Housing Element</b>
Incorporation of current fire safe building codes.
Identify and mitigate substandard fire safe housing and neighborhoods relative to fire hazard severity zones.
Consider diverse occupancies and their effects on wildfire protection (group housing, seasonal populations, transit-dependent, etc).
<b>Open Space and Conservation Elements</b>
Identify critical natural resource values relative to fire hazard severity zones.
Include resource management activities to enhance protection of open space and natural resource values.
Integrate open space into fire safety planning and effectiveness.
Mitigation for unique pest, disease and other forest health issues leading to hazardous situations.
<b>Circulation Element</b>
Provide adequate access to very high fire hazard severity zones.
Develop standards for evacuation of residential areas in very high fire hazard severity zones.
Incorporate a policy that provides for a fuel reduction maintenance program along roadways.



FEMA

September 20, 2019

Sarah Lana  
Emergency Services Coordinator  
Berkeley Fire Department – Office of Emergency Services  
2100 Martin Luther King, Jr. Way, 2nd Floor  
Berkeley, CA 94704

Dear Ms. Lana:

We have completed our review of the *City of Berkeley 2019 Local Hazard Mitigation Plan* and have determined that this plan is eligible for final approval pending its adoption by the City of Berkeley.

Formal adoption documentation must be submitted to the FEMA Region IX office by the jurisdiction within one calendar year of the date of this letter, or the entire plan must be updated and resubmitted for review. We will approve the plan upon receipt of the documentation of formal adoption.

If you have any questions regarding the planning or review processes, please contact the FEMA Region IX Hazard Mitigation Planning Team at [fema-r9-mitigation-planning@fema.dhs.gov](mailto:fema-r9-mitigation-planning@fema.dhs.gov).

Sincerely,

A handwritten signature in blue ink that reads "Juliette Hayes".

Juliette Hayes  
Director  
Mitigation Division  
FEMA, Region IX

Enclosure

cc: Adam Sutkus, Hazard Mitigation Planning Chief, California Governor's Office of  
Emergency Services  
Jennifer Hogan, State Hazard Mitigation Officer, California Governor's Office of  
Emergency Services



Planning and Development Department  
Land Use Planning Division

## STAFF REPORT

DATE: November 6, 2019  
TO: Members of the Planning Commission  
FROM: Alene Pearson, Principal Planner  
SUBJECT: 2019 Local Hazard Mitigation Plan

### RECOMMENDATION

Hold a Public Hearing to consider input and recommend approval to the City Council of the 2019 Local Hazard Mitigation Plan (LHMP). LHMPs are updated on a 5-year cycle and this plan replaces the 2014 LHMP. Adoption of this plan requires an amendment to the General Plan, which explicitly references the 2014 LHMP. Findings for the General Plan amendment are included in this report.

### BACKGROUND

There are three steps the Planning Commission must take to address the staff recommendation to have the LHMP adopted into the General Plan (by reference):

- Hold a Public Hearing and consider public input (*see Attachment 1*):
- Recommend that the General Plan be changed to include the proposed language, which references the LHMP into the General Plan, but removes reference to the update year; and
- Recommend the LHMP as drafted, or with additional changes, to the Council for adoption as part of the General Plan.

Note: General Plan amendment findings are included in this report.

This report provides steps, process and findings for the Planning Commission (Commission) to consider. It also includes a report submitted by the City's Office of Emergency Services (OES), which describes the details of the LHMP and the update process to date (*see Attachment 2*).

The Commission was introduced to the LHMP on November 7, 2018 and then reviewed a preliminary draft of the LHMP on February 6, 2019. At that meeting, the Commission and public was informed that the Draft LHMP was available for review on the City's website and at libraries.

## DISCUSSION

### **Local Hazard Mitigation Plan Essentials**

- *Purpose of the LHMP*  
The LHMP identifies and suggests actions to reduce a wide range of Berkeley's hazard vulnerabilities. The document follows a standardized outline and process mandated by the State and Federal government. Once a city has adopted an LHMP, opportunities for State and Federal funding become available. The City of Berkeley may be eligible for program funding based on adoption of the LHMP.
- *The LHMP and the General Plan*  
In 2004, the City of Berkeley adopted a Disaster Mitigation Plan (DMP) that was considered part of the Disaster Preparedness and Safety Element of the General Plan. In 2014, the LHMP replaced the DMP and was appended to the General Plan by reference. Attachment 3 provides the proposed General Plan amendment text being considered by Planning Commission on November 6, 2019 which extends this reference to future updates of the LHMP.
- *LHMP Project Management and Plan Development*  
The LHMP update process was managed through the Fire Department's OES Division, which focuses on disaster readiness. A companion OES staff report (see *Attachment 2*) describes the LHMP mandate, Berkeley LHMP basics, and the public process associated with the 2019 LHMP update. The LHMP Executive Summary (see *Attachment 4*) is also provided to guide Commission discussion. OES staff will provide a short presentation and be available as subject experts to address any questions the Commission may have regarding the details of the LHMP.

### **Environmental Review**

The environmental impacts of the LHMP, from a CEQA standpoint, are inconsequential. CEQA is used to evaluate the environmental impact of a jurisdiction's action. The action can result in direct physical changes in the environment (such as the approval of a new building), or indirect change that is reasonably foreseeable (such as the approval of a General Plan).

In this case, the action is the adoption of a plan that identifies natural hazards in Berkeley and outlines a five-year strategy of possible future efforts to further protect Berkeley's citizens, buildings, infrastructure and environment from those hazards. Much of the plan's mitigation strategy focuses on studies and inter-agency programs, for which the City of Berkeley is not the Lead Agency as defined by CEQA. Other mitigation programs that may be undertaken would require specific CEQA review, once they are better understood and a scope is set.

The LHMP project can be considered "exempt" from CEQA based on four different sections of the CEQA Guidelines:



Section 15183(d): “The project is consistent with...a general plan of a local agency, and an EIR was certified by the lead agency for the...general plan.”

Section 15262: “A project involving only feasibility or planning studies for possible future actions which the agency, board or commission has not approved, adopted, or funded does not require the preparation of an EIR or negative declaration but does require consideration of environmental factors. This section does not apply to the adoption of a plan that will have a legally binding effect on later activities.”

Section 15306: “(Categorical Exemption) Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted or funded.”

Section 15601(b)(3): “...CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.”

### **General Plan Amendment Findings:**

1. *The proposed amendment is in the public interest.*  
The LHMP and General Plan amendment open the opportunity for the City to better protect itself from natural disasters. The update of the LHMP incorporates state of the art knowledge regarding potential disasters, and makes the City eligible to receive funding.
2. *The proposed amendment is consistent and compatible with the rest of the General Plan.*  
Four of the six Objectives of the General Plan’s Disaster Preparedness and Safety Element refer to the need to mitigate and reduce potential for damage from disasters:
  - a. Improve and develop City mitigation programs to reduce risks to people and property from natural and man-made hazards to socially and economically acceptable levels.
  - b. Reduce the potential for loss of life, injury, and economic damage resulting from earthquakes and associated hazards.
  - c. Reduce the potential for loss of life, injury, and economic damage resulting from urban and wild land fire.
  - d. Reduce the potential for loss of life and property damage in areas subject to flooding.

The LHMP responds to these General Plan objectives and focuses attention on resolving them. In addition, the LHMP is a part of the Disaster Preparedness and Safety Element of the General Plan; a required Element under State General Plan Law.

3. The potential effects of the proposed amendment have been evaluated and have been determined not to be detrimental to the public health, safety, or welfare.

The potential effects of the LHMP and General Plan amendment are all positive. The LHMP suggests preemptive programs and activities (some with other agencies) to make Berkeley less susceptible to natural disaster.

4. The proposed amendment has been processed in accordance with the applicable provisions of the California Government Code and the California Environmental Quality Act.

The General Plan amendment is processed in accordance with Chapter 22.04.020 of the Berkeley Municipal Code. The amendment is being submitted to the Planning Commission for consideration; a public hearing was set for November 6, 2019 (see *Attachment 1*), with at least 10 days' notice given; and a notice was published in a newspaper of record (*The Berkeley Voice*) on October 25, 2019 according to the applicable procedures.

### CONCLUSION

Staff recommends that the Planning Commission recommend to City Council adoption of the 2019 LHMP, make the General Plan findings, and recommend amending the General Plan to reference the updated LHMP.

#### Attachments:

1. Public Hearing Notice
2. Staff report from Fire Department – Office of Emergency Services
3. Proposed General Plan Language
4. 2019 Final Draft LHMP Executive Summary



# PLANNING COMMISSION

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## NOTICE OF PUBLIC HEARING

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### NOVEMBER 6, 2019

#### 2019 Local Hazard Mitigation Plan (LHMP)

The Planning Commission, of the City of Berkeley, will hold a Public Hearing on the above matter, on **Wednesday, November 6, 2019**, at the **South Berkeley Senior Center**, 2939 Ellis Street (wheelchair accessible). The meeting starts at 7:00 p.m.

**PROJECT DESCRIPTION:** Consider an update to the Local Hazard Mitigation Plan (LHMP) adopted in 2014. The 2019 Local Hazard Mitigation Plan (LHMP) identifies natural hazards in Berkeley and outlines a five-year strategy to further protect Berkeley's people, buildings, infrastructure and environment from those hazards. Adoption of the 2019 LHMP requires an amendment to the City's Disaster Preparedness and Safety Element of the General Plan.

**LOCATION:** Citywide.

**ENVIRONMENTAL REVIEW STATUS:** The proposed change would be exempt from the California Environmental Quality Act pursuant to Guideline Sections 15183(d), 15262, 15306 and 15061(b)(3) because a) the Plan is consistent with the General Plan; b) the Plan involves feasibility and planning studies for possible future actions; c) the Plan involves basic data collection, research, experimental management and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource; and d) it can be seen with certainty that the proposed amendment would not have a significant effect on the environment.

#### PUBLIC COMMENT

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Comments may be made verbally at the Public Hearing, and in writing before the hearing. Those wishing to speak at the hearing must submit a speaker card. Written comments or questions concerning this project should be directed to:

Planning Commission  
Alene Pearson, Secretary  
Land Use Planning Division  
1947 Center Street  
Berkeley, CA 94704

E-mail: [apearson@CityofBerkeley.info](mailto:apearson@CityofBerkeley.info)  
Telephone: (510) 981-7489

To assure distribution to Commission members prior to the meeting, **correspondence must be received by 12:00 noon, eight (8) days before the meeting**. For items with more than ten (10) pages, fifteen (15) copies must be submitted to the Secretary by this deadline. For any item submitted less than eight (8) days before the meeting, fifteen (15) copies must be submitted to the Secretary prior to the meeting date.

### **COMMUNICATION ACCESS**

To request a meeting agenda in large print, Braille, or on audiocassette, or to request a sign language interpreter for the meeting, call (510) 981-7410 (voice) or 981-6903 (TDD). Notice of at least five (5) business days will ensure availability.

### **FURTHER INFORMATION**

Questions should be directed to Alene Pearson, at 981-7489, or [apearson@cityofberkeley.info](mailto:apearson@cityofberkeley.info)

Current and past agendas are available on the City of Berkeley website at:

[https://www.cityofberkeley.info/Clerk/Commissions/Commissions\\_Planning\\_Commission\\_Homepage.aspx](https://www.cityofberkeley.info/Clerk/Commissions/Commissions_Planning_Commission_Homepage.aspx)



**Fire Department**  
Office of Emergency Services

## STAFF REPORT

DATE: November 6, 2019  
 TO: Members of the Planning Commission  
 FROM: Sarah Lana, Emergency Services Coordinator  
 SUBJECT: Final Draft 2019 Local Hazard Mitigation Plan (LHMP)

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### SUMMARY

The City of Berkeley's Local Hazard Mitigation Plan (LHMP) is an Appendix to the General Plan's Disaster Preparedness and Safety Element. The LHMP was originally adopted by the City Council on June 22, 2004, and Council adopted an update in 2014. The LHMP must be updated once every five years. The 2014 LHMP expires on December 16, 2019.

The LHMP is written in accordance with federal requirements so that Berkeley can maintain eligibility for federal mitigation grant funding. On September 20, 2019, FEMA determined the Final Draft LHMP to be eligible for final approval pending its adoption by the Berkeley City Council.

Tonight's Planning Commission meeting will serve as the first Public Hearing for the Final Draft 2019 LHMP. Staff will bring the Final Draft 2019 LHMP to the City Council for adoption at its December 10, 2019 meeting. If the plan is adopted by the City Council at its December meeting, the City will remain in compliance and will retain eligibility for mitigation grant funding.

### BACKGROUND

#### *Description of Local Hazard Mitigation Plan*

The LHMP is written to adhere to federal requirements as outlined in the Disaster Mitigation Act of 2000. The City of Berkeley retains eligibility for federal Hazard Mitigation grant funding by fulfilling these requirements and maintaining a LHMP that is updated on a five-year cycle. The LHMP has two functions.

- First, it identifies natural hazards in Berkeley and their possible impacts on Berkeley's people, buildings, infrastructure, and environment. Because of their potential to catastrophically impact Berkeley, earthquake and wildland-urban

interface fire are considered to be Berkeley's hazards of greatest concern. Other hazards of concern include landslide, flooding, tsunami, extreme heat, climate change, and hazardous materials release.

- Second, the Plan outlines a five-year strategy to reduce Berkeley's vulnerabilities to these potential impacts. The multi-faceted strategy builds on collaboration among City government, external partners, and community members to implement mitigation programs. Proposed Actions include strengthening Berkeley's building stock, reducing fire risk through code enforcement and vegetation management, and continuing research to better understand all hazards.

#### *First Draft Plan Development Process*

The first draft plan was developed using a collaborative process with partners and technical experts. The First Draft LHMP was circulated for public review for 73 days (December 18 through February 28, 2019). During this period, staff made presentations at 11 Commission meetings to provide interested persons with an in-person opportunity to ask questions and provide feedback on the First Draft 2019 LHMP.

#### *Plan Development*

In August 2018, the City convened an interdepartmental planning team to develop the First Draft 2019 LHMP. Over the three months, this Core Planning Team collaborated with numerous partner representatives, scientists, and hazard experts to update information in the 2014 Hazard Analysis. The 2019 LHMP accounts for new scientific research on hazards that could affect Berkeley, their areas of exposure, and their potential impacts.

City and partner representatives worked with the project manager to identify Berkeley's progress mitigation actions identified in 2014 (Element D.2). Next, the project manager, City representatives, and partner representatives combined information on the success of 2014 actions, updates to the hazard analysis, and guidance from the City's General Plan to identify "pre-draft" actions for the 2019 Mitigation Strategy (Element C). These pre-draft actions were initially vetted by the City's Core Planning Team in October 2018. They were then further vetted by a diverse group of partner representatives at the December 2018 Institutional Community Partner Meeting. The Core Planning Team revised actions to reflect feedback received from institutional partners, then incorporated the actions into a complete 2019 First Draft Plan.

#### *Public Outreach Process*

In June 2018, staff released a survey to collect information from the community about their hazard concerns. The 518 responses informed the First Draft 2019 LHMP. City staff has provided updates and presentations to the community throughout the 2019 LHMP development process, starting during development of the First Draft Plan with the Planning Commission (November 7, 2018) and Disaster and Fire Safety Commission (December 5, 2018).

On December 18, 2019, the City made the First Draft 2019 LHMP a public document for review and comment by the Berkeley community. Additionally, the City Manager sent a

memo to City Council members and to secretaries of all City Commissions. The memos outlined the process for Commissions to provide feedback and attached the First Draft Plan's Executive Summary and Actions.

From December 18, 2018 to February 28, 2019:

- The City posted the First Draft Plan on the City website and at City libraries, and community members were invited to provide feedback on the plan.
- Staff presented the First Draft 2019 LHMP to Commissioners and community members for review and feedback at the following meetings:
  - January 3, 2019 Housing Advisory Commission
  - January 9, 2019 Parks and Waterfront Commission
  - January 9, 2019 Commission on Disability
  - January 10, 2019 Public Works Commission
  - January 16, 2019 Planning Commission
  - January 16, 2019 Commission on Aging
  - January 23, 2019 Disaster and Fire Safety Commission
  - February 4, 2019 Energy Commission
  - February 4, 2019 Peace and Justice Commission
  - February 7, 2019 Landmarks Preservation Commission
  - February 14, 2019 Community Environmental Advisory Commission

#### *Final Draft Plan Development Process*

Development of the Final Draft 2019 LHMP involved incorporation of community feedback and technical review by State and federal authorities. These activities are detailed below.

#### *Incorporating Community Feedback*

Following the February 28, 2019 comment deadline, City staff reviewed feedback from commissions and community members. Staff provided responses, as documented in *Public Comments and Staff Responses: First Draft 2019 Local Hazard Mitigation Plan*. Four topics emerged repeatedly in community responses to the First Draft 2019 LHMP:

##### 1. Scope and Detail of the Mitigation Plan

Community comments included a number of questions and suggestions regarding hazards, topics, and programs to consider for inclusion in the LHMP. Many of those suggestions related to emergency management, but were not within the scope of the LHMP.

Mitigation describes pre-disaster activities that reduce the impact of a disaster by providing passive protection at the time of disaster impact. If an activity or system creates a steady state of protection that exists both before and after a disaster occurs, then it is likely a mitigation activity. If the activity creates a system that can be "activated" after a disaster to reduce vulnerability, then it is likely not considered a mitigation activity.



## 2. Hazard Information: Digital LHMP

Many community members recommended that the plan include information on topics and hazards that were in fact addressed by the plan, but were likely challenging to find for community reviewers. Because the LHMP is written primarily to achieve compliance with federal requirements, staff recognizes that the document can be difficult to navigate. To address this gap and make the plan more user-friendly for community members, the LHMP Coordinator created the Digital LHMP, available at <https://arcg.is/reqbG>.

This web-based tool highlights key hazard information, interactive maps, and associated mitigation actions in a much more user-friendly interface than can be provided in document version being provided to FEMA. Staff hopes that this structure helps to better educate the community about the key information contained in the plan. Staff also plans to adapt a version of the Digital LHMP that can be updated at more regular intervals as new hazard information arises.

## 3. Evacuation in the Berkeley Hills

Many responses included concerns about Wildland-Urban Interface Fire risk in the Berkeley Hills and how people will evacuate. The City is finalizing its draft Wildfire Evacuation Plan, which addresses evacuation strategy and process. While evacuation is not considered mitigation and is not described in detail in the plan, there are mitigation activities addressed in the plan that can make evacuation easier:

- a. Hills Roadways and Parking: As part of the Hills Roadways and Parking Action, the City is currently developing the Safe Passages Program, which is a project to support the City's emergency evacuation plan by helping to ensure clear ingress for emergency vehicles and egress routes for evacuation. Project implementation will include evaluation of streets requiring parking restrictions, enforcement mechanisms, vegetation clearing and management, and a robust public education campaign to reduce risks and maximize benefits.
- b. Vegetation Management: The City runs a number of vegetation management programs. The Fire Department inspects over 1,400 parcels in Hazardous Fire Zones 2 and 3 in addition to responding to complaints. Many responses on this topics indicate that this may not be enough. As part of the Vegetation Management Action, the City's currently in-development Safe Passages Program includes seeking funding for vegetation clearing and management. The goal is to create a crew that would be available to assist with vegetation management on private and public property.
- c. Pedestrian Evacuation Routes in the Hills: The 2019 LHMP highlights paths in the hills areas as important elements of Berkeley's evacuation network. The Wildland-Urban Interface Fire information in Element B: *Hazard Analysis*

describes how these pathways significantly reduce evacuation distances when compared to City streets alone. The *Hills Pedestrian Evacuation Action* presented in Element C: *Mitigation Strategy* outlines how the City hopes to continue working with partners to maintain and promote these public pathways for pedestrian evacuation.

Some community responses identified concerns about the state of these pathways and who they serve. These concerns are noted. The City is focusing on path maintenance and key improvements as an important supplement to the existing network of streets in the hills. Paths can contribute to the limited evacuation routes currently available to community members in the hills.

#### 4. Overhead Utility Lines

Many responses expressed concerns about the threat of overhead utility wires. The 2019 LHMP includes the *Undergrounding Action* in Element C: *Mitigation Strategy*. This action describes the City's efforts to reduce the potential threat of these wires specifically in the Berkeley Hills. The action describes undergrounding projects that have been prioritized and or are underway.

Each year, Pacific Gas & Electric credits the City of Berkeley with 525,000 credits for use in undergrounding utilities. Under Rule 20A, the City utilizes these credits on utility undergrounding projects that PG&E performs. The City may also borrow up to five years (2.6 million) of future credits at a time to help fund existing approved projects.

At this time, funding alternatives have not been identified.

The General Plan prioritizes undergrounding utilities along designated evacuation routes. See *Disaster Preparedness and Safety Element Policy S-1: Response Planning, Actions B and C, Policy S-22: Fire Fighting Infrastructure, Action A; and Transportation Element Policy T-28, Action E.*

Based on feedback, staff incorporated appropriate changes into the Final Draft Plan, as documented in *Summary of Changes to the City of Berkeley's First Draft 2019 Local Hazard Mitigation Plan*. Both of these documents are available at [www.CityofBerkeley.info/Mitigation](http://www.CityofBerkeley.info/Mitigation) and at City libraries.

#### *Board of Forestry Review*

When adopted by City Council, the 2019 LHMP will serve as an Appendix to the General Plan's *Disaster Preparedness and Safety Element*. As part of the 2019 LHMP update, City staff worked with the California Department of Forestry and Fire Protection (Cal Fire) to meet requirements of Government Code 65302.5. This new code requires that when the City updates the LHMP, the City also review and update the Safety Element of the General Plan to address fire risk. The City submitted the current General Plan and the Final Draft 2019 LHMP for Board of Forestry Review. At its meeting on June 11, 2019, the Board of Forestry and Fire Protection reviewed these documents,

determined that they met Code requirements, and provided general recommendations for future collaboration.

#### *Federal Emergency Management Agency Review*

The LHMP is written in accordance with federal requirements so that Berkeley can maintain eligibility for federal mitigation grant funding. Review of the Final Draft Plan included assessment by the Federal Emergency Management Agency in August 2019. On September 20, 2019, FEMA determined the Final Draft LHMP to be eligible for final approval pending its adoption by the Berkeley City Council.

#### CONCLUSION

Development of the 2019 LHMP update involved a highly-collaborative process with hazard experts, scientists, key Berkeley institutions, City Commissions, and individual community members. This inclusive effort has resulted in a cutting-edge document that describes the risks our community faces, as well as a path forward to protect our people, buildings, infrastructure, and environment in the next disaster.

Adopting the 2019 LHMP will provide a roadmap for the City to continue its work to make the community safer. It will also enable the City to use external resources for the effort. The Final Draft 2019 LHMP meets the technical needs of City government and reflects the will of the community.

DATE: November 6, 2019  
TO: Members of the Planning Commission  
FROM: Alene Pearson, Principal Planner  
SUBJECT: 2019 Local Hazard Mitigation Plan, Proposed General Plan Language

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Below is the proposed amendment to the General Plan. Changes would be made to the fifth paragraph on page S-3 of the Disaster Preparedness and Safety Element as follows:

*In 2004, the City adopted its first Hazard Mitigation Plan. It is part of the Disaster Preparedness and Safety Element of the General Plan. The City updated the Disaster Mitigation Plan in 2014 and renamed it the Local Hazard Mitigation Plan (LHMP). On 12/16/14, the City Council adopted the LHMP (by reference) into the General Plan. The LHMP will be updated periodically, as required by State and Federal regulations.*





City of Berkeley

# 2019 Local Hazard Mitigation Plan

Final Draft

September 19, 2019

## Acknowledgements

### City Council

Jesse Arreguin, Mayor  
Rashi Kesarwani, District 1  
Cheryl Davila, District 2  
Ben Bartlett, District 3  
Kate Harrison, District 4  
Sophie Hahn, District 5  
Susan Wengraf, District 6  
Rigel Robinson, District 7  
Lori Droste, District 8

### City Manager

Dee Williams-Ridley

### Project Managers

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Jamie Albrecht, LHMP Coordinator, City of Berkeley

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Keith May, Special Operations Chief  
Jenny McNulty, Program and Administration Manager  
Alene Pearson, Principal Planner  
Suzanne Ridel, PHEP Unit Senior Manager  
Rachel Rodriguez, PHEP Program Manager  
Tony Yuen, Fire Marshal

### Institutional Key Partner Representatives

Alex Yao, UC Berkeley Police Captain  
Alina Constantinescu, Berkeley Path Wanderers Incoming President  
Daphne White, Berkeley Path Wanderers, Board Member  
James Wogan, Berkeley Unified School District Manager of Student Services  
John Calise, Berkeley Unified School District Director of Facilities  
Kristi Mercado, AT&T FirstNet Senior Principal  
Minna Toloui, Ecology Center Climate Lead



Natasha Beery, Berkeley Unified School District Director (BSEP)  
Rafael Vargas, Sutter Health Emergency Management Coordinator  
Robert Maisonet, Lifelong Medical Compliance Coordinator  
Rochelle Pollard, AT&T Client Solutions Executive  
Steven Frew, EBMUD Manager Security and Emergency Preparedness  
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Jeffrey Bowman, Bayer  
Julia Halsne, EBMUD Manager of Business Continuity  
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Anne Wein, US Geological Survey Operations Research Analyst  
Michael Germeraad, Association of Bay Area Governments Resilience Planner

Technical Reviewers

Derek J. Lambeth, California Governor's Office of Emergency Services  
Kelly Riley, California Governor's Office of Emergency Services  
Lindsey Robinson, Michael Baker International  
JoAnn Scordino, Federal Emergency Management Agency

## Executive Summary

Berkeley is a vibrant and unique community. But every aspect of the city – its economic prosperity, social and cultural diversity, and historical character – could be dramatically altered by a disaster. While we cannot predict or protect ourselves against every possible hazard that may strike the community, we can anticipate many impacts and take steps to reduce the harm they will cause. We can make sure that tomorrow’s Berkeley continues to reflect our current values.

City government and community members have been working together for years to address certain aspects of the risk – such as strengthening structures, distributing disaster supply caches, and enforcing vegetation management measures to reduce fire risk. The 2004 Disaster Mitigation Plan formalized this process, ensuring that these activities continued to be explored and improved over time. The 2014 Local Hazard Mitigation Plan continued this ongoing process to evaluate the risks that different hazards pose to Berkeley, and to engage the community in dialogue to identify the most important steps that the City and its partners should pursue to reduce these risks. Over many years, this constant focus on disasters has made Berkeley, its residents and businesses, much safer.

The federal Disaster Mitigation Act of 2000 (DMA 2000) calls for all communities to prepare mitigation plans. The City adopted a plan that met the requirements of DMA 2000 on June 22, 2004, and an update on December 16, 2014. This is the 2019 update to that plan, called the 2019 Local Hazard Mitigation Plan (2019 LHMP).

### **Plan Purpose**

The 2019 LHMP serves three functions:

1. The 2019 LHMP documents our current understanding of the hazards present in Berkeley, along with our vulnerabilities to each hazard – the ways that the hazard could impact our buildings, infrastructure, community, and environment.
2. The document presents Berkeley City government’s Mitigation Strategy for the coming five years. The Mitigation Strategy reflects a wide variety of both funded and unfunded actions, each of which could reduce the Berkeley’s hazard vulnerabilities.
3. By fulfilling requirements of the DMA 2000, the 2019 LHMP ensures that Berkeley will remain eligible to apply for mitigation grants before disasters, and to receive federal mitigation funding and additional State recovery funding after disasters.

### **Plan Organization**

Unlike prior versions of the plan, the 2019 LHMP has been structured to specifically address DMA 2000 requirements. The 2019 LHMP is organized as follows:

#### *Element A: Planning Process*

This section of the 2019 LHMP describes the process used to develop the document, including how partners, stakeholders, and the community were engaged. It also addresses the City’s approach to maintaining the 2019 LHMP over the five-year planning cycle.

*Element B: Hazard Analysis*

This section of the 2019 LHMP outlines the different hazards present in Berkeley. Analysis of each hazard includes the areas of Berkeley with exposure to the hazard, the potential impacts of each hazard, and Berkeley's vulnerabilities to each hazard.

*Element C: Mitigation Strategy*

The Mitigation Strategy section first documents the authorities, policies, programs, and resources that the City brings to bear in implementing mitigation actions. Second, this section outlines a comprehensive range of specific mitigation actions and projects designed to reduce Berkeley's hazard vulnerabilities. This section also describes how the 2019 LHMP is integrated with other City plans.

*Element D: Plan Review, Evaluation, and Implementation*

This section describes how changes in development have influenced updates to the 2019 LHMP. It also provides a detailed description of Berkeley's progress on the Mitigation Strategy proposed in 2014.

*Element E: Plan Adoption*

This section will be used to document formal adoption of the Final Draft 2019 LHMP by the Berkeley City Council.

In the pages that follow, this Executive Summary describes highlights from Element B: *Hazard Analysis* and Element C: *Mitigation Strategy*, as well as any key updates that were made to the section since the 2014 version.

## Element B: Hazard Analysis

To become disaster resilient, a community must first understand the existing hazards and their potential impacts. Berkeley is exposed to a number of natural and human-caused hazards that vary in their intensity and impacts on the city. This mitigation plan addresses six natural hazards: earthquake, wildland-urban interface (WUI) fire, flood, landslide, and tsunami. Each of these hazards can occur independently or in combination, and can also trigger secondary hazards.

Although this plan is focused on natural hazards, four human-caused hazards of concern are also discussed: hazardous materials release, climate change,<sup>1</sup> extreme heat events, and terrorism. They are included because of their likelihood of occurrence and the magnitude of their potential consequences, as outlined in the table below.

**Table 1. Summary of Hazard Analysis**

<b>Hazard</b>	<b>Likelihood</b>	<b>Severity of Impact</b>
<b>Earthquake</b>	Likely	Catastrophic
<b>Wildland-Urban Interface Fire</b>	Likely	Catastrophic
<b>Rainfall-Triggered Landslide</b>	Likely	Moderate
<b>Floods</b>	Likely	Minor
<b>Tsunami</b>	Possible	Moderate
<b>Climate Change</b>	Likely	Moderate to Catastrophic*
<b>Extreme Heat</b>	Likely	Moderate to Catastrophic*

*\*Consequence levels for climate change and extreme heat depend highly on the success of global climate mitigation over the coming decades. If greenhouse gas emissions are significantly reduced, and carbon sequestration is increased, impacts may be moderate. If emissions remain steady at present levels or even increase, consequences may increase to catastrophic, although effects will differ widely over the globe.<sup>23</sup>*

Hazardous materials release is described only as a cascading impact of a natural hazard. Because this plan focuses on natural hazards as emphasized in DMA 2000, likelihood and consequence levels for hazardous materials release and terrorism are not defined.

## ***Hazards of Greatest Concern***

### **Earthquake**

We do not know when the next major earthquake will strike Berkeley. The United States Geological Survey states that there is a 72% probability of one or more M 6.7 or greater earthquakes from 2014 to 2043 in the San Francisco Bay Region.<sup>4</sup> There is a 33% chance that a 6.7 or greater will occur on the Hayward fault system between 2014 and 2043.<sup>5</sup> This means that many Berkeley residents are likely to experience a severe earthquake in their lifetime.

A catastrophic earthquake on the Hayward Fault would cause severe and violent shaking and three types of ground failure in Berkeley. Surface fault rupture could occur in the Berkeley hills along the fault, damaging utilities and gas lines that cross the fault. Landslides are expected in the Berkeley hills during the next earthquake, particularly if the earthquake occurs during the rainy winter months. Landslide movement could range from a few inches to tens of feet. Ground surface displacements as small as a few inches are enough to break typical foundations. Liquefaction is very likely in the westernmost parts of the city and could occur in much of the Berkeley flats. Liquefaction can destroy pavements and dislodge foundations.

Shaking and ground failure is likely to create impacts that ignite post-earthquake fires. Firefighting will be simultaneously challenged due to broken water mains and damage to electrical, transportation, and communication infrastructure.

In a 6.9 magnitude earthquake on the Hayward Fault, the City estimates that over 600 buildings in Berkeley will be completely destroyed and over 20,000 more will be damaged. One thousand to 4,000 families may need temporary shelter. Depending on the disaster scenario, one hundred people could be killed in Berkeley alone, and many more would be injured. Commercial buildings, utilities, and public roads will be disabled or destroyed. This plan estimates that building damage in Berkeley alone could exceed \$2 billion, out of a multi-billion dollar regional loss, with losses to business activities and infrastructure adding to this figure.

Low-income housing units are expected to be damaged at a higher rate than other residences. Other types of housing, such as condominiums, may replace them when land owners rebuild. This could lead to profound demographic shifts in Berkeley.

### **Wildland-Urban Interface Fire**

Berkeley is vulnerable to a wind-driven fire starting along the city's eastern border. The fire risk facing the people and properties in the eastern hills is compounded by the area's mountainous topography, limited water supply, minimal access and egress routes, and location, overlaid upon the Hayward Fault. Berkeley's flatlands are also exposed to a fire that spreads west from the hills. The flatlands are densely-covered with old wooden buildings housing low-income and vulnerable populations, including isolated seniors, people with disabilities, and students.

The high risk of wildland-urban interface (WUI) fire in Berkeley was clearly demonstrated in the 1991 Tunnel Fire, which destroyed 62 homes in Berkeley and more than 3,000 in Oakland. Accounts of major wildfires in Berkeley date back to at least 1905 when a fire burned through

Strawberry Canyon and threatened the University campus and the small Panoramic Hill subdivision. Other major fires occurred in the 1970s and 1980s.

In 1923, an even more devastating fire burned through Berkeley. It began in the open lands of Wildcat Canyon to the northeast and, swept by a hot September wind, penetrated residential north Berkeley and destroyed nearly 600 structures, including homes, apartments, fraternities and sororities, a church, a fire station and a library. The fire burned downhill all the way to Shattuck Avenue in central Berkeley.<sup>6</sup>

If a fire occurred today that burned the same area, the loss to structures would be in the billions of dollars.<sup>7</sup> Destruction of contents in all of the homes and businesses burned would add hundreds of millions of dollars<sup>8</sup> to fire losses. Efforts to stabilize hillsides after the fire to prevent massive landslides would also add costs. Depending on the speed of the fire spread, lives of Berkeley residents could also be lost. Many established small businesses, homes, and multi-family apartment buildings, particularly student housing, would be completely destroyed, changing the character of Berkeley forever.

### ***Natural Hazards of Concern***

This plan identified three additional natural hazards of concern: rainfall-triggered landslide, floods, and tsunami. These hazards could cause significant damage and losses in Berkeley. However, unlike earthquake and WUI fire, their impacts are likely to be smaller, and confined to specific areas.

#### **Rainfall-Triggered Landslide**

Berkeley has a number of deep-seated landslides that continuously move, with the rate of movement affected by rainfall and groundwater conditions. Significant localized areas of the Berkeley hills face risk from landslide, and a major slide could endanger lives and impact scores of properties, utilities and infrastructure.

#### **Floods**

Floods also could damage property and cause significant losses in Berkeley. Flooding can occur when stormwater exceeds the capacity of a creek channel, or the capacity of the storm drain system. Creek flooding in Berkeley has the potential to affect about 675 structures, mainly in the western, industrial area of the city. It is unlikely that floodwaters will reach higher than three feet, but damages to homes, businesses, and their contents could total over \$160 million. Storm drain overflow creates localized flooding in many known intersections in Berkeley. With few properties covered by flood insurance, these costs would be borne primarily by Berkeley residents and businesses.

#### **Tsunami**

Tsunamis, though rare inside the San Francisco Bay, can occur from large offshore subduction style earthquakes around the Pacific Rim. Small, local tsunamis can also result from offshore strike-slip Faults such as parts of the San Andreas Fault of the Peninsula and the Hayward Fault through San Pablo Bay. The March 2011 Japan earthquake generated a devastating tsunami, which reached the Bay Area and caused minor damage to docks and floats in the Berkeley Marina. A larger tsunami could impact much more of Berkeley's western shores. Buildings, infrastructure, and roadways could be damaged, and debris and hazardous materials could cause post-tsunami fires. Deaths are possible if individuals choose not to evacuate hazardous areas, do not understand tsunami warnings, or are unable to evacuate.



### ***Manmade Hazards of Concern***

While the focus of the 2019 LHMP is on natural hazards as emphasized in the Disaster Mitigation Act of 2000 (DMA 2000),<sup>9</sup> the plan provides analysis of four manmade hazards of concern. Climate change is described because its impacts are likely to exacerbate the natural hazards of concern identified in the plan. The 2019 LHMP specifically addresses the hazard of extreme heat events because they are projected to increase exponentially in the next century as climate change continues. Hazardous materials release is addressed in this mitigation plan as a potential impact from a natural hazard. Terrorism is identified as a hazard of concern but is not analyzed in-depth.

### **Climate Change**

Like regions across the globe, the San Francisco Bay Area is already experiencing negative impacts of climate change. These impacts will continue to grow in intensity and will disproportionately affect communities such as the elderly, children, people with disabilities, and people with low incomes.

The severity of these impacts will depend on the amount of greenhouse gas emissions produced worldwide over the coming decades. Mitigation of further emissions will reduce Berkeley's exposure to climate change. Berkeley's Climate Action Plan<sup>10</sup> identifies the City's plan for emissions reductions, known as climate change mitigation. Simultaneously, we are already experiencing climate change impacts that will intensify over time—including sea level rise, prolonged poor air quality from wildfires, drought, severe storms, and extreme heat – so it is also critical that Berkeley adapt to current and projected impacts in order to protect Berkeley's community, infrastructure, buildings, and economy, known as climate change adaptation.

Climate change will have direct impacts and will also exacerbate the natural hazards of concern outlined in this plan. Rising sea levels have the potential to impact infrastructure and community members in west Berkeley and the Berkeley waterfront. This will increase Berkeley's exposure to tsunami inundation and to flooding of critical infrastructure in these areas, which includes sanitary sewers, state highways, and railroad lines. Increased temperatures, when coupled with prolonged drought events, can increase the intensity of wildfires that may occur, and pose significant health and safety risks to people. By 2100, most of the Bay Area will average six heat waves per year, each an average length of ten day.<sup>11</sup> Shorter, more intense wet seasons will make flooding more frequent, and may increase the landslide risk in the Berkeley hills. California may experience greater water and food insecurity, and drought will become a more persistent issue as the effects of climate change deepen.

### **Extreme Heat Events**

Multiple factors contribute to the extreme heat hazard, including very high temperatures, nights that do not cool down, consecutive days of extreme heat, and extreme heat during unexpected times of the year. Extreme heat events impact public health, increase fire risk, damage critical facilities and infrastructure, and worsen air quality.

Social factors play a key role in vulnerability to extreme heat events, meaning that people with disabilities, chronic diseases, the elderly, and children under five are the most at risk to heat-

related illnesses.<sup>12</sup> Across California, the highest risk of heat-related illness occurs in the typically cooler regions found in coastal areas like Berkeley.

Projections indicate that the number of extreme heat days, warm nights, and heat waves will increase exponentially: by 2099, the City of Berkeley is expected to average 18 days per year with temperatures over 88.3 degrees F.

### **Hazardous Materials Release**

Over the last 25 years, Berkeley has seen a more than 90 percent reduction in the number of facilities with extremely hazardous materials. The City carefully tracks hazardous materials within its borders, and works closely with companies using large amounts of potentially dangerous materials. The City has identified fifteen facilities in Berkeley with sufficiently large quantities of toxic chemicals to pose a high risk to the community. Hazardous materials also travel through Berkeley by truck and rail. Natural hazards identified in the plan could trigger the release of hazardous materials.

### **Terrorism**

It is not possible to estimate the probability of a terrorist attack. Experts prioritize terrorism readiness efforts by identifying critical sites and assessing these sites' vulnerability to terrorist. City officials are currently working with State and regional groups to prevent and prepare for terrorist attacks.

### ***Access and Functional Needs***

This plan recognizes that there are many individuals that are still disproportionately vulnerable during disasters. People with access and functional needs are defined as community members who may have additional needs before, during and after an incident in functional areas, including but not limited to: maintaining independence, communication, transportation, supervision, and medical care. Individuals in need of additional response assistance may include those who have disabilities, live in institutionalized settings, are elderly, are children, are from diverse cultures, have limited English proficiency, or are non-English speaking, or are transportation disadvantaged. An individual with a disability is defined by the ADA as a person who had a physical or mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered.

### ***Summary of Changes to the Hazard Analysis***

The 2019 LHMP contains numerous updates to facts, figures, and descriptions. The City has incorporated the newest-available hazard data, including impact maps for particular scenarios. The City and its partners have provided additional descriptions, details and definitions to explain the science of these hazards and their potential impacts. Advances in GIS mapping technology have enabled the City to present maps that help to visualize information.

Institutional community partners have updated information regarding their vulnerabilities to the described hazards, as well as significant mitigation activities that they have completed, are in progress, or planned for the coming five years.

Within the historical section for each hazard, the City has added information about any instances of the hazard affecting Berkeley since 2014. Throughout the plan, the City has updated financial loss estimates for inflation.

### **Hazards Described in the 2014 Plan**

For the first time, the plan identifies extreme heat events as a hazard of concern. Significant changes and updates to the analysis of each hazard are described below:

#### **Earthquake (Section B.5)**

- The 2019 LHMP integrates the 2018 HayWired scenario developed by the USGS to help illustrate the potential impacts of a catastrophic earthquake near Berkeley. The plan now includes five maps with data from the scenario.
- Berkeley's liquefaction hazard is now mapped using both overall levels of susceptibility and probability of liquefaction in the 7.0M HayWired scenario.
- The seismic stability of City-owned and leased buildings has been updated to reflect significant retrofit and rebuilding efforts since 2014.
- The City has updated the plan to describe Berkeley's progress on mitigating earthquake vulnerabilities in privately-owned buildings. Detailed analysis along with three new maps have been provided to describe and illustrate the locations of potentially seismically vulnerable buildings, including unreinforced masonry buildings, soft story buildings, non-ductile concrete buildings, and tilt-up or other rigid-wall flexible diaphragm buildings.
- The Earthquake section includes updated descriptions from Key Institutional Partners about mitigation efforts completed or planned. Updated partner profiles include UC Berkeley, Berkeley Lab, Berkeley Unified School District, East Bay Municipal Utility District, AT&T, and Alta Bates Summit Medical Center.
- Earthquake risk and loss estimates have been updated to integrate regional estimates from the 2018 HayWired earthquake scenario.

#### **Wildland-Urban Interface Fire (Section B.6)**

The 2019 LHMP integrates hazardous fire zones as defined by the City of Berkeley and the California Department of Forestry onto one map.

The 2019 LHMP presents a new map overviewing the locations of pedestrian pathways in Berkeley. These pathways are key resources for pedestrian evacuation from wildland-urban interface fire.

#### **Rainfall-Triggered Landslide (Section B.7)**

This section has been updated to describe hazard occurrences in Berkeley since 2014.

#### **Floods (Section B.8)**

The Floods section has been updated to include newly-revised flood exposure maps for Berkeley from the FEMA National Flood Insurance Program.

#### **Tsunami (Section B.9)**

The Tsunami section now includes a map of Tsunami Evacuation Playbook zones. These zones, developed by the California Geological Survey, California Governor's Office of Emergency Services, and the National Ocean and Atmospheric Administration (NOAA), reflect more refined and detailed planning, in which forecasted tsunami amplitudes, storm surge, and tidal information can help guide what areas might be inundated.

The Tsunami section also includes new information about infrastructure vulnerabilities of the Berkeley Marina, based on recent tsunami inundation modeling by the California Geological Survey, University of Southern California, California State Lands Commission, and California Governor's Office of Emergency Services.

#### **Climate Change (Section B.10)**

The Climate Change section has been updated to use the latest available science and policy guidance on the direct and secondary impacts of climate change. It describes recent events that demonstrate climate change impacts that we are already experiencing.

The section provides new analysis of amounts of sea-level rise anticipated under different projected carbon emissions scenarios, as well as new maps of expected levels of inundation from 2-ft, 4-ft, and 5.5-ft sea level rise scenarios using the Adapting to Rising Tides Bay Shoreline Flood Explorer.

#### **Extreme Heat Events (Section B.11)**

Extreme heat events are a newly-introduced hazard of concern for the 2019 LHMP. The extreme heat events section describes factors that contribute to the extreme heat hazard, and describe how the Urban Heat Island Effect can further exacerbate impacts of extreme heat events. The section outlines the secondary hazards created by extreme heat, including public health impacts, fire, damage to critical facilities and infrastructure, and worsened air quality.

The section also describes the predicted average number of extreme heat days in Berkeley through the end of the century.

#### **Hazardous Materials Release (Section B.12)**

The Hazardous Materials Release section contains updated figures on the number of sites with hazardous materials in Berkeley. Additionally, the section has been updated since 2014 to reflect Berkeley industrial sites with large quantities of extremely hazardous materials. These sites have been mapped for reference.

## Element C: Mitigation Strategy

### *Authorities, Policies, Programs and Resources*

Through many years of diligent effort by City government and the community, Berkeley has developed many innovative initiatives to increase our disaster resilience. The authorities, policies, programs and resources that Berkeley will use to support execution of the 2019 LHMP Mitigation strategy include:

- The City has strengthened its ability to serve the community during and after disasters by seismically upgrading or replacing buildings that house critical City functions. In 2017, work was completed on the James Kenney Recreation Center and the Center Street Garage. Since 2004 the City has strengthened or rebuilt all seven of the City's fire stations, the historic Ratcliff Building (which houses the Public Works Department Operations Center), the Civic Center (which houses many key government functions), the Public Safety Building, a new animal shelter, and all libraries.
- The Berkeley Unified School District, supported by voter-approved bonds, has strengthened all public schools.
- The City of Berkeley has worked diligently to enhance public safety and reduce physical threats from earthquakes by requiring owners of soft story and unreinforced masonry buildings to retrofit their structures.
  - Berkeley was the first city in the nation to inventory the community's soft-story buildings. In 2014 Berkeley mandated retrofit of soft story buildings with five or more dwelling units. Since then, 61 percent of these identified buildings have had retrofits completed.
  - Over 99% of Berkeley's 700 unreinforced masonry buildings have been retrofitted or demolished since a City mandate began in 1991.
- The City offers a comprehensive suite of programs to encourage the community to strengthen buildings to be more hazard-resistant.
  - In early 2017, the Building and Safety Division developed a new Retrofit Grants program with funding from a Hazard Mitigation Grant from the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES).
  - Since July 2002, the City has distributed over \$12 million to homeowners through the Transfer Tax Rebate Program, which reduces the real estate transfer tax to building owners who perform seismic safety work.
  - The City participates in the Earthquake Brace + Bolt (EBB) program, a grant program administered by the California Earthquake Authority, providing grants of up to \$3,000 for seismic retrofits of owner-occupied residential buildings with 1-4 dwelling units.
- The City, working together with key partners, is using a comprehensive strategy to aggressively mitigate Berkeley's wildland-urban interface (WUI) fire hazard. These approaches include:

- Prevention through development regulations with strict building and fire code provisions, as well as more restrictive local amendments for new and renovated construction;
- Enforcement programs including annual inspections of over 1,200 high-risk properties annually;
- Natural resource protection through four different vegetation management programs;
- Improvement of access and egress routes;
- Infrastructure maintenance and improvements to support first responders' efforts to reduce fire spread.
- The Disaster Cache Program incentivizes community-building for disaster readiness. To date, the City has awarded caches of disaster response equipment to neighborhoods, congregations, and UC Berkeley Panhellenic groups that have undertaken disaster readiness activities.
- Berkeley's 2009 Climate Action Plan has served as a model for jurisdictions across the nation. The Climate Action Plan also guides the City's new climate adaptation strategy.

These programs, and many others, place Berkeley as a leader in disaster management. Long-term maintenance and improvements to these programs will support execution of the 2019 LHMP Mitigation strategy, and will help to protect the Berkeley community in our next disaster.

### ***Disaster Mitigation Goals and Objectives***

Berkeley will focus on three goals to reduce and avoid long-term vulnerabilities to the hazards identified in Element B: *Hazard Analysis*:

1. The City will evaluate and strengthen all City-owned properties and infrastructure, particularly those needed for critical services, to ensure that the community can be served adequately after a disaster.
2. The City will establish and maintain incentive programs and standards to encourage local residents and businesses to upgrade the hazard resistance of their own properties.
3. The City will actively engage other local and regional groups to collaboratively work towards mitigation actions that help maintain Berkeley's way of life and its ability to be fully functional after a disaster event.

Five objectives guide the mitigation strategy:

- A. Reduce the potential for loss of life, injury and economic damage to Berkeley residents and businesses from earthquakes, wildfires, landslides, floods, tsunamis, climate change, extreme heat, and their secondary impacts.
- B. Increase City government's ability to serve the community during and after hazardous events by mitigating risk to key City functions.
- C. Connect with residents, community-based organizations, institutions, businesses, and essential lifeline systems in order to increase mitigation actions and disaster resilience in the community.
- D. Preserve Berkeley's unique character and values from being compromised by hazardous

events.

- E. Protect Berkeley’s historically underserved populations from the impacts of hazardous events by applying an equity focus, including equal access, to mitigation efforts.

**Overview of Actions**

This plan identifies and analyzes 27 mitigation actions to reduce the impacts from hazards described in Element B: *Hazard Analysis*. This suite of actions addresses every natural hazard posing a threat to Berkeley, with an emphasis on new and existing buildings and infrastructure.

Tables 1, 2, and 3 below summarize all of the actions. The tables group actions by their priority level (see Element C.5.a for details on prioritization of actions), and identify the hazard(s) and each action addresses.

**Table 2. High-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Building Assessment</b>	Continue appropriate seismic and fire safety analysis based on current and future use for all City-owned facilities and structures.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Strengthen and Replace City Buildings</b>	Strengthen or replace City buildings in the identified prioritized order as funding is available.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat



Name	Action	Hazards
<b>Buildings</b>	Reduce hazard vulnerabilities for non-City-owned buildings throughout Berkeley.	Earthquake Wildland-Urban Interface Fire Landslide Floods Climate Change Extreme Heat
<b>Retrofit Grants</b>	Implementation of the Retrofit Grants Program which helps Berkeley building owners increase safety and mitigate the risk of damage caused by earthquakes	Earthquake
<b>Soft Story</b>	Continued Implementation of the Soft Story Retrofit Program, which mandates seismic retrofit of soft story buildings with 5+ residential units.	Earthquake
<b>Unreinforced Masonry (URM)</b>	Complete the ongoing program to retrofit all remaining non-complying Unreinforced Masonry (URM) buildings.	Earthquake
<b>Concrete Retrofit Ordinance Research</b>	Monitor passage and implementation of mandatory seismic retrofit ordinances for concrete buildings in other jurisdictions to assess best practices.	Earthquake
<b>Gas Safety</b>	Improve the disaster-resistance of the natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami
<b>Fire Code</b>	Reduce fire risk in existing development through fire code updates and enforcement.	Wildland-Urban Interface Fire
<b>Vegetation Management</b>	Reduce fire risk in existing development through vegetation management.	Wildland-Urban Interface Fire Climate Change
<b>Hills Pedestrian Evacuation</b>	Manage and promote pedestrian evacuation routes in Fire Zones 2 and 3.	Earthquake Wildland-Urban Interface Fire

Name	Action	Hazards
<b>Hills Roadways and Parking</b>	Improve responder access and community evacuation in Fire Zones 2 and 3 through roadway maintenance and appropriate parking restrictions.	Earthquake Wildland-Urban Interface Fire
<b>Undergrounding</b>	Coordinate with PG&E for the construction of undergrounding in the Berkeley Hills within approved Underground Utility Districts (UUDs).	Earthquake Wildland-Urban Interface Fire
<b>EBMUD</b>	Work with EBMUD to ensure an adequate water supply during emergencies and disaster recovery.	Earthquake Wildland-Urban Interface Fire
<b>Extreme Heat</b>	Reduce Berkeley’s vulnerability to extreme heat events and associated hazards.	Climate Change Extreme Heat
<b>Hazardous Materials</b>	Mitigate hazardous materials release in Berkeley through inspection and enforcement programs.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change
<b>Air Quality</b>	Define clean air standards for buildings during poor air quality events and use those standards to assess facilities for the Berkeley community.	Wildland-Urban Interface Fire Climate Change Extreme Heat
<b>National Flood Insurance Program (NFIP)</b>	Maintain City participation in the National Flood Insurance Program.	Floods
<b>Hazard Information</b>	Collect, analyze and share information with the Berkeley community about Berkeley hazards and associated risk reduction techniques.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat

Name	Action	Hazards
<b>Partnerships</b>	Coordinate with and encourage mitigation actions of key City partners.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat

**Table 3. Medium-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Severe Storms</b>	Reduce Berkeley’s vulnerability to severe storms and associated hazards through proactive research and planning, zoning regulations, and improvements to stormwater drainage facilities.	Landslide Floods Climate Change
<b>Energy Assurance</b>	Implement energy assurance strategies at critical City facilities.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami Climate Change Extreme Heat
<b>Climate Change Integration</b>	Mitigate climate change impacts by integrating climate change research and adaptation planning into City operations and services.	Earthquake Wildland-Urban Interface Fire Landslide Tsunami Climate Change Extreme Heat
<b>Sea Level Rise</b>	Mitigate the impacts of sea level rise in Berkeley.	Climate Change
<b>Water Security</b>	Collaborate with partners to increase the security of Berkeley’s water supply from climate change impacts.	Climate Change

**Table 4. Low-Priority Actions in mitigation strategy**

Name	Action	Hazards
<b>Tsunami</b>	Mitigate Berkeley’s tsunami hazard.	Tsunami
<b>Streamline Rebuild</b>	Streamline the zoning permitting process to rebuild residential and commercial structures following disasters.	Earthquake Wildland-Urban Interface Fire Landslide Floods Tsunami

<sup>1</sup> Human action directly influences the probability that climate change will occur. Climate change is referenced as a natural hazard here because of its potential to exacerbate natural hazards described in this plan.

<sup>2</sup> Ackerly, David. 2018. California’s Fourth Climate Change Assessment, San Francisco Bay Area Region Report. <http://www.climateassessment.ca.gov/regions/docs/20190116-SanFranciscoBayArea.pdf>

<sup>3</sup> <https://cal-adapt.org/tools/extreme-heat/>

<sup>4</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.3.

<sup>5</sup> Detweiler, Shane and Wein, A., 2018, The HayWired Earthquake Scenario – Earthquake Hazards: U.S. Geological Survey Scientific Investigations Report 2017-5013-A-H, p.4.

<sup>6</sup> City of Berkeley. *Fire Hazard Mitigation Plan*. February 25, 1992.

<sup>7</sup> Total square footage of buildings in burn area is 9,386,281 square feet.

<sup>8</sup> In 2004, estimate was \$500 million.

<sup>9</sup> Public Law 106-390

<sup>10</sup> Berkeley Climate Action Plan (City of Berkeley, 2009) [www.cityofberkeley.info/climate/](http://www.cityofberkeley.info/climate/)

<sup>11</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017, p58-59)

[http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

<sup>12</sup> San Francisco Bay Area 2017 Risk Profile (ABAG, 2017) [http://resilience.abag.ca.gov/wp-content/documents/mitigation\\_adaptation/RiskProfile\\_4\\_26\\_2017\\_optimized.pdf](http://resilience.abag.ca.gov/wp-content/documents/mitigation_adaptation/RiskProfile_4_26_2017_optimized.pdf)

**NOTICE OF PUBLIC HEARING - BERKELEY CITY COUNCIL  
SCHOOL DISTRICT BOARD ROOM, 1231 ADDISON STREET**

**2019 LOCAL HAZARD MITIGATION PLAN (LHMP) AND AMENDMENTS TO THE  
GENERAL PLAN**

Notice is hereby given pursuant to Berkeley Municipal Code Section 22.040.020 and California Government Code Sections 65090 and 65355 by the City Council of the City of Berkeley that on December 10, 2019 at 6:00 p.m. a public hearing will be conducted to consider adoption of the 2019 Local Hazard Mitigation Plan and an amendment to the General Plan.

A copy of the agenda material for this hearing will be available on the City’s website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of November 27, 2019.

For further information, please contact Sarah Lana, Fire Department, 510-981-5576 or Alene Pearson, Planning and Development, 510-981-7489.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City’s electronic records, which are accessible through the City’s website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

**Published:** November 29, 2019 – The Berkeley Voice

Pursuant to Berkeley Municipal Code Section 22.04.020 and California Government Code Sections 65090 and 65355

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I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of the Maudelle Shirek Building, 2134 Martin Luther King Jr. Way, as well as on the City’s website, on November 27, 2019.

\_\_\_\_\_  
Mark Numainville, City Clerk



Office of the City Manager

PUBLIC HEARING

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip Harrington, Director, Public Works

Subject: Implement Residential Preferential Parking (RPP) Program on the 1500 Block of Lincoln Street

RECOMMENDATION

Conduct a public hearing and upon its conclusion, adopt a Resolution amending Resolution No. 56,508-N.S. Section 25N by adding a subsection to implement Residential Preferential Parking (RPP) on the 1500 block of Lincoln Street in RPP Area N.

FISCAL IMPACTS OF RECOMMENDATION

Funding of \$2,000 for RPP street signage installation is available in the FY 2020 budget in General Fund 011-54-622-664-0000-000-431-513110- and 011-54-622-664-0000-000-431-642990-.

CURRENT SITUATION AND ITS EFFECTS

Within the past few months, residents on the 1500 block of Lincoln Street, which is an RPP-eligible area, submitted a petition to join the RPP Program. The area that would join the Program is shown in Attachment 3:

1. In Area N: Both sides of Lincoln Street between Sacramento Street and California Street.

In accordance with Berkeley Municipal Code (BMC) Section 14.72.050(A)(1), staff verified that residents submitted signatures on a qualifying petition representing a numerical majority of dwellings wishing to “opt-in” to the RPP for the street section listed in the attached Resolution. Staff verified that at least 75% of the curb spaces were occupied during mid-morning and mid-afternoon observation periods at the location.

The addition of one block in Area N should have a minimal impact on enforcement capabilities. Each new addition to the RPP Program, however, tends to result in slightly diminished enforcement for all other existing permit areas, due to parking enforcement officers having slightly larger areas to patrol.



### BACKGROUND

The RPP Program was instituted in 1980 (1) to protect Berkeley residential neighborhoods from an influx of non-resident vehicles and related traffic; (2) to assure continued quality of life for residents; and (3) to provide neighborhood parking for residents. The Program limits parking for vehicles not displaying an RPP permit in most RPP areas to two hours, and reserves available daytime parking for residents, between 9:00 a.m. and 7:00 p.m. Monday through Friday, and on some blocks Saturday.

The RPP Program currently allows residents to petition the City to “opt-in” or “opt-out” of the Program. The process to install RPP controls requires submittal of a petition signed by residents (including tenants of rental properties) of at least 51% of dwellings sited along the affected block, and a parking survey of those blocks that shows at least 75% of available on-street parking spaces are occupied during the mid-morning and mid-afternoon time periods. In addition, residents of a block petitioning to opt-in should be included in existing residential Study Area boundaries covered by the EIR.

### ENVIRONMENTAL SUSTAINABILITY

Expansion of the RPP Program to include additional blocks may have a minor beneficial environmental effect. It may reduce greenhouse gases generated by commuters searching for parking who “cold start” their vehicles (i.e., moving a car without warming up the engine), or by drivers moving their cars to new locations after the two-hour parking limit expires. Incremental expansion of the RPP Program may also make alternative transportation options more attractive. A modal shift by commuters to walking, bicycling, public transportation, or carpooling may also lead to a decrease in greenhouse gasses.

### RATIONALE FOR RECOMMENDATION

Because the required number of households on the subject blocks have signed a petition, and as parking surveys show more than 75% occupancy of curbside parking, these blocks meet the requirements set forth by the BMC for inclusion into the RPP Program.

### ALTERNATIVE ACTIONS CONSIDERED

Council may allow unrestricted parking to remain on these streets. However, Council has previously approved the “opting in” of blocks where the requisite number of households signed a petition requesting RPP control, and where the parking utilization exceeds 75%.

### CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7010  
Matthew Cotterill, Assistant Planner, Public Works (510) 981-6433

Implement Residential Preferential Parking (RPP) Program on the  
1500 Block of Lincoln Street

PUBLIC HEARING  
December 10, 2019

**Attachments:**

1. Resolution
2. Public Hearing Notice
3. Map of Street Section Opting Into Program

RESOLUTION NO. ##,###-N.S.

IMPLEMENT RESIDENTIAL PREFERENTIAL PARKING (RPP) PROGRAM ON 1500  
BLOCK OF LINCOLN

WHEREAS, Berkeley Municipal Code Section 14.72.050.A.1, Designation of a Residential Preferential Parking (RPP)Area, allows residents to petition the City to "opt-in" or "opt-out" of the program and requires submittal of a petition containing signatures of residents of at least 51% of dwellings on the affected block; and

WHEREAS, residents of at least 51% of the dwellings on the following block have petitioned to "opt-in" to Residential Preferential Parking:

1. Both sides of the 1500 block of Lincoln Street between Sacramento Street and California Street; and

WHEREAS, staff has conducted field observations and determined at least 75% of available on-street parking spaces are occupied during the mid-morning and mid-afternoon time periods; and

WHEREAS, the designation of these blocks as a residential permit parking area will not be detrimental to the health, safety, peace, morals, comfort and general welfare of persons residing in the area designated; and

WHEREAS, the \$2,000 implementation cost is available in FY 2020 General Fund 011 for Transportation Traffic Maintenance.

NOW THEREFORE, BE IT RESOLVED by the Council of the City of Berkeley that the following subsections of Section 25 of Resolution No. 56,508-N.S. are hereby added to read as follows:

Section 25N LINCOLN STREET, both sides between Sacramento Street and California Street

**NOTICE OF PUBLIC HEARING – BERKELEY CITY COUNCIL  
SCHOOL DISTRICT BOARD ROOM, 1231 ADDISON STREET,  
BERKELEY**

**EXTEND RESIDENTIAL PREFERENTIAL PARKING PROGRAM**

**TUESDAY, DECEMBER 10, 2019 AT 6:00 P.M.**

The Department of Public Works is proposing to conduct a public hearing and, if recommendations are approved, adopt a Resolution amending Section 25N of Resolution No. 56,508-N.S. by adding a subsection to extend residential preferential parking on both sides of the 1500 block of Lincoln Street between Sacramento Street and California Street.

The Residential Preferential Parking (RPP) Program allows for residents to petition the City to "opt-in" or "opt-out" of the Program. Complying with program requirements, residents of the block under consideration for opting into the RPP Program have submitted the qualifying signatures on a petition and also have at least 75% of the curb spaces occupied during the morning and mid-afternoon observation periods. Adding a block within the existing residential study area boundaries through evaluations by an EIR study certified on September 27, 1988, and in accordance with California Environment Quality Act (CEQA) guidelines, are categorically exempt as defined by Section 15.162(c).

The hearing will be held on December 10, 2019 at 6:00 p.m. in the School District Board Room, 1231 Addison Street.

A copy of the agenda material for this hearing will be available on the City's website at [www.CityofBerkeley.info](http://www.CityofBerkeley.info) as of November 27, 2019.

For further information, please contact Matthew Cotterill, Assistant Planner at (510) 981-6433.

This meeting is being held in a wheelchair accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services Specialist at 981-6418 (V) or 981-6347 (TDD) at least three business days before the meeting date. Please refrain from wearing scented products to this meeting.

Written comments should be mailed or delivered directly to the City Clerk, 2180 Milvia Street, Berkeley, CA 94704, in order to ensure delivery to all Councilmembers and inclusion in the agenda packet.

Communications to the Berkeley City Council are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please**

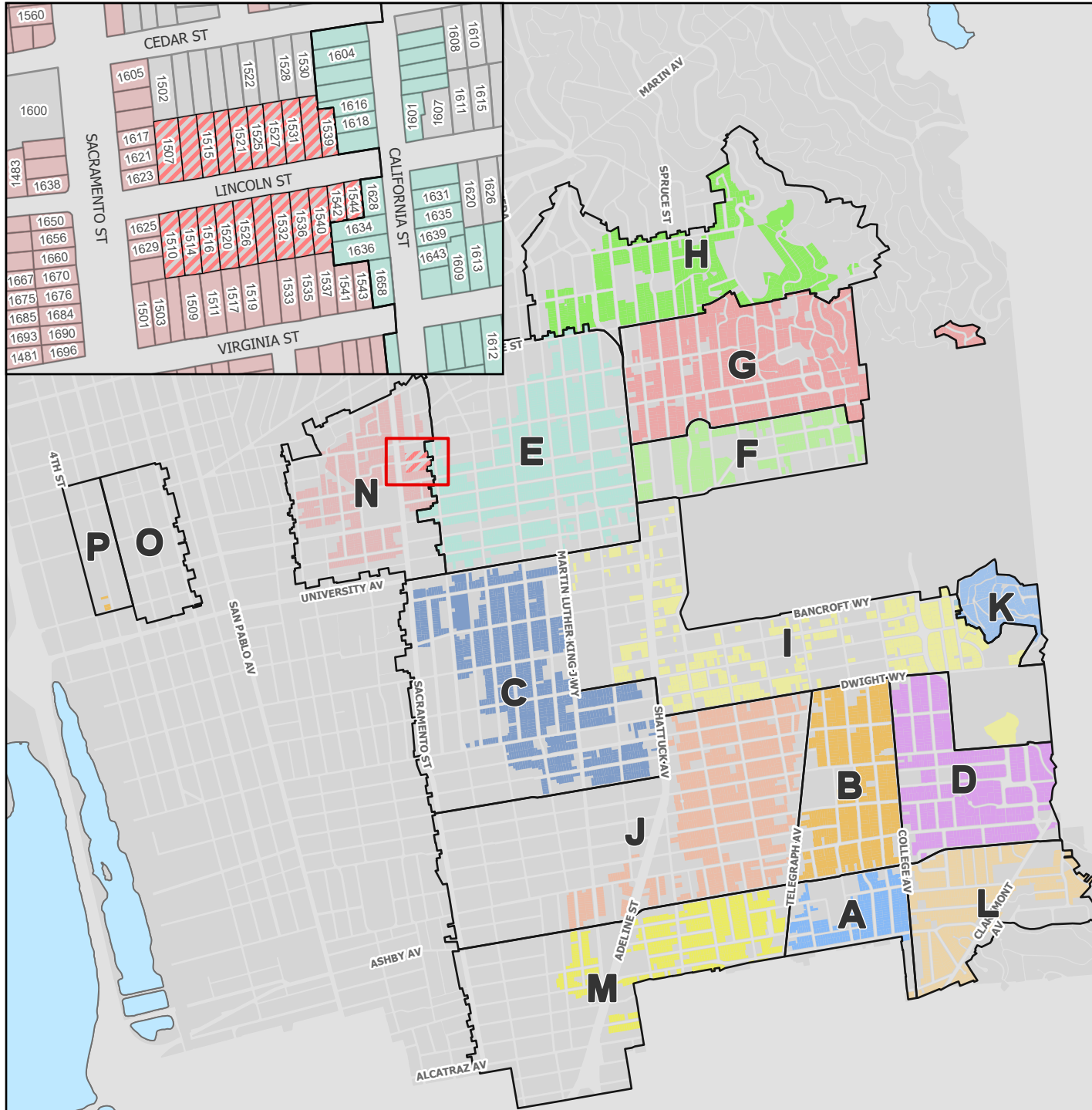
**note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to the City Council, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the City Clerk. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the City Clerk at 981-6900 or [clerk@cityofberkeley.info](mailto:clerk@cityofberkeley.info) for further information.

**Posted:** November 27, 2019

Pursuant to Berkeley Municipal Code Chapter 14.72

~~~~~  
I hereby certify that the Notice for this Public Hearing of the Berkeley City Council was posted at the display case located near the walkway in front of School District Board Room, 1231 Addison Street, Berkeley, as well as on the City's website, on November 27, 2019.

\_\_\_\_\_  
Mark Numainville, City Clerk



# ATTACHMENT 3

PARCELS OPTING IN

RPP AREAS

## ELIGIBLE PARCELS

- ELIGIBLE AREA A PARCELS
- ELIGIBLE AREA B PARCELS
- ELIGIBLE AREA C PARCELS
- ELIGIBLE AREA D PARCELS
- ELIGIBLE AREA E PARCELS
- ELIGIBLE AREA F PARCELS
- ELIGIBLE AREA G PARCELS
- ELIGIBLE AREA H PARCELS
- ELIGIBLE AREA I PARCELS
- ELIGIBLE AREA J PARCELS
- ELIGIBLE AREA K PARCELS
- ELIGIBLE AREA L PARCELS
- ELIGIBLE AREA M PARCELS
- ELIGIBLE AREA N PARCELS
- ELIGIBLE AREA P PARCELS

This map is for reference purposes only.

Care was taken in the creation of this map, but it is provided "AS IS". Please contact the City of Berkeley to verify map information or to report any errors.  
September 23, 2019



**CITY OF BERKELEY**  
Transportation Division  
1947 Center Street  
Berkeley CA 94704







Office of the City Manager

ACTION CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Timothy Burroughs, Director, Department of Planning and Development

Subject: Urgency Ordinance Amending Accessory Dwelling Unit (ADU) Ordinance to Comply with New State Law and Establish Interim Limits on Development; Amending BMC Chapter 23C.24

RECOMMENDATION

Adopt an urgency ordinance amending Berkeley Municipal Code Chapter 23C.24 (Accessory Dwelling Units) to comply with new State law and establish interim limits on ADU development pending further analysis, deliberation and adoption of local regulations, in order to help ensure public safety.

FISCAL IMPACTS OF RECOMMENDATION

None.

CURRENT SITUATION AND ITS EFFECTS

[Assembly Bill 881<sup>1</sup>](#), (see *Attachment 2*) signed by Governor Newsom on October 9, 2019, requires local jurisdictions to relax or eliminate restrictions on the development of accessory dwelling units (ADUs). The intent behind the new law is to increase statewide production of ADUs by requiring every jurisdiction to ministerially approve projects, apply only a specific set of development standards identified in the State law, and implement shortened permitting timelines. New regulations go into effect on January 1, 2020. A local ordinance will be null and void if it is not in compliance with new State law. The new State law effectively means that as long as an ADU application meets the development standards included in AB 881, the application must be approved over the counter with a Zoning Certificate.

Like cities throughout California, Berkeley's existing ADU Ordinance (<https://www.codepublishing.com/CA/Berkeley/>), found in Berkeley Municipal Code (BMC) Chapter 23C.24, does not conform to new State law. The Planning Commission began the standard process for adopting permanent Zoning Ordinance amendments to bring the BMC into compliance with State requirements, receiving a briefing from staff on the new regulations at its November 6, 2019 meeting (see *Attachment 3*). However,

<sup>1</sup> [https://leginfo.ca.gov/faces/billTextClient.xhtml?bill\\_id=201920200AB881](https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB881);  
Note that only Section 1.5 of the Bill is in effect as of January 1, 2020.

the new law is complex and will require additional meetings and public input, including a public hearing, prior to recommending amendments to the City Council, a process expected to take up to six months.

Since the City does not have time to complete this process prior to January 1, 2020, absent an urgency ordinance, State law would govern Berkeley's land use regulation as it relates to ADUs. Among other implications, this would mean that Berkeley's current prohibition on ADUs in certain areas of the city, due to health and safety concerns, would no longer be in effect.

This is of particular concern in Berkeley Fire Zones 2 and 3 (*see Attachment 4*), especially in consideration of recent PG&E Public Safety Power Shutoff events and heightened awareness of fires in California. Updates to the [2019 Local Hazard Mitigation Plan<sup>2</sup>](#) and adopted City Council referrals regarding development in the wildland-urban interface and ADU parking requirements in the hills directly reflect concern for evacuation planning and public safety in the event of a natural disaster.

Existing and new State ADU regulations<sup>3</sup> acknowledge the importance of these concerns, allowing cities to designate areas where ADUs are restricted based on potential impacts to traffic flow and public safety. In Berkeley's existing ordinance, ADUs are not allowed in the ES-R (Environmental Safety – Residential) District (Berkeley Fire Zone 3) due to fire hazards and limited emergency access/egress. Similarly, ADUs located in the Hillside Overlay, which includes almost all of Berkeley Fire Zone 2 (*see Attachment 5*), currently require an Administrative Use Permit (AUP) and approval by the Fire Department on lots that front on a street with less than 26 feet of pavement width. The Planning Commission and staff in the Planning and Fire Departments have begun and will continue to discuss Zoning Ordinance amendments that both address local conditions and are in compliance with new State law. However, these amendments will not be adopted by January 1, 2020.

**After January 1, 2020, Berkeley will not have the authority to apply discretionary standards such as AUP requirements on ADU locations. Therefore, the proposed urgency ordinance would temporarily impose non-discretionary restrictions in order to maximize public safety.**

State law allows a jurisdiction to adopt urgency ordinances to protect the public health, safety and welfare of its residents. The proposed urgency ordinance would continue to meet the health and safety goals of Berkeley's existing protections by prohibiting ADUs in Berkeley Fire Zone 3, and on roads in Berkeley Fire Zone 2 that are less than 26 feet in width. This urgency ordinance would foster public safety for the following reasons:

<sup>2</sup> [https://www.cityofberkeley.info/uploadedFiles/Fire/Level\\_3\\_-\\_General/City%20of%20Berkeley%202019%20Final%20Draft%20LHMP%20-%20COMPLETE%2009-19-19%20Reduced.pdf](https://www.cityofberkeley.info/uploadedFiles/Fire/Level_3_-_General/City%20of%20Berkeley%202019%20Final%20Draft%20LHMP%20-%20COMPLETE%2009-19-19%20Reduced.pdf)

<sup>3</sup> See California Government Code Section 65852.2(a)(1)(A)

- Berkeley's current ordinance already prohibits ADUs in Berkeley's Fire Zone 3. This area is exceptionally vulnerable to fire and earthquake hazards and is characterized by substandard vehicular access, steep slopes, inadequate water pressure, proximity to the Hayward Fault, and proximity to vegetated wildlands. It is also within the State's Very High Fire Hazard Severity Zone (see *Attachment 6*).
- Many of the City's narrow streets fall within the boundaries of Berkeley's Fire Zone 2 (see *Attachment 4*). The existing AUP requirement for ADUs in Berkeley's Fire Zone 2 was implemented in consultation with the Fire Department to address accessibility challenges on narrow and curving roads. Fire response requires deployment of hoses and other equipment that restrict vehicle and pedestrian movement along roads. Roads narrower than 26 feet are likely to be obstructed by the operations required by fire and emergency medical responses.

In addition, Fire Department operations are impacted by increased density in Fire Zones 2 and 3 because:

- Increased density translates to an increased number of people that may need assistance in the event of an emergency and increased numbers of people trying to evacuate narrow and windy roads. Berkeley does not want to replicate conditions experienced in the Oakland firestorm of 1991.
- Accessibility issues could be exacerbated by increased density if new residents own cars and park on the street. This is a likely outcome, as off-street parking is not required for ADUs, and replacement off-street parking for primary dwelling units will not be required as of January 1, 2020.

The existing AUP requirement for ADUs in Fire Zone 2 has allowed the Fire Department to require mitigations that protect public safety. Since these protections are discretionary and are not part of new State law, Berkeley will need to amend its Zoning Ordinance to add these requirements to a ministerial review process. As the Planning Commission begins working on such permanent Zoning Ordinance amendments, staff will consult with the California Department of Housing and Community Development (HCD) and the City Attorney to propose a set of objective standards that meet the Fire Department's needs and provide clarity to applicants who live in Fire Zone 2.

In the interim, City Council is asked to adopt this urgency ordinance to maximize public safety in Fire Zones 2 and 3. The new regulations would take effect immediately upon adoption, pursuant to California Government Code Section 65858. As drafted, it would apply prospectively to projects submitted after January 1, 2020. California Government Code [Section 65858](#) provides that urgency ordinances expire forty-five (45) days following their adoption unless the Council adopts an extension for up to a total of one year during that initial period. Staff would return to the Council meeting of January 21,

2020 for this purpose. An urgency ordinance and an extension thereof requires eight affirmative votes of a nine member legislative body to be adopted.

BACKGROUND

California's State Legislature has passed significant packages of housing-related laws in the last three legislative sessions in order to address the State's housing crisis. This year's housing package included over 20 housing-focused bills that affect a variety of regulations throughout the Berkeley Municipal Code (BMC) including those pertaining to ADUs and Junior ADUs.

ENVIRONMENTAL SUSTAINABILITY

ADUs have the potential to decrease vehicles miles traveled and greenhouse gas emissions and increase availability of housing near campus, transit and jobs.

RATIONALE FOR RECOMMENDATION

Adoption of the proposed urgency ordinance on January 1, 2020 is needed to ensure public safety in the City of Berkeley.

ALTERNATIVE ACTIONS CONSIDERED

Council could take no action and allow the development standards for ADUs imposed by AB 881 go into effect on January 1, 2020.

CONTACT PERSON

Alene Pearson, Principal Planner, Department of Planning and Development, 510-981-7489

Attachments:

- 1: Draft Ordinance
- 2: Section 1.5 of Assembly Bill (AB) 881
- 3: Planning Commission Staff Report on New ADU Legislation (November 2019)
- 4: Berkeley Fire Zone Map
- 5: Hillside Overlay and Fire Zone 3 Map
- 6: Berkeley Hillside Conditions Map

ORDINANCE NO. -N.S.

URGENCY ORDINANCE AMENDING ACCESSORY DWELLING UNIT (ADU) ORDINANCE TO COMPLY WITH NEW STATE LAW AND ESTABLISH INTERIM LIMITS ON DEVELOPMENT; BERKELEY MUNICIPAL CODE CHAPTER 23C.24

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. Findings

- a. A severe housing crisis exists in the state with the demand for housing outpacing supply.
- b. Accessory dwelling units (ADUs) provide flexible opportunities for infill housing.
- c. On October 9, 2019, Governor Newsom signed into law Assembly Bill (AB) 881 which is intended to increase the state's supply of affordable housing by facilitating the construction of ADUs and Junior ADUs.
- d. AB 881 amends California Government Code Section 65852.2 and, among other limitations on local authority, requires cities, counties, and utility districts to significantly relax regulation of ADUs by requiring a 60-day ministerial approval of ADUs on all lots that allow residential uses. These amendments to California Government Code Section 65852.2 become effective January 1, 2020.
- e. California Government Code Section 65852.2(a)(4), as amended, provides that any existing local ADU ordinance failing to meet the requirements of the new state law shall be null and void unless and until the local agency adopts a new ordinance complying with California Government Code Section 65852.2. In the absence of a valid local ordinance, the new state law instead provides a set of default standards governing local agencies' regulation and approval of ADUs.
- f. Berkeley's current ADU Ordinance, adopted by City Council on May 29, 2018, protects fire hazard areas by 1) prohibiting ADUs in the Environmental Safety-Residential District and 2) requiring discretionary review and approval by the Fire Department of ADUs in the Hillside Overlay. These measures were adopted in order to mitigate impacts to public safety.
- g. Amendments to Government Code section 65852.2, effective January 1, 2020, provide no protections for fire hazard areas and provide no mechanism for discretionary review. However, as amended, Government Code section 65852.2 will allow jurisdictions to prohibit ADUs from areas where their allowance would create an impact to public safety.
- h. Because Government Code section 65852.2 takes effect on January 1, 2020, ADUs would be permitted in high fire risk zones without discretionary review unless the City adopts an ADU ordinance that limiting the construction of ADUs in such zones that complies with the requirements of Government Code section 65852.2 before its effective date. The potential for construction of ADUs in high fire risk zones without discretionary review creates a current and immediate threat to the public health, safety, and welfare, and the approval of Zoning Certificates or building permits in such high fire risk zones would result in such an immediate threat to public health, safety, and welfare.

Section 2. That Berkeley Municipal Code Chapter 23C.24 is amended to read as follows:

## Chapter 23C.24 Accessory Dwelling Units

### Sections:

[23C.24.010](#) Applicability of Regulations

[23C.24.020](#) Purposes

[23C.24.030](#) Permit Procedures

~~[23C.24.040](#) Special Provisions~~

~~[23C.24.050](#) Development Standards~~

~~[23C.24.060](#) Modification of Development Standards with an Administrative Use Permit~~

~~[23C.24.070](#) Findings~~

### 23C.24.010 Applicability of Regulations

The provisions of this Chapter apply to all lots that are ~~occupied by one legally established Single Family Dwelling~~ zoned for residential use except 1) in the following zoning districts: Environmental Safety-Residential (ES-R), Manufacturing (M), Mixed Manufacturing (MM), Mixed Use-Light Industrial (MU-LI), and Unclassified (U) ; and 2) on a lot with frontage on a roadway with less than 26 feet in pavement width in the Hillside Overlay.

### 23C.24.020 Purposes

The purposes of this Chapter are to:

- A. Implement California Government Code Section [65852.2](#) and [65852.22](#), ~~as it may be amended from time to time.~~
- B. Increase overall supply and range of housing options in Berkeley ~~while maintaining residential character of neighborhoods.~~
- ~~C. Minimize impacts of new Accessory Dwelling Units on neighboring properties.~~
- C. Expedite small-scale infill development ~~on lots with Single Family Dwellings, particularly where development potential is otherwise limited.~~

D. Support Housing Element goals of facilitating construction of Accessory Dwelling Units and increasing the number of housing units that are more affordable to Berkeley residents.

E. Encourage development of Accessory Dwelling Units in zoning districts with compatible land uses and infrastructure.

### **23C.24.030 Permit Procedures**

~~Zoning Certificates will be issued for Accessory Dwelling Units and Junior Accessory Dwelling Units per California Government Code Section 65852.2 and 65852.22. The Zoning Officer shall issue a Zoning Certificate to establish an Accessory Dwelling Unit in compliance with this Chapter if all requirements of Section 23C.24.050 and other applicable requirements of this Title are met. The Zoning Officer may approve an Administrative Use Permit to establish an Accessory Dwelling Unit that is not in compliance with Section 23C.24.050.A or Sections 23C.24.050.C through F, subject to the findings in Section 23C.24.070. (Ord. 7599-NS § 2 (part), 2018)~~

### ~~23C.24.040 Special Provisions~~

~~A.—An Accessory Dwelling Unit may be created as follows:~~

- ~~1.—Conversion of Existing Space: Within the existing dimensions of the exterior walls and/or roof of a Primary Dwelling Unit or an existing legally established Accessory Structure or Accessory Building (e.g., the building envelope does not change), in which case Sections 23C.24.050.C through F do not apply.~~
- ~~2.—Expansion of Existing Space: By extending the existing dimensions of the exterior walls and/or roof of a Primary Dwelling Unit or an existing legally established Accessory Structure or Accessory Building (e.g., the building envelope changes). Section 23C.24.040.A.1 applies to conversion of nonconforming existing space.~~
- ~~3.—New Building: By constructing a new detached building or by constructing a new Primary Dwelling Unit with an Accessory Dwelling Unit.~~

~~B.—Only one Accessory Dwelling Unit is allowed on a lot.~~



~~C.—An Accessory Dwelling Unit may not be subdivided, whether by land or air rights, condominium or other mechanism, and may not be sold, transferred, or otherwise conveyed separately or independently from the Primary Dwelling Unit or other portions of the property.~~

~~D.—The owner of a property that has an Accessory Dwelling Unit must reside in either the Primary Dwelling Unit or the Accessory Dwelling Unit. Prior to issuance of a Building Permit, all owners of record of the subject property shall sign and file a Declaration of Restrictions with the County Recorder, in a form satisfactory to the Zoning Officer, that makes any transfer of the property specifically subject to the restrictions contained in this Chapter and requires that either the Primary Dwelling Unit or the Accessory Dwelling Unit be occupied by the owner of the subject property. Non-occupancy by an owner for periods of up to three years is allowed before the property will be found to be in noncompliance with this requirement.~~

~~E.—Accessory Dwelling Units are not subject to Design Review.~~

~~F.—Verification of neighbor preapplication contact is required for Accessory Dwelling Units subject to an Administrative Use Permit. Signatures must be collected from all adjacent and abutting lots that have residential occupants, regardless of zoning district.~~

~~G.—Accessory Dwelling Unit projections allowed into yards are subject to Main Building development standards set forth in Table 23D.04.030.~~

~~H.—An Accessory Dwelling Unit is not required to be equipped with fire sprinklers if sprinklers are not required for the Primary Dwelling Unit, consistent with California Government Code Section 65852.2.~~

~~I.—An Accessory Dwelling Unit is not considered a new residential use for the purposes of calculating utility connection fees or capacity charges, consistent with California Government Code Section 65852.2. (Ord. 7599-NS § 2 (part), 2018)~~

#### ~~23C.24.050 Development Standards~~

~~A.—Fire Access Requirement: An Accessory Dwelling Unit is not allowed on a lot with frontage on a roadway with less than 26 feet in pavement width, unless an Administrative Use Permit is approved, subject to the findings specified in Section 23C.24.070 A.~~

~~B.— Unit Size: The Gross Floor Area of an Accessory Dwelling Unit may be no greater than 850 square feet.~~

~~C.— Height: An Accessory Dwelling Unit that is created by New Building or by Expansion to an Accessory Structure or Accessory Building or by Expansion of a Primary Dwelling Unit cannot exceed the following height limits:~~

~~1.— 14 feet Maximum Height.~~

~~2.— 18 feet Maximum Height with an Administrative Use Permit.~~

~~3.— 14 feet Average Height in the Hillside Overlay District with an Administrative Use Permit.~~

~~4.— 18 feet Average Height in the Hillside Overlay with an additional Administrative Use Permit.~~

~~D.— Setbacks:~~

~~1.— An Accessory Dwelling Unit must be located outside the required front yard setback.~~

~~2.— An Accessory Dwelling Unit must be set back at least 4 feet from the rear and side property lines unless an Administrative Use Permit is approved.~~

~~3.— An Accessory Dwelling Unit constructed above a garage shall have a required rear and side setback of no less than five feet, subject to the provisions in Chapters 23C.04 and 23C.08.~~

~~E.— Usable Open Space: The subject lot shall meet the usable open space requirements of the applicable zoning district unless an Administrative Use Permit is approved.~~

~~F.— Lot Coverage: The subject lot shall meet the lot coverage requirements of the applicable zoning district unless an Administrative Use Permit is approved.~~

~~G.— Parking Requirements:~~

~~1.— Parking is not required for an Accessory Dwelling Unit.~~

~~2. If creation of an Accessory Dwelling Unit requires the removal of a required off-street parking space for the Primary Dwelling Unit, a replacement off-street parking space must be provided.~~

~~3. Replacement parking is not subject to the applicable standards of Section 23D.12.050 nor Section 23D.12.080, and may be located within the required front and side setbacks when located within an existing driveway that does not comply with these standards. (Ord. 7599-NS § 2 (part), 2018)~~

#### ~~23C.24.060 Modification of Development Standards with an Administrative Use Permit~~

~~An Accessory Dwelling Unit that does not conform to the development standards in Section 23C.24.050.C through F may be permitted with an Administrative Use Permit subject to the applicable findings in Section 23C.24.070. (Ord. 7599-NS § 2 (part), 2018)~~

#### ~~23C.24.070 Findings~~

~~A. In order to approve an Administrative Use Permit under Section 23C.24.050.A to allow an Accessory Dwelling Unit on a lot with frontage on a roadway with less than 26 feet of pavement width, the Zoning Officer must be provided with evidence that the Fire Chief has determined that the project will meet minimum fire safety requirements.~~

~~B. In order to approve an Administrative Use Permit under Section 23C.24.050.C through F, the Zoning Officer must find on the basis of substantial evidence that the Accessory Dwelling Unit would not be detrimental to the residential character of the neighborhood, would not unreasonably obstruct sunlight, air, or views, and would not introduce unreasonable privacy impacts to the immediate neighbors. (Ord. 7599-NS § 2 (part), 2018)~~

#### Section 3. Votes Required, Immediate Effectiveness

Based on the findings and evidence in Section 1 of this Urgency Ordinance, the Council determines that this Ordinance is necessary for the immediate preservation of the public health, peace and safety in accordance with Article XIV Section 93 of the Charter of the City of Berkeley and must therefore go into effect immediately. This ordinance shall go into effect immediately upon a four-fifths vote of the City Council, in satisfaction of the Charter of the City of Berkeley and Government Code Section 65858.

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SHARE THIS:



Date Published: 10/10/2019 09:00 PM

**Assembly Bill No. 881**

## CHAPTER 659

An act to amend, repeal, and add Section 65852.2 of the Government Code, relating to housing.

[ Approved by Governor October 09, 2019. Filed with Secretary of State  
October 09, 2019. ]

## LEGISLATIVE COUNSEL'S DIGEST

AB 881, Bloom. Accessory dwelling units.

(1) The Planning and Zoning Law provides for the creation of accessory dwelling units by local ordinance, or, if a local agency has not adopted an ordinance, by ministerial approval, in accordance with specified standards and conditions. Existing law requires the ordinance to designate areas where accessory dwelling units may be permitted and authorizes the designated areas to be based on criteria that includes, but is not limited to, the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety.

This bill would instead require a local agency to designate these areas based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. The bill would also prohibit a local agency from issuing a certificate of occupancy for an accessory dwelling unit before issuing a certificate of occupancy for the primary residence.

(2) Existing law requires an ordinance providing for the creation of accessory dwelling units, as described above, to impose standards on accessory dwelling units, including, among other things, lot coverage. Existing law also requires such an ordinance to require that the accessory dwelling units be either attached to, or located within, the living area of the proposed or existing primary dwelling, or detached from the proposed or existing primary dwelling and located on the same lot as the proposed or existing primary dwelling.

This bill would delete the provision authorizing the imposition of standards on lot coverage and would prohibit an ordinance from imposing requirements on minimum lot size. The bill would revise the requirements for an accessory dwelling unit by providing that the accessory dwelling unit may be attached to, or located within, an attached garage, storage area, or an accessory structure, as defined.

(3) Existing law prohibits a local agency from requiring a setback for an existing garage that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit. Existing law requires that an accessory dwelling unit that is constructed above a garage have a setback of no more than 5 feet.

This bill would instead prohibit a setback requirement for an existing living area or accessory structure or a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit. The bill would also instead require a setback of no more than 4 feet for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and to the same dimensions as an existing structure.

(4) Existing law provides that replacement offstreet parking spaces, required by a local agency when a garage, carport, or covered parking structure is demolished in conjunction with the construction of an accessory dwelling unit or converted to an accessory dwelling unit, may be located in any configuration on the same lot as the accessory dwelling unit, except as provided.

This bill would instead prohibit a local agency from requiring the replacement of offstreet parking spaces when a garage, carport, or covered parking structure is demolished or converted, as described above.

(5) Existing law requires a local agency to ministerially approve or deny a permit application for the creation of an accessory dwelling unit or a junior accessory dwelling unit within 120 days of receiving the application.

This bill would instead require a local agency to ministerially approve or deny a permit application for the creation of an accessory dwelling unit or junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. The bill would authorize the permitting agency to delay acting on the permit application if the permit application is submitted with a permit application to create a new single-family or multifamily dwelling on the lot, as specified.

(6) Existing law prohibits a local agency from utilizing standards to evaluate a proposed accessory dwelling unit on a lot that is zoned for residential use that includes a proposed or existing single-family dwelling other than the criteria described above, except, among one other exception, a local agency may require an applicant for a permit to be an owner-occupant of either the primary or accessory dwelling unit as a condition of issuing a permit.

This bill, until January 1, 2025, would prohibit a local agency from imposing an owner-occupant requirement, as described above.

(7) Existing law authorizes a local agency to establish minimum and maximum unit size limitations on accessory dwelling units, provided that the ordinance permits an efficiency unit to be constructed in compliance with local development standards.

This bill would prohibit a local agency from establishing a minimum square footage requirement for either an attached or detached accessory dwelling unit that prohibits an efficiency unit, as defined. The bill would also prohibit a local agency from establishing a maximum square footage requirement for either an attached or detached accessory dwelling unit that is less than 850 square feet, and 1,000 square feet if the accessory dwelling unit contains more than one bedroom. The bill would also instead prohibit a local agency from establishing any other minimum or maximum size for an accessory dwelling unit, size based upon a percentage of the proposed or existing primary dwelling, or limits on lot coverage, floor area ratio, open space, and minimum lot size for either attached or detached dwelling units that prohibits at least an 800 square foot accessory dwelling unit that is at least 16 feet in height and with a 4-foot side and rear yard setbacks.

(8) Existing law prohibits a local agency from imposing parking standards for an accessory dwelling unit if, among other conditions, the accessory dwelling unit is located within  $\frac{1}{2}$  mile of public transit.

This bill would make that prohibition applicable if the accessory dwelling unit is located within  $\frac{1}{2}$  mile walking distance of public transit, and would define public transit for those purposes.

(9) Existing law requires a local agency to ministerially approve an application for a building permit to create within a zone for single-family use one accessory dwelling unit per single family lot of the unit that is contained within the existing space of a single-family residence or accessory structure when specified conditions are met, including that the side and rear setbacks are sufficient for fire safety.

This bill would instead require ministerial approval of an application for a building permit within a residential or mixed-use zone to create the following: (1) one accessory dwelling unit and one junior accessory dwelling unit per lot with a proposed or existing single-family dwelling if certain requirements are met; (2) a detached, new construction accessory dwelling unit that meets certain requirements and would authorize a local agency to impose specified conditions relating to floor area and height on that unit; (3) multiple accessory dwelling units within the portions of an existing multifamily dwelling structure provided those units meet certain requirements; or (4) not more than 2 accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling and are subject to certain height and rear yard and side setback requirements.

(10) Existing law prohibits a local agency, special district, or water corporation from considering an accessory dwelling unit to be a new residential use for purposes of calculating fees or capacity charges.

This bill would establish an exception from the above-described prohibition in the case of an accessory dwelling unit that was constructed with a new single-family home.

(11) Existing law requires a local agency to submit a copy of the adopted ordinance to the Department of Housing and Community Development and authorizes the department to review and comment on the ordinance.

This bill would instead authorize the department to submit written findings to the local agency as to whether the ordinance complies with the statute authorizing the creation of an accessory dwelling unit, and, if the department finds that the local agency's ordinance does not comply with those provisions, would require the department to notify the local agency within a reasonable time. The bill would require the local agency to consider the department's findings and either amend its ordinance to comply with those provisions or adopt it without changes and include specified findings. If the local agency does not amend its ordinance or does not adopt those findings, the bill would require the department to notify the local agency and authorize it to notify the Attorney General that the local agency is in violation of state law, as provided. The bill would authorize the department to adopt guidelines to implement uniform standards or criteria to supplement or clarify the provisions authorizing accessory dwelling units.

(12) Existing law defines the term "accessory dwelling unit" for these purposes to mean an attached or a detached residential dwelling unit which provides complete independent living facilities for one or more persons.

This bill would revise the definition to additionally require an accessory dwelling unit be located on a lot with a proposed or existing primary residence in order for the provisions described above to apply.

(13) This bill would incorporate additional changes to Section 65852.2 of the Government Code proposed by SB 13 to be operative only if this bill and SB 13 are enacted and this bill is enacted last.

(14) By increasing the duties of local agencies with respect to land use regulations, this bill would impose a state-mandated local program.

(15) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

(16) This bill would include findings that the changes proposed by this bill address a matter of statewide concern rather than a municipal affair and, therefore, apply to all cities, including charter cities.

Vote: majority Appropriation: no Fiscal Committee: yes Local Program: yes

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

**SEC. 1.5.** Section 65852.2 of the Government Code is amended to read:

**65852.2.** (a) (1) A local agency may, by ordinance, provide for the creation of accessory dwelling units in areas zoned to allow single-family or multifamily dwelling residential use. The ordinance shall do all of the following:

(A) Designate areas within the jurisdiction of the local agency where accessory dwelling units may be permitted. The designation of areas may be based on the adequacy of water and sewer services and the impact of accessory dwelling units on traffic flow and public safety. A local agency that does not provide water or sewer services shall consult with the local water or sewer service provider regarding the adequacy of water and sewer services before designating an area where accessory dwelling units may be permitted.

(B) (i) Impose standards on accessory dwelling units that include, but are not limited to, parking, height, setback, landscape, architectural review, maximum size of a unit, and standards that prevent adverse impacts on any real property that is listed in the California Register of Historic Resources. These standards shall not include requirements on minimum lot size.

(ii) Notwithstanding clause (i), a local agency may reduce or eliminate parking requirements for any accessory dwelling unit located within its jurisdiction.

(C) Provide that accessory dwelling units do not exceed the allowable density for the lot upon which the accessory dwelling unit is located, and that accessory dwelling units are a residential use that is consistent with the existing general plan and zoning designation for the lot.

(D) Require the accessory dwelling units to comply with all of the following:

(i) The accessory dwelling unit may be rented separate from the primary residence, but may not be sold or otherwise conveyed separate from the primary residence.

(ii) The lot is zoned to allow single-family or multifamily dwelling residential use and includes a proposed or existing dwelling.

(iii) The accessory dwelling unit is either attached to, or located within, the proposed or existing primary dwelling, including attached garages, storage areas or similar uses, or an accessory structure or detached from the proposed or existing primary dwelling and located on the same lot as the proposed or existing primary dwelling.

(iv) If there is an existing primary dwelling, the total floor area of an attached accessory dwelling unit shall not exceed 50 percent of the existing primary dwelling.

(v) The total floor area for a detached accessory dwelling unit shall not exceed 1,200 square feet.

(vi) No passageway shall be required in conjunction with the construction of an accessory dwelling unit.

(vii) No setback shall be required for an existing living area or accessory structure or a structure constructed in the same location and to the same dimensions as an existing structure that is converted to an accessory dwelling unit or to a portion of an accessory dwelling unit, and a setback of no more than four feet from the side and rear lot lines shall be required for an accessory dwelling unit that is not converted from an existing structure or a new structure constructed in the same location and to the same dimensions as an existing structure.

(viii) Local building code requirements that apply to detached dwellings, as appropriate.

(ix) Approval by the local health officer where a private sewage disposal system is being used, if required.

(x) (I) Parking requirements for accessory dwelling units shall not exceed one parking space per accessory dwelling unit or per bedroom, whichever is less. These spaces may be provided as tandem parking on a driveway.

(II) Offstreet parking shall be permitted in setback areas in locations determined by the local agency or through tandem parking, unless specific findings are made that parking in setback areas or tandem parking is not feasible based upon specific site or regional topographical or fire and life safety conditions.

(III) This clause shall not apply to an accessory dwelling unit that is described in subdivision (d).

(xi) When a garage, carport, or covered parking structure is demolished in conjunction with the construction of an accessory dwelling unit or converted to an accessory dwelling unit, the local agency shall not require that those offstreet parking spaces be replaced.

(xii) Accessory dwelling units shall not be required to provide fire sprinklers if they are not required for the primary residence.

(2) The ordinance shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(3) A permit application for an accessory dwelling unit or a junior accessory dwelling unit shall be considered and approved ministerially without discretionary review or a hearing, notwithstanding Section 65901 or 65906 or any local ordinance regulating the issuance of variances or special use permits. The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall be considered without discretionary review or hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. A local agency may charge a fee to reimburse it for costs incurred to implement this paragraph, including the costs of adopting or amending any ordinance that provides for the creation of an accessory dwelling unit.



(4) An existing ordinance governing the creation of an accessory dwelling unit by a local agency or an accessory dwelling ordinance adopted by a local agency shall provide an approval process that includes only ministerial provisions for the approval of accessory dwelling units and shall not include any discretionary processes, provisions, or requirements for those units, except as otherwise provided in this subdivision. If a local agency has an existing accessory dwelling unit ordinance that fails to meet the requirements of this subdivision, that ordinance shall be null and void and that agency shall thereafter apply the standards established in this subdivision for the approval of accessory dwelling units, unless and until the agency adopts an ordinance that complies with this section.

(5) No other local ordinance, policy, or regulation shall be the basis for the delay or denial of a building permit or a use permit under this subdivision.

(6) This subdivision establishes the maximum standards that local agencies shall use to evaluate a proposed accessory dwelling unit on a lot that includes a proposed or existing single-family dwelling. No additional standards, other than those provided in this subdivision, shall be used or imposed, including any owner-occupant requirement, except that a local agency may require that the property be used for rentals of terms longer than 30 days.

(7) A local agency may amend its zoning ordinance or general plan to incorporate the policies, procedures, or other provisions applicable to the creation of an accessory dwelling unit if these provisions are consistent with the limitations of this subdivision.

(8) An accessory dwelling unit that conforms to this subdivision shall be deemed to be an accessory use or an accessory building and shall not be considered to exceed the allowable density for the lot upon which it is located, and shall be deemed to be a residential use that is consistent with the existing general plan and zoning designations for the lot. The accessory dwelling unit shall not be considered in the application of any local ordinance, policy, or program to limit residential growth.

(b) When a local agency that has not adopted an ordinance governing accessory dwelling units in accordance with subdivision (a) receives an application for a permit to create an accessory dwelling unit pursuant to this subdivision, the local agency shall approve or disapprove the application ministerially without discretionary review pursuant to subdivision (a). The permitting agency shall act on the application to create an accessory dwelling unit or a junior accessory dwelling unit within 60 days from the date the local agency receives a completed application if there is an existing single-family or multifamily dwelling on the lot. If the permit application to create an accessory dwelling unit or a junior accessory dwelling unit is submitted with a permit application to create a new single-family dwelling on the lot, the permitting agency may delay acting on the permit application for the accessory dwelling unit or the junior accessory dwelling unit until the permitting agency acts on the permit application to create the new single-family dwelling, but the application to create the accessory dwelling unit or junior accessory dwelling unit shall still be considered ministerially without discretionary review or a hearing. If the applicant requests a delay, the 60-day time period shall be tolled for the period of the delay. If the local agency has not acted upon the completed application within 60 days, the application shall be deemed approved.

(c) (1) Subject to paragraph (2), a local agency may establish minimum and maximum unit size requirements for both attached and detached accessory dwelling units.

(2) Notwithstanding paragraph (1), a local agency shall not establish by ordinance any of the following:

(A) A minimum square footage requirement for either an attached or detached accessory dwelling unit that prohibits an efficiency unit.

(B) A maximum square footage requirement for either an attached or detached accessory dwelling unit that is less than either of the following:

(i) 850 square feet.

(ii) 1,000 square feet for an accessory dwelling unit that provides more than one bedroom.

(C) Any other minimum or maximum size for an accessory dwelling unit, size based upon a percentage of the proposed or existing primary dwelling, or limits on lot coverage, floor area ratio, open space, and minimum lot size, for either attached or detached dwellings that does not permit at least an 800 square foot accessory dwelling unit that is at least 16 feet in height with four-foot side and rear yard setbacks to be constructed in compliance with all other local development standards.

(d) Notwithstanding any other law, a local agency, whether or not it has adopted an ordinance governing accessory dwelling units in accordance with subdivision (a), shall not impose parking standards for an accessory dwelling unit in any of the following instances:

- (1) The accessory dwelling unit is located within one-half mile walking distance of public transit.
- (2) The accessory dwelling unit is located within an architecturally and historically significant historic district.
- (3) The accessory dwelling unit is part of the proposed or existing primary residence or an accessory structure.
- (4) When on-street parking permits are required but not offered to the occupant of the accessory dwelling unit.
- (5) When there is a car share vehicle located within one block of the accessory dwelling unit.

(e) (1) Notwithstanding subdivisions (a) to (d), inclusive, a local agency shall ministerially approve an application for a building permit within a residential or mixed-use zone to create any of the following:

(A) One accessory dwelling unit or junior accessory dwelling unit per lot with a proposed or existing single-family dwelling if all of the following apply:

(i) The accessory dwelling unit or junior accessory dwelling unit is within the proposed space of a single-family dwelling or existing space of a single-family dwelling or accessory structure and may include an expansion of not more than 150 square feet beyond the same physical dimensions as the existing accessory structure. An expansion beyond the physical dimensions of the existing accessory structure shall be limited to accommodating ingress and egress.

(ii) The space has exterior access from the proposed or existing single-family dwelling.

(iii) The side and rear setbacks are sufficient for fire and safety.

(iv) The junior accessory dwelling unit complies with the requirements of Section 65852.22.

(B) One detached, new construction, accessory dwelling unit that does not exceed four-foot side and rear yard setbacks for a lot with a proposed or existing single-family dwelling. The accessory dwelling unit may be combined with a junior accessory dwelling unit described in subparagraph (A). A local agency may impose the following conditions on the accessory dwelling unit:

(i) A total floor area limitation of not more than 800 square feet.

(ii) A height limitation of 16 feet.

(C) (i) Multiple accessory dwelling units within the portions of existing multifamily dwelling structures that are not used as livable space, including, but not limited to, storage rooms, boiler rooms, passageways, attics, basements, or garages, if each unit complies with state building standards for dwellings.

(ii) A local agency shall allow at least one accessory dwelling unit within an existing multifamily dwelling and shall allow up to 25 percent of the existing multifamily dwelling units.

(D) Not more than two accessory dwelling units that are located on a lot that has an existing multifamily dwelling, but are detached from that multifamily dwelling and are subject to a height limit of 16 feet and four-foot rear yard and side setbacks.

(2) A local agency shall not require, as a condition for ministerial approval of a permit application for the creation of an accessory dwelling unit or a junior accessory dwelling unit, the correction of nonconforming zoning conditions.

(3) The installation of fire sprinklers shall not be required in an accessory dwelling unit if sprinklers are not required for the primary residence.

(4) A local agency shall require that a rental of the accessory dwelling unit created pursuant to this subdivision be for a term longer than 30 days.

(5) A local agency may require, as part of the application for a permit to create an accessory dwelling unit connected to an onsite water treatment system, a percolation test completed within the last five years, or, if the percolation test has been recertified, within the last 10 years.

(6) Notwithstanding subdivision (c) and paragraph (1) a local agency that has adopted an ordinance by July 1, 2018, providing for the approval of accessory dwelling units in multifamily dwelling structures shall ministerially consider a permit application to construct an accessory dwelling unit that is described in paragraph (1), and may impose standards including, but not limited to, design, development, and historic standards on said accessory dwelling units. These standards shall not include requirements on minimum lot size.

(f) (1) Fees charged for the construction of accessory dwelling units shall be determined in accordance with Chapter 5 (commencing with Section 66000) and Chapter 7 (commencing with Section 66012).

(2) An accessory dwelling unit shall not be considered by a local agency, special district, or water corporation to be a new residential use for purposes of calculating connection fees or capacity charges for utilities, including water and sewer service, unless the accessory dwelling unit was constructed with a new single-family dwelling.

(3) (A) A local agency, special district, or water corporation shall not impose any impact fee upon the development of an accessory dwelling unit less than 750 square feet. Any impact fees charged for an accessory dwelling unit of 750 square feet or more shall be charged proportionately in relation to the square footage of the primary dwelling unit.

(B) For purposes of this paragraph, "impact fee" has the same meaning as the term "fee" is defined in subdivision (b) of Section 66000, except that it also includes fees specified in Section 66477. "Impact fee" does not include any connection fee or capacity charge charged by a local agency, special district, or water corporation.

(4) For an accessory dwelling unit described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation shall not require the applicant to install a new or separate utility connection directly between the accessory dwelling unit and the utility or impose a related connection fee or capacity charge, unless the accessory dwelling unit was constructed with a new single-family home.

(5) For an accessory dwelling unit that is not described in subparagraph (A) of paragraph (1) of subdivision (e), a local agency, special district, or water corporation may require a new or separate utility connection directly between the accessory dwelling unit and the utility. Consistent with Section 66013, the connection may be subject to a connection fee or capacity charge that shall be proportionate to the burden of the proposed accessory dwelling unit, based upon either its square feet or the number of its drainage fixture unit (DFU) values, as defined in the Uniform Plumbing Code adopted and published by the International Association of Plumbing and Mechanical Officials, upon the water or sewer system. This fee or charge shall not exceed the reasonable cost of providing this service.

(g) This section does not limit the authority of local agencies to adopt less restrictive requirements for the creation of an accessory dwelling unit.

(h) (1) A local agency shall submit a copy of the ordinance adopted pursuant to subdivision (a) to the Department of Housing and Community Development within 60 days after adoption. After adoption of an ordinance, the department may submit written findings to the local agency as to whether the ordinance complies with this section.

(2) (A) If the department finds that the local agency's ordinance does not comply with this section, the department shall notify the local agency and shall provide the local agency with a reasonable time, no longer than 30 days, to respond to the findings before taking any other action authorized by this section.

(B) The local agency shall consider the findings made by the department pursuant to subparagraph (A) and shall do one of the following:

(i) Amend the ordinance to comply with this section.

(ii) Adopt the ordinance without changes. The local agency shall include findings in its resolution adopting the ordinance that explain the reasons the local agency believes that the ordinance complies with this section despite the findings of the department.

(3) (A) If the local agency does not amend its ordinance in response to the department's findings or does not adopt a resolution with findings explaining the reason the ordinance complies with this section and addressing the department's findings, the department shall notify the local agency and may notify the Attorney General that the local agency is in violation of state law.

(B) Before notifying the Attorney General that the local agency is in violation of state law, the department may consider whether a local agency adopted an ordinance in compliance with this section between January 1, 2017, and January 1, 2020.

(i) The department may review, adopt, amend, or repeal guidelines to implement uniform standards or criteria that supplement or clarify the terms, references, and standards set forth in this section. The guidelines adopted pursuant to this subdivision are not subject to Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2.

(j) As used in this section, the following terms mean:

(1) "Accessory dwelling unit" means an attached or a detached residential dwelling unit that provides complete independent living facilities for one or more persons and is located on a lot with a proposed or existing primary residence. It shall include permanent provisions for living, sleeping, eating, cooking, and sanitation on the same parcel as the single-family or multifamily dwelling is or will be situated. An accessory dwelling unit also includes the following:

(A) An efficiency unit.

(B) A manufactured home, as defined in Section 18007 of the Health and Safety Code.

(2) "Accessory structure" means a structure that is accessory and incidental to a dwelling located on the same lot.

(3) "Efficiency unit" has the same meaning as defined in Section 17958.1 of the Health and Safety Code.

(4) "Living area" means the interior habitable area of a dwelling unit, including basements and attics, but does not include a garage or any accessory structure.

(5) "Local agency" means a city, county, or city and county, whether general law or chartered.

(6) "Neighborhood" has the same meaning as set forth in Section 65589.5.

(7) "Nonconforming zoning condition" means a physical improvement on a property that does not conform with current zoning standards.

(8) "Passageway" means a pathway that is unobstructed clear to the sky and extends from a street to one entrance of the accessory dwelling unit.

(9) "Proposed dwelling" means a dwelling that is the subject of a permit application and that meets the requirements for permitting.

(10) "Public transit" means a location, including, but not limited to, a bus stop or train station, where the public may access buses, trains, subways, and other forms of transportation that charge set fares, run on fixed routes, and are available to the public.

(11) "Tandem parking" means that two or more automobiles are parked on a driveway or in any other location on a lot, lined up behind one another.

(k) A local agency shall not issue a certificate of occupancy for an accessory dwelling unit before the local agency issues a certificate of occupancy for the primary dwelling.

(l) Nothing in this section shall be construed to supersede or in any way alter or lessen the effect or application of the California Coastal Act of 1976 (Division 20 (commencing with Section 30000) of the Public Resources Code), except that the local government shall not be required to hold public hearings for coastal development permit applications for accessory dwelling units.

(m) A local agency may count an accessory dwelling unit for purposes of identifying adequate sites for housing, as specified in subdivision (a) of Section 65583.1, subject to authorization by the department and compliance with this division.

(n) In enforcing building standards pursuant to Article 1 (commencing with Section 17960) of Chapter 5 of Part 1.5 of Division 13 of the Health and Safety Code for an accessory dwelling unit described in paragraph (1) or (2) below, a local agency, upon request of an owner of an accessory dwelling unit for a delay in enforcement, shall delay enforcement of a building standard, subject to compliance with Section 17980.12 of the Health and Safety Code:

- (1) The accessory dwelling unit was built before January 1, 2020.
- (2) The accessory dwelling unit was built on or after January 1, 2020, in a local jurisdiction that, at the time the accessory dwelling unit was built, had a noncompliant accessory dwelling unit ordinance, but the ordinance is compliant at the time the request is made.
- (o) This section shall remain in effect only until January 1, 2025, and as of that date is repealed.



**Planning and Development Department**  
Land Use Planning Division

## STAFF REPORT

DATE: November 6, 2019

TO: Members of the Planning Commission

FROM: Alene Pearson, Principal Planner  
Katrina Lapira, Assistant Planner

SUBJECT: 2019 State Housing Legislation

### BACKGROUND

California's State Legislature has passed significant packages of housing-related laws in the last three legislative sessions in order to address the State's housing crisis. This year's housing package included over 20 housing-focused bills that affect a variety of regulations including Accessory Dwelling Units (ADUs), density bonus, and streamlined permitting.

Jurisdictions across the State are working to understand new regulations, many of which take effect on January 1, 2020. Berkeley staff are consulting with the City Attorney and other municipalities to understand requirements. A number of land use law firms have provided summaries<sup>1</sup> of the new legislation (*see Attachments 1 through 3*) and guidance documents from California Department Housing and Community Development (HCD) are forthcoming. This report provides an initial analysis, identifies areas where the Planning Commission will be making recommendations, and discusses overlap with Council Referrals.

Laws affect land use policies, implementation procedures and specific zoning standards. Planning Commission will ultimately recommend Zoning Ordinance (ZO) amendments to City Council for consideration. This report summarizes four important bills (*see Attachments 4 through 7*) affecting housing policies and practices:

- AB-881 -- Accessory Dwelling Units
- AB-1763 -- Density Bonuses
- AB-1485 -- Streamlining
- SB-330 -- Housing Crisis Act of 2019

<sup>1</sup> Summaries are provided for informational purposes only. The City of Berkeley has not consulted with authors or firms about content or analysis.

**AB-881 -- Accessory Dwelling Units**

As of January 1, 2020, a new set of ADU regulations take effect statewide. Local ordinances are superseded by these regulations, except where noted. The list below outlines main points of the new law – providing references to some Government Code sections (GC) and highlighting opportunities to refine local ordinances.

1. **Allowable Lots:** ADUs are allowed in all districts that allow residential uses. ADUs would be allowed on lots that include a proposed or existing dwelling unit.

*Local ordinances can restrict ADUs from areas 1) without adequate water and sewer service and 2) in areas where ADUs create impacts to traffic flow and public safety. GC 65852.2 (a)(1)(A)*

2. **Approval Process:** Jurisdictions must ministerially approve or disapprove building permit applications for ADUs within 60-days of receiving a complete application. If an ADU building permit is associated with an application for a new primary dwelling unit, ministerial approval of the ADU can be delayed until there is an action on the permit for the primary dwelling unit.

3. **Development Standards:** ADUs will have to adhere to and can impose only the following development standards (unless modified by local ordinance as set forth in italics below):

- Maximum height of 16 feet
- Rear and side setbacks of 4 feet
- Maximum size:
  - A detached ADU shall not exceed 1200 square feet
  - An attached ADU shall not exceed 50% of the floor area of an existing or proposed primary dwelling unit. GCS 65852.2 (a)(1)(D)(iv)

*Local ordinances can reduce maximum ADU size to no less than 850 square feet for a studio and 1-bedroom ADU and no less than 1000 square feet for ADUs with more than one bedroom.*

*Local ordinances can impose development standards on ADUs that prevent adverse impacts to any real property listed in the California Register of Historic Resources. GC 65852.2 (a)(1)(B)(i)*

*Local ordinances can impose development standards for lot coverage and open space as long as those standards allow for at least an 800 square foot ADU that is 16 feet in height. GC 65852.2 (c)(2)(C).*

4. **Parking:** Replacement parking for the primary dwelling unit is not required if the ADU physically replaces the location of an existing garage, carport or covered parking structure.



**5. Sprinklers:** Fire sprinklers are required for the ADU if they are required for the primary dwelling unit.

**6. Fees**

- a. No **impact fees** may be levied on ADUs that are less than 750 square feet. For ADUs larger than 750 square feet, impact fees must be **proportional** to the square footage of the primary dwelling unit. GC 65852.2 (f)(3)
- b. ADUs shall not be considered new residential uses for the purposes of calculating **connection fees or capacity charges** for utilities, unless the ADU is created with a newly constructed primary dwelling unit. GC 65852.2 (f)(2).
- c. ADUs carved out of existing dwelling units shall not require new or separate **utility hook-ups**. All other ADUs may require new hook-ups and will be charged **utility fees** proportionate to its size and/or burden. GC 65852.2 (f)(4),(5).

*Local Ordinance: Cities can charge fees to cover costs associated with meeting the new 60-day timeline. Fees can include costs incurred adopting new ADU ordinances. GC 65852.2 (a)(3)*

**7. Owner Occupancy, Rental and Sale of ADUs:** Properties with ADUs cannot require owner-occupancy of the ADU or the primary dwelling unit. ADUs can be rented separate from the primary dwelling unit, but the rental term shall be for 30-days or more. GC 65852.2 (e)(4). ADUs may not be sold separately from primary dwelling unit. GC 65852.2 (a)(1)(D)(i)

**8. Number of ADUs**

- a. **Single Family (Primary) Dwelling Unit:** One ADU is allowed on all lots with one primary dwelling unit. The ADU can be attached to the primary dwelling unit or can be a detached structure. In addition, the lot can have a Junior ADU (J-ADU) attached to either the ADU or the primary dwelling unit.
- b. **Multifamily Dwelling Units**  
Attached: Multiple ADUs can be created within existing areas of multifamily dwellings that are not used as livable space (i.e. storage rooms, basements, garages, attics). At a minimum, one ADU is allowed. At a maximum, the number of ADUs cannot exceed 25% of the number of multifamily dwelling units. GC 65852.2 (e)(1)(C)(i),(ii)  
Detached: There can be no more than two detached ADUs on lots with multifamily dwellings, subject to the abovementioned development standards. GC 65852.2 (e)(1)(D)

**9. Non-conforming Structures:** If an ADU is constructed in the same location and to the same dimensions as an existing non-conforming structure, it does not have to comply with the rear and side setbacks. GC 65852.2 (a)(1)(D)(vii). Additionally, the jurisdiction cannot require the correction of nonconforming zoning conditions in order to ministerially approve an ADU. GC 65852.2 (e)(2).

Berkeley Context:

- *Planning Commission Action:* As of January 1, 2020, Berkeley's ADU Ordinance will be considered null and void. Until Berkeley's ADU Ordinance is updated to reflect new law, State regulations will be in effect. Staff is working on amendments for Planning Commission consideration. As part of this effort, a J-ADU Ordinance will be adopted.
- *Referrals:* Listed below are requests from City Council referrals that pertain to ADUs (see *Attachment 8*). Some requests have been resolved with the passage of AB-881, others are included in AB-881 – but need additional consideration and refinement from the City -- and some topics are not included in AB-881. Over the next few months, Planning Commission will be considering these items while developing Berkeley's new ADU Ordinance.

AB-881 Dictates Action with New Regulations:

- Reconsider the owner-occupancy requirements (May 15, 2018)
- Rectify ADU regulations for demolition and conversion of legally non-confirming structures (May 15, 2018)
- Consider allowing multiple ADUs on a lot (May 15, 2018)
- Consider allowing ADUs for multifamily dwellings (May 15, 2018)
- Clarify regulations for ADUs created through residential additions (Sept 13, 2018)

AB-881 Provides Guidance and Requires City Action:

- Adopt a J-ADU ordinance (May 2, 2017)
- Consider public safety issues in the Very High Fire Zone (Feb 27, 2018)
- Reconsider off-street parking regulations on narrow roads (Sept 13, 2018)

These are not included in AB-881:

- Consider incentives for affordability restrictions (May 15, 2018)
- Consider incentives for universal design (September 13, 2018)
- Require signed receipt of information on rent control, tenant protections and short term rental rules when ADU permits are issued (Sept 13, 2018)

**AB-1763 -- Density Bonuses**

AB-1763 modifies GC 65915 to include 100% affordable housing projects<sup>2</sup>. Under the new law, projects that provide 20% of their units to moderate income households<sup>3</sup> and 80% of their units to lower income households<sup>4</sup> will be eligible for State Density Bonus. Under this program, 100% affordable projects do not have to provide off-street parking. Projects that are more than half a mile from major transit stops<sup>5</sup> receive an 80% density bonus. Projects that are within half a mile of major transit stop have no maximum density,

<sup>2</sup> 100% affordable housing projects include all (base and bonus) units, except manager's unit(s)

<sup>3</sup> Moderate income households: 120-80% of the Area Median Income (AMI)

<sup>4</sup> Lower income households: Less than 80% of the AMI

<sup>5</sup> Major transit is defined as fixed rail service or a bus stop for a rapid line or a line with 15 minute headways at commute hours, per Public Resources Code 21155.

receive four incentives or concessions, and are provided an additional three stories or 33 feet in height.

Berkeley Context:

- *Planning Commission Action:* No action is required. In March 2019, City Council adopted a new Density Bonus Ordinance (Chapter 23C.14) that points to GC 65915. This was done intentionally to ensure that as State law evolved, Berkeley's ZO would not need to be amended.
- *Referrals:* The Planning Commission and its Subcommittee on Affordable Housing developed a multi-phase approach to address six Density Bonus referrals. The approach included 1) adopting a new Density Bonus Ordinance; 2) developing a local density incentive program that would result in affordable housing production in excess State Density Bonus requirements; and 3) recommending density standards. AB-1763 directly responds to the second phase of the outlined approach.

**AB-1485 – Streamlining**

AB-1485 modifies SB-35, which was signed by Governor Brown in the fall of 2017. SB-35 requires streamlined permit processing for qualified housing developments in cities that have not met their Regional Housing Needs Allocation (RHNA) targets and/or have not submitted their Housing Element Annual Progress Reports. AB-1485 provides additional options for developers (i.e. percentage of units at different affordability levels) requesting streamlining. AB-1485 clarifies project approval timelines taking into consideration length of potential litigation and/or construction. Furthermore, AB-1485 requires jurisdictions to ministerially process subsequent permits needed for a project that has received its SB-35 approval. Finally, AB-1485 explains how to calculate the percentage of a project that is residential (e.g. exclude underground space such as parking garages and basements).

Berkeley Context:

- *Planning Commission Action:* No action is required.
- *Referrals:* On December 5, 2017 City Council adopted a referral to allow ministerial approval of housing projects that receive Housing Trust Fund monies and/or housing projects that have more than 50% below market rate units with 20% of the BMR units designated for those earning up to 50% AMI (extremely low and very low income households). Affordability levels in this referral are deeper than those required by SB-35. Additionally, the referral asks for design review and a community meeting as part of ministerial review.

**SB-330 -- Housing Crisis Act of 2019**

SB-330 places a moratorium on regulations that limit housing development. It dictates a new project intake process – requiring a preliminary application -- and freezes applicable

regulations and fees at the time the preliminary application is submitted. It shortens timelines to approve projects and limits the number of allowable project hearings<sup>6</sup> to five. SB-330 primarily affects permit processing procedures, but it also restricts jurisdictions from adopting new zoning regulations or policies that limit housing or density. This includes objective standards and invalidates any regulations adopted after January 1, 2018 that reduce allowable density or restrict development.

#### Berkeley Context:

- *Planning Commission Action:* As new ZO amendments are considered, Planning Commission and staff will have to evaluate if proposals are reducing density or restricting development.
- *Referrals:* N/A

#### NEXT STEPS

Staff will continue to work with the City Attorney and HCD to evaluate the interpretations presented in this staff report. Planning Commission is asked to provide feedback on this summary, with particular attention to the analysis of AB-881.

#### Attachments:

1. [New California Housing Laws by Best, Best and Kreiger](#)
2. [California's 2020 Housing Laws: What You Need to Know by Holland and Knight](#)
3. [California Housing Law Update by Meyers and Nave](#)
4. AB-881 -- Accessory Dwelling Units
5. AB-1763 -- Density Bonuses
6. AB-1485 – Streamlining (SB-35)
7. SB-330 – Housing Crisis Act of 2019
8. ADU Referrals


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<sup>6</sup> A project hearing is broadly defined as a city-held meeting, workshop, work session, commission meeting, public hearing, subcommittee meeting, appeal or departmental meeting.

# City of Berkeley Fire Zone Map

## Legend


 CA Very High Hazard Severity Zone


 Berkeley Fire Zone 2

 Berkeley Fire Zone 3

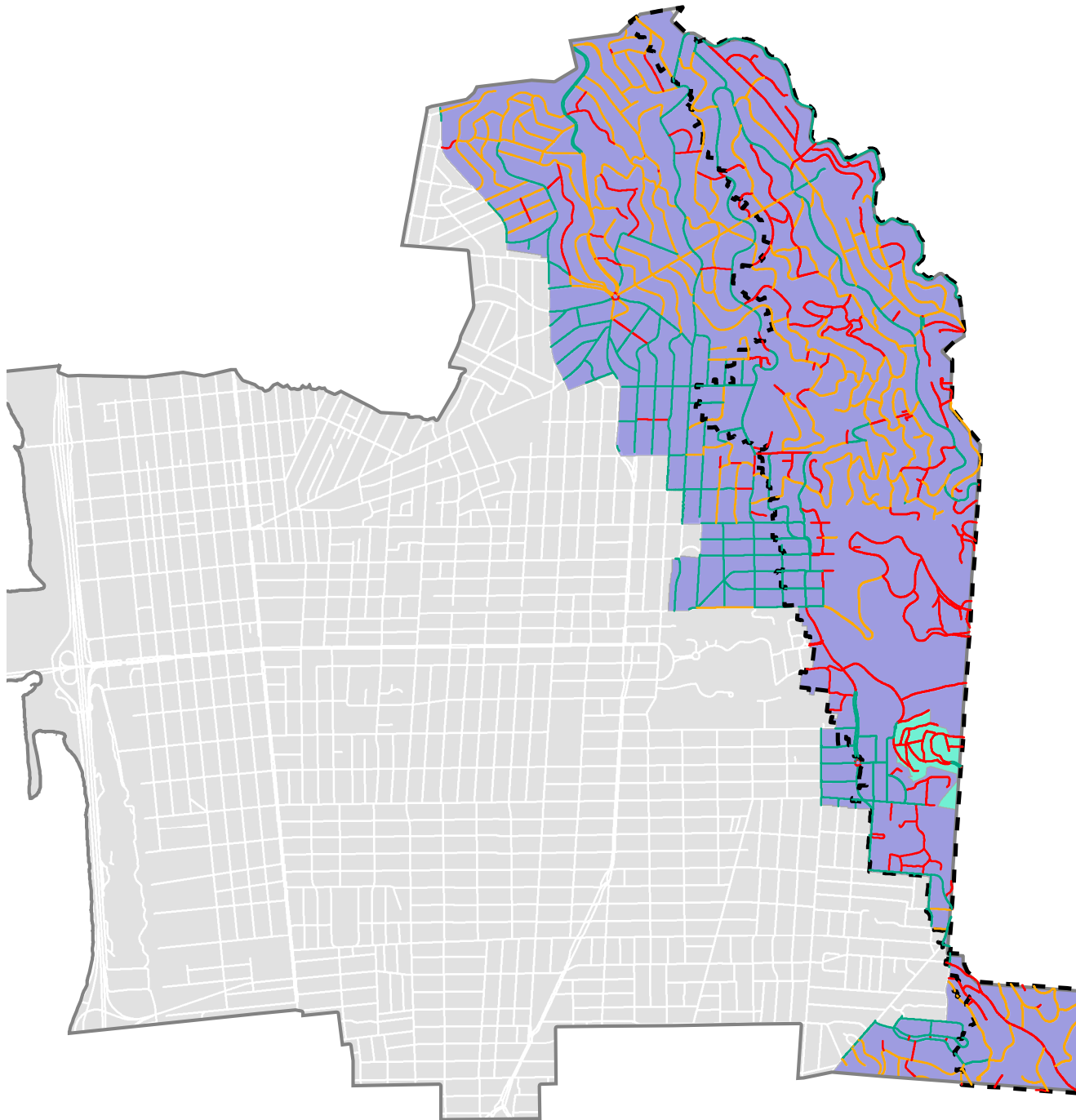
 Berkeley Boundary

## Pavement Width

 Less than or equal to 20 feet

 21 to 26 feet

 Greater than 27 feet



Updated:  
November 14, 2019

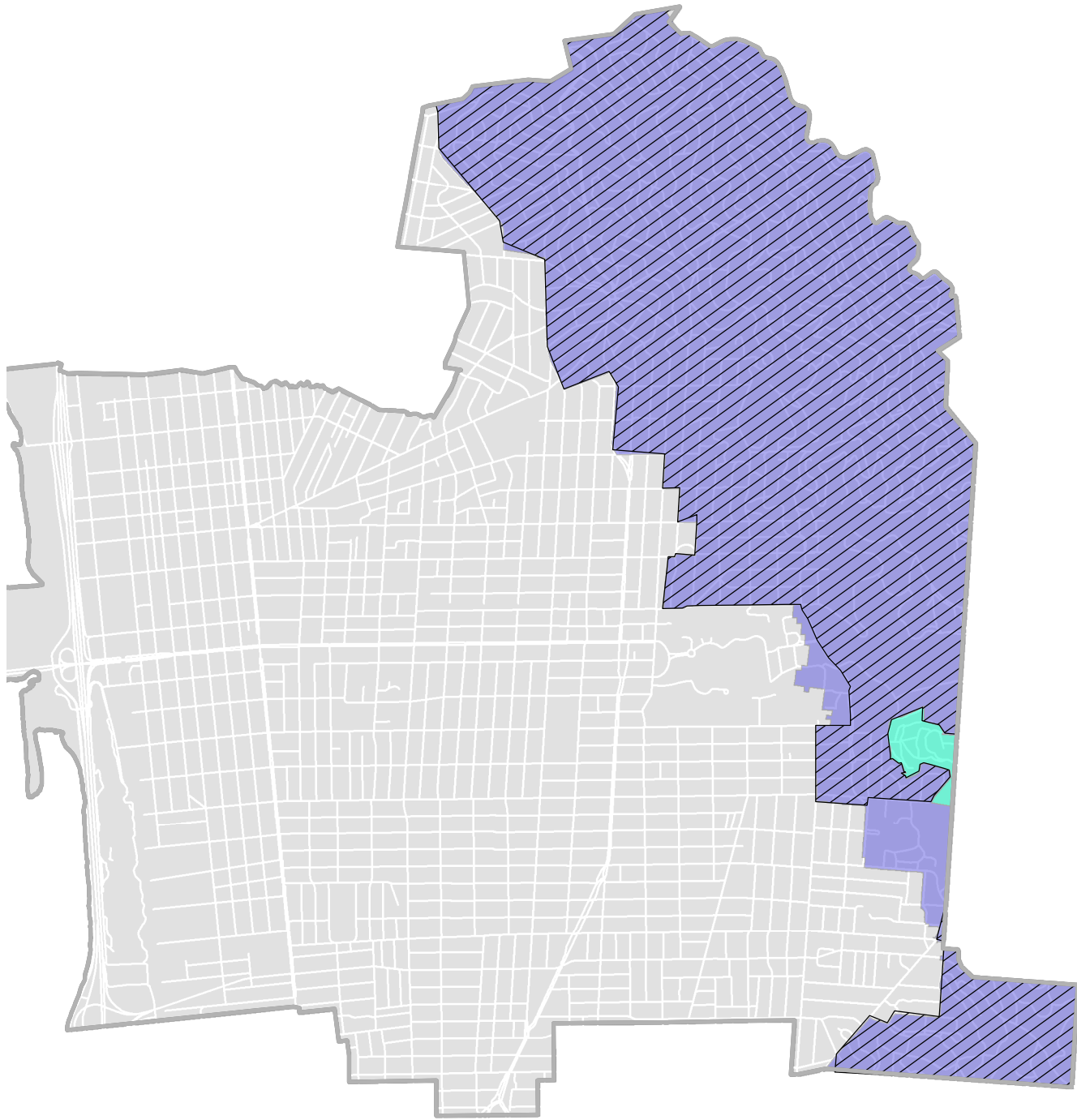


0 800 1,600 3,200  
Feet






**CITY OF BERKELEY**  
Land Use Planning Division  
Dep.t of Planning & Development  
2120 Milvia Street, 2nd Floor  
Berkeley, CA 94704

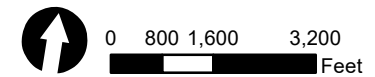
# Hillside Overlay and Fire Zones 2 and 3




## Legend

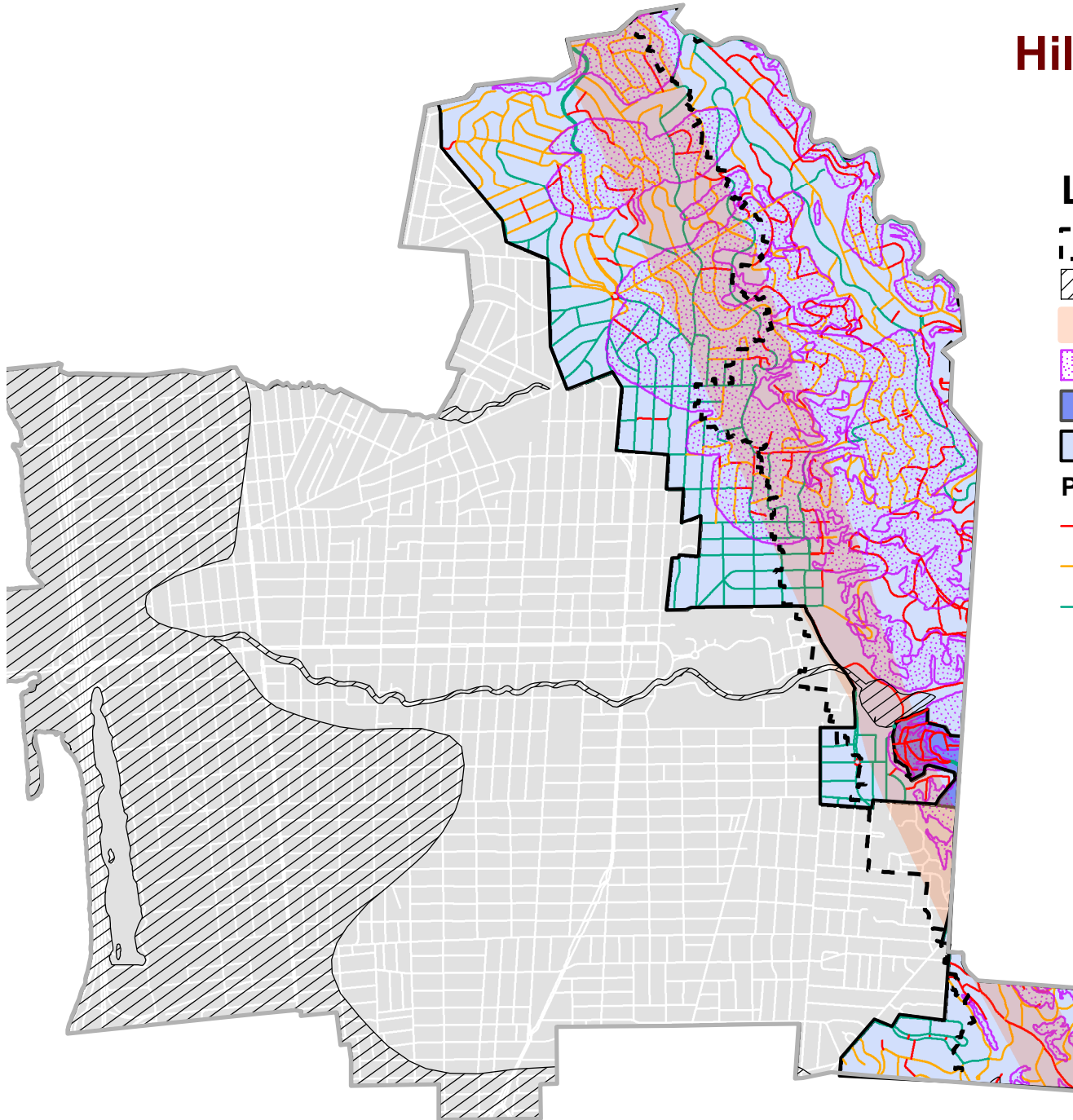
-  Hillside Overlay
-  Berkeley Fire Zone 2
-  Berkeley Fire Zone 3

Updated:  
November 14, 2019









 **CITY OF BERKELEY**  
Land Use Planning Division  
Dep.t of Planning & Development  
2120 Milvia Street, 2nd Floor  
Berkeley, CA 94704




# City of Berkeley Hillside Conditions Map



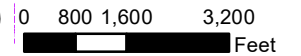
## Legend

-  Very High Hazard Severity Zone
-  CGS Seismic Hazard Zone: Liquefaction
-  CGS Seismic Hazard Zone: Earthquake Fault
-  CGS Seismic Hazard Zone: Landslide
-  ES-R Zoning District
-  Hillside Overlay

## Pavement Width

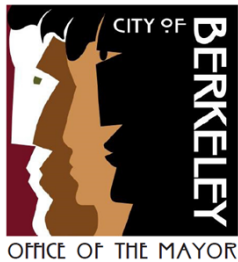
-  Less than or equal to 20 feet
-  21 to 26 feet
-  Greater than 27 feet

Updated:  
November 14, 2019



**CITY OF BERKELEY**  
 Land Use Planning Division  
 Dep.t of Planning & Development  
 2120 Milvia Street, 2nd Floor  
 Berkeley, CA 94704





TO: Honorable Members of the City Council

FROM: Mayor Arreguín, Councilmember Bartlett, and Councilmember Kesarwani

SUBJECT: Approval of a Memorandum of Understanding between the City of Berkeley and BART on Implementation of State Law AB 2923 at the Ashby and North Berkeley BART Stations and Establishment of a Community Advisory Group

### **RECOMMENDATION**

- (1) Approve a Memorandum of Understanding (MOU) between the City of Berkeley and the Bay Area Rapid Transit District (BART) to establish a process for cooperatively pursuing the implementation of Assembly Bill 2923 (AB 2923, Stats. 2018, Chp. 1000) at the Ashby and North Berkeley BART Stations. This action is pursuant to unanimous City Council direction on May 9, 2019, to direct the City Manager to “engage with BART to develop an MOU that outlines the project planning process including feasibility analysis, project goals, and roles and responsibilities; and direct that the MOU return to Council for adoption.”
- (2) Establish a Community Advisory Group (CAG) for the purposes of providing input:
  - To the City Planning Commission as it considers zoning standards that will be consistent with the City’s obligations under AB 2923 for the Ashby and North Berkeley BART station areas; and
  - To the City and BART as the parties establish a joint vision and priorities document that will be incorporated in eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART Properties.

### **SUMMARY STATEMENT**

On May 9, 2019, the City Council unanimously voted to engage with BART on an MOU to collaborate on development at the North Berkeley BART Station and refer to the Planning Commission to study development of zoning for the site.<sup>1</sup> At the same time, the Adeline Corridor Plan public process has identified interest in the development of homes at the Ashby BART Station.<sup>2</sup> The City and BART both acknowledge that the region faces a shortage of affordable homes and a climate crisis that requires a significant reduction in vehicle miles traveled, and both entities have adopted policies that prioritize creating affordable homes and reducing greenhouse gas emissions. Publicly-owned land at the Ashby and North Berkeley Stations provides a rare

<sup>1</sup> [May 9, 2019, Special Meeting Annotated Agenda](#) [PDF]

<sup>2</sup> [Adeline Corridor Plan website](#) [cityofberkeley.info]

opportunity to meet the objectives of both the City and BART. Furthermore, state law AB 2923 requires the City of Berkeley to zone the Ashby and North Berkeley Stations in accordance with BART transit-oriented development (TOD) standards no later than July 1, 2022.<sup>3</sup> A significant benefit of the proposed collaboration with BART is the opportunity to identify and make infrastructure improvements in order to enhance station access for all Ashby and North Berkeley BART riders using all modes, including pedestrians, bicyclists, community members with access and functional needs, shared mobility users, and patrons using public and private transportation.

Therefore, the attached MOU establishes a process to:

1. Identify a shared vision and priorities for development for BART and the City, and set forth steps needed to pursue this vision and priorities;
2. Clarify the processes that BART and/or the City will pursue to address the activities and timelines; and
3. Provide greater clarity for all parties, including BART, the City, and members of the public, on the currently-planned steps, timelines, and the Parties' roles and responsibilities needed in seeking to commence construction of TOD on BART-owned property at both the Ashby and North Berkeley BART Stations.

The MOU specifies roles and responsibilities of the City and BART and does not specify in great detail financial arrangements, environmental review, and other relevant considerations to be addressed at a future time.

Given the importance placed on community input in the Adeline Corridor Specific Plan, Policy 3.7 (3-22),<sup>4</sup> and the North Berkeley BART Development Goals and Objectives,<sup>5</sup> a Community Advisory Group (CAG) shall be formed for the purposes of advising the Planning Commission on zoning for the Ashby and North Berkeley Stations. While there may be distinct concepts and requirements for each station site, the CAG will advise the Planning Commission on zoning that conforms with AB 2923 with the assistance of an AB 2923 Guidance Document to be prepared by BART. The CAG will also provide input to the City and BART as the parties establish a joint vision and priorities document that will be incorporated into eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART Properties.

## **BACKGROUND**

### **Ashby BART Station**

As described in the Draft Adeline Corridor Plan (2-22), "The Ashby BART subarea is comprised of two large parcels adjacent to the Ashby BART Station, as well as the public street right-of-way and station area between them. The two parcels are owned by BART, but the City retains an

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<sup>3</sup> [Text of Assembly Bill 2923](#) [ca.gov]

<sup>4</sup> [Adeline Corridor Specific Plan, Public Review Draft, May 2019](#) [PDF]

<sup>5</sup> [A Community Visioning Process for the Ashby and North Berkeley BART Stations](#) [jessesarreguin.com]

option to the ‘air rights’ over the parcel on the west side of Adeline. The parcel on the east side of Adeline is a 1.9-acre surface parking lot. The parcel on the west side is a 4.4-acre surface parking lot, the northern portion of which is used by the Berkeley Flea Market on weekends. Beyond the parking lots, this subarea consists of wide, busy streets, with high volumes of station-bound pedestrian, bicycle, and bus traffic. The streets are not as conducive to safe and comfortable pedestrian activity as they might be. There are grade changes and design features that limit the visibility and accessibility of station entrances.”

The collaborative community process identified a number of “big ideas” (2-16) that help achieve the five strategic goals of the Plan: Land Use and Community Character, Housing Affordability, Economic Opportunity, Transportation, and Public Space. One of the “big ideas” especially considers development at Ashby BART:

*Redevelop the Ashby BART Station Area as a vibrant neighborhood center with high-density mixed-use development, structured parking (including some replacement parking for BART riders), ground floor commercial and civic uses, and new public space. The BART development should incorporate green construction and become a model for sustainable transit-oriented development. It should unify both sides of Adeline Street, and provide public space for community gatherings, special events, and civic celebrations.<sup>6</sup>*

The CAG’s discussions should connect to the “big ideas” from the Adeline Corridor Plan, which include neighborhood priorities and amenities such as the Berkeley Flea Market, South Berkeley Farmers’ Market, Ed Roberts campus, and others in the context of requirements stipulated by AB 2923 TOD zoning standards.

### **North Berkeley BART Station**

The North Berkeley BART Station sits on approximately 8.1 acres of land in residential Northwest Berkeley, bounded by Sacramento Street on the east, Virginia Street on the north, Acton Street on the west, and Delaware Street on the south (with the exception of additional side parking lots abutting the Ohlone Greenway).

The North Berkeley BART site is currently zoned U-Unclassified, meaning there is no zoning designation, and therefore zoning and development standards will have to be developed by the Planning Commission in consultation with the CAG.

After a series of public meetings, including a community visioning session in October 2018, the City Council gave direction on January 15, 2019, to the City’s Planning Department to develop conceptual land use scenarios for the North Berkeley BART site. On May 9, 2019, the City Council reviewed these scenarios, and unanimously voted to make a referral to the Planning Commission to study development of zoning for the site.

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<sup>6</sup> See Chapters 3, 4 and 7 of the Draft Adeline Corridor Plan for more on Ashby BART.

The CAG's discussions should connect to the North Berkeley BART Development Goals and Objectives, including the discussion of station access, affordability, livability, and environmental sustainability in the context of requirements stipulated by AB 2923 TOD zoning standards.

### **REVIEW OF EXISTING PLANS, PROGRAMS, POLICIES AND LAWS**

A number of City and regional plans and policies emphasize the value of creating affordable homes and transit-oriented development, enhancing infrastructure, reducing vehicle miles traveled, and improving safety for pedestrians and bicyclists, as briefly described below.

#### **Berkeley General Plan<sup>7</sup>**

Policies to increase residential and commercial density near transit are articulated in the Berkeley General Plan which include:

- Policy H-12 Transit-Oriented New Construction: Encourage construction of new medium and high-density housing on major transit corridors and in proximity to transit stations consistent with zoning, applicable area plan, design review guidelines and the Climate Action Plan. Actions include:
  - Consider adjusting zoning to allow for greater residential density and specified commercial uses along certain transit corridors and in proximity to the Downtown Berkeley, Ashby and North Berkeley BART Stations.
- Policy LU-23 Transit-Oriented Development: Encourage and maintain zoning that allows greater commercial and residential density and reduced residential parking requirements in areas with above-average transit-service.
- Policy LU-25 Affordable Housing Development: Encourage the development of affordable housing in the Downtown Plan area, the Southside Plan area, and other transit-oriented locations.
- Policy LU-32 Ashby BART Station: Encourage affordable housing or mixed use development including housing on the air rights above the Ashby BART Station lot west of Adeline Street. Actions include:
  - Consider a joint City/BART development plan to encourage and ensure appropriate development design, density and parking to accommodate the BART station and transit-oriented development. Development at Ashby BART should include multi-family, transit-oriented housing and ground-floor commercial space and if feasible, at least 50% of housing units should be affordable to low and very-low income households.
  - Consider revising the zoning for the site to reduce the on-site parking requirements for new housing above the BART station.

#### **South Berkeley Area Plan<sup>8</sup>**

The Plan recommends practical approaches to implementing goals and policies that ensure access to affordable rental housing and homeownership opportunities, preserve the diversity of

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<sup>7</sup> [Berkeley General Plan, Housing](#) & [Berkeley General Plan, Land Use](#) [PDF]

<sup>8</sup> [South Berkeley Area Plan](#) [PDF]

South Berkeley's population, maintain and expand South Berkeley's housing stock and improve transit and paratransit opportunities for South Berkeley residents.

### **South Shattuck Strategic Plan<sup>9</sup>**

The Plan serves as a guide for future development in South Shattuck that offers action steps to improve traffic and encourage the use of alternative modes of mobility such as public transit, shuttles, bicycling and walking. Such action steps include incorporation of elements to encourage non-auto travel in the Public Improvements Plan and working with residents and merchants to define transit needs for South Shattuck.

### **Plan Bay Area 2050<sup>10</sup>**

Plan Bay Area 2050 is a comprehensive Bay Area planning effort to look at the intersection of transportation, housing and the environment. The Plan expands on Plan Bay Area 2040's long-range plan which outlines Priority Developments Areas as a mechanism to maximize growth in transit-rich communities and reduce vehicle miles traveled and greenhouse gas emissions.

### **Berkeley Bicycle Plan<sup>11</sup>**

The Plan speaks to policies and action steps to foster a bicycle-friendly city. Such steps include integrating bicycle network and facility needs into City projects, supporting a successful bike share system that promotes an alternative mode of travel to BART stations and designing a Bikeway Network that is accessible to people of all ages and abilities.

### **Vision 2050<sup>12</sup>**

The citizen-led effort will develop a framework for Berkeley's 30-year Sustainable Infrastructure Plan to address the City's growing population and ever-changing climate. Community information sessions informed additional research conducted by the Vision 2050 Task Force in identifying the need for infrastructure projects that improve equity and community and environmental resilience, emerging technologies in transportation and cost effective financing options for building and maintaining Berkeley's infrastructure.

### **Berkeley Climate Action Plan<sup>13</sup>**

The Berkeley Climate Action Plan outlines measures to ensure that the community continues to meet its greenhouse gas reduction target by increasing density along transit corridors through new development of affordable housing, retail services and employment centers. The Plan also promotes a resilience framework that highlights the steps the City has taken to advance neighborhood equity, adapt to the changing climate and establish community partnerships to further its climate commitments.

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<sup>9</sup> [South Shattuck Strategic Plan](#) [PDF]

<sup>10</sup> [Plan Bay Area 2050](#) [planbayarea.org]

<sup>11</sup> [Berkeley Bicycle Plan](#) [cityofberkeley.info]

<sup>12</sup> [Vision 2050](#) [jessearreguin.com]

<sup>13</sup> [Berkeley Climate Action Plan](#) [cityofberkeley.info]

In addition, see Chapter 3 of the Draft Adeline Corridor Plan — “EXISTING PLANS, PROGRAMS AND REGULATIONS” (3-3).

### **OUTREACH OVERVIEW AND RESULTS**

Extensive information about community process and outreach can be found at:

[jessearreguin.com/bart](http://jessearreguin.com/bart)

[cityofberkeley.info/council3/adeline](http://cityofberkeley.info/council3/adeline)

[rashikesarwani.com/issues/north-berkeley-bart](http://rashikesarwani.com/issues/north-berkeley-bart)

In addition, see Chapter 1 of the Draft Adeline Corridor Plan — “Table 1-2 Planning Process & Community Engagement” (1-10).

### **RATIONALE FOR RECOMMENDATION**

The Public Review Draft of the Adeline Corridor Specific Plan, Chapter 3.7 - Ashby BART, states:

*Because of the importance of the BART site both to the success of the proposed housing strategy and to the overall character of the neighborhood, any development process should include a deliberate and extensive community decision making process ... which includes a Station Area Advisory Group or similar body comprised primarily of representatives of local stakeholder organizations. (3-24)*

On May 9, 2019, the City Council unanimously adopted the North Berkeley BART Development Goals and Objectives, which states:

*A Community Advisory Committee shall be created for the purposes of providing input to the City’s Planning Commission as it considers City and BART TOD zoning standards.*

As directed by the full City Council, the MOU establishes a process for the City and BART to identify a shared vision and priorities, clarify activities and timelines, and identify roles and responsibilities. While the City has a process for zoning and entitlements, and BART has a process for development of its properties, this MOU identifies in broad terms how these processes will work together.

Approving the attached MOU is a critical next step in the overall station development process.

### **IMPLEMENTATION, ADMINISTRATION AND ENFORCEMENT**

This item will establish a Community Advisory Group (CAG) comprised of an odd-number of members no greater than 15. Members of the CAG may be appointed from the following commissions: Commission on Disability; Housing Advisory Commission; Planning Commission; and the Transportation Commission. The commissions shall select a representative to serve on the CAG.

Representatives from the following stakeholder groups and communities will also be considered:

- Berkeley Flea Market
- Bicycle and Pedestrian advocacy
- Neighborhood groups in the Adeline Corridor area
- Neighborhood groups in the North Berkeley area
- Faith-based communities
- At-large members

The CAG members will be appointed with an eye toward ensuring a diversity of views, perspectives, and experiences including: (1) representing all geographic areas of the city on which station area development would have an impact such as immediate as well as commuter neighborhoods, (2) reflecting a wide-range of relevant expertise in areas such as city planning, architecture, transit, and environmental sustainability, and (3) incorporating diverse life experiences. The representative from the Planning Commission shall serve as Chair of the CAG unless they defer and shall be responsible for creating and providing reports to the Planning Commission on the CAG's discussions.

Members of the CAG shall be appointed no later than January 31, 2020, by a subcommittee of the City Council comprised of the Mayor and the City Councilmembers who represent the districts that include the Ashby and North Berkeley Stations. The subcommittee comprised of the Mayor and Councilmembers will undertake extensive public outreach to appoint CAG members that represent the diversity of backgrounds and perspectives of the community.

The charge of the CAG is to: (1) provide input to the Planning Commission on matters directly related to zoning of the Ashby and North Berkeley BART Stations in conformance with AB 2923 zoning standards; (2) bridge communication between the Planning Commission's zoning process and other neighborhood groups and the community at large; and (3) provide input on a joint vision and priorities document to be developed by the City and BART.

The CAG's work plan and schedule shall be dependent upon the Planning Commission's schedule and will align with the Planning Commission's timeline and workflow regarding development of zoning at the Ashby and North Berkeley Stations. It is anticipated that the CAG's work will ultimately depend on the Planning Commission's workflow and will include the following scope: two meetings on design, two meetings on economic feasibility, and two meetings to review preliminary zoning concepts.

Once the Planning Commission recommends zoning to the City Council, the CAG shall have completed its charge as it relates to zoning. It is anticipated that the CAG will be re-established to provide input to the City and BART as the two parties establish a joint vision and priorities document to be included in eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART properties.



## **ENVIRONMENTAL SUSTAINABILITY**

The current use of the Ashby and North Berkeley BART Station parking lots solely for vehicle parking is not the optimal environmental use of scarce, publicly-owned land. By creating homes on these sites, the City Council would further its goals to address the Climate Emergency and reduce greenhouse gas emissions from vehicle miles traveled. A reimagined use of these sites and reconfigured public spaces can allow for enhanced public and neighborhood amenities to flourish while improving bicycle and pedestrian facilities and providing safe routes to encourage alternate means of access to the BART stations.

## **FINANCIAL IMPLICATIONS**

The MOU between the City of Berkeley and BART specifies that at least 35% of the housing units proposed to be constructed at the BART Properties would be deed-restricted to low, very low and/or extremely low-income affordable housing, as defined by the federal Department of Housing and Urban Development. The City recognizes that meeting this level of affordability will require significant local, state, and federal subsidy.

Complying with AB 2923 to zone the Ashby and North Berkeley Stations will require significant staff and consultant resources by the City's Planning Department. The City is making efforts to seek outside sources of funding:

- On November 12, 2019, the City Council authorized the City Manager to submit an application for Senate Bill 2 Planning Grants Program (PGP) in the amount of \$310,000.<sup>14</sup> SB 2 provides funding and technical assistance to all local governments in California to help them prepare, adopt, and implement plans and process improvements that streamline housing approvals and accelerate housing production. Funding is non-competitive and based on population estimates published by the State's Department of Finance. The City of Berkeley is classified as a "medium city" and is therefore eligible to apply for \$310,000. Grants issued through the 2019 PGP can be used for updating local planning documents, updating zoning ordinances, conducting environmental analyses or for local improvements to expedite local planning and permitting. More specifically, planning activities funded through this program are to focus on preparation, adoption and implementation of plans and zoning regulations that streamline housing approvals and accelerate housing production. The City will use these funds for developing TOD zoning regulations on BART properties in Berkeley. Further, the Mayor's Office has been supportive of additional grant applications by BART.<sup>15,16</sup>
- On November 19, 2019, the City Council considered adoption of a resolution in support of nominating the North Berkeley Station as a Priority Development Area (PDA).<sup>17</sup> It should be noted that this area refers to the parking lot itself, and street surfaces area that abut

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<sup>14</sup> [Council Authorization to the City Manager to Submit Senate Bill 2 Planning Grants Program Application](#) [PDF]

<sup>15</sup> [Mayor's Letter of Support for BART Sustainable Communities Grant](#) [PDF]

<sup>16</sup> [Mayor's Letter of Support for BART FTA TOD Grant](#) [PDF]

<sup>17</sup> [Priority Development Area Nomination – North Berkeley BART Station](#) [PDF]

the station. If the Metropolitan Transportation Commission (MTC) opts to designate the station as such, the City of Berkeley will become eligible to apply for and receive grant funding from MTC for activities related to the community engagement and advisory processes; to help develop the zoning and design guidelines; and to support infrastructure improvements related to the development of the North Berkeley Station.

- On November 12, 2019, the City Council referred \$250,000 to the mid-year budget allocation process to initiate environmental review required as part of developing and adopting zoning for the Ashby and North Berkeley BART Stations that conforms with AB 2923.<sup>18</sup>

### **OUTCOMES AND EVALUATION**

This item represents the next steps in an iterative process responding to the City Council's direction on May 9, 2019, as well as the Adeline Corridor Plan process. As such, the intended outcome is a successful Planning Commission zoning process in which extensive community input is received from people of diverse backgrounds and perspectives.

### **CONTACT**

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### **ATTACHMENTS**

1. Memorandum of Understanding (“MOU”) by and between the San Francisco Bay Area Rapid Transit District (“BART”) and the City of Berkeley (“City”) to cooperatively pursue transit oriented development (“TOD”) and the implementation of Assembly Bill 2923 (“AB 2923”) at the Ashby and North Berkeley BART Stations
2. Exhibit 1 - Policy 3.7 of the Draft Adeline Corridor Specific Plan
3. Exhibit 2 - North Berkeley BART Development Goals and Objectives
4. Exhibit 3 - BART TOD Policy
5. Exhibit 4 - BART Affordable Housing Policy
6. Exhibit 5 - BART Station Access Policy

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<sup>18</sup> [Budget Referral: BART Station Environmental Planning](#) [PDF]

**MEMORANDUM OF UNDERSTANDING**

This Memorandum of Understanding (“MOU”) is entered into on this \_\_\_ day of \_\_\_\_\_, 2020, by and between the San Francisco Bay Area Rapid Transit District (“BART”) and the City of Berkeley (“City”) to cooperatively pursue transit oriented development (“TOD”) and the implementation of Assembly Bill 2923 (“AB 2923”) at the Ashby and North Berkeley BART Stations.

**RECITALS**

- A. BART and the City both acknowledge that the region faces a shortage of affordable homes and a climate crisis that requires a significant reduction in vehicle miles traveled; and
- B. BART and the City have adopted District- and City-wide policies that prioritize creating affordable homes and reducing greenhouse gas emissions; and
- C. Publicly-owned land at the Ashby and North Berkeley BART stations provides a rare opportunity to create more homes, including below-market-rate affordable homes, in a manner that reduces residents’ reliance on driving; and
- D. State law AB 2923 (AB 2923, Stats. 2018, Chp. 1000) requires BART to adopt TOD zoning standards for BART-owned property surrounding its stations and requires that the City’s local zoning conform with TOD zoning standards by July 1, 2022; and
- E. BART and the City are committed to enabling multiple opportunities for community input and engagement that inform site master planning and zoning; and
- F. The purpose of this agreement is to:
  - 1. Identify a shared vision and priorities for development for BART and the City, and set forth steps needed to pursue this vision and priorities;
  - 2. Clarify the processes that BART and/or the City will pursue to address the activities and timelines outlined below in Section III; and
  - 3. Provide greater clarity for all parties, including BART, the City, and members of the public, on the currently-planned steps, timelines, and the Parties’ roles and responsibilities needed in seeking to commence construction of TOD on BART-owned property at both the Ashby and North Berkeley BART Stations.

**MUTUAL UNDERSTANDING OF THE PARTIES**

**I. Framework for Development at Ashby and North Berkeley BART Stations**

- A. Goals and objectives for TOD have been established for Ashby and North Berkeley BART stations by the City through two separate processes. Similarly, BART has adopted policies and performance targets guiding its TOD program as a whole. These documents will inform the Parties' respective goals and objectives with regard to TOD at the Ashby Station and North Berkeley Station.
- B. The Draft Adeline Corridor Specific Plan (published in May 2019) sets forth a vision, policies and objectives for the Ashby BART Station area. Specifically, Policy 3.7 of the Plan, shown in Exhibit 1, includes seven objectives relating to affordable housing, public space, development parameters, public art, pedestrian and bicycle connections, transportation and demand management and community engagement.
- C. On May 9, 2019, the Berkeley City Council unanimously approved the City's goals and objectives for North Berkeley BART development, which are shown in Exhibit 2. The City's goals focus on community input, station access, affordability, livability and environmental sustainability.
- D. In 2016, the BART Board adopted three policies which set overall goals for BART's transit-oriented development (TOD) program:
  - 1. A TOD Policy (Exhibit 3), setting the goals of creating complete communities, advancing sustainable communities, increasing ridership, capturing the value of transit, enhancing transportation choice, and increasing affordability with a district-wide affordability target of 35%.
  - 2. An Affordable Housing Policy, which requires a 20% affordable housing minimum for its projects, and favors projects with the greatest depth and quantity of affordable housing (Exhibit 4).
  - 3. A Station Access Policy (Exhibit 5) to guide access practices and investments through 2025. The policy is designed to support the broader livability goals of the Bay Area, reinforce sustainable communities, increase the share of BART passengers walking and biking to the stations, and enable riders to get to and from stations safely, comfortably, affordably, and cost-effectively.
- E. Together these documents, as well as further engagement of community stakeholders and additional collaboration and activities as set forth in this MOU, lay the groundwork for future development at the Ashby and North Berkeley BART Stations.

## II. Scope of Agreement

- A. This MOU applies to development of the following properties, henceforth known as the “BART Properties”:
1. Ashby BART Western Parking Lot: Bounded by Ashby Ave, Adeline St, and Martin Luther King Jr Way. Site is owned by BART, with an option to the City to retain the air rights above 10 feet;
  2. Ashby BART Eastern Parking Lot: Located on the east side of the station, behind the Ed Roberts campus, which is owned by BART; and
  3. North Berkeley BART Main Parking Lot: Bounded by Sacramento, Delaware, Acton and Virginia Streets. Site is owned by BART.
- B. In order to ensure that development of the BART Properties is, to the extent possible, consistent with the vision and priorities established by the City and BART, during the TOD planning process outlined in this MOU there will be an opportunity to consider infrastructure enhancements to other areas that are owned by BART or the City. These may include the following (henceforth known as “Surrounding Areas”):
1. North Berkeley BART: auxiliary parking lots owned by BART, and areas owned by the City that abut the Ohlone Greenway;
  2. Other public infrastructure (e.g., streets, crosswalks, bicycle paths, on-street parking, stormwater and sewer infrastructure) within a one-mile radius of the BART Properties; and
  3. Proposed changes to access and circulation at each Station would be identified through the Station Access Study described in Section III.F of this MOU, as well as through the development master plan or entitlement process. Any such changes would therefore be subject to public review and comment, and to approval by the Parties.

## III. Activities and Timelines

Activities and Timelines – Summary Table

Activity	Lead Party	Milestone	Date
1. Community Advisory Process and other community engagement activities	City	Establish a Community Advisory Group to inform site zoning and to facilitate community input on site master planning and zoning	Initiate December 2019
2. Zoning for Ashby and North Berkeley BART Stations	City	<ul style="list-style-type: none"> <li>a. Zoning alternatives proposed</li> <li>b. Draft CEQA document released</li> <li>c. Planning Commission and community review</li> <li>d. Planning Commission approval</li> <li>e. Council zoning approval</li> </ul>	Complete by June 2021
3. BART AB 2923 Guidance Document	BART	<ul style="list-style-type: none"> <li>a. Draft Guidance</li> <li>b. Final Guidance</li> </ul>	<ul style="list-style-type: none"> <li>a. February 2020</li> <li>b. July 2020</li> </ul>
4. City Affordable Housing Funding	City	Decision on set-aside of City funding for affordable housing to Ashby and North Berkeley Stations	December 2020 (pending further definition of zoning and site capacity)
5. Developer Solicitation	BART	Decision on timeline to initiate solicitation of a developer (as part of BART's 10-Year TOD Work Plan)	July 1, 2020
6. Station Access Studies	BART	Station Access Studies Completed	Timeline dependent upon Developer solicitation for each station

**A. Community Advisory Process and other Community Engagement Activities**

1. Pursuant to the Draft Adeline Corridor Specific Plan (Policy 3.7) and the North Berkeley BART Development Goals and Objectives adopted by the City Council on May 9, 2019, an advisory group consisting of members of the community will be created for the purposes of providing input:
  - a. To the City Planning Commission as it considers zoning standards that will be consistent with the City's obligations under AB 2923 for the Ashby and North Berkeley BART station areas; and
  - b. To the City and BART as the Parties establish a joint vision and priorities document ("Joint Vision and Priorities") that will be incorporated in eventual Requests for Proposal/Requests for Qualifications for potential developers of the BART Properties.
2. The City will be responsible for the selection and all logistics and funding for the Community Advisory Process.
3. Contingent on availability of funding, the City will also organize public participation design charrettes that inform predictable form-based design standards that BART will incorporate into guidelines for future development of the BART properties.
4. BART will support the City's efforts by participating in meetings, presenting information, as necessary, and considering input arising from the Community Advisory Process as part of its larger community engagement for AB 2923, TOD and station access studies in the City.

**B. Zoning Ashby and North Berkeley BART Stations.** As required by AB 2923, the City will pursue rezoning of developable, BART-owned property within ½-mile of the Ashby and North Berkeley Stations. The City will be responsible for all logistics and funding required for these rezoning efforts. As the agency responsible for local zoning regulations, the City will work in good faith with BART to coordinate the City's rezoning efforts with BART's development of AB 2923 guidance.

**C. BART AB 2923 Guidance.** BART and the City understand that AB 2923 requires further clarification related to height, floor-area-ratio, density, bicycle parking minimums, automobile parking minimums and maximums. To address these points of clarification, BART will publish a guidance document offering all affected local jurisdictions information on AB 2923. As the



agency responsible for determining whether local zoning conforms to state law, BART will be responsible for all logistics and funding required for the AB 2923 guidance document. The guidance document will provide guidance on TOD zoning standards for all local jurisdictions as those jurisdictions seek to comply with their obligations under AB 2923.

#### **D. City Affordable Housing Funding Decision**

1. The voters of Berkeley recently established three important new sources of funding to support the creation and preservation of affordable housing, keep vulnerable people housed, and rehouse the homeless:
  - a. Measure O provides for issuance of \$135 million in bonds to fund capital expenditures for a variety of types of affordable housing;
  - b. Measure P established a real estate transfer tax on the most expensive one-third of real estate sales with a stated intent to rehouse the homeless and fund the services they need to remain housed; and
  - c. Measure U1 increased the gross receipts tax on most residential rental properties with a stated intent to fund affordable housing and protect Berkeley residents from homelessness.
2. The above measures establish advisory panels which advise the City Council as it makes determinations regarding the allocation of these and other affordable housing monies (such as City Housing Trust Fund resources) and related resources such as public land and inclusionary units.
3. The City will set-aside appropriate funding, including development fees and other above-mentioned sources, to support deed-restricted affordable housing at a range of income levels to meet BART and the City's affordable housing goals at the Ashby and North Berkeley BART Stations (as referenced in Section I).

#### **E. Developer Solicitation**

1. Consistent with its standard practice, BART will issue a Request for Qualifications ("RFQ"), Request for Proposals ("RFP") or both to initiate the process of identifying and recommending potential developers of the BART Properties to the BART Board of Directors. The committee(s) established to evaluate RFQ/RFP submissions will include City Representatives and BART staff as well as an independent financial consultant, who

will evaluate the capabilities of each proposer to deliver the project. The criteria used to select a developer with whom to negotiate will be based on the BART Station Development Joint Vision and Priorities that will take into account community input as outlined in Section III.A.

2. For the Ashby BART Western Parking Lot, which is owned by BART with an option to the City to retain the air rights above 10 feet, and assuming that the City exercises said option, the City and BART will enter into a separate agreement detailing how they will share decision-making authority in the developer solicitation process.
3. The evaluation committee's role is to make a recommendation to the BART Board of Directors regarding a developer with whom BART will negotiate for the development of TOD. The BART Board of Directors has the sole discretion and authority to determine whether, and with whom, BART will enter into an exclusive negotiating agreement ("ENA") relating to potential TOD development on the BART Properties. It is anticipated that, among other things, the ENA will require the developer to advance the proposed project through the City's entitlement process, lead or participate in a community engagement process, fund a Station Access Study for BART (see below), pay BART an option fee in exchange for exclusive negotiating rights, and reimburse BART for its expenses, including engineering review, outside legal fees, and outside consultant expenses.

#### **F. Station Access Study**

1. Per the draft policies in the Adeline Corridor Plan, Council-adopted goals and objectives for development of the North Berkeley BART property, BART's TOD Policy, and the requirements of AB 2923, a Station Access Study must be prepared prior to development of the BART Properties that identifies sustainable access options for both the Ashby and North Berkeley BART Stations in light of potential changes to the BART Properties and surrounding areas resulting from TOD. AB 2923 added Section 29010.6(h) to the California Public Utility Code, which requires BART—with respect to any station where BART commuter parking is reduced as a result of a TOD project on land where TOD zoning standards apply—to develop and fund an access plan that maintains station access for at least the number of customers affected by the reduced number of commuter parking spaces, with specific consideration for customers who live further than one-half mile from the station.
2. The Station Access Studies will evaluate a range of access options that support BART's goals to increase the share of BART patrons who access the stations via modes other than the private automobile, and that maximize the potential number of homes

(including homes restricted to low, very low, and extremely low-income households) on site. In exploring alternatives to parking, the Studies will evaluate whether and how to offer viable, multimodal access to BART for the station catchment areas, and how to ensure that TOD and associated improvements result in an overall increase in the number of people who use the BART Stations. The Studies will identify infrastructure needs on and near BART's property to improve access for riders using all modes, including pedestrians, bicyclists, community members with access and functional needs, shared mobility users, and patrons using public and private transportation.

3. BART will be responsible for all logistics required for the Station Access Studies. BART will fund these Studies in advance, but may require reimbursement for the Studies from a developer or developers pursuant to an ENA with said developer(s). Findings from the Ashby and North Berkeley BART station access studies will be presented to the community.

#### **IV. Zoning and Solicitation Process; Retention of Decision-making Authority by City and BART**

- A. To demonstrate its commitment to advancing development at BART property, and in consideration for its inclusion as a high priority in BART's 10-year work plan for development, the City will: 1) complete rezoning of the properties by June 2021, and 2) make a decision by the end of December 2020 to set-aside funding sufficient to assure BART, in its sole discretion, that at least 35% of the housing units proposed to be constructed at the BART Properties would be deed-restricted to low, very low and/or extremely low affordable housing. The City recognizes that meeting this level of affordability will require significant local, state, and federal subsidy. The Planning Commission has a target date of December 2020 to review zoning alternatives as a show of progress towards completion of zoning by June 2021.
- B. To support the City's zoning process, BART agrees to provide guidance that will be applicable to North Berkeley Station and all other stations in the BART system to which AB 2923 applies. BART will work with the City of Berkeley to explore possible approaches to conformance with AB 2923 zoning standards in the context of the built form characteristics of a surrounding lower density neighborhood. The City will consult with BART regarding zoning alternatives for the North Berkeley Station that conform with AB 2923 zoning standards.
- C. It is understood that both BART and the City desire for more work to be completed in support of zoning, such as site master planning or objective design guidelines. At the time of this MOU, the City and BART are actively working to identify additional resources to accelerate this work.

- D. The City and BART will meet in December 2020 to review the City's efforts undertaken pursuant to Section III.B and III.D, in order to:
1. Determine whether the City has approved a set-aside of sufficient funding to meet the 35% affordable housing minimum for each station as described in Section IV.A;
  2. Negotiate possible additional City participation in the solicitation processes; and
  3. Agree upon the timing of the developer solicitations for the BART Properties in December 2020.
- E. If the zoning for the Ashby and North Berkeley Stations and the set-aside of City affordable housing funds occurs after the dates indicated for those actions in the timeline in Section IV.A above, BART may re-evaluate the inclusion of these stations in its 10-year work plan. Likewise, if BART does not proceed with developer solicitations for the BART Properties as determined in Section III.D, the City may reallocate affordable housing funding to other projects.
- F. Notwithstanding any other provision in this MOU, nothing herein shall be construed to limit or restrict the discretionary decision-making authority of the City or of BART. The Parties acknowledge that any reference to a project or proposed project in this MOU or in any document that may be created in connection with this MOU does not constitute a Project or Project approval by either Party as those terms are defined in CEQA and discussed in *Save Tara v. City of West Hollywood*, 45 Cal. 4th 116 (2008).

## 3.7 ASHBY BART

**Future development within the Ashby BART subarea shall provide public space, community-oriented facilities, and affordable housing, consistent with the objectives, parameters, and process outlined in the Adeline Corridor Specific Plan.**

The Ashby BART Station is one of the most prominent landmarks and amenities along the Adeline Corridor, with the potential to support and advance all five key topic areas addressed in this Plan – land use, housing, economic opportunity, transportation, and public space.

As stated in Chapter 2, the Ashby BART subarea is envisioned to be redeveloped as a vibrant neighborhood center with high-density mixed-use development that unifies and knits back together the east and west sides of Adeline Street. The Ashby BART development will be a model for sustainable transit-oriented development, incorporating high levels of affordable housing and complementary commercial and civic uses; public space for community gatherings, special events, and civic celebrations; and green construction.

The Plan lays the groundwork for future engagement with the community and BART by outlining key objectives that apply to future development and describing a process for evaluating development proposals for these sites. Future development in the Ashby BART subarea shall be consistent with the seven objectives below, which shall be incorporated into any future master plan and development agreements with potential developers.

**OBJECTIVE 1. AFFORDABLE HOUSING.** For any future development in the BART subarea, at least 50% of the total housing units produced should be comprised of deed-restricted affordable housing, which could also include supportive services or other spaces associated with the affordable housing. This



*The Ashby BART Station*

goal for at least 50% affordable housing at a range of income levels (e.g. Extremely Low, Very Low, Low and Moderate) would be calculated across the entire Ashby BART subarea and could be accomplished through multiple phases of development. Any future development agreement should commit to deliver at least this level of affordable housing, and provide a plan to do so. Amounts of affordable housing exceeding 50% of the total square footage and number of units are encouraged.

**OBJECTIVE 2. PUBLIC SPACE.** Any future development shall include one or more publicly accessible spaces incorporated onto the development parcels within the Ashby BART subarea. The public space could potentially be provided as plazas, green space, pedestrian paseos, rooftop patios, flexible event space, or other pedestrian-accessible spaces that are open to the public. Incorporating elements of “green infrastructure” in these elements is highly encouraged (See Chapter 7).

Future redevelopment of the Ashby BART west parking lot shall incorporate a large civic plaza that could be designed and programmed to accommodate the Berkeley Flea Market and potentially a relocated Farmers Market, as well as support the Juneteenth Festival and other music and entertainment events. This space could include dedicated flexible space on the site and/or in a nearby location such as on Adeline Street. The space shall be designed with the general and specific needs of the Flea Market and Farmers Market, as well as allow flexibility for other programming such as the Juneteenth Festival, music and entertainment, civic events, or other public uses – at different times of the week or in complementary locations. This could include dedicated flexible space on the site or in a nearby location such as on Adeline Street.

**OBJECTIVE 3. ADDITIONAL DEVELOPMENT PARAMETERS.** The following general development parameters will be further refined as implementation steps of this Specific Plan:

**Building Height.** To achieve the affordable housing goal, climate action goals and maximize community benefits from development of public land, high density mixed-use development is envisioned that are generally up to four to seven stories. The City will continue to coordinate with BART as it refines development parameters as part of implementation of Assembly Bill 2923. In general, development fronting on Adeline Street and Ashby Avenue should “step down” or transition to lower heights where development fronts on Martin Luther King Jr. Way, Woolsey, Tremont and Essex Streets.

**Ground-Floor Uses.** As noted in Policy 3.1, the following types of uses shall be required for ground floor uses for the Ashby BART subarea:

- Adeline Street frontage: Ground floor retail or active commercial use required.

## WHAT IS ASSEMBLY BILL (AB) 2923?

Assembly Bill 2923 was signed into law by Governor Jerry Brown on September 30, 2018. AB2923 grants BART the authority to establish transit-oriented development (TOD) zoning standards that apply to its property across the Bay Area, including the North Berkeley and Ashby BART Station sites. The intent of the law is to enable BART to work together with cities to maximize the public benefit of scarce transit-adjacent land (see Appendix B for more information). Although BART has the ultimate authority to establish zoning standards for its property, BART has indicated that it intends to work in close collaboration with local elected officials and community stakeholders. Furthermore, since the City controls the “air rights” for the west Ashby BART parking lot, it would have a direct role in approving any future master plan and development agreement for that site, and would work with BART to implement the Objectives described in the Adeline Corridor Specific Plan for any redevelopment of the Ashby BART subarea.

- Ashby Avenue frontage: Ground floor commercial use required.
- Martin Luther King Jr. Way: Residential or commercial use allowed on ground floor.
- Tremont, Woolsey and Fairview Streets: Residential or commercial use allowed on ground floor.

**Additional Land Uses.** Additional land uses that would be encouraged in the Ashby BART area include the following:

- Potential space for a new African American Holistic Resource Center (see Chapter 5 for more information)
- Ground floor retail, restaurants and family-oriented entertainment;
- Affordable space for neighborhood non-profits
- Small, affordable workspaces
- Universally-accessible community event and recreation space, or performance venues.

**OBJECTIVE 4. PUBLIC ART.** Future redevelopment should maximize opportunities to incorporate permanent and/or temporary public art installations that celebrate neighborhood history, cultural heritage and identity (see Chapters 2, 5 and 7 for more information).

**OBJECTIVE 5. PEDESTRIAN AND BICYCLE CONNECTIONS.** Future development should include pedestrian and bicycle connections that serve users of all abilities and ages. Development of the west parking lot should incorporate the following key bicycle connections at minimum, consistent with the City of Berkeley Bike Plan and as described in the Transportation Chapter of this Plan:

- Connection of the Woolsey/Prince bicycle boulevard facility across the Ashby site
- Provision of an off-street/protected bicycle facility along Adeline Street between Ashby and the intersection with MLK Jr. Way.

## WHAT ARE “AIR RIGHTS?”

Ownership of land can be divided into rights on the surface, subsurface (i.e. mining or mineral rights) and air rights. The City of Berkeley acquired air rights over both parking lots at Ashby BART Station back in 1966 after the voters approved undergrounding the BART lines. In 1999, the City executed a contract with the Ed Roberts Campus to assign the City's option to the air rights over the eastern Ashby BART parking lot (the current Ed Roberts Campus site and the remainder parking lot behind it), to facilitate development of the Ed Roberts Campus. An agreement between the City and the Ed Roberts Campus in 2008 confirmed that the City assigned the air rights over the eastern BART parking lot to the Ed Roberts Campus, but the City still retained the option over the western BART parking lot. The air rights generally refer to the space starting 10 feet above the average finished grade location.

## OBJECTIVE 6. PARKING AND TRANSPORTATION DEMAND MANAGEMENT.

Any future development must include aggressive and innovative Transportation Demand Management strategies to reduce demand for parking and single-use automobile trips (See Chapter 6). Consistent with BART Transit-Oriented Design Guidelines and the City's Climate Action Plan, any future mixed-use development shall provide parking at ratio not to exceed 0.5 spaces/residential unit and 1.6 spaces per 1000 sqft of commercial space. Because of the urban environment of the station, replacement parking for BART patrons can be provided at a ratio of 0.5 spaces/per existing space or less while access improvements are incorporated to offset the loss of parking and ride spaces and offer viable non-auto alternatives to BART patrons.

## OBJECTIVE 7. PROCESS AND ENGAGEMENT.

Because of the importance of the BART site both to the success of the proposed housing strategy and to the overall character of the neighborhood, any development process should include a



deliberate and extensive community decision making process. The City will work with BART to complete a planning process which includes a Station Area Advisory Group or similar body comprised primarily of representatives of local stakeholder organizations. This stakeholder group should participate in decisions regarding the site requirements to be included in any Request for Proposals (RFP). In addition, any RFP that is issued for development at the BART site will outline specific requirements that a selected developer continue to invest in proactive community engagement throughout the development process and to identify appropriate additional community benefits as part of the project design process. A development team's proven track record of managing this kind of community engagement/community benefits process will be one criteria for selection. The local community should continue to be closely involved in development of these key public sites. Chapter 4 (Housing Affordability) includes additional information and considerations for future phasing, funding, programming, and affordable housing strategies for the Ashby BART area.

## North Berkeley BART Development Goals and Objectives

(Approved unanimously by the Berkeley City Council on May 9, 2019)

State law (AB 2923, Chiu) passed in 2018 requires the San Francisco Bay Area Rapid Transit District (BART) to develop transit-oriented development (TOD) zoning standards for each BART station, establishing minimum local zoning requirements for height, density, parking, and floor area ratio by July 1, 2020.

Prior to the enactment of AB 2923, the Berkeley City Council initiated a community process to explore the potential for transit-oriented development at the North Berkeley BART station. Creating homes at the North Berkeley BART parking lots will help the City of Berkeley address the shortage of affordable homes; reduce vehicle miles traveled and meet our climate change goals; and improve the livability of the surrounding neighborhood through the creation of green open space, pedestrian and bicycle infrastructure improvements; and possible small-scale community, non-profit, and/or retail uses.

AB 2923 requires local jurisdictions like Berkeley to adopt a local zoning ordinance that conforms to BART TOD zoning standards.

While the Berkeley City Council voted at its May 29, 2018 meeting to oppose AB 2923, the City Council recognizes that we now have an obligation to comply with the law. The Council is seeking to comply as soon as possible with AB 2923 for the purposes of developing the North Berkeley BART station in order to ensure that the community has a meaningful opportunity to engage with BART on how the site is developed.

At the same time, the Berkeley City Council acknowledges the unique neighborhood characteristics of each BART station and expresses its intent to incorporate a station-specific design that is sensitive to the existing single-family (R-1) and two-family (R-2) residential zoning directly adjacent to the North Berkeley BART station.

The City of Berkeley seeks to enter into a Memorandum of Understanding with BART that enumerates, among other terms, the following goals and objectives for development:

### **Community Input**

**A Community Advisory Committee shall be created for the purposes of providing input to the City's Planning Commission as it considers City and BART TOD zoning standards.**

**The planning process will engage the community in order to ensure that the site reflects the community's values for equity, sustainability, and sense of place.** In particular, community input should be considered for:

- The number/percentage of affordable housing units and populations to be served, including the possibility of a 100% affordable project

- The size, height, scale, spacing, and setbacks of buildings, and their responsiveness to the neighborhood
- The inclusion of green and open spaces
- The possibility of limited, small-scale community, non-profit, and retail space to serve the immediate neighborhood
- Exploration of whether it's appropriate to include small-scale community, non-profit, and/or retail space to serve the immediate neighborhood, whether any parking should be provided for such uses, and consideration of the tradeoff of foregone housing units
- Access options, including traditional modes such as public transit, taxis and private vehicles, active modes such as biking, walking and scooters, emerging modes such as car share, ride share, driverless cars, etc., and access for the disabled and mobility impaired
- Green and sustainable features

### **Station Access**

**BART, the City of Berkeley, and a future developer(s) will address station access.** Specifically, Section 29010.6(h) of AB 2923 requires BART—in cases in which commuter parking is reduced as a result of a TOD project—to develop and fund an access plan that maintains station access for at least the number of customers affected by the reduced number of commuter parking spaces, with specific consideration for customers who live further than one-half mile from the station. A station access plan for implementation will seek to explore feasible and effective alternatives to individuals driving to and parking at the station, such as reserved parking spaces for carpools and car-share vehicles, ride-share, enhanced bus/shuttle service, additional electric-assist bikes and scooters, among other alternatives. We will also consider limiting or eliminating parking for residential and/or potential community, non-profit, or retail uses in order to maximize parking availability for commuters. We note that the station access plan should take into account the rapid evolution of mobility trends and technologies and consider the adaptability of the plan to future mobility patterns. Further, we intend to conduct a traffic study to help determine the number of parking spaces that are needed at the site, including reserved spaces for people with disabilities.

In light of Berkeley's long tradition of leadership on issues related to the disabled and mobility impaired, access at the North Berkeley BART station should be first in its class, including consideration for access to and from the station itself, within the station, and to and from the BART platform.

All traditional modes should be considered: public transit, taxis, carpools and cars; all active modes including walking, biking and scooters; all emerging modes including car share, ride share, van pools and driverless vehicles; and all modes of accessibility for the disabled.

### **Affordability**

**Maximize the number of affordable below-market-rate units that are available to low-income households of diverse types and sizes, including affordable live/work units for artists.** We seek to exceed BART's 35% system-wide affordability goal by aiming for a high number of affordable

units—to potentially be funded by local, state, and regional funding sources. In order to ensure housing for a range of income levels, we will consider inclusionary below-market-rate units and engagement of an affordable housing developer to develop a fully affordable building.

We will seek to support the creation of local jobs through a project labor agreement for construction of the development.

We will engage in a community dialogue that is positive, productive, and thoughtful in regards to community benefits and financial feasibility.

### **Livability**

**Enhance the livability of the neighborhood surrounding the North Berkeley BART station.** The site should create a visual and physical connection with the neighborhood through its architectural design, height, and scale. In particular, we seek a development that considers the character and context of the neighborhood and steps down in height around the perimeter of the station (with consideration for the varying width of streets around the station) in order to blend in visually and physically with the residential neighborhood. Such a design honors a common theme of many of the designs submitted as part of the October 2018 visioning event. We also seek reasonable spacing between buildings, setbacks, and plantings at the perimeter of the station.

The inclusion of green open space should serve as an amenity that enhances the neighborhood's sense of place.

The streetscape design should strive to minimize neighborhood traffic and congestion impacts and support safe access to the station for bicyclists and pedestrians. Transportation demand management and other best practices should be used to reduce traffic and parking impacts in the surrounding neighborhood.

### **Environmental Sustainability**

**Reflect the City's commitment to reducing our carbon footprint in every possible way.** All buildings should strive to: incorporate all-electric designs, achieve Zero Net Energy, and reduce parking for residents and retail to the maximum extent possible.

To ensure universal access, regardless of age or ability, Universal Design should be considered for all elements of housing and of all other private and public spaces.

## Transit-Oriented Development Policy

Adopted June 9, 2016

Amended August 22, 2019

### VISION

The San Francisco Bay Area Rapid Transit District (BART) is a steward of a large scale public investment. This includes real estate assets essential to BART's transit operations, and real estate assets that can be used to catalyze transit-oriented development in furtherance of BART's purpose and goals. BART leverages these opportunities by working in partnership with the communities it serves in order to implement the regional land use vision and achieve local and regional economic development goals. Strengthening the connections between people, places, and services enhances BART's value as a regional resource.

### GOALS

- A. **Complete Communities.** Partner to ensure BART contributes to neighborhood/district vitality, creating places offering a mix of uses and incomes.
- B. **Sustainable Communities Strategy.** Lead in the delivery of the region's land use and transportation vision to achieve quality of life, economic, and greenhouse gas reduction goals.
- C. **Ridership.** Increase BART ridership, particularly in locations and times when the system has capacity to grow.
- D. **Value Creation and Value Capture.** Enhance the stability of BART's financial base by capturing the value of transit, and reinvesting in the program to maximize TOD goals.
- E. **Transportation Choice.** Leverage land use and urban design to encourage non-auto transportation choices both on and off BART property, through enhanced walkability and bikeability, and seamless transit connectivity.
- F. **Affordability.** Serve households of all income levels by linking housing affordability with access to opportunity.

### STRATEGIES

- A. **Manage Resources Strategically to Support Transit-Oriented Development**
  - 1. Develop a 4-Year Work Plan to assess how staff and financial activities toward TOD will be most fruitful. Identify BART staffing priorities and assignments to promote TOD on and around District property, including contributions to efforts such as planning and development, community engagement, funding and financing strategies.
  - 2. Favor long-term ground leases of no more than 66 years, rather than sale of property, as the standard disposition strategy for joint development projects, except in cases where alternative approaches are required to achieve specific development objectives or where other strategies would generate greater financial return to the District.
  - 3. Solicit proposals for transit-oriented development in localities that have an adopted plan allowing for transit-supportive land uses as defined in the TOD Guidelines. Utilize a competitive selection process but ensure the solicitation process considers property assembly with adjacent land owners for optimal TOD.

## Transit-Oriented Development Policy

Adopted June 9, 2016

Amended August 22, 2019

4. Develop a procedure that will allow BART to respond to unsolicited proposals for property development on BART-owned land. Although BART does not encourage unsolicited proposals, they can be a valuable means for BART to partner with local communities and/or the development community to produce innovative or unique developments that deliver benefits in excess of what is typically provided by the market.
5. Revisit the Transit-Oriented Development Policy every 10 years.

### **B. Support Transit-Oriented Districts**

1. Proactively support local jurisdictions in creating station area plans and land use policies that: a) encourage transit-supportive, mixed-use development on and around station properties, b) enhance the value of BART land, and c) enhance the performance of the BART system as a whole.
2. Form partnerships with public agencies, developers and landowners, community development organizations, finance entities, and consider strategic land acquisition to help build TOD both on and off BART property.
3. For BART system expansion, ensure that transit-oriented development and value capture opportunities are explicitly accounted for in major investments such as the location of new station sites, design and construction of station facilities, and acquisition of new properties.

### **C. Increase Sustainable Transportation Choices using Best Practices in Land Use and Urban Design**

1. Utilize BART's TOD Guidelines to ensure future development and investments seamlessly connect BART stations with surrounding communities.
2. Ensure that combined TOD/parking/access improvements on and around each BART station encourage net new BART ridership, utilizing corridor-level, shared, and off-site approaches to parking replacement as appropriate. Following the aspirational Station Access Policy place types, use the following guidelines to replace current BART parking as follows when developing BART property with TOD: strive for no or limited parking replacement at "Urban with Parking" Stations; and use the access model to maximize revenue to BART from development and ridership when determining a parking replacement strategy at all station types.
3. Utilize strategies including mixed-use development, transportation demand management, and pedestrian-friendly urban design to encourage reverse-commute, off-peak, and non-work trips on BART and other modes of non-auto transportation, thereby reducing greenhouse gas emissions.

### **D. Enhance Benefits of TOD through Investment in the Program**

1. Evaluate the financial performance of proposed projects based on sound financial parameters and the ability to generate transit ridership, fare revenue, lease payments, parking revenues, grant resources, other financial participation, and/or cost savings. Consider the opportunity cost to the District of delaying or accelerating development opportunities.
2. Use a variety of financing and governance mechanisms, including joint powers authorities, assessment districts, improvement districts, and lease credits to achieve station area TOD objectives.
3. As appropriate, and in consideration of District-wide financial needs, reinvest revenues from the sale and lease of BART land into the TOD Program, informed by the priorities identified in the 4-Year Work Plan.

**Transit-Oriented Development Policy**

**Adopted June 9, 2016**

**Amended August 22, 2019**

**E. Invest Equitably**

1. Increase scale of development at and near BART stations through catalytic investments in TOD, to help address the regional shortfall in meeting housing and other sustainable growth needs.
2. Implement BART's adopted Affordable Housing Policy and aim for a District-wide target of 30 percent of all units to be affordable, with a priority to very low (<50% AMI), low (51-80% AMI) and/or transit-dependent populations.
3. Ensure the 4-Year Work Plan addresses how BART will achieve its affordable housing goals.



## AFFORDABLE HOUSING POLICY

It shall be the policy of the District that at each station where the District intends to pursue development that the cumulative development consist of a number of affordable housing units amounting to no less than 20 percent of the total proposed housing units on the property. This goal is for the total aggregate number of residential units on BART property at the station, regardless of the planned phasing of the project.

Each Request for Qualifications (RFQ) or Request for Proposals (RFP) issued by the District relating to proposed residential development projects at BART stations shall include the current percentage of affordable housing constructed at that station along with the cumulative 20 percent goal of affordable housing units per station.

The percentage of affordable units and/or depth of unit affordability based on Area Median Income (AMI) categories in any residential developments at its stations shall be a part of the District's assessment of RFQ/RFP responsiveness. There shall be a priority on residential units made available to very low (< 50% AMI) and low (51-80% AMI) income households. The General Manager or his/her designee will develop an approach to evaluating respondents' affordability housing proposals, that will consider a proposal's quantity and depth of affordability, as well as the proposal's validity and feasibility with respect to this policy.

If a party responding to the RFQ or RFP determines that such a goal is not feasible, that party shall provide an impact analysis, which will be assessed by the District to determine if the goal cannot be attained.

Upon selection of a Developer, the District commits to working with the Developer throughout the development's negotiation process to achieve the pre-established affordable housing goal.

As the negotiations of the proposed development proceed, the General Manager or his/her designee will provide periodic updates to the Board regarding the financial details of each component of the development, culminating in a term sheet for Board approval.

BART also affirms its commitment to develop sustainable partnerships to achieve thriving Priority Development Areas (PDA) at or near BART stations with housing opportunities for residents of all income levels – particularly those populations most reliant on public transit – in order to reduce Greenhouse Gas Emissions (GHG), encourage use of public transit and active transportation, and decrease reliance on automobiles.

On a project-by-project basis, the General Manager or his/her designee may request from the Board an exception to this Policy if staff determines it is infeasible for a specific project.

This policy shall be prospective, and shall not be applicable to past or present development projects for which exclusive negotiating agreements, option agreements for ground leases, or ground leases have already been executed between BART and developers.

Adopted: January 28, 2016



## BART STATION ACCESS POLICY

Adopted June 9, 2016

### VISION

For more than 40 years, the San Francisco Bay Area Rapid Transit District (BART) has been a steward of major public investment to connect people and places. The BART Station Access Policy is designed to support the broader livability goals of the Bay Area, reinforce sustainable communities, and enable riders to get to and from stations safely, comfortably, affordably, and cost-effectively.

### GOALS

**A. Safer, Healthier, Greener.** Advance the region's safety, public health, and greenhouse gas (GHG) and pollution-reduction goals.

1. Ensure safe access for all users of the BART system, including users with disabilities.
2. Promote and invest in active transportation access modes to improve public health.
3. Prioritize the most sustainable access modes, with a focus on the lowest greenhouse gas and pollutant emissions per trip.
4. Reduce the access mode share of the automobile by enhancing multi-modal access to and from BART stations in partnership with communities and access providers.
5. Develop station-level designs that are consistent with the Station Design Access Hierarchy (Figure 1).

**B. More Riders.** Invest in station access to connect more riders cost-effectively, especially where and when BART has available capacity.

1. As ridership grows, invest in and manage access resources so as not to exacerbate peak period – peak direction crowding, including by ensuring users can find parking spaces at all times of day.
2. Develop access solutions that promote reverse-peak and off-peak ridership to optimize use of the BART system.

**C. More Productive and Efficient.** Manage access investments, programs, and current assets to achieve goals at the least cost.

1. Consider life-cycle costs, including capital and operating budget implications, using best asset management practices.
2. Factor land value in decision-making, prioritizing access that generates the most riders with the least space.
3. Consider the Station Access Investment Framework (Figure 2) in identifying contextual access investments at each station, and seek to move stations from their existing to their aspirational types.

**D. Better Experience.** Be a better neighbor, and strive for an excellent customer experience, including on the first and last mile of the trip to and from BART stations.

1. Expand station access choices for all riders.

## BART STATION ACCESS POLICY

2. Promote Transit-Oriented Development (TOD) on and off of BART property as a powerful access tool, putting more riders within walking distance of stations, connecting communities.
3. Collaborate with local jurisdictions to improve station access and create more sustainable communities, including by promoting access improvements off BART property.
4. Ensure high quality design for access improvements, with careful consideration of the local context and the quality of the environment accessing BART.

**E. Equitable Services.** Invest in access choices for all riders, particularly those with the fewest choices.

1. Ensure that disadvantaged communities share in the benefits of BART accessibility.
2. Strive to be a partner to reduce the cost of living (i.e., transportation and housing) in the Bay Area for low-income communities by increasing access and housing options (i.e. TOD), providing greater access to opportunity.
3. Use Universal Design principles to improve safety and ensure access is available for everyone at all times.

**F. Innovation and Partnerships.** Be an innovation leader, and establish durable partnerships with municipalities, access providers, and technology companies.

1. Involve BART riders in station access decision-making.
2. Develop partnerships with municipalities, transit operators, developers, technology providers, corporate shuttle providers, Transportation Network Companies, bike share operators, advocacy groups and other entities to best meet access goals.
3. Continue to research and pilot emerging technologies and new forms of access services to keep up with the rapidly-changing transportation ecosystem.
4. Remain technology- and operator-agnostic; make long-term investments in the access technologies and services that best meet the needs of BART riders.
5. Prioritize projects that leverage other fund sources and local matches both to further build partnerships and to capture more value from BART investments.

## STRATEGIES

### Plan, Innovate and Partner

1. Plan for systemwide access mode shift to reduce drive alone rates.
2. Partner with interested stakeholders to improve access to the BART system.
3. Plan all BART facilities to be accessible to all users, including users with disabilities.

### Invest and Implement

1. Invest in the pedestrian and bicycle assets with a focus on BART property, and partner to advance projects off BART property, including partnering on local initiatives, such as Vision Zero, Safe Routes to School, and Safe Routes to Transit.

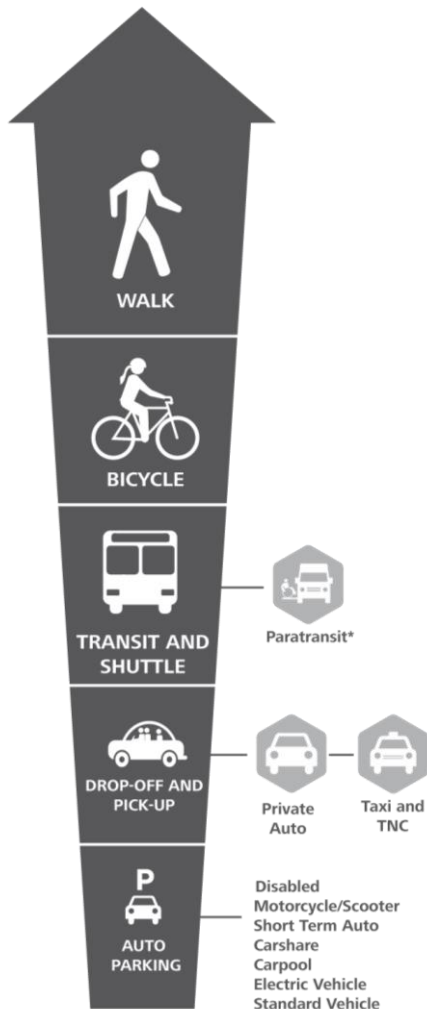
### BART STATION ACCESS POLICY

- 2. Invest in transit connections, including investments that improve passenger experience in transit transfers (shelters, real-time information); seek to reduce barriers to transit connections; and partner with local transit service providers on last mile improvements.
- 3. Prioritize station access investments that support ridership growth where and when the system has capacity.
- 4. Improve management of existing parking resources, and invest in or partner on strategic parking resources; including shared parking, on-street parking, programs to maximize existing parking assets, and locating new parking resources only where other approaches are not sufficient, consistent with the station typology investment matrix.

### Manage and Assess

- 1. Manage resources we have.
- 2. Regularly collect and analyze station access data, and consider emerging data sources.
- 3. Develop a 4-year work plan to identify projects BART staff will advance in the near-term.
- 4. Revisit the Station Access Policy every ten years.































FIGURE 1: STATION ACCESS DESIGN HIERARCHY



\*All Stations must be paratransit accessible  
Note: All stations must always remain readily accessible to and usable by persons with disabilities

BART STATION ACCESS POLICY

FIGURE 2: STATION ACCESS INVESTMENT FRAMEWORK

STATION TYPE	PRIMARY INVESTMENTS	SECONDARY INVESTMENTS	ACCOMMODATED	NOT ENCOURAGED
URBAN	  Walk Bicycle	 Transit and Shuttle	  Taxi and TNC Drop-Off and Pick-Up	 Auto Parking*
URBAN WITH PARKING	  Walk Bicycle	 Transit and Shuttle	  Taxi and TNC Drop-Off and Pick-Up	 Auto Parking*
BALANCED INTERMODAL	  Walk Bicycle	  Transit and Shuttle Drop-Off and Pick-Up	  Taxi and TNC Auto Parking*	
INTERMODAL/AUTO RELIANT	 Walk	   Bicycle Drop-Off and Pick-Up Transit and Shuttle	  Taxi and TNC Auto Parking*	
AUTO DEPENDENT	 Walk	    Bicycle Drop-Off and Pick-Up Auto Parking* Transit and Shuttle	 Taxi and TNC	

**Primary Investment:**  
 BART will prioritize investments of funds and staff time on and off of BART property, consistent with access goals; priority projects best achieve policy goals, focus on safety and sustainability.

**Secondary Investment:**  
 BART will invest funds and staff time on and off of BART property, consistent with policy goals; secondary investments balance policy goals.

**Accommodated:**  
 BART will maintain and manage existing assets, and partner with other access providers as needed.

**Not Encouraged:**  
 BART will not invest in construction of parking expansion.

Note: TNC is for Transportation Network Company (shared use mobility)

\*Parking Management is a secondary investment at all stations with parking.

\*Parking replacement for transit-oriented development to be determined by BART's Transit-Oriented Development Policy.





Office of the City Manager

INFORMATION CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Mark Numainville, City Clerk

Subject: City Council Short Term Referral Process – Monthly Update

INTRODUCTION

This report is a monthly update on the status of short term (90-day) and other date-certain Council referrals.

CURRENT SITUATION AND ITS EFFECTS

In this context, tracking refers to a manually updated chart (Attachment 1). The May 15, 2018 Council referral establishing the monthly update includes both “short term” and “date-certain” referrals. Short term referrals are referrals that staff determines they will be able to complete in approximately three months. Date-certain referrals are those which contain a specified date of completion at the time they are approved by the City Council. Currently, the City only tracks short term referrals in an Excel spreadsheet.

Providing a monthly update on all short term and date-certain referrals will allow Council and the public to see the status of these referrals and any circumstances which lead to delays.

BACKGROUND

In 2016, the City Council adopted a system of Re-Weighted Range Voting (RRV) to prioritize the outstanding City Council referrals to staff. The RRV system enables City Council to provide direction to staff on which referrals are highest priority to the City Council. However, that process does not provide information on the status of short term or date-certain referrals. While many short term or date-certain referrals were “updated” through being completed and presented to Council as consent or information items, there was no comprehensive overview of this subset of referrals.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with the subject of this report.

POSSIBLE FUTURE ACTION

The City Council may wish to direct staff to evaluate this process after it has been in place six months.



FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

No direct fiscal impact. Greater efficiencies in staff resources due to prioritization of work and alignment with budget and strategic plan goals.

CONTACT PERSON

Mark Numainville, City Clerk, 981-6900

Attachments:

1: Short Term and Date-Certain Referrals

# Short Term Referrals [FINAL]

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2018-04-03	18	Supplemental Paid Family Leave	2) refer to the City Manager to draft an ordinance regarding retaliation against employees using state family leave, including a private right of action provision.	Commission				2018-09-28 17:00:00	City Attorney	Pending	2018-09-28 17:00:00		<a href="#">2019-09-17 11:24:26 - Christopher Jensen (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=CJensen)</a> City Attorney's Office to coordinate with Human Resources <small>Additional comments</small>
2018-07-10	20	Refer to City Manager to look into adopting an ordinance requiring a permit process for scooter sharing companies to operate on public streets	Refer to the City manager to look into adopting an ordinance establishing a pilot Powered Scooter Share Permit Program for 24 months, requiring a permit issued by the Director of Public Works, establishing a fee for the issuance of the permit, establishing administrative penalties for failure to obtain a permit or violation of permit requirements, providing a procedure for the assessment and collection of administrative penalties for permit violations or parking or leaving standing an unpermitted powered scooter subject to the pilot Powered Scooter Share Permit Program on a sidewalk, street, or other public right-of-way.	Council member		Kriss Worthington, Sophie Hahn	Transportation Commission	2018-11-27 17:00:00	Public Works	Pending	2018-11-27 17:00:00		<a href="#">2019-08-07 11:03:01 - Nancy Melendez (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=nmelendez)</a> City issued an RFP for Franchise applications due back by 1/25/19. A panel consisting of staff reps from Public Works, Police, 311, Economic Development and UC Berkeley scored the applications. A draft Council report was prepared to recommend the top 3 scorers when staff learned that the City of San Diego was being sued by Disability Rights California over accessibility impacts of permitted scooter sharing operations. City of Berkeley staff is reevaluating the scooter applications with an eye toward requirements informed by the lawsuit. The approval of 3 Scooter Franchises is expected to go to Council in Oct 2019. <small>Additional comments</small>
2019-09-10	48	Request for Information Regarding Current Status and Progress on Traffic Mitigations at Dwight Way and California Street	Refer to the City Manager a request for information regarding the current status and progress on traffic mitigations and pedestrian safety improvements at the intersection of Dwight Way and California Street.	Council member		Ben Bartlett		2019-09-16 17:00:00	Public Works	Not Started	2019-09-16 17:00:00		<a href="#">2019-02-05 15:22:21 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Council adopted tentative terms for franchise agreements on December 4, 2018 based on input from the Transportation Commission and multiple other Commissions and agencies. Transportation staff has solicited proposals from various scooter sharing companies and will return to Council with recommendations for up to 3 service providers and adoption of franchise agreements for each. <small>Additional comments</small>
2019-09-10	55	Game Day Parking - Minor Update to include RPP area K	Refer to the City Manager the modification of parking restrictions in specified RPP Zones on UC Berkeley home football game days as follows: establish "Enhanced Fine Areas" to prohibit parking without a valid RPP permit to include RPP Zone K; and install new RPP signs in zone K to clearly indicate UC Berkeley home football game day parking prohibitions.	Council member		Lori Droste, Jesse Arreguin		2019-09-16 17:00:00	Public Works	Not Started	2019-09-16 17:00:00		

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2019-03-26	15	Ensuring the Sustainability of the Berkeley Flea Market	Short-term referral to the City Manager to provide material and strategic assistance to the Berkeley Flea Market, to sustain and enhance its ability to serve both merchant participants and the community at large.	Council member		Ben Bartlett, Sophie Hahn, Cheryl Davila		2019-05-27 17:00:00	Office of Economic Development	Work in Progress	2019-07-30 11:38:31		<p><b>2019-09-24 11:03:09 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments Still waiting for the Flea Market's strategic plan, expected end of calendar year.</p>
2019-09-10	53	Voluntary Time Off on Statewide Election Days for City Employees	Refer to the City Manager to designate Statewide Election Days as VTO days, and refer to the 2x2 Committee to discuss coordinating City and District policy on holidays, in particular Election Day.	Council member		Rigel Robinson, Cheryl Davila, Sophie Hahn, Lori Droste		2019-09-16 17:00:00	Human Resources	Work in Progress	2019-09-16 17:00:00		<p><b>2019-11-06 15:47:09 - Wilhelmina Parker (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=WParker)</b> Additional comments Referred to the budget committee to provide analysis on the cost. It is also slated to be a part of labor negotiations in 2020 as it subject to meet and confer.</p>
2019-07-16	14	Opportunity Zone Project Guidelines for the City Manager	Refer to the City Manager the priorities listed below for investment in Berkeley's Opportunity Zones for proactive outreach and marketing to investors or Opportunity Funds, and to guide any discussions or negotiations regarding development projects in Opportunity Zones. The priorities are: Construction of new Affordable Housing units or acquisition and preservation of affordable housing; Preservation of historic buildings; Cultural Institutions and Performing Arts Venues; Civic Uses (Government Offices, Libraries, Schools, Public Safety); Public Open Space and Recreation Facilities; Health Care Services; Transportation Demand Management features; and Job training or employment opportunities. The City Manager should further incorporate these guidelines into any relevant formal document relating to projects in Opportunity Zones. That City staff, working with non-profit organizations OR seeking technical assistance, develop a prospectus marketing community development projects in Berkeley's Opportunity Zones using the guidelines mentioned above, or any other tools to attract equitable investment in Opportunity Zones.	Councilmembers		Ben Bartlett, Kate Harrison, Jesse Arreguin, Cheryl Davila		2019-07-22 17:00:00	Office of Economic Development	Work in Progress	2019-09-25 11:01:10		<p><b>2019-11-05 13:31:36 - Jordan Klein (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=JKlein)</b> Additional comments Information report submitted for 12/3/19 Council Meeting</p>
2019-05-28	29	Referral to the Public Works Department and the City Manager: Finishing the installation of Sculpture Lighting into Adjacent Street Lights for the William Byron Rumford Statue on Sacramento and Julia St.	Refer to the City Manager a request to finish the installation of sculpture lighting into adjacent street lights for the William Byron Rumford statue on Sacramento and Julia Street. Refer to the Public Works Department for its installation.	Councilmembers		Ben Bartlett, Kate Harrison, Cheryl Davila, Jesse Arreguin		2019-06-13 17:00:00	Public Works	Work in Progress	2019-10-01 17:00:00		
2019-09-10	35	1281 University Avenue Request for Proposals	Refer to the City Manager to issue a Request for Proposals (RFP) for residential development at the City-owned site at 1281 University Avenue with a requirement that 100% of the on-site units to be restricted to 80% AMI or below households with at least 10% at 50% AMI, with consideration given to accommodations that serve unhoused or homeless households, including nontraditional living arrangements such as tiny homes and that Council consider interim use for the site for housing purposes.	Commission			Housing Advisory Commission	2019-11-29 17:00:00	Health, Housing and Community Services	Work in Progress	2019-11-29 17:00:00		

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2019-09-24	36	Companion Report: Health Study to be Conducted by the Public Health Division to Gather Data on Health Conditions, Health Disparities and Mortality Rates of Berkeley's homeless	Send a letter to Alameda County requesting data on deaths of identified homeless individuals.  Contact Alameda County request that they explore the feasibility of recording homelessness as a data point in death records and/or making investments to begin tracking this information locally.	Councilmembers				2019-10-31 17:00:00	Health, Housing and Community Services	Work in Progress	2019-11-29 17:00:00		
2019-03-26	15	Dynamex Decision Impact and Compliance on Minimum Wage Ordinance and Paid Sick Leave Ordinance	That the City Council refers to the City Manager and the Labor Commission to ensure the Berkeley Minimum Wage Ordinance (MWO) and Paid Sick Leave Ordinance are interpreted and enforced in a manner consistent with the holdings in Dynamex Operations West, Inc. v. Superior Court of Los Angeles (2018) 4 Cal.5th 903.	Councilmembers		Ben Bartlett		2019-11-29 17:00:00	City Attorney	Work in Progress	2019-11-29 17:00:00		2019-09-17 10:59:00 - <a href="#">Christopher Jensen (sys_user.do?sysparm_view=ftil&amp;sysparm_query=user_name=CJensen)</a> Additional comments A draft opinion is under review in the City Attorney's office.
2019-07-16	9	Referral to the City Manager to Consider Amending the Language of the City's Wireless Telecommunications Ordinance and Aesthetic Guidelines	Request that the City Manager consider amending the language of the City's Wireless Telecommunications Ordinance (BMC 23C.17) and Aesthetic Guidelines (BMC 16.10 & Aesthetic Guidelines for PROW permits) and return to City Council for adoption as soon as possible.	Councilmembers		Susan Wengraf, Jesse Arreguin, Ben Bartlett, Kate Harrison		2019-07-22 17:00:00	City Attorney	Work in Progress	2020-02-28 17:00:00		2019-06-18 08:04:27 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftil&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments The City Attorney's Office is drafting a City Attorney opinion analyzing the holding in Dynamex Operations West, Inc. v. Superior Court of Los Angeles (2018) 4Cal.5th 903 with respect to the City's MWO and PSLO. The completed memo will be referred to the City Manager and the Labor Commission for review by June 24, 2019 and for any related action, including amending ordinances as necessary.
2019-02-19	16	Providing Requested Direction to the City Manager and Planning Department on the Number of Cannabis Retail Establishments and the Creation of an Equity Program	That the Council provides requested direction to the Planning Department on how to proceed with the Equity Program recommended by the Cannabis Commission in the October 9, 2018 staff report; with the following specifications: Recommendation of creating 1 new dispensary license for equity applicants. It is envisioned as new licenses are created, such as, delivery, manufacturing, and micro-business, permits will be reserved for equity applicants for each new category.	Councilmembers		Ben Bartlett, Kriss Worthington, Cheryl Davila		2019-05-17 17:00:00	PLANNING & DEVELOPMENT	Work in Progress	2020-03-24 12:00:00		2019-11-06 09:58:01 - <a href="#">James Bondi (sys_user.do?sysparm_view=ftil&amp;sysparm_query=user_name=JBondi)</a> Additional comments Planned end date changed to 3/24/2020. Cannabis actions coming to Council in Dec 2019 will NOT include the equity program as previously thought. Equity needs more time/coordination with out City departments, Commissions, and constituencies.
													2019-04-12 16:03:50 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftil&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments This will be included with the next set of Cannabis Ordinance changes, expected in summer 2019.

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2019-04-02	18	Companion Report: Effective Enforcement of Safe Lead-Paint Practices - Update on Amendments	Based on the intent of the recommendation from the Community Environmental Advisory Commission (CEAC) for the City to expand enforcement of unsafe lead paint practices, refer to the City Manager to: - Coordinate with the Alameda County Healthy Homes Program to clearly identify roles and responsibilities for expanding enforcement of unsafe lead practices, and to explore options for sharing resources that can support expanded local enforcement; - Identify what resources, staff capacity, and program structure would be required to expand City enforcement of unsafe lead practices; - Continue current work to educate building permit applicants and contractors about safe lead paint practices; train and certify all City of Berkeley Building and Housing Inspectors in lead paint safety; respond to, investigate, and enforce safe lead paint practices as needed; and administer the Public Health Division's Childhood Lead Poisoning Prevention Program; and - Provide an update to City Council within one-year that identifies progress and next steps for expanding enforcement of unsafe lead practices. AMENDMENTS: Request that the City Manager return to Council as soon as possible with recommendations on staffing for robust enforcement and internal restructuring for inspections. Options for noticing and distributing disclosure information. Enforcement by the City or the County, if feasible.	Councilmembers				2019-06-28 17:00:00	CITY MANAGER'S OFFICE	Work in Progress	2020-04-28 15:28:36		<p>2019-10-03 13:55:00 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Completed matrix <small>Additional comments</small></p> <p>2019-09-12 08:32:23 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Convened all City divisions which touch issue (Public Health, Environmental Health, Toxics, Building &amp; Safety, 311). Mapped existing processes. Preparing draft consolidation plan. <small>Additional comments</small></p> <p>2019-08-07 15:33:54 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> In progress, drafting matrix of capacity across multiple city departments, next steps to develop an improved response framework and explore County funding options. Planned report back to Council in spring 2020. <small>Additional comments</small></p>
2014-04-29	35	35. City Manager Referral: Policy for Companies Such as Airbnb to Pay Transient Occupancy Tax, as Currently Paid by Other Small Local Businesses	Refer to the City Manager creation of a policy for companies such as Airbnb to pay the Transient Occupancy Tax, as currently paid by other small local businesses.	Council member	City Council District 7	Kriss Worthington		2014-10-24 17:00:00	PLANNING & DEVELOPMENT	Completed	2014-10-27 08:00:00	2016-09-07 00:00:00	
2014-12-16	25	Reconcile the West Berkeley Plan and the Zoning Code as it Pertains to Medical Uses	Refer to the Planning Commission the task of revising the current zoning ordinance so that it reflects the West Berkeley Plan's goals of encouraging medical uses in West Berkeley.	Council member	City Council District 2			2015-06-12 17:00:00	PLANNING & DEVELOPMENT	Completed	2015-06-15 08:00:00	2017-01-24 00:00:00	
2015-09-15	43	Prohibit Sales of Tobacco Products to Persons Under the Age of 21	Direct the City Manager and Community Health Commission to draft an ordinance amending Berkeley Municipal Code Chapter 9.80 "Tobacco Retailers" to prohibit the sales of tobacco products and smoking paraphernalia to persons under the age of 21.	Council member		Jesse Arreguin		2016-03-11 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2016-03-11 17:00:00		
2015-09-15	55	Referral to the Community Environmental Advisory Commission to Install 1.8 GPM Showerheads in All New Housing Projects or Any Renovation Over \$50,000	Refer to the Community Environmental Advisory Commission to explore requiring a maximum of 1.8 GPM low flow showerheads in new housing projects and all housing renovations exceeding \$50,000 throughout Berkeley.	Council member		Kriss Worthington		2016-03-11 17:00:00	PLANNING & DEVELOPMENT	Completed	2016-03-14 08:00:00	2016-07-19 00:00:00	
2015-11-10	1	Proposed Amendments to the Minimum Wage Ordinance; Amending Berkeley Municipal Code Chapter 13.99 (Continued from September 15, 2015)	Review and consider information regarding the activities and costs associated with implementing and enforcing the Commission on Labor's proposed amendments to the Minimum Wage Ordinance (MWO), including the potential impact of the proposed amendments on the City's minimum wage employees, employers, non-profit organizations and community-based organizations, on-call workers and youth training program workers, and either: 1. Adopt first reading of an Ordinance amending Berkeley Municipal Code Chapter 13.99, which includes staff-recommended revisions to the Commission's proposed Ordinance; -OR- 2. Refer the MWO back to the City Manager for further analysis and revisions.					2016-05-06 17:00:00	CITY MANAGER'S OFFICE	Completed	2016-05-09 08:00:00	2016-09-01 00:00:00	



Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2015-11-17	30	Fourth Ambulance Pilot Project 6-Month Update	No recommendation noted. Action: Moved to Consent Calendar and held over to January 19, 2016. Fire to report back in May 2016 for permanent program.					2016-05-13 17:00:00	FIRE & EMERGENCY SERVICES	Completed	2016-05-16 08:00:00	2018-07-01 00:00:00	
2015-12-01	22	City Manager Referral: Pilot Program to Implement Solar Trash Compactors on Telegraph Avenue and Downtown Berkeley	Refer to the City Manager to adopt a Pilot Program to implement Solar Trash Compactors on Telegraph Avenue and Downtown Berkeley.	Council member				2016-05-27 17:00:00	Public Works	Completed	2016-05-30 08:00:00	2018-07-24 00:00:00	2019-02-05 16:44:20 - Melissa McDonough (sys_user.do?sysparm_view=ftl&sysparm_query=user name=MMcDonough) Additional comments 6/2018 RFPs received; 2 solar compactors to be issued contracts.
2015-12-01	33	City Manager and Planning Commission's Referral: Enable Implementation of Council Approved Floor Area Ratio in the Telegraph Commercial District between Dwight and Bancroft by Amending the Zoning Ordinance	Refer to the City Manager and Planning Commission an immediate implementation strategy to bring the City Zoning Ordinance in compliance with the policy adopted by City Council to increase Floor Area Ratio (FAR) in the Telegraph Commercial District between Dwight and Bancroft	Council member	City Council District 7	Kriss Worthington		2016-05-27 17:00:00	PLANNING & DEVELOPMENT	Completed	2016-05-30 08:00:00	2016-06-28 00:00:00	
		Google Translate Bar							Information Technology	Completed	2016-06-01 00:00:00	2016-06-01 00:00:00	
2015-12-15	35	Amending Open Government Ordinance to Allow Submission of Revised/Supplemental Items	Refer to the City Manager and City Attorney to draft an ordinance amending Berkeley Municipal Code Section 2.06.070.E (Open Government Ordinance) to allow the submission of revised or supplemental agenda material for the Supplemental Communications Packet 2. The revised or supplemental material must be submitted no later than 12 noon the day of the City Council meeting at which the item is to be considered. The online version of the City Council agenda shall also contain a link to such items. If revised agenda material is submitted by this deadline, it would not require a two-thirds vote of the Council to accept the material.	Council member		Jesse Arreguin, Susan Wengraf, Lori Droste		2016-06-10 17:00:00	City Clerk	Completed	2016-06-10 17:00:00		
2015-12-15	54	Referral to City Manager: Establishment of Affordable Housing Small Sites Program Revised Version	Refer to the City Manager to: 1. Look into the feasibility of creating a Small Sites Program to allow non-profits to purchase small multi-family buildings (5-25 units) to create and preserve affordable housing, with an emphasis on properties with a high potential for conversion to cooperative homeownership. 2. Develop an inventory of City-owned land and other land owned by public agencies in the City of Berkeley which could potentially be used to create below-market rate housing.	Council member		Jesse Arreguin		2016-06-10 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2016-06-13 08:00:00	2016-12-13 00:00:00	2019-02-05 16:47:39 - Melissa McDonough (sys_user.do?sysparm_view=ftl&sysparm_query=user name=MMcDonough) Additional comments 2 is completed. 1 was later prioritized long term as top priority of Council's housing action plan. Plan outline complete and will bring before HAC in July 2018.
2015-12-15	30	Provide Cost Estimates to Restore the Berkeley Pier	Refer to the City Manager to determine the cost to make the appropriate repairs so that it will be safe for public use.	Council member	City Council District 2			2016-06-10 17:00:00	CITY MANAGER'S OFFICE	Completed	2016-06-13 08:00:00	2017-03-14 00:00:00	
2016-01-19	24	Tenant Buyout Agreement Ordinance	Refer to the City Manager and the Rent Stabilization Board to draft an ordinance regulating situations where a tenant agrees to vacate a rent-controlled unit in exchange for a sum of money, known as a buyout.	Council member		Jesse Arreguin		2016-07-15 17:00:00	CITY MANAGER'S OFFICE	Completed	2016-07-18 08:00:00	2016-03-31 00:00:00	
2016-02-09	15	Budget Referral: Including BigBelly Solar Compactor Bins Allocation in the 2016 Mid-Year Budget Process	Refer to the 2016 Mid-year budget process the purchasing of BigBelly Solar Compactor Bins in order to save money, meet zero waste goals, and reduce Berkeley's greenhouse gas emissions.	Council member		Kriss Worthington, Lori Droste		2016-08-05 17:00:00	Public Works	Completed	2016-08-08 08:00:00	2018-07-24 00:00:00	2019-02-05 16:51:37 - Melissa McDonough (sys_user.do?sysparm_view=ftl&sysparm_query=user name=MMcDonough) Additional comments 6/2018 RFPs received; 2 solar compactors to be issued contracts.

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2016-02-09	26	Develop a Provision for the Landmarks Preservation Ordinance to Allow for the De-designation of a Landmark Designation for a Building that has been Legally Demolished (Continued from January 12, 2016)	Refer to the City Manager to develop a provision for the Landmarks Preservation Ordinance (LPO) that would allow a landmark designation to be de-designated for a building that has been previously landmarked but subsequently has been legally demolished.	Council member				2016-08-05 17:00:00	CITY MANAGER'S OFFICE	Completed	2016-08-08 08:00:00	2016-05-10 00:00:00	
2016-03-15	6	Prioritize Installation of Bicycle Lane on Fulton Street	Direct the City Manager and Transportation staff to prioritize and expedite the installation of a bicycle lane on Fulton Street between Bancroft Way and Channing Way.	Council member		Jesse Arreguin		2016-09-09 17:00:00	Public Works	Completed	2016-09-12 08:00:00	2016-05-10 00:00:00	
2016-04-05	10	Modify the Proposed Early Mitigation Fee Discount and Preserve Revenue Towards Units At Or Below 50% AMI and Add Sunset Clause (Continued from February 23, 2016)	That the City of Berkeley amend Council Item 10a to remove the option of paying a substantially-reduced mitigation fee at the issuance of a permit, and to preserve revenue from the mitigation fees to maintain or increase the funds designated towards units for incomes at or below 50% AMI, and add a sunset clause.	Council member		Kriss Worthington		2016-09-30 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2016-10-03 08:00:00	2016-07-19 00:00:00	
2016-04-26	31	Creation of 311 Mobile Application	Refer to the City Manager to create a mobile application for the 311 system and improve the 311 Online Service Center.	Council member		Jesse Arreguin		2016-10-24 08:00:00	Information Technology	Completed	2016-10-24 08:00:00	2016-11-15 00:00:00	
2016-05-10	21	Resolutions Consenting to Inclusion of the City of Berkeley Properties in the California Home Finance Authority PACE Programs and Associate Membership in California Home Finance Authority	ABAG has a new report and the City Council has voted twice in favor; thus, the City of Berkeley should approve and sign an agreement for collaborative services for Property Assessed Clean Energy Financing (PACE) marketplace. Also, that the City of Berkeley approve and sign acknowledgement addendum of RCSA, as executed between ABAG and RPPs.	Council member		Kriss Worthington		2016-11-04 17:00:00	City Attorney	Completed	2016-11-07 08:00:00	2016-09-20 00:00:00	
2016-05-31	22	City Manager Referral: Consider Adding Energy Efficient Equity as an Additional Property Assessed Clean Energy Program	Refer to the City Manager to consider adding Energy Efficient Equity as an additional property assessed clean energy program.	Council member		Kriss Worthington		2016-11-25 17:00:00	PLANNING & DEVELOPMENT	Completed	2016-11-28 08:00:00	2016-09-20 00:00:00	
2016-05-31	20	Requesting a Comprehensive Report on the State of Homeless Services within the City of Berkeley	Request the City Manager direct staff to prepare a report outlining the details of City funded homeless services. The purpose of this report is to help Council and the community understand the various factors related to the allocation of resources to address homelessness within the City. Once the report is complete, it is requested that city staff schedule a worksession to go over the findings.	Council member		City Council District 5		2016-11-25 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2016-11-28 08:00:00	2016-11-01 00:00:00	
2016-06-28	47	City Manager Referral: Feasibility of Acquiring a High-Capacity Scanner for Multiple City Departments	Refer to the City Manager to consider investing in a high-capacity scanner to digitize City records for the Council and multiple City departments.	Council member		Kriss Worthington		2016-12-26 08:00:00	Information Technology	Completed	2016-12-26 08:00:00	2017-12-12 00:00:00	



Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2016-07-12	27	Refer to City Manager to Consider Applying for \$100,000 from the Better Together Resilient Communities Grant Program	That the City Manager consider applying for the \$100,000 grant that PG&E's Better Together Resilient Communities grant program will offer in the beginning of 2017.	Council member		Kriss Worthington		2017-01-06 17:00:00	PLANNING & DEVELOPMENT	Completed	2017-01-09 08:00:00	2016-12-31 00:00:00	
2016-07-19	41	Companion Report: Amend Berkeley Municipal Code Creating Community Health Commission	Refer to staff to write an ordinance based on the Community Health Commission (CHC) recommendation with the changes suggested by staff.		MAYOR AND COUNCIL			2017-01-13 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2017-01-16 08:00:00	2016-11-29 00:00:00	
2016-09-20	32	City Manager Referral: Implementing BigBelly Solar Compactor Bins	Refer to the City Manager to examine the feasibility of procuring BigBelly Solar Compactor Bins to save money, meet zero waste goals, and reduce Berkeley's greenhouse gas emissions.	Council member		Kriss Worthington, Lori Droste		2017-03-17 17:00:00	Public Works	Completed	2017-03-20 08:00:00	2018-07-24 00:00:00	<a href="#">2019-02-05 17:04:44 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> 6/2018 RFPs received; 2 solar compactors to be issued contracts. Additional comments
2016-09-20	22	Amending Council Rules Regarding Removal of Commissioners	Direct staff to return with a policy recommendation consistent with the recommendations in this report, i.e., noting that as a matter of courtesy and respect, Councilmembers are expected to set the date a commissioner is to be replaced on a commission and communicate that date to the commissioner not less than two weeks from the official date of replacement.	Council member		Commission		2017-03-17 17:00:00	City Clerk	Completed	2017-03-20 08:00:00	2018-06-12 00:00:00	<a href="#">2019-02-05 17:02:37 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Incorporating changes from City Council. Additional comments
2016-09-20	21	City Manager Referral: Consider the Four Recommendations Contained in the Alameda County Grand Jury Report (Continued from July 19, 2016)	Refer to the City Manager to consider the four recommendations in response to the Alameda County Grand Jury Report recommendations.	Council member		Kriss Worthington		2017-03-20 08:00:00	Information Technology	Completed	2017-03-20 08:00:00	2016-10-20 00:00:00	
		Improved Emergency Notification System							Information Technology	Completed	2017-04-01 00:00:00	2017-06-05 00:00:00	
2016-10-18	25	Amendments to BMC 23C.23.050 to Allow a Third Option to Satisfy the Private Percent for Art Requirements	Request the City Manager draft an ordinance for Council adoption to revise BMC 23C.23.050, the One-Percent for Public Art on Private Projects Ordinance, to do the following: 1. Have 5% of the 1% requirement go directly to administration of the Public Art in Private Development program regardless of how the developer decides to satisfy the requirement;	Council member				2017-04-14 17:00:00	Office of Economic Development	Completed	2017-04-17 08:00:00	2017-01-24 00:00:00	
			Refer the following actions to the City Manager to consider in developing a plan for emergency shelter/services during the upcoming winter season. These actions will help implement Resolution No. 67,357-N.S. "Declaring a Homeless Shelter Crisis in Berkeley": 1. Allow full use of the Multi-Agency Service Center (MASC) at 1931 Center Street as a Warming Center. Direct the City Manager to study the feasibility of using the West Berkeley Senior Center as a day-time Warming Center or evening shelter. Engage in discussions with Dorothy Day House about a day-time respite center. 2. Direct staff to develop a winter shelter services program for Fall 2016-Spring 2017 with funding to increase warming centers and emergency shelter. 3. Direct staff to work with service providers and faith-based organizations who have capacity, to add shelter beds during the year. 4. Direct that all bathrooms in City-owned buildings be available to homeless people for use at the City Manager's discretion. 5. Prioritize people on the street for Housing First funds who are in frail health, disabled, or with special needs and have a source of income. Direct the City Manager to create a list of city-owned properties that could be used for a Tiny House development for the homeless, a successful and growing model for dense urban regions.	Council member		Jesse Arreguin		2017-04-14 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2017-04-17 08:00:00	2017-06-27 00:00:00	

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2016-10-18	26	Revisions to the Public Art in Private Development Program	Request the City Manager draft a resolution to revise the Public Art in Private Development Program Guide to provide the Civic Arts Commission guidance and more flexibility in the use of the Cultural Trust Fund with the language suggested in the report.	Council member				2017-04-14 17:00:00	Office of Economic Development	Completed	2017-04-17 08:00:00	2016-12-13 00:00:00	
2016-11-01	15	City Manager Referral: Increasing Transparency in City Public Record Act Responses	Approved revised recommendation to request a report from the City Manager on how the City is using the permitted exemptions in compliance with the Public Records Act.	Council member		Kriss Worthington		2017-04-28 17:00:00	City Attorney	Completed	2017-05-01 08:00:00	2016-12-13 00:00:00	
2016-12-13	29	Ordinance for Standards for Testing and Certification of DAS Antennas	Request that the City Manager draft ordinance language to amend Section 16.10.100 of the Berkeley Municipal Code to include Standards for Testing and Certification of DAS Antennas and return to the City Council within 60 days.	Council member		Susan Wengraf		2017-06-09 17:00:00	City Attorney	Completed	2017-06-12 08:00:00	2017-03-28 00:00:00	
2017-01-24	38	Berkeley Mothers Initiative	Request that the City Manager ensure that all City buildings provide and maintain at least one private place reasonably close to an employee's workspace for breastfeeding mothers to pump.	Councilmembers		Lori Droste		2017-07-21 17:00:00	CITY MANAGER'S OFFICE	Completed	2017-07-24 08:00:00	2017-07-01 00:00:00	
2017-01-24	37	Berkeley BABIES Initiative	Request that the City Manager create a provision and enforcement mechanism to ensure that all publically-accessible City buildings install and maintain at least one baby diaper-changing accommodation that is accessible in both men and women's restrooms or a single diaper-changing accommodation that is accessible to all genders. In addition, request that the City Manager provide recommendations to mandate all businesses to provide changing stations in either women's and men's restrooms or gender-neutral restrooms.	Councilmembers				2017-07-24 08:00:00	CITY MANAGER'S OFFICE	Completed	2017-07-24 08:00:00	2017-07-01 00:00:00	
2017-01-31	10	Medical Cannabis Ordinance Revisions and Cultivation Application Process	Request that the City Manager provide Council with analysis of the questions presented by Councilmember Sophie Hahn.	Council member				2017-07-28 17:00:00	PLANNING & DEVELOPMENT	Completed	2017-07-31 08:00:00	2017-11-07 00:00:00	
2017-02-14	11	Updated Information Report on Measure M	Request that the City Manager return to the City Council in April with an Information Report on Measure M implementation, expenditures, projected expenses and plans.	Council member				2017-08-11 17:00:00	Public Works	Completed	2017-08-14 08:00:00	2017-05-02 00:00:00	
2017-03-28	33	Referral Response: Cigarette Butt Pollution Prevention	REFER to the City Manager to enact a pilot program in downtown Berkeley with the goal of greatly reducing cigarette butt litter that accumulates on sidewalks and curbsides, in a central location. This pilot program would: a) Place a total of four receptacles for cigarette butt disposal in front of three adult schools and a bus stop where smoking behavior continues despite its prohibition. The receptacles are to be placed in front of: i. Berkeley City College, 2050 Center Street; ii. Language Studies International on 2015 Center Street; iii. Kaplan International, Berkeley, 150 Berkeley Square; and iv. a selected major bus stop in the vicinity of an entrance to the Downtown Berkeley BART station; and b) Exhibit graphics on the receptacles to remind and inform the public that tobacco litter is hazardous to the health of the Bay; and c) Enter into a partnering agreement with the Downtown Berkeley Association (DBA) for upkeep of the receptacles for the duration of the one-year pilot program, including sending collected butts to the company for recycling; and d) TerraCycle® will track the weight of butts received, and share the data with the City of Berkeley and CEAC commissioners to help track and assess the success of the pilot program; and e) Identify funding sources to expand the pilot program if successful at the end of the one year trial.	Commission			Community Environmental Advisory Commission	2017-09-22 17:00:00	Office of Economic Development	Completed	2017-09-25 08:00:00	2017-05-30 00:00:00	
2017-03-28	22	Security Camera Database	Request that the City Manager return to Council with an update on the referral to create a voluntary database of security cameras in Berkeley. With an increase in crime, residents are anxious to help the Berkeley Police Department solve cases and arrest the perpetrators - amended to include direction that guidelines protect privacy and prevent misuse of camera footage.	Council member				2017-09-25 08:00:00	Police	Completed	2017-09-25 08:00:00	2018-08-15 00:00:00	
2017-07-25	40	Expediting Elements of Previous Council Referral to Study Possible Scenarios of the Loss of Federal Funds	Direct the City Manager to expedite the compilation and delivery of a list of federal funds that the City of Berkeley receives and the programs and facilities supported by such funds.	Council member		Sophie Hahn, Jesse Arreguin, Cheryl Davila, Kate Harrison		2018-01-19 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2017-10-23 00:00:00	2018-12-11 12:22:40	2019-02-05 17:14:03 - Melissa McDonough (sys_user.do?sysparm_view=11&sysparm_query=user_name=MMcDonough) HHCS is updating with the latest single audit findings.

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2017-05-30	53	Eliminate the Required Affidavits of Residency for Commissioners	Eliminate the requirement for Commissioners to submit Affidavits of Residency when they are appointed, and annually thereafter, in pursuit of saving time and money for the City of Berkeley. Revised Materials - <a href="http://www.cityofberkeley.info/Clerk/City_Council/2017/05_May/Documents/2017-05-30_Item_53_Eliminate_the_Required_-_Rev.aspx">http://www.cityofberkeley.info/Clerk/City_Council/2017/05_May/Documents/2017-05-30_Item_53_Eliminate_the_Required_-_Rev.aspx</a>	Council member				2017-11-24 17:00:00	City Clerk	Completed	2017-11-27 08:00:00	2017-09-12 00:00:00	
2017-06-27	32	Housing Inspection and Community Services Manager	Request the City Manager to create and fill the position of Housing Inspection and Community Services Manager.	Council member				2017-12-22 17:00:00	PLANNING & DEVELOPMENT	Completed	2017-12-25 08:00:00	2018-09-13 00:00:00	<b>2019-02-05 17:13:07 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments New position approved by Personnel Board. Will bring to Council for adoption by November which will complete referral.
2017-10-03	7	Request for Information Regarding Grant Writing Services from Specialized Grant Writing Firms	Refer to the City Manager to issue a request for information to explore grant writing services from specialized municipal grant-writing firms, and report back to Council.	Council member		Sophie Hahn, Kate Harrison, Cheryl Davila, Ben Bartlett		2018-01-01 17:00:00	Finance	Completed	2018-01-01 17:00:00	2019-09-24 12:41:03	<b>2019-04-12 15:07:44 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments Issued #18-11201 Feb. 5, 2018 as an RFI (Request for information); closed March 1, 2018. Received 13 information responses for review. Next Steps: use responses to inform scope of work, then release as RFP.
2017-07-25	51	Commercial Cannabis Regulations and Licensing	Refer to the City Manager and Cannabis Commission the proposed local ordinances to establish a licensing process for Commercial Cannabis operations, as permitted under Proposition 64, Adult Use of Marijuana Act. The Council requests that the City Manager and Cannabis Commission report to the City Council on its recommendations on regulations and licensing for commercial cannabis businesses before the end of 2017.	Council member				2018-01-19 17:00:00	PLANNING & DEVELOPMENT	Completed	2018-01-22 08:00:00	2018-09-13 00:00:00	<b>2019-02-05 17:15:33 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments Lengthy process involving 3 Commissions and many City departments. Some Ordinance changes will be at Council 9/13/18. But more will be needed. Council Worksession scheduled for 10/9/18, then adoption of more Ordinance changes expected by end of year, which will close this referral.
2017-09-12	33	Voter Registration Forms in All City Buildings on Their Main Floors	Direct the City Manager to provide voter registration forms on the main floor of all designated city buildings that are open to the public and in all Community based organizations within the city limits. Community based organizations that are funded by the City of Berkeley will be required to pick up the voter registration forms from the City Clerk's Office and that should be clearly stated in their respective contracts.	Council member		Cheryl Davila, Kate Harrison, Sophie Hahn		2018-03-09 17:00:00	City Clerk	Completed	2018-03-12 08:00:00	2017-11-08 00:00:00	
2017-10-03	21	Referral to the City Manager to Provide a Public Master List of the Legislation on which the City Council Has Taken a Position	Request that the City Manager work with the City's lobbyist to create and maintain a master list of the legislation on which the City Council has taken a formal position of support or opposition through passage of an item.	Council member		Kate Harrison, Sophie Hahn, Cheryl Davila		2018-03-30 17:00:00	City Clerk	Completed	2018-04-02 08:00:00	2018-01-23 00:00:00	
2017-10-03	24	Parallel Permitting Process	Request that the City Manager in coordination with the Director of Planning and the Chief Building Official work to establish a voluntary parallel permitting process for applications to construct housing in the City of Berkeley.	Council member		Susan Wengraf, Linda Maio, Lori Droste, Jesse Arreguin		2018-03-30 17:00:00	PLANNING & DEVELOPMENT	Completed	2018-04-02 08:00:00	2017-11-01 00:00:00	<b>2019-02-05 17:23:50 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments This voluntary parallel permitting option already exists. Following October 2017 referral we advised Building staff to be sure to make option known to interested applicants.
2018-01-23	27	Open the West Campus Pool All Year Round and Start the Shower Program at the West Campus Pool	Short Term Referral to City Manager to assess the feasibility to keep the West Campus Pool open all year round and to start COB Shower Program at the West Campus Pool. Keeping the West Campus Pool open all year round will provide equitable swimming options in both North Berkeley and in South/West Berkeley and provide another location available for our community to shower.	Council member		Cheryl Davila, Ben Bartlett		2018-07-20 17:00:00	Parks, Recreation & Waterfront	Completed	2018-04-23 00:00:00	2018-10-16 10:14:13	<b>2019-02-05 17:38:54 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b> Additional comments a) On June 12, 2018, Council received an Off Agenda Memo that identifies the cost to establish a shower program at West Campus Pool. b) In mid-September 2018, Council will receive an Off Agenda Memo that describes the feasibility of keeping West Campus pool open year-round.

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2017-10-31	30	Short-Term Referral to the City Manager, a Process for Relocation of a Permitted Cannabis Dispensary	Refer to the City Manager to approve a process for the relocation of Apothecarium, a cannabis dispensary with valid permits.	Council member				2018-04-27 17:00:00	PLANNING & DEVELOPMENT	Completed	2018-04-30 08:00:00	2018-01-23 00:00:00	
2017-12-05	18	City Manager Referral: Prioritizing New Business Before Old Business at City Council Meetings	Prioritize new business before old business at City Council Meetings by: 1. Altering the Council rules of procedure as adopted May 24, 2016 so that new business comes before old business. The reformatted section will read "The agenda for the regular business meetings shall include the following: Ceremonial; Comments from the City Manager; Comments from the Public; Consent Calendar; Action Calendar (Appeals, Public Hearings, Continued Business, New Business, Old Business); Information Reports; and Communication from the Public"; and 2. Granting explicit authorization to Agenda Committee to move new business backwards or forwards at their discretion by amending section III E of the Rules of Procedure.	Council member				2018-06-01 17:00:00	City Clerk	Completed	2018-06-04 08:00:00	2018-01-30 00:00:00	
2018-02-13	17	Referral to the City Manager to Submit a Filing to the CPUC Recommending Adjusting Electric Rule 20 to Better Serve the City of Berkeley and Other Communities with Very High Fire Hazard Severity Zones	A referral to the City Manager to submit a filing with the California Public Utilities Commission (CPUC) concerning the CPUC's current review of Electric Rule 20. The CPUC is considering, among other things, how the existing program is administered by the various utility companies operating in California and the definition of what projects are to be included in the public interest.	Council member		Susan Wengraf, Sophie Hahn, Jesse Arreguin, Lori Droste		2018-08-10 17:00:00	Public Works	Completed	2018-08-10 17:00:00		
2018-02-13	26	Referral to the City Manager on Gender Options of the General Application for City Boards and Commissions	Refer to the City Manager to add a nonbinary gender option on the General Application for appointment to Berkeley boards and commissions.	Council member		Lori Droste, Linda Maio, Susan Wengraf, Worthington		2018-08-10 17:00:00	City Clerk	Completed	2018-08-13 08:00:00	2018-03-01 00:00:00	
2018-02-27	22	Wildland Urban Interface Fire Safety and Fire Safety Education	Commission Referral #5 revised to read: 5. Refer to the Planning Commission to consider Accessory Dwelling Units (ADUs) in the Very High Hazard Fire Zone to review public safety issues especially relevant to the risk of WUI fires. Amend Section 23D.10 to incorporate greater public safety considerations to be met before issuing an Administrative Use Permit (AUP);		City Council and Mayor			2018-08-24 17:00:00	FIRE & EMERGENCY SERVICES	Completed	2018-08-24 17:00:00		
2018-03-13	17	Referral to the Arts Commission and the City Manager: Cost Estimate and Plan for Installation of Sculpture Lighting into Adjacent Street Lights for the William Byron Rumford Statue on Sacramento and Julia St	Refer to the City Manager a request to develop a cost estimate and an installation plan for installing sculpture lighting into adjacent street lights for the William Byron Rumford statue on Sacramento and Julia Street. Refer the cost estimate and plan to the Arts Commission.	Council member				2018-09-07 17:00:00	Public Works	Completed	2018-09-07 17:00:00		

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2018-01-30	14	Direction and Referral to the City Manager Regarding "Premier Cru" Property	3. The Berkeley Way Affordable Housing Project is the City's top affordable housing priority. Premier Cru, as a City property, to be developed for affordable housing falls under the "High Priority" on the list of housing initiatives passed by Council on November 28, 2017. In light of the above, refer to the City Manager to take the following actions to move Premier Cru forward as a High Priority initiative: a. Based on recommendations from Health, Housing and Community Services and other Departments, the Housing Advisory Commission, and on consultation with local affordable housing providers, and taking into consideration requirements and restrictions associated with potential funding sources, create a recommendation or recommendations to Council regarding levels of affordability, unit sizes, on-site services and other features to be included in the proposed project or projects. b. Based on the above analyses and recommendations, and on Council direction, develop and issue an RFQ or RFP to affordable housing developers for proposals to develop affordable housing at the site.	Council member		Sophie Hahn, Jesse Arreguin, Linda Maio, Kate Harrison		2018-09-07 17:00:00	PLANNING & DEVELOPMENT	Completed	2018-09-10 08:00:00	2018-05-29 00:00:00	
2017-12-19	41	Companion Report: Public Works Commission Recommendation for the Five-Year Paving Plan	Adopt a Resolution updating the City's Five-Year Street Rehabilitation Plan for FY 2018 to FY 2022. The City Council may consider the information put forth by the Public Works Commission relevant to adoption of the recommended plan.					2018-09-21 17:00:00	Public Works	Completed	2018-09-24 08:00:00	2018-07-24 00:00:00	
2017-12-05	24	Ordinance Amending the Berkeley Municipal Code to Establish Ability to Pay Provisions Regarding Parking Fines and Fees in Accordance with Guidelines Established in Assembly Bill 503	to refer the item as written in Supplemental Reports Packet #2 to the City Manager to conduct an analysis of the item, including a review of current indigency procedures and coordination with similar efforts in the City of Oakland, and report back to the Council in 90 days.	Council member			Transportation Commission	2018-09-28 17:00:00	Finance	Completed	2018-09-28 17:00:00	2018-07-02 00:00:00	
2018-04-24	17	Refer the Housing Advisory Commissions Questions on the Smoke-Free Residential Housing Ordinance to Staff and Berkeley Considers	The Housing Advisory Commission respectfully requests that the Council direct the City Manager to assist the HAC in its review of the Smoke-Free Residential Housing Ordinance, a regulation of tobacco use, as follows: 1. By responding to the HAC's questions enumerated in the report with any readily available responsive information. 2. By facilitating the conduct of a "Berkeley Considers" questionnaire about the Smoke-Free Residential Housing Ordinance, questions for which are proposed in the report.	Commission				2018-10-19 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2018-10-19 17:00:00	2019-03-17 14:41:36	
2017-07-25	10	Authorizing City Manager Approval for Community Development Block Grant (CDBG) Community Facility Improvement Contracts Under \$200,000; Amending BMC Chapter 7.18	Adopt first reading of an Ordinance, by two-thirds vote of the Council, amending Chapter 7.18 of the Berkeley Municipal Code to authorize the City Manager to enter into and amend contracts of up to \$200,000 with applicants recommended for funding by staff and the Housing Advisory Commission under the City's Community Development Block Grant (CDBG) program for community facility improvements.					2018-10-19 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2018-10-22 08:00:00	2018-04-24 00:00:00	



Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2018-07-31	10	Direction to the City Manager Regarding the Community Service In Lieu of Parking Penalties Program	Direct the City Manager to amend the eligibility requirements of the Community Service In Lieu of Parking Penalties Program in order to allow all indigent individuals to be eligible to participate in the program (regardless of the registration status of a potential participant's vehicle).	Council member		Ben Bartlett, Cheryl Davila, Kate Harrison, Sophie Hahn		2018-10-29 17:00:00	Public Works	Completed	2018-10-29 17:00:00	2019-01-19 15:21:35	<p><b>2019-08-27 15:23:33 - Nancy Melendez (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=nmelendez)</b></p> <p>FJ/DP: Aside from the fact that Public Works is not actually involved in citations or citation payment plans or alternatives, this program exists and the FAQ at the link below was updated January 2019.</p> <p><a href="https://www.cityofberkeley.info/uploadedFiles/City_Manager/Level_3_-_General/COMMUNITY%20SERVICE.pdf">https://www.cityofberkeley.info/uploadedFiles/City_Manager/Level_3_-_General/COMMUNITY%20SERVICE.pdf</a></p>
2018-05-15	23	Transgender Health Access Training at City of Berkeley Clinics	Adopt a Resolution providing \$2,400 from the General Fund to support a half-day Transgender Health Access Training for City of Berkeley Public Health staff in June 2018.	Commission				2018-11-09 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2018-11-10 17:00:00	2019-02-04 10:22:57	<p><b>2019-02-05 15:38:44 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b></p> <p>Because this is a multidepartmental task assigned to Public Works, involving Finance and City Attorney, and administered by the City of Oakland, the completion date is unclear.</p>
2018-05-29	14	Budget Referral: Increasing Safety at San Pablo Park	Request the City Manager perform traffic assessments to gather data and refer any needed improvements to the FY 2020 – FY 2021 budget process.	Councilmembers		Cheryl Davila		2018-11-13 17:00:00	Public Works	Completed	2018-11-13 17:00:00	2019-05-16 00:00:00	
2018-05-29	14	Implementation of Secure Storage Program	1. Direct the City Manager to expedite implementation of two publicly available, secure storage facilities to accommodate as many individuals as possible, based on the parameters set in staff's March 2, 2018 RFI: Downtown Homeless Storage Pilot - Staffing and Operations and on additional parameters outlined in Program Details, below. 2. Direct the City Manager to publicize the locations, hours, and rules applicable to new storage facilities through normal outreach channels (website, press release, etc.) and through direct outreach to homeless individuals by the City, community organizations (CBOs) and other partners such as the Downtown Berkeley Association and Telegraph Avenue BID. 3. Refer \$100,000 to the budget process; an added \$25,000 for the downtown storage location and \$75,000 for storage in West Berkeley.	Council member				2018-11-23 17:00:00	HEALTH, HSG & COMMUNITY SVC	Completed	2018-11-26 08:00:00	2018-07-24 00:00:00	
2018-12-11	23	Short-term referral to City Attorney and Health Housing and Community Service to amend Berkeley Municipal Code 7,441-N.S. to expand the control of flavored tobacco across the City of Berkeley toward preventing youth and young adult tobacco use	Short-term referral to City Manager to amend Berkeley Municipal Code 7,441-N.S. according to the changes made in the attached amended ordinance to prohibit the sale of flavored tobacco products and require a minimum package size for cigars and little cigars across the City of Berkeley. The primary purpose of the amendment to the ordinance is to do more to prevent youth and young adult tobacco use.	Councilmembers		Cheryl Davila		2018-12-11 17:00:00	City Attorney	Completed	2018-12-11 17:00:00	2019-09-10 13:15:43	

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2018-09-13	31	Short-Term Referral to City Manager re: Emergency Standby Officers Qualifications	Referral to the City Manager to consider the following suggestions for requirements and qualifications for Emergency Standby Officers and return to Council within 90 days with recommendations. Possible requirements may include: -Trainings in roles and responsibilities to serve as a standby officer possibly including: ethics and workplace harassment. -City government experience. -Council District residency. -Require standby officers to meet the same qualifications, including restrictions on conflict of interest, as required in the City Charter for City Councilmembers. -In addition, consider requiring Councilmembers to nominate three people in a single action.	Council member		Susan Wengraf, Jesse Arreguin, Sophie Hahn		2018-12-11 17:00:00	City Clerk	Completed	2018-12-11 17:00:00	2019-05-02 12:02:38	<a href="#">2019-02-05 15:21:26 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Ongoing discussion with City Attorney regarding potential criteria
2018-07-10	17	Referral to City Manager to Consolidate all City Commission Workplans in One Place for Easy Access for Staff, the Public, and Elected Officials	Make a referral to the City Manager to consolidate all City Commission Workplans in one place for easy (electronic) access for staff, the public, and elected officials.	Council member				2019-01-04 17:00:00	City Clerk	Completed	2019-01-07 08:00:00	2018-09-13 00:00:00	
2018-10-30	20	Proposed Portland Loo Installations in Telegraph Commercial District	Short-Term Referral to the City Manager to identify costs for the installation of a "Portland Loo" type of bathroom facility in Telegraph Commercial District. Costs should be comprehensive and include, but not be limited to: the facility, infrastructure, design, construction, oversight and any contingencies.	Councilmembers		Jesse Arreguin, Sophie Hahn		2019-01-31 17:00:00	Public Works	Completed	2019-01-31 17:00:00	2019-02-27 00:00:00	
2018-11-13	23	Clarifying Jurisdiction of Ohlone Greenway	Refer to the City Manager to review the recommendation to place the Ohlone Greenway under park rules and policies with the intent of revising the BMC to include the Ohlone Greenway as open space and enforce park-like rules.	Councilmembers		Linda Maio, Sophie Hahn, Kate Harrison		2019-02-13 17:00:00	City Attorney	Completed	2019-02-13 17:00:00	2019-09-17 10:57:38	<a href="#">2019-09-17 10:57:27 - Christopher Jensen (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=CJensen)</a> Referral response complete; Public Works is providing assistance on right-of-way issues.
2017-05-02	27	Berkeley Bicycle Plan 2018	Adopt a Resolution approving the Berkeley Bicycle Plan 2017, and directing the City Manager to pursue implementation of the Plan as funding and staffing permit.					2019-02-15 17:00:00	Public Works	Completed	2019-02-15 17:00:00		
2018-11-13	24	Budget Referral: Increasing Safety at San Pablo Park	4. Develop, implement and coordinate drills for active shooter and other emergency protocol at San Pablo Park: Create protocol with input from community partners, then orient licensed daycare providers, coaches, trainers and program staff who operate out of the park, and conduct drills with City staff operating the Center and providers in order to prepare for emergencies and how to use the Center as a shelter during or following them.	Councilmembers		Cheryl Davila		2019-03-01 17:00:00	Police	Completed	2019-03-01 17:00:00	2019-03-30 15:34:27	<a href="#">2019-04-24 15:35:06 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Training class conducted March 30
2017-12-05	17	City Manager Referral: Consider CPUC Interconnection Applications	Refer to the City Manager consideration of applying for CPUC interconnection applications.	Council member				2019-03-04 16:00:00	Public Works	Completed	2019-03-04 16:00:00	2018-04-04 00:00:00	
2018-09-13	18	Adopt a Resolution in Support of Appropriate City Enforcement Measures to Mitigate Damages Resulting from the Removal of Trees at 1698 University Avenue	Amended to be a referral to the City Manager regarding enforcement of measures to mitigate damage to the general welfare of the City and neighborhood resulting from the damage and subsequently-required removal of trees at 1698 University Avenue.	Council member		Kate Harrison		2019-03-11 17:00:00	PLANNING & DEVELOPMENT	Completed	2019-03-11 16:00:00	2018-10-01 15:56:16	
2018-09-25	22	Safe storage of firearms - Revised materials (Supp 2)	Refer to the City Manager to review draft Safe Storage of Firearms ordinance, identify and resolve issues, and return to Council within 90 days.	Council member		Susan Wengraf, Sophie Hahn		2019-03-22 17:00:00	City Attorney	Completed	2019-03-23 16:00:00	2018-12-24 16:21:16	783



Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2018-10-02		Lobbyists Registration and Regulation Ordinance; Amendments to Existing Revolving Door Ordinance	Request an analysis from the City Manager before the November budget discussion on the administrative impacts and cost to implement the lobbyist ordinance.	Council member				2019-03-29 17:00:00	City Attorney	Completed	2019-03-30 16:00:00	2019-01-22 12:32:26	
2018-10-02	9	Amend BMC Chapters 6.24 and 14.52 to Authorize Paid Parking on Shattuck Avenue between Carleton Street and Ward Street and add the Northside Metered Parking Area to the goBerkeley Program; and Authorize Paid Parking at the City-Owned Adeline/Alcatraz Parking Lot	Request staff to perform an analysis of the parking in the Northside area during the academic year to be completed within six months.	Council member				2019-04-02 17:00:00	Public Works	Completed	2019-04-02 17:00:00	2019-08-01 15:29:17	<p><b>2019-08-27 15:29:52 - Nancy Melendez (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=nmelendez)</b></p> <p>GH: Staff conducted an analysis of the parking in the Northside area in spring 2019, roughly six months after goBerkeley price and time limits went into effect on November 1, 2018. As summarized in the June 25, 2019 Information Report submitted to Council, the data showed that goBerkeley changes are working as intended to increase parking availability in the area. Two minor adjustments to prices and time limits in “Value” zones went into effect August 1, 2019</p>
2018-10-30	35	City Manager referral: Initiate a franchise agreement with FlixBus	That the Council refer to the City Manager initiation of a franchise agreement with FlixBus, requiring a permit issued by the Director of Public Works, establishing a fee for the issuance of the permit, establishing administrative penalties for failure to obtain a permit or violation of permit requirements, and providing a procedure for the assessment and collection of administrative penalties for permit violations.	Councilmembers		Kriss Worthington		2018-10-30 17:00:00	Public Works	Completed	2019-05-01 11:39:27	2019-05-23 00:00:00	<p><b>2019-04-23 11:49:56 - Mark Numainville (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MNumainville)</b></p> <p>Resolution of Intent adopted on 3/26/19; Public Hearing set for 4/30/19</p>
2018-10-16	25	Welcome to Berkeley Signage	Refer to the City Manager on a short term basis to replace all the Welcome to Berkeley signs with the Option B design per the Transportation Commission recommendation, including "Ohlone Territory" but not a second motto. Also, leave space on the sign to add a policy message and consult with Ohlone leaders on the use of the word "territory."	Councilmembers	City Council District 2	Cheryl Davila		2018-10-16 17:00:00	Public Works	Completed	2019-05-03 12:00:00	2019-02-07 00:00:00	
2019-02-19	21	Refer to the Planning Commission an amendment to BMC Chapter 23C.12.020 (Inclusionary Housing Requirements - Applicability of Regulations) and the Affordable Housing Mitigation Fee Resolution to Close a Loophole for Avoiding the Mitigation Fee through Property Line Manipulation	1) Refer to the Planning Commission an amendment to BMC Section 23C.12.020 (Inclusionary Housing Requirements – Applicability of Regulations) and BMC Section 22.20.065 (Affordable Housing Mitigation Fee) to close a loophole allowing prospective project applicants to avoid inclusionary affordable housing requirements for projects by modifying property lines so that no lot is large enough to construct five or more units; the Commission should return to Council with a report by April 30, 2019. 2) Refer to the Planning Commission to consider modifying the structure of in-lieu fees for owner-occupied developments to a flat per-unit fee, as with rental developments, or a per square foot fee; the Commission should return to Council with a report. 3) Refer to the Housing Advisory Commission to assess the appropriateness of the fee level as suggested in the proposed amendments to BMC 23C.12. 4) The Planning Commission is to consider the following language from the item submitted at the meeting: It is possible that the new fee structure will be adopted prior to the Housing Advisory Commission approving the level of the fee. In this instance, those projects that opt to pay the in-lieu fee and are permitted after the new fee structure is adopted but before the new fee level is adopted shall be given the choice of paying the current fee level, or the one that is adopted.	Councilmembers		Kate Harrison, Rigel Robinson, Sophie Hahn		2019-05-21 17:00:00	PLANNING & DEVELOPMENT	Completed	2019-05-21 17:00:00	2019-06-11 09:40:07	<p><b>2019-04-15 09:44:51 - James Bondi (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=JBondi)</b></p> <p>Scheduled for Council 4/30/19.</p> <p><b>2019-04-12 16:04:35 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</b></p> <p>May be done at Council 4/30/19, pending recommendation from Planning Commission (special Public Hearing 4/3/19).</p>

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2019-02-19	9	Short-Term Referral: Develop Ordinance permitting Cannabis Events and designate Cesar Chavez Park as an Approved Venue	Short-Term Referral to the City Manager to develop ordinance amendments permitting up to three cannabis events per year in the first year in the City of Berkeley and designating Cesar Chavez Park as the sole approved location for cannabis events, provided such events are organized and licensed as required by the State of California. The ordinance shall: 1. reference Resolution No. 68,326-N.S., declaring that Berkeley is a sanctuary for adult use cannabis, 2. specify procedures for such events that replicate similar alcohol related event protocols. The City Council will revisit the provisions of the ordinance following the first year of implementation.	Councilmembers		Jesse Arreguin		2019-05-21 17:00:00	PLANNING & DEVELOPMENT	Completed	2019-05-22 00:00:00	2019-04-15 09:54:32	<p><a href="#">2019-04-15 09:54:26 - James Bondi (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=JBondi)</a> Additional comments Council considered and opted not to adopt policy, 4/2/19.</p> <p><a href="#">2019-04-12 16:02:31 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Pending Council adoption of Cannabis Ordinance revisions scheduled for April 2 (second reading April 23).</p>
2017-07-25	37	Reviewing the GIG Car Share Pilot Program	Refer to the City Manager and Transportation Department a review of the concerns, emerging regarding some features of the recently implemented GIG Car Share pilot program, request adjustments before the two-year pilot program from staff.	Council member		Linda Maio, Susan Wengraf		2019-05-28 17:00:00	Public Works	Completed	2019-05-28 17:00:00	2019-05-28 11:39:27	<p><a href="#">2019-02-05 15:16:47 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments The program evaluation will be conducted in early 2019 and an action report prepared for Council to continue, modify, or discontinue the pilot.</p>
2019-03-26	23	Referral to City Manager to Scope Process and Estimate Cost of New General Plan	Referral to the City Manager to return to City Council with an outline of the process for creating a new City of Berkeley General Plan. The cost for the first two years of work will be included in the report for consideration during the upcoming 2020-2021 Budget Process.	Councilmembers		Jesse Arreguin, Cheryl Davila		2019-06-21 17:00:00	PLANNING & DEVELOPMENT	Completed	2019-06-21 17:00:00	2019-06-12 09:41:11	<p><a href="#">2019-04-15 09:53:31 - James Bondi (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=JBondi)</a> Additional comments Scoping has begun. Off-Agenda Memo will provide answers (date TBD)</p>
2018-12-11	26	Referral to the City Manager and Planning Commission to Update the Housing Pipeline Report to Address Timeline between Planning Entitlements and Submission of Building Permit Applications and Consider Reasons for Delay	Referral to the City Manager to include in the Housing Pipeline Report an analysis of the time between planning entitlements and building permit requests for all projects of five units or greater over the past five years. On an ongoing basis, refer to the City Manager and Planning Commission to propose changes to current Planning approval process to address the causes of delays between entitlements and building permits for construction or substantial rehabilitation of five or more dwelling units.	Councilmembers		Kate Harrison		2018-12-11 17:00:00	PLANNING & DEVELOPMENT	Completed	2019-07-16 16:43:23	2019-07-23 11:40:57	
2018-11-13	18	Short-Term Referral to City Manager to Complete Steps Necessary to Establish Lava Mae Services in Berkeley	Short-term referral to the City Manager to coordinate with Fire, Planning and Public Works Department Heads to provide permits, identify locations and allow access to water and disposal hook-ups necessary to bring Lava Mae shower services to Berkeley's homeless populations within 90 days for a 6-8 week pilot. This includes: -Determining locations to set up portable shower; and -Identifying water source for hook ups designated to dispense water for showers, either fire hydrants (preferred) or garden hose spigots; and -Parking permits for shower trailer; and -Identifying sewage manholes designated to pump out/dump gray and black water (H2O) into the sewer system; and -Calendar a Fire Department inspection to inspect the propane to heat up the H2O on the first day of operation or through a dry run. Starting January 2019, Lava Mae is prepared to bring shower service two days a week to two consistent locations (one day per a location) at no charge to the City of Berkeley or the users of the services. The proposal is to start with an 8-week pilot in two locations to test sites.	Councilmembers		Cheryl Davila, Sophie Hahn		2019-09-10 17:00:00	CITY MANAGER'S OFFICE	Completed	2019-09-10 17:00:00	2019-09-12 08:29:03	<p><a href="#">2019-09-12 08:30:15 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Report on Council agenda.</p> <p><a href="#">2019-08-07 15:07:11 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Sites and hook-ups have been established.</p>

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2019-09-10	30	Chapter 9.26 Live Animal Sales – Disclosure Requirements	In lieu of approving the ordinance, encourage Berkeley live animal retailers to provide purchasers with information regarding the sourcing of their animals by utilizing one or two of the following designations describing the sourcing of the particular animal: 'captive bred;' 'hobby breeder' or 'licensed breeder;' 'rescue;' 'wild caught;' or 'imported.'	Commission		Animal Care Commission	2019-12-16 17:00:00	CITY MANAGER'S OFFICE	Completed	2019-12-16 17:00:00	2019-12-16 17:00:00	<a href="#">2019-10-15 14:28:21 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Staff developed a set of standard terms and sent a letter to all animal retailers on 10/3/2019, encouraging them to use the designations. Staff has prepared and submitted a referral response via off-agenda memo.
2017-10-31	17	Expanded Criteria for the Installation of Stop Signs	1. Refer to the Transportation Commission consideration of additional or supplemental stop sign criteria which addresses the needs of vulnerable populations, the presence of bicycle boulevards, and the difficulty of crossing particular intersections. 2. Direct that staff consult with the Bicycle Subcommittee of the Transportation Commission when making decisions impacting bicycle boulevards, whenever possible. 3. Request that the City Manager provide an informational report on the particular state and federal warrants and local policies that prevent stop signs being used as traffic calming measures.	Council member		Transportation Commission	2018-01-29 17:00:00	Public Works	Past Due	2018-01-29 17:00:00		<a href="#">2019-09-25 08:55:09 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Commission Recommendation and City Manager Companion report are under review and tentatively scheduled for council approval in Nov 2019
2017-07-25		Public Toilet Policy	Refer to the City Manager to develop the following "Neighborhood Public Toilet Policy": Develop a process in which residents can obtain a permit for a neighborhood public toilet via an official petition; Residents should contact the City via 311 to obtain an official petition form to apply for a permit; In order to obtain the permit, the petition should be signed by at least 51% of residential addresses and business owners within the nearest two block radius of the proposed public toilet site; The City shall not fund or contribute to the financing of the public toilets or their maintenance.	Council member			2018-06-29 17:00:00	CITY MANAGER'S OFFICE	Past Due	2018-06-29 17:00:00		<a href="#">2019-02-05 16:27:28 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Transportation Commission formed a subcommittee and held first meeting 6/11/18, additional meetings to be planned by subcommittee.
2017-07-25		Public Toilet Policy	Refer to the City Manager to develop the following "Neighborhood Public Toilet Policy": Develop a process in which residents can obtain a permit for a neighborhood public toilet via an official petition; Residents should contact the City via 311 to obtain an official petition form to apply for a permit; In order to obtain the permit, the petition should be signed by at least 51% of residential addresses and business owners within the nearest two block radius of the proposed public toilet site; The City shall not fund or contribute to the financing of the public toilets or their maintenance.	Council member			2018-06-29 17:00:00	CITY MANAGER'S OFFICE	Past Due	2018-06-29 17:00:00		<a href="#">2019-08-05 09:47:54 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Staff have prepared a memo which will be submitted to Council in Fall 2019.
2017-12-19	22	Develop Ordinance Prohibiting Companies Participating in the Construction of a Border Wall from Contracting with the City of Berkeley	Direct the City Manager to develop an ordinance prohibiting companies involved in the construction of a border wall from contracting with the City of Berkeley. Return to Council with the proposed ordinance within 90 days.	Council member			2018-07-20 17:00:00	Finance	Pending Not On Schedule	2018-07-20 17:00:00		<a href="#">2019-04-24 15:13:54 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Still on hold as staff attention is on RV, TNC.
2017-12-19	22	Develop Ordinance Prohibiting Companies Participating in the Construction of a Border Wall from Contracting with the City of Berkeley	Direct the City Manager to develop an ordinance prohibiting companies involved in the construction of a border wall from contracting with the City of Berkeley. Return to Council with the proposed ordinance within 90 days.	Council member		Ben Bartlett, Sophie Hahn, Cheryl Davila	2018-07-20 17:00:00	Finance	Pending Not On Schedule	2018-07-20 17:00:00		<a href="#">2019-04-12 15:41:24 - Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a> Additional comments Staff transition and priority put on TNC, RV policy, and Safe Clean Streets

Meeting Date	Agenda Item Number	Project Name	Recommendations	Referral by	Referral District	Referral Sponsor	Referral Commission	Original end date	Lead City Department	State	Planned end date	Actual end date	Additional comments
2015-11-17	28	Improve Conditions on Our Community Sidewalks; Amending Berkeley Municipal Code Chapters 13.36 and 14.48	Discuss and refer the following services and ordinances to the City Manager for implementation, and adopt first reading of three Ordinaces: 1. Adding Section 13.36.085 to the Berkeley Municipal Code prohibiting urination and defecation in public places. 2. Amending Sections 14.48.020 and 14.48.170 of the Berkeley Municipal Code regulating use of sidewalks. 3. Adding Section 13.36.040 to the Berkeley Municipal Code prohibiting obstruction of City-owned planters and trees. Additional Services: 1. Create a secure storage facility for personal belongings; bins must be of adequate size, of reasonable number (estimate of 50 – 100 at the outset) and ensure reasonable access, with posted hours. 2. Provide additional bathrooms in the Downtown and Telegraph areas. 3. Provide mobile showers and bathrooms for public use.	Council member		Linda Maio, Lori Droste		2019-02-28 16:00:00	CITY MANAGER'S OFFICE	Pending On Schedule	2019-02-28 16:00:00		<p><b>2019-10-15 14:27:16 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      Staff has prepared an overview of the outcomes from the pilot implementation of the Shared Sidewalk Policy , and anticipates presenting its findings to Council in Fall 2019. The ongoing program is currently in place.</p> <p><b>2019-08-07 14:46:28 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      Storage is done as is mobile showers and expansion of bathrooms, 14.48 re: sidewalks is done.</p> <p><b>2019-04-24 15:08:11 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      Outreach information disseminated to people on streets; another round of personal notification starts 4/16/19 and 3 person team starts 4/23/19.</p> <p><b>2019-04-12 14:20:27 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      Ordinances and AR 10.2 have been updated. Homeless storage program created in October 2018. Enforcement of 10.2 has been launched as of 2/28.</p> <p><b>2019-10-11 11:49:18 - <a href="#">Nancy Melendez (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=nmelendez)</a></b>                      Additional comments                      Status remains the same</p>
2017-03-14	24	Referral to Consider Caregiver Parking in Residential Shared Parking Pilot	Refer to the City Manager and Transportation Commission to consider a pilot program for caregiver parking permits in RPP zones in the goBerkeley Residential Shared Parking Pilot.	Council member				2020-06-12 17:00:00	Public Works	Pending On Schedule	2020-06-12 17:00:00		<p><b>2019-09-25 09:09:40 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      This fall, City staff, with vendor support, will be collecting "existing conditions" data in the Southside and Elmwood pilot areas, including soliciting public input from a range of stakeholders who are parking in these areas. As part of this process, we will assess the need/demand for caregiver parking in the pilot areas.</p> <p><b>2019-04-12 14:22:07 - <a href="#">Melissa McDonough (sys_user.do?sysparm_view=ftl&amp;sysparm_query=user_name=MMcDonough)</a></b>                      Additional comments                      Ongoing, part of 3-year pilot project (Spring 2018); staff will work with consultants to collect data to determine the various needs and constraints of all residential parking users, including those with childcare needs; subsequent policy proposals will balance these needs.Contract for outreach consultant has been executed and work is starting in 2019.</p>







Office of the City Manager

INFORMATION CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: David White, Deputy City Manager

Subject: Examination of Department Directors Transition Procedures Follow-Up Audit - Status Report

INTRODUCTION

On July 19, 2016, the City Auditor submitted an [Examination of Department Directors Transition Procedures Follow-Up Audit](#)<sup>1</sup> to the City Council with recommendations to address transition procedures for department directors when entering and leaving employment with the City. This information item updates City Council on the status of implementation of the audit report's recommendations. This is the first status report regarding this audit.

CURRENT SITUATION AND ITS EFFECTS

As of September 10, 2019, the City Manager's Office has taken action to either implement the open recommendations or provide information on the obstacles the department must first overcome to fully address the recommendations. All three of the open recommendations are partially implemented.

Please see Attachment 1 detailing the status of the open recommendations, the progress the City Manager's Office has made, and the obstacles keeping the department from fully implementing the City Auditor's recommendations.

BACKGROUND

The City of Berkeley is responsible for ensuring appropriate documentation and standard procedures to safeguard access to assets and software, as well as knowledge transfer when staff enter or exit employ.

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<sup>1</sup> Audit: Examination of Department Directors Transition Procedures Follow-Up Audit (7/19/16): [https://www.cityofberkeley.info/uploadedFiles/Auditor/Level\\_3\\_-\\_General/A.2\\_RPT\\_Follow%20Up%20Audits%20Fiscal%20Year%202016.pdf](https://www.cityofberkeley.info/uploadedFiles/Auditor/Level_3_-_General/A.2_RPT_Follow%20Up%20Audits%20Fiscal%20Year%202016.pdf)

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects associated with the subject of this report.

POSSIBLE FUTURE ACTION

The City Manager's Office will continue to review and improve its processes and documentation.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

None at this time.

CONTACT PERSON

David White, Deputy City Manager, 510-981-7012

Attachments:

1: Auditee Response Form: Audit Recommendations and Corrective Actions Detail



**City of Berkeley City Auditor’s Office  
Audit Findings and Recommendations Response Form**

**Management summary of accomplishments, challenges, and other pertinent information relative to the audit finding and recommendations (optional; limit 1,500 characters):**

**Audit Title: Examination of Department Directors Transition Procedures Follow Up Audit**

Findings and Recommendations	Lead Dept.	Agree, Partially Agree, or Do Not Agree and Corrective Action Plan	Expected or Actual Implementation Date	Status of Outstanding Audit Recommendations and Implementation Progress Summary
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**Finding: Of our original recommendations, Recommendations #1 and #3 are currently partially implemented, and Recommendation #2 is unimplemented**

**New Recommendations:**

1.1	<p>Develop and implement clear procedural guidelines for the department director transition process that ensure:</p> <ul style="list-style-type: none"> <li>▪ Finance is notified of changes in signature authority when the transition takes place</li> <li>▪ Information Technology is notified of changes in access authority when the transition takes place</li> <li>▪ The incoming director is briefed on knowledge transfer</li> <li>▪ Uniform formal exit briefings between the City Manager and exiting directors take place that include a transfer of knowledge discussion and confirmation that all assets have been returned</li> <li>▪ Assignment of responsibilities to staff who will assist the City Manager in completing and updating the City’s property checklist for department directors, both incoming and exiting</li> <li>▪ Assigned staff (a) maintain original checklists for current directors; (b) forward final property checklists for exiting directors to Human Resources; and (c) obtain confirmation from Human Resources of receipt of checklists for exiting directors.</li> </ul>	City Manager	Agree	July 1, 2016	<p>In progress</p> <p><b>9/10/19 Status - Implemented:</b> The Human Resources (HR) Director has an entry/exit checklist, which includes issued property. At the July Senior Executive Team meeting, the Deputy City Manager and HR Director announced the policy that the HR Director is responsible for entry/exit checklists for department directors. The HR Director then handed out the checklist to every department director to complete and return and noted that the Finance and Information Technology Departments would be notified by HR when department directors enter and exit employ. The HR Director will incorporate the completed checklist into each director’s personnel file and notify the Auditor once all directors’ checklists have been filed. Going forward, the HR Director will ensure completion of the checklist upon entry to and update upon exit from employment. The checklist is part of Administrative Regulation (AR) 2.6 and used in</p>
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Audit Findings and Recommendations Response Form

Audit Title: Examination of Department Directors Transition Procedures Follow Up Audit					
Findings and Recommendations		Lead Dept.	Agree, Partially Agree, or Do Not Agree and Corrective Action Plan	Expected or Actual Implementation Date	Status of Outstanding Audit Recommendations and Implementation Progress Summary
					<p>conjunction with AR 2.15, which also notes that Information Technology will be notified of transitions involving communication equipment.</p> <p>The Human Resources Director will ensure appropriate procedures for department director separations, in line with standard exit protocols established for all staff.</p>
1.2	Complete City property checklists for all current department directors.	City Manager	Agree	June 10, 2016	<p>Due to Deputy City Manager by June 10, 2016 to copy to Human Resources</p> <p><b>9/10/19 Status - Implemented:</b> The City obtained checklists for all current department directors.</p>

Audit Findings and Recommendations Response Form

Audit Title: Examination of Department Directors Transition Procedures Follow Up Audit					
Findings and Recommendations		Lead Dept.	Agree, Partially Agree, or Do Not Agree and Corrective Action Plan	Expected or Actual Implementation Date	Status of Outstanding Audit Recommendations and Implementation Progress Summary
1.3	Update and revise Administrative Regulation 2.15, <i>City Issued Communication Equipment</i> to reflect that the department is responsible for the regulation, describe current practices, and include procedures for recording retrieval of the equipment.	Information Technology	Agree. IT updated AR 2.15 to reflect that the department is responsible for the regulation and further define procedures. The City Manager published the revised AR to iCoBWEB on December 10, 2015. IT is now working on an additional update to define protocols for returning equipment and updating equipment inventory records.	January 17, 2017	<b>9/10/19 Status - Implemented:</b> The Information Technology (IT) Director updated the Administrative Regulation (AR) 2.15 City Issued Communication Equipment Policy to clarify the responsibility for administering the AR (i.e., IT). The City is planning to use a new software product to aid in onboarding staff upon entry to employment. The IT Director will update the AR again in the near term, once this software is implemented, to reflect any changes. In the meantime, to request electronic equipment, staff must submit a request ticket via Service Now, the City's Help Desk system. Once approved by the appropriate authority, the device is procured. Staff sign a paper form detailing receipt of communications equipment at the time of issuance from IT. This signed form is scanned and attached to the electronic ticket in Service Now.





Office of the City Manager

INFORMATION CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Henry Oyekanmi, Finance Director

Subject: Recommendation Status Reports: Credit Card Audit, Cash Handling, Business License Tax, and Contracts Review Audits

INTRODUCTION

On February 26, 2019 the City Auditor reported to City Council on the status of all audit recommendations that had not yet been implemented (open recommendations). During the summer of 2019, Finance and City Manager's Office personnel met multiple times with the City Auditor's Office to discuss the status of recommendations for which Finance is responsible and provided documentation supporting the status of these implementations.

This report provides information on the status of all the open recommendations for the following four audits:

1. Credit Card Use: Clearer Guidance Needed
2. \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures
3. Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues
4. Most Contracts Executed Timely But Contract Project Managers Could Use Better Tools and Guidance.<sup>1</sup>

CURRENT SITUATION AND ITS EFFECTS

As of December 10, 2019, Finance has taken action to either implement the open recommendations or provide information on the impediments the department must first overcome to fully address the City Auditor's Offices' recommendations.

The following summarizes the current status of the audits:

1. Credit Card Use: (Three Total Audit Recommendations): There were three outstanding recommendations. Two of the City Auditor's recommendations have been implemented and one is outstanding.

2. **\$52,000 Theft: (17 Total Audit Recommendations):** There were three outstanding recommendations. 16 of the City Auditor's 17 recommendations were implemented prior to February 2019. Of the three remaining recommendations, all three are now implemented.
3. **Business License Taxes: (20 Total Audit Recommendations):** There were five outstanding recommendations. 15 of the City Auditor's 20 recommendations were addressed prior to February 2019. The five remaining recommendations have now been implemented.
4. **Most Contracts Executed Timely: (Five Total Audit Recommendations):** There were five outstanding recommendations. Four of the City Auditor's five recommendations were implemented prior to February 2019. The action taken by Finance was not presented to City Council until now. There is one remaining recommendation that has not been implemented.

Please see Attachment 1 detailing the status of the open recommendations, the progress Finance has made, and the impediments keeping the department from fully implementing the City Auditor's Recommendations. The detail provides information on only the recommendations that were either open as of February 2019 or that had not yet been reported to City Council. Information is also provided for the one recommendation in the cash-handling audit for which Parks, Recreation, and Waterfront was responsible. That recommendation has now been implemented.

#### BACKGROUND

**Credit Card Audit:** The City of Berkeley provides the use of credit cards as an alternative means to its traditional purchase order process. The City does not use purchasing cards (p-cards). While similar, p-cards differ from credit cards. They allow for more restrictions, such as controlling purchases to specific merchant categories and vendors. The City plans to implement a p-card program to replace the existing use of credit cards.

**\$52,000 Theft: (Cash-Handling) Audit:** The City performs thousands of dollars in business transactions every day that translate into services and programs for the Berkeley community. Making sure that these revenues are used as intended requires management to establish policies and procedures that protect City staff and money, and to define the roles of cash handlers.

**Business License Taxes:** The City Council enacted the current business license tax ordinance in 1977, codified as Chapter 9.04 of the Berkeley Municipal Code (BMC), to raise revenue for municipal purposes. The BMC requires all individuals and entities engaged in business in Berkeley to obtain a City business license. The Finance Department is responsible for administering the tax program and enforcing the BMC's business license provisions.

**Most Contracts Executed Timely (Contracts Review) Audit:** Contract administration for the City is centralized in the Finance Department, under the General Services Manager. The General Services Manager reviews contract packages for completeness and serves as the single point of contact for all city departments' project managers. Project managers are responsible for initiating the procurement process, shepherding contract packages through the approval process, and monitoring contract activity. Together, the General Services Manager and Project Managers are the primary players in the administration of City contracts.

#### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects associated with the subject of this report.

#### CONTACT PERSON

Henry Oyekanmi, Finance Department, Director (510) 981-7326

#### Attachments:

1: Auditee Response Form: Audit Recommendations and Corrective Actions Detail

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<sup>i</sup> Credit Card Use Audit: Clearer Guidance Needed (6/26/2018); Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance (10/6/2015); \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures (4/1/2014); and Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues (5/29/2012). The City Auditor's Reports are available at: [https://www.cityofberkeley.info/Auditor/Home/Audit\\_Reports.aspx](https://www.cityofberkeley.info/Auditor/Home/Audit_Reports.aspx)



Auditee Response Form: Audit Recommendations and Corrective Actions Detail

<b>Audit Title: Credit Card Use: Clearer Guidance Needed</b>		
<b>Open Recommendations</b>		<b>Finance Response and Recommendation Status</b>
<b>Finding 1: Credit card use practices are out of alignment with City purchasing policies</b>		
1.1	<p>Issue written credit card use policies and procedures that:</p> <ul style="list-style-type: none"> <li>• Reflect the City’s expectations regarding credit card use, e.g., for immediate needs that cannot wait for the purchase order process.</li> <li>• Clarify acceptability, or not, of creating accounts with third-party payment groups, e.g., PayPal.</li> <li>• Address the use Amazon or similar organizations that offer cheaper prices but may result in noncompliance with procurement restrictions.</li> <li>• Incorporate current practices used by Finance to issue and manage credit cards.</li> <li>• Include best practices, for example, spending limits and reconciliation requirements.</li> <li>• Require staff provide itemized receipts to support purchases.</li> </ul>	<p><b>Agree</b></p> <p><b>12/10/19 Status – Implemented:</b> Finance issued a memo covering each of the topics listed in the City Auditor’s recommendation. The memo identifies the purchases for which credit cards may be used and the documentation needed for support, and references Administrative Regulation (A.R.) 3.26. The information from the memo will be incorporated into all relevant purchasing policies, including A.R. 3.26, when Finance aligns all purchasing policies as recommended in recommendation 1.3 below.</p> <p><b>Initial Response:</b> A.R. 3.26 Credit Card Policy and Procedures Guidelines implemented 12/22/2017 addresses many of the recommendations in this Finding. Other recommendations will be addressed in A.R. 3.4 Purchasing Manual; A.R. 3.9 Policies and Procedures for Payment of Conference and Meeting; and any other administrative regulations, as applicable.</p>

<b>Audit Title: Credit Card Use: Clearer Guidance Needed</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• Require the City Manager approve department head credit card purchases.</li> <li>• Require the Finance Director approve the City Manager’s credit card purchases.</li> <li>• Require staff verify that a purchase order is not the more appropriate procurement option in circumstances that do not clearly warrant the use of a credit card. For example, travel purchases clearly warrant use of a credit card while purchase of supplies may not.</li> <li>• Require indication of the need to use a credit card versus a purchase order on supporting documentation when it is not clear based on the purchase. For example, travel purchases clearly warrant use of a credit card while purchase of supplies may not.</li> <li>• Require Accounts Payable staff report to the Finance Director any City Manager and department head purchases that do not agree with City policies.</li> </ul>	

<b>Audit Title: Credit Card Use: Clearer Guidance Needed</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• Outline steps for reporting disallowed or questionable purchases to higher management and taking appropriate action to prevent further occurrence.</li> <li>• Require demonstrating that travel costs represent the lowest, reasonable fare available when costs do not reflect the most common economical purchase.</li> <li>• Require that credit card use be included in existing training programs, for example, Accounts Payable processing.</li> </ul>	
<p>1.2 Create and issue a written policy regarding food purchases. This policy should cover when food purchases are allowable, identify purchase limits, and require staff obtain itemized receipts.</p>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Finance issued Administrative Regulation (A.R.) 3.27. The A.R. covers when food purchases are allowable, identifies purchase limits, and requires staff obtain itemized receipts.</p> <p><b>Initial Response:</b> Staff will develop a policy for the purchase of food using City funds, clarifying circumstances that may qualify, purchase limits, required documentation, etc. The Purchasing Manual will be updated to reference the requirement to adhere to</p>

Audit Title: Credit Card Use: Clearer Guidance Needed		
Open Recommendations	Finance Response and Recommendation Status	
		the food purchase policy and acceptable methods of paying for same, including payment by City credit card.
1.3	Align City policies and procedures reflecting purchasing requirements and restrictions: purchasing; travel and attendance; petty cash; credit card use; food purchases; and any others that, if not updated, would create disconnect regarding the City's expectations and create confusion for City staff expected to adhere to City policy.	<p><b>Agree</b></p> <p><b>12/10/19 Status – Not Implemented:</b> Finance is making some progress in this area but implementation rests with full implementation of Erma, the City's new financial and payment system, and then adjusting manual processes to align with automated capabilities. Doing so will help clarify what the city's appropriate purchasing procedures should be so that the appropriate information can then be updated to written procedures.</p> <p><b>Initial Response:</b> Partially complete:</p> <p>A.R. 3.26 Credit Card Policy and Procedures Guidelines implemented 12/22/2017; A.R. 3.9 Policies and Procedures for Payment of Conference and Meeting Attendance updated 2/28/2018.</p> <p>To be completed:</p>

Audit Title: Credit Card Use: Clearer Guidance Needed	
Open Recommendations	Finance Response and Recommendation Status
	Review and update of all related administrative regulations to align cohesively.

Audit Title: \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures	
Open Recommendations	Finance Response and Recommendation Status
<b>Finding 1: Revenue collection and monitoring: theft of at least \$52,000; other thefts; and sharp, unexpected revenue declines.</b>	
1.8 In collaboration with the Department of Information Technology, implement a general cash-handling system to serve as the city’s single portal for all cash-collection activities. Such a system would allow Finance to: <ul style="list-style-type: none"> <li>• Integrate with the City’s financial system, FUND\$, for automatic inputs of cash receipts.</li> <li>• Remove manual processes (e.g., reconciliations) and free up staff time to perform other cash-handling oversight activities.</li> </ul>	<b>Agree</b>  <b>12/10/19 Status - Implemented:</b> Finance included a new cashiering system with the contract for enterprise resource planning software and implementation. That contract identifies multiple software projects all of which are in different phases. Implementation of the cashiering component is on the work plan scheduled for November 2020. The City Auditor accepted this as viable solution to the intent of this recommendation and recognizes that software implementation is long, not short term.

<b>Audit Title: \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• Develop graphic workflow maps that can generate procedures for processing cash transactions, and identify the specific positions assigned to each step in the cash-handling sequence.</li> <li>• Use automated restrictions to prevent staff from processing cash transactions when they:                             <ul style="list-style-type: none"> <li>○ Have not taken the required cash-handling training.</li> <li>○ Are not assigned to processing cash-receipt transactions.</li> </ul> </li> </ul>	<p><b>12/12/17 Status:</b> Partially Implemented through a new ERP system "ERMA" scheduled for Fiscal Year 2019. Finance has been working with IT to ensure that all recommendation specified on this finding are integrated into the new system.</p> <p><b>7/19/16 Status:</b> Not implemented. The City released the RFP for the new ERP system on May 27, 2016. Responses were due back from vendors on July 14, 2016. The City expects to select a vendor and begin implementation by February 2017.</p> <p><b>12/1/15 Status:</b> Not Implemented. The City has solicited advisory services from the Government Finance Officers Association (GFOA) related to the City's planned procurement and implementation of an Enterprise Resources Planning (ERP) system. The contract between the City and GFOA was signed on April 17, 2015. The first phase of the project, the needs assessment, started in June 2015, and will continue until the end of December 2015. We expect GFOA to prepare an RFP by mid-March 2016, and that the vendor interviews and selection will start shortly after. We are hoping to select a vendor by July-August 2016, and begin implementation toward the end of 2016.</p>

<b>Audit Title: \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures</b>		
<b>Open Recommendations</b>		<b>Finance Response and Recommendation Status</b>
		<p><b>4/28/15 Status:</b> Not implemented. A new software system, ERP (Enterprise Resource Planning), is on the horizon. It is anticipated that the implementation of this new system would incorporate the cashiering functions of the various departments.</p> <p><b>Initial Response:</b> Not implemented. The departments of Finance and Information Technology have begun the research and investigation of various software options.</p>
1.13	<p>Develop supplemental cash-handling procedures describing activities unique to site-specific operations to accompany Finance’s cash-handling manual. Obtain guidance from Finance to ensure that these procedures adequately protect cash and cash handlers. Also see recommendations 1.9 and 1.12.</p>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Finance obtained the procedures. However, a recurring issue is that cash-handling sites make modifications to those procedures without notifying Finance. In some cases, those procedures circumvent required citywide cash-handling procedures. To help address this issue, the Finance Director issued a memo to department directors and city management regarding the importance of proper cash-handling procedures. Additionally, the Finance Department has been doing more surprise cash counts as a deterrent to fraud and misuse, and to check on compliance with city procedures.</p>



Audit Title: \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures		
Open Recommendations	Finance Response and Recommendation Status	
		<p><b>12/19/17 Status:</b> Partially Implemented. Based on surprise cash count visits, Finance is compiling sites that need supplemental cash handling manuals. Projected completion by December 2018.</p> <p><b>7/19/16 Status:</b> Partially implemented. Finance will follow up with other City departments by September 2016.</p> <p><b>12/1/15 Status:</b> No change from 4.28.15 status report.</p> <p><b>10/28/14 &amp; 4/28/15:</b> Partially implemented. Implemented for PRW. Other City departments are in the process of completing site-specific cash handling procedures.</p> <p><b>Initial Response:</b> Partially implemented. Many City cash handling sites (including all PRW sites) already have cash handling procedures. PRW procedures are currently being revised and updated.</p>
1.15	In connection with recommendation 1.14, install an access system such as barrier arms that open only after providing a paid ticket at the launch area to ensure boaters pay for a launch before using the ramp. This may require PRW to redesign the parking area to provide enough space for boaters to park their	<p><b>Agree</b></p> <p><b>12/3/19 Status - Implemented:</b> Installation of the barrier arms is complete. Boat launchers must pay to access the boat launch area.</p>

<b>Audit Title: \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<p>vehicles and trailers after they pay for the launch ticket and still have access to the amenities (boat washing stations, etc.). The parking area should have a separate exit that opens by sensing that a vehicle has driven up to it so that boaters are not required to use a ticket to exit, since there is a likelihood tickets will get wet, which could cause machinery to malfunction.</p>	<p><b>12/12/17 Status:</b> Partially implemented. The project is in construction, and scheduled for completion in November 2017.</p> <p><b>7/9/16 Status:</b> Partially Implemented. Construction was advertised and bids were due at the beginning of July 2016. We anticipate completion in September 2016.</p> <p><b>12/1/15 Status:</b> Partially Implemented. Design is being finalized, and construction will be advertised in November 2015.</p> <p><b>4/28/14 Status:</b> Partially Implemented. The Department has determined the operation and design and will install the barrier arm by June 2015.</p> <p><b>Initial Response:</b> Design and configuration options are under consideration. Approximate onetime construction and installation costs will be \$55,000; and annual costs for service and maintenance will be approximately \$10,000.</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<b>Finding 1: Business license guidance is insufficient and is inconsistently applied.</b>	
<p>1.3 Develop a single set of Finance Department written procedures to provide complete guidance on how to process business licenses and calculate the amount of taxes, penalties, and interest due. Provide copies of the updated procedures and training to staff to ensure all staff involved in the business license process follow the same procedures and provide consistent guidance to businesses. The procedures should:</p> <ul style="list-style-type: none"> <li>• Provide guidance and examples on the date to use as the basis for calculating penalties and interest due for both renewing and closed businesses.</li> <li>• Provide guidance and examples for the types of subcontractor deductions allowed, how to determine that claimed deductions are appropriate, and the business types allowed to take the deduction. The determination of whether a deduction is appropriate should be based on the definition of "subcontractor" developed under Recommendation 1.1. above.</li> </ul>	<p><b>Partially Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> New policies and procedures developed, rigorously reviewed, and provided in extensive training to Finance staff prior to peak season. These procedures include processing business license applications, license renewals, closed businesses, and properly calculating and assessing taxes, penalties, and interest. Weekly drop-in workshops/sessions were provided to Revenue Collection and Treasury/Revenue Development staff during peak season.</p> <p>Updated business license website to include user-friendly language; fillable, auto-calculating forms; and frequently asked questions.</p> <p>Developed a worksheet for supervisory review of adjustments; system configured to require second-level approval for gross receipts, exemptions, allowable deductions, and pre-payments.</p> <p>Developed "Voided Fees" and "Voided Transactions" reports for monthly review of adjustments.</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• Include sample answers to questions that businesses frequently ask regarding business licenses.</li> <li>• As recommended in previous audits, require written support, including guidance on what constitutes sufficient support, for adjustments related to business license taxes. Revenue Collection staff should return to the initiating staff any adjustments received for input that do not include sufficient support.</li> <li>• As recommended in previous audits, require evidence of supervisory and/or interest adjustments. Revenue Collection staff should return to the initiating staff any adjustments received for input that have not had supervisory review. Supervisory review should include:               <ul style="list-style-type: none"> <li>○ Written evidence of the review.</li> <li>○ Manager review of large dollar transactions. The Director should establish criteria as to what constitutes a large-dollar transaction.</li> </ul> </li> </ul>	<p>Referred reconciliation task to Accounting Division, this will be postponed until an Accounting Manager has been hired.</p> <p><b>12/19/17 Status:</b> Partially Implemented. The Finance Department will be replacing Accela Business License module after the implementation of the core financials (ERP Project). In the interim, Finance has engaged Accela in identifying and improving processes such as accuracy of license status and marking the closing process easier, etc. Current policies and procedures are being documented in a comprehensive manual.</p> <p><b>6/24/14 Status:</b> Finance will develop new P&amp;Ps once Accela fully functional.</p> <p><b>Initial Response:</b> A single set of written policies, procedures and frequently asked questions will be developed by the Finance Dept. and will be reviewed and approved by the Director of Finance. Finance will work on changing the current procedures to ensure timeliness of the reconciliation process. As part of the implementation of the new business license software, the cash receipts will be posted directly to the business license accounts, which will rectify the reconciliation issue.</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>○ Documented review of the monthly list of adjustments from the FUND\$ Occupational License module and evidence that the list is used to identify and review all adjustments for necessity and accuracy.</li> <li>• Require a supervisor to reconcile, at least monthly, revenue recorded in the general ledger holding account with the payments recorded in the Occupational License module and for management to verify that reconciliations are performed as required.</li> <li>• Run the completed policies and procedures manual through a rigorous review process to ensure it adequately addresses questions and issues staff encounter while performing business license activities and that staff are clear on how to apply the procedures.</li> </ul>	

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<b>Finding 2: Efforts to collect delinquent business license taxes, penalties, and interests and to write-off uncollectible accounts are ineffective and insufficient.</b>	
<p>2.2 Enter into a contract with an outside collection agency to pursue collection of citywide delinquent accounts. Identify criteria for when to transfer accounts to the collection agency rather than pursuing collection in-house.</p>	<p><b>Agree</b></p> <p><b>12/10/19 Status – Alternative Implemented:</b> Finance reorganized its operations to streamline its internal collection operations. Beyond just business license taxes, the collection unit is actively monitoring delinquent accounts and contacting customers regularly to collect on outstanding payments. The department has made tremendous progress in its collection efforts. For the 2018 &amp; 2019 business license renewal period alone, Finance collected over \$1.3Million on past due accounts.</p> <p><b>12/12/17 Status:</b> Partially implemented. After implementation of Accela in 2013, the system was unable to generate delinquent reports, which triggers collection activities. On March 1, 2016, the first delinquent notice was generated which resulted in approximately collecting of half million dollars. Finance is compiling data to review to see if this recommendation should be implemented.</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
	<p><b>6/24/14 Response:</b> This recommendation will be addressed when the reorganization of the Finance Department is complete.</p> <p><b>Initial Response:</b> Not implemented. We will evaluate this recommendation in conjunction with the review and evaluation of all of the recommendations made by the City Auditor and Management Partners.</p>
<p>2.3</p>	<p>Immediately pursue collection efforts on all delinquent accounts that are within the statute of limitations for pursuing collection. Follow proven best practices for seeking payment, based on the age and amount of each account. Before initiating collection action, verify whether each account is on the unapplied balances list, and if so, adjust the account to determine whether there is a remaining delinquent balance to pursue for collection.</p> <p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Finance reorganized its operations to streamline its internal collection operations. Beyond just business license taxes, the collection unit is actively monitoring delinquent accounts and contacting customers regularly to collect on outstanding payments within the statute of limitations for pursuing collections.</p> <p><b>12/12/17 Status:</b> Partially implemented. Finance is working with IT to generate ad hoc reports to properly account for all delinquent</p>



<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
	<p>accounts such as unpaid balances, unapplied balances and license year. Recently, Finance attended training for ad hoc reporting which will enable Finance to create collection reports. The collection process delinquent accounts will be improved with such readily-available reports.</p> <p><b>6/24/14 Status:</b> As of August 2013, of the \$1.1 million in reported unpaid fees, \$505,624 were balances that were submitted to the County for collection on the property tax roll, but had not yet been adjusted from the business license system. Some of the balances were reduced as the result of Administrative Hearing decisions. Collection efforts continue on accounts that can be pursued and the remaining balances will be written off.</p> <p><b>Initial Response:</b> Partially implemented. An analysis of all the unapplied balances will be part of the pre-Accela Occupational License software implementation clean-up. After a review and evaluation of that analysis, we will immediately pursue collection efforts on all accounts we believe are collectible.</p>
<p>2.4</p>	<p>Develop reports to monitor collection activity on a monthly and quarterly basis, including an aging report of past-due accounts and a report identifying</p> <p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Finance uses multiple monitoring reports, which include aging information, to track progress on</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>		
<b>Open Recommendations</b>		<b>Finance Response and Recommendation Status</b>
	<p>collection strategies pursued on each delinquent account and the results. Use the results as a long-term planning tool for developing effective collection strategies and criteria for when to use them.</p>	<p>following up on delinquent accounts on a monthly basis and identifying trends in collection activities that inform future decisions for the collections unit.</p> <p><b>6/24/14 Status:</b> New reports to monitor collection activity and aging reports will be developed as part of the on-going Accela Business License implementation.</p> <p><b>12/12/17 Status:</b> Partially Implemented. Aging reports are generated from Accela Business License module but current reports do not have delinquent amounts or license year information. Finance is reviewing the options to generate accurate aging reports.</p> <p><b>Initial Response:</b> We will develop appropriate strategies and reporting and tracking mechanisms, including the use of periodic activity reports and aging report.</p>
2.5	<p>Develop performance measures to evaluate the effectiveness of collection efforts. Establish a performance goal for each measure and monitor performance toward achieving the goals. Examples include:</p> <ul style="list-style-type: none"> <li>Percentage of delinquent accounts collected</li> </ul>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Finance uses performance measures to evaluate the effectiveness of its collection activities. These measures have helped staff see their accomplishments, which in turn has helped improve collections even further for not only business license renewals but also other revenue streams as well.</p>

<b>Audit Title: Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• Percentage of delinquent dollars collected</li> <li>• Average time to collect a delinquent account</li> </ul>	<p>This measure helped track the collection of over \$1 million in delinquent accounts in 2019. The measures track:</p> <ul style="list-style-type: none"> <li>• Percentage of delinquent accounts collected</li> <li>• Percentage of delinquent dollars collected</li> <li>• Average time to collect a delinquent account</li> </ul> <p><b>12/12/17 Status:</b> Partially Implemented. The current performance measure 150% of Revenue Development Specialist’s total compensations (salary and benefits). In the interim, Finance continues to develop a more comprehensive performance measures based on the current receivables. Finance will be working on additional performance measures that will be effective July 1, 2018.</p> <p><b>6/24/14 Response:</b> New performance measures will be developed as part of the Finance Department reorganization.</p> <p><b>Initial Response:</b> Not implemented. We will develop appropriate performance measures for collection of delinquent accounts.</p>

<b>Audit Title: Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<b>Finding 1: The City vastly improved its performance in securing fully executed agreements before contract work commences, but barriers to full compliance must be addressed.</b>	
<p>1.1 Design two timeline graphics to visually display the length of time project managers should expect it to take to execute the average boilerplate contract and non-boiler plate contract (i.e., routine vs. non-routine contracts). Identify the full length of time from request for proposal to City Manager approval. Include the average review times for the departments involved with contract review to provide user departments with a structure for their contract needs planning. Post the timelines to Contracts Online.</p>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> A “contract preparation date estimate” tool was created in MS Excel. It includes two timeline estimators to help project managers estimate the amount of time they will need to process both boilerplate and non-boilerplate contracts. The tool was implemented in June 2016.</p> <p><b>Initial Response:</b> Finance will create timeline graphic for a typical boilerplate. Non-boilerplate contracts are situational and highly unpredictable, oftentimes involving discussions and negotiations between the City Attorney’s office and outside counsel. Therefore, for non-boiler plate contracts, we will include information with the regular timeline that contract project managers should plan for extended preparation time, e.g., two months longer than the norm.</p>
<p>1.2 Continue providing semiannual reports of expiring contracts to project managers and work with the Department of Information Technology to convert the ad hoc query into an On Demand report that identifies all contracts set to expire within six months from the</p>	<p><b>Partially Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> The city’s new financial system, Erma, allows for project managers to run reports of expiring</p>

<b>Audit Title: Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
	<p>date of the query. Provide project managers with access to the On Demand feature so that they can run the report as needed.</p> <p>contracts. Finance developed procedures for doing so and provided this information to city staff.</p> <p><b>Initial Response:</b> IT will design and complete an On Demand query. The departments will have access to run the OD query at will.</p> <p>This will enhance, reinforce, and encourage the department’s active management of their respective contracts.</p> <p>Finance will supplement dissemination of contracts’ status on a biannual basis (prior to FY-end close and CY-end close) with a city-wide notification report.</p>
1.3	<p>In collaboration with the Department of Information Technology and key contract review and approval departments, include contract management in Enterprise Resource Planning (ERP) needs. Work with key personnel in the contract review and approval departments, and with project managers who typically execute and manage a large number of contracts, to identify critical business needs, and methods for eliminating redundancies and streamlining the contract preparation, review, and approval process.</p> <p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Part of Erma implementation included having the Tyler Technologies manager meet with key city stakeholders to document the contracting processes, identify process redundancies, and note pain points. The all-day session included future state requirements and recommended business process changes that would exploit the new system’s delivered functionality and drive efficiencies. Erma was implemented with the capacity to prepare, review, and approve contracts.</p>

Audit Title: Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance		
Open Recommendations		Finance Response and Recommendation Status
		<p><b>Initial Response:</b> Inclusion of a modern contract management system in an ERP is highly desirable. We will work with Information Technology to include a contract management system in Enterprise Resource Planning and work with key personnel to identify the critical business needs for such a system. Actual purchase will depend on funding availability and consideration of other information system needs with a higher priority.</p>
1.4	<p>In coordination with the Department of Finance, enhance City training to include guidance for contract planning as part of project management. Once training is established, obtain feedback from training attendees and modify the training on an ongoing basis to meet the needs of project managers. Example training topics include:</p> <ul style="list-style-type: none"> <li>• planning for contract needs by aligning them with department work plans</li> <li>• structuring contract preparation needs with citywide approval timelines (also see recommendation 1.1)</li> </ul>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Implemented:</b> Complementary to the timelines created in response to recommendation 1.1 and an integrated contract management system within the ERP system, Finance’s RFP/IFB and Contracts Procedures trainings courses encourage more continuous Q&amp;A feedback during sessions that concentrate on discussing the actual timelines, roadblocks, and steps of planning, preparing, and executing solicitations and contracts versus simply presenting a slideshow detailing how the process is designed to work. Training sessions were scheduled twice per month (the 1st Friday morning and the 2nd Wednesday afternoon) beginning September – December 2016, and will continue going</p>

<b>Audit Title: Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance</b>		
<b>Open Recommendations</b>		<b>Finance Response and Recommendation Status</b>
	<ul style="list-style-type: none"> <li>developing simple contract tracking systems to monitor contract timelines, expirations, and funding needs</li> </ul>	<p>forward based on demand. At minimum, the sessions will be offered quarterly.</p> <p><b>Initial Response:</b> The City’s training program will be enhanced to include better contract planning as part of project and time management. As is standard with any City training, feedback from attendees will be used to continually improve the City’s training program.</p>
1.5	<p>Require departments to document their specific procedures for contract preparation, oversight, and management. Procedures should include:</p> <ul style="list-style-type: none"> <li>planning for department specific actions, e.g., obtaining management’s approval</li> <li>tracking contract status and funding needs</li> <li>attending City training courses when offered, e.g., contract preparation and FUND\$ 101</li> <li>describing shared contract management responsibilities between project managers and support staff</li> </ul>	<p><b>Agree</b></p> <p><b>12/10/19 Status - Not Implemented:</b> Finance is in the process of updating its procedures to align contract preparation, oversight, and management with Erma automated processes and purchasing policy requirements. This will include revamping Contracts Online so it’s streamlined, more intuitive, and user-friendly, and to include a section that identifies department responsibilities based on this recommendation. This was accepted by the City Auditor as an acceptable alternative to the recommendation.</p> <p><b>Initial Response:</b> None</p>



<b>Audit Title: Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance</b>	
<b>Open Recommendations</b>	<b>Finance Response and Recommendation Status</b>
<ul style="list-style-type: none"> <li>• requiring projects managers to coordinate with and respond to support staff's needs for contract administration</li> <li>• requesting contract extensions</li> <li>• aligning contract needs with department work plans</li> <li>• using Finance's contract process timelines and On Demand report of expiring contracts for contract planning (also see recommendations 1.1 and 1.2)</li> <li>• Minimum level of documentation needed to effectively manage contracts.</li> </ul>	





Office of the City Manager

INFORMATION CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Kelly Wallace, Director, Health, Housing, and Community Services

Subject: Public Health Division Strategic Plan Update

INTRODUCTION

The Public Health Division released its 2018 Community Health Status Report in July 2018. Following the release of this report, the Public Health Division undertook a 6-month strategic planning process to further define community needs and the most effective way for the division to address the health inequities described in the report. The Strategic Plan process included a community health survey, community focus groups, key informant interviews, and a partner event that hosted over 30 community partner organizations. This community and partner engagement work was well received by participants, and we received requests for continued opportunities for future engagement. The information from the Health Status Report as well as the community input led to the development of the Public Health Division's first formal 3-year strategic plan.

CURRENT SITUATION AND ITS EFFECTS

In January 2019, the Public Health Division developed a 3-year strategic plan, refining its mission and vision statements, identifying values to guide practice, and identifying four focus areas to align the work of its programs for the next three years. The four community driven focus areas are: chronic disease, mental wellness, homelessness, and racism.

To support moving our efforts forward, a workforce development plan is being implemented, including division-wide staff trainings in trauma informed systems, racial/health equity, and participatory decision making facilitation skills. The Division is also engaged in a division-wide Results Based Accountability effort which will support us in tracking program impacts in the community. Work is also being conducted to develop a communication plan and a resource plan to support these efforts. As part of pilot project, the Division is developing a dashboard as a way to communicate the Division's work internally and eventually for the community.

The strategic planning process was designed to engage and respond to the needs identified by the community as well as through health data. Our work moving forward in implementing our strategic plan will use the same approach. We aim to work towards

addressing health disparities as a result of implicit bias and institutional racism through a trauma informed practice and encouraging a participatory approach to program planning. We also hope to strengthen our existing partnerships and engage in new collaborations to be more responsive to the emerging needs in our communities.

The Public Health Division's Strategic Plan is aligned with the City's Strategic Plan Priority Project, advancing our goal with a public health focus to:

- Champion and demonstrate social and racial equity,
- Be a customer-focused organization that provides excellent, timely, easily-accessible service and information to the community, and
- Attract and retain a talented and diverse City government workforce.

### BACKGROUND

The Public Health Division released its 2018 Health Status Report in July 2018. This marked the beginning for the Public Health Division's strategic planning process. In the subsequent six months, Public Health Division staff completed 20 community focus groups with a total of 165 community members, 42 community member key informant interviews, and received 298 completed community health surveys. Particular effort was made to elicit information from communities identified to have experienced the impacts of health disparities and inequities, including the African American community, the Latinx community, persons experiencing homelessness, older adults, the LGBTQIA community, persons with disabilities, day laborers, and South Berkeley residents. The Public Health Division also hosted a partner event that included over 31 community partner organizations to identify common goals, gaps, and opportunities to strengthen collaborative efforts. The information collected from these efforts were synthesized by an independent consulting firm and summarized in a community health assessment report (attached).

### ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects.

### POSSIBLE FUTURE ACTION

The Public Health Division will continue conducting division-wide trainings, providing staff with the informational foundation to develop strategies to address each of the four identified focus areas. The Public Health Division also plans to finalize performance measures and complete the dashboard pilot. It is the hope that by the end of the three years, clear strategies will be developed that clearly address the four areas of focus as well as performance measures and baseline data to track our progress. By engaging in the Results Based Accountability framework, the Public Health Division will be looking at strategies to expand or refocus our current programmatic work to align with the four areas of focus. The Division will also be looking for opportunities to collaborate and strengthen our relationships with our partners both within the City Departments as well as our community partners.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Based on the strategies and the identified areas for improvement from our performance measurement data, the Public Health Division would potentially develop budgets and program plans to existing and future special funding as well as plan general funds for future investments in staff, programs, and budget development.

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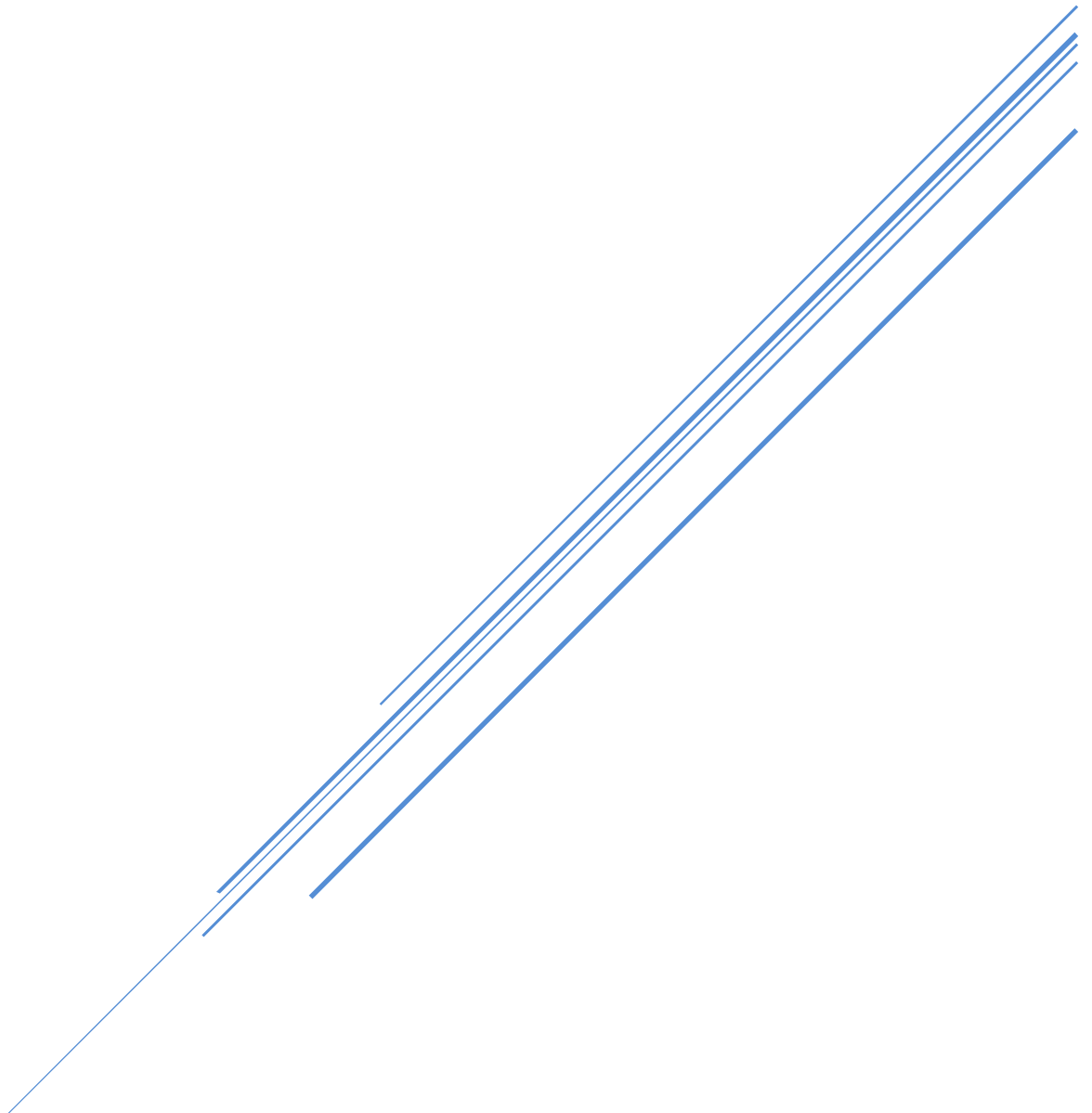
Attachments:

1: Community Health Assessment Report

2: 2020 – 2022 Public Health Strategic Plan

# CITY OF BERKELEY PUBLIC HEALTH DIVISION COMMUNITY HEALTH ASSESSMENT

February 1, 2019



## Acknowledgements

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This report was produced in coordination and partnership with City of Berkeley Public Health Division.

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Table of Contents

---

**ACKNOWLEDGEMENTS..... 1**

**AUTHORS ..... 1**

**EXECUTIVE SUMMARY..... 4**

**KEY FINDINGS FROM COMMUNITY AND PARTNER ENGAGEMENT ..... 4**

HEALTH BARRIERS ..... 4

HEALTH NEEDS ..... 5

COMMUNITY RESOURCES..... 5

RECOMMENDATIONS ..... 5

EVALUATION LIMITATIONS ..... 5

**EVALUATION METHODS ..... 6**

**VULNERABLE COMMUNITIES: ..... 6**

**PARTNER ROUNDTABLE EVENT ..... 6**

**HEALTH STATUS REPORT..... 7**

**DATA COLLECTION TOOLS..... 7**

2018 COMMUNITY HEALTH SURVEY ..... 7

FOCUS GROUPS AND INTERVIEWS..... 7

**DREAMING OF A HEALTHIER COMMUNITY ..... 8**

**THREATS TO HEALTH IN BERKELEY..... 9**

**SUGGESTIONS FOR IMPROVING HEALTH IN BERKELEY ..... 10**

**TOP HEALTH NEEDS IN BERKELEY..... 12**

**TOP PROBLEMS FOR CITY TO ADDRESS..... 13**

**TOP SERVICES FOR PUBLIC HEALTH CLINIC TO PROVIDE..... 14**

**COMMUNITY PERCEPTION OF CITY STRATEGIES TO ADDRESS HEALTH NEEDS..... 15**

**CURRENT COMMUNITY RESOURCES ..... 16**

**COMMUNITY OPINIONS OF THE CITY OF BERKELEY PUBLIC HEALTH DIVISION ..... 17**

**COMMUNITY FAMILIARITY OF THE BERKELEY PUBLIC HEALTH DIVISION'S SERVICES..... 18**

**GREATEST HEALTH IMPACTS ON COMMUNITIES SERVED ..... 19**

**PARTNERSHIP OPPORTUNITIES FOR A HEALTHIER COMMUNITY.....20**

COMMUNITY RESOURCES & STRENGTHS.....20

SERVICE GAPS.....21

POTENTIAL STRATEGIES FOR PARTNERSHIPS .....22

**HEALTH STATUS REPORT.....23**

**BERKELEY'S TOP HEALTH NEEDS IDENTIFIED .....24**

**DISCUSSION AND RECOMMENDATIONS.....25**

**METHODOLOGICAL LIMITATIONS.....26**

**APPENDIX 1. DESCRIPTION OF RESPONDENTS.....27**

DEMOGRAPHICS.....27

TABLE 7. COMPLETE LIST OF VULNERABLE POPULATIONS REACHED .....29

**APPENDIX 2. FOCUS GROUP QUESTIONS.....30**

**APPENDIX 3. SURVEY TOOL .....31**

**APPENDIX 4. HEALTH STATUS REPORT: KEY FINDINGS .....36**

**APPENDIX 5. OCTOBER 30<sup>TH</sup> PARTNER ROUNDTABLE EVENT QUESTIONS.....38**

## Executive Summary

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The City of Berkeley Health, Housing and Community Services Department (HHCS), Public Health Division, provides community health education and promotion, disease prevention and control, health surveillance, preparedness and clinical services, and vital statistics for the City of Berkeley. In July 2018, the Public Health Division released the City of Berkeley Health Status Report which describes key health outcomes of the City. As a response to the report, the Berkeley Public Health Division has engaged in a strategic planning process that involves community and stakeholder engagement.

Significant milestones of this effort include:

- Development of a Vision, Mission, and Values Statement
- Identification of key focus areas for community health intervention
- The identification of strategies, goals, objectives, and program performance measures to guide the Division's program planning and improvement efforts for the next three (3) years.

Community and partner engagement were identified as essential inputs for a successful strategic planning process. The Berkeley Public Health Division recognized that specific community populations experienced historical and sustained impacts of health inequities, and therefore would have valuable knowledge and input. These community voices were identified to help shape the direction of the Division and in turn, improve the health of all the communities in Berkeley. In October 2018, Berkeley initiated community engagement activities which included a community health survey, community focus groups, and a partner convening.

The Health Status Report is a robust report that included data representing the entire Berkeley population. The goal for the community engagement process was to supplement the findings in the Health Status Report by hearing directly from the community about the challenges they face as well as their identified needs.

The community and partner engagement process also explored the impact of identified health issues among specific vulnerable populations who have experienced historically, disproportionate poorer health outcomes and faced challenges across multiple health needs. These populations may be Berkeley residents of particular geographic areas or may represent a specific race, ethnicity, or age groups, sexual orientation, etc. In striving towards health equity and strategic direction of the Public Health Division, strong emphasis was placed on the needs of these vulnerable populations. For a complete list of individuals who provided input, see Appendix 1.

The overarching goal of the community health assessment is to inform and engage local decision-makers, key stakeholders, and the community-at-large in collaborative efforts to improve the health and well-being of all those that live in Berkeley.

### Key Findings from Community and Partner Engagement

The critical findings of the analysis are summarized below. Detailed information about each of these critical findings can be found in the chapters that appear later in this report. Each key theme is bolded.

A total of 398 respondents completed a Community Health Survey, and a total of 207 community members participated in focus groups/interviews. The following evaluation findings are organized under the main topics discussed in the survey, focus group/interviews, and partner roundtable event:

#### Health Barriers

Berkeley residents feel it is difficult to be healthy. The **economy** was identified as the largest barrier, with many citing that the cost of living in Berkeley is too high. **Food security** was identified as another large threat to being healthy. In

Berkeley, there is limited access to healthy food options that are affordable to all. Additional threats to being healthy in Berkeley included **stress** and lack of **safety**. Community partners identified the **lack of knowledge of current resources available** as a barrier to service; a finding that was consistent with information gathered from focus groups/interviews.

### Health Needs

**Mental health** was identified as the top health need across the majority of the community groups. It is important to note that when participants spoke about mental health, they were referring primarily to **depression and/or anxiety**, not necessarily severe mental illness (SMI). Additional health needs identified by the majority of community members include **diabetes, substance abuse/tobacco use, and violence/crime**. During the community partner roundtable event, **mental health** was also identified as the greatest health impact experienced by the communities they serve. When survey respondents were asked to suggest two services they would like to see the Public Health Clinic provide, **mental health** was reported as the top service. This data suggests that mental health is the top need of Berkeley communities and should be considered as a priority of the City of Berkeley Public Health Division.

### Community Resources

Focus group participants named **LifeLong Medical Care** and the **Women's Daytime Drop-In Center** as resources commonly identified in the Berkeley community. Other community resources reported by participants include **clinics, libraries, and churches**.

### Recommendations

Many respondents suggested ways to improve health in Berkeley communities, including creating a **community center** that is free, accessible, and offers fun programs and needed services, all in one location; and creating a community garden that provides **affordable access to fruit and vegetables**. There were also several recommendations made by both community partners and members to develop a comprehensive community **resource guide** to inform the community of what is current and available. Additionally, partners were very interested in meeting more frequently and coordinating efforts. More **collaboration** and **networking** were recurring themes across groups.

### Evaluation Limitations

Although this community health assessment identified key health findings for the Berkeley community, there are several limitations in our assessment methods, including the small sample size, the validity and reliability of data and assessment tools, the lack of consistent data collection procedures, and the subjective nature of qualitative assessment and analysis. See page 25 for the full list of limitations.

## Evaluation Methods

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This process used a mixed-methods approach to collect and compile data to provide a robust assessment of health in Berkeley. A combination of qualitative and quantitative data allowed for the consideration of many potential health needs as well as in-depth analysis. This assessment includes data from community partners, community members, and the health status report. It was designed and triangulated to assist the Berkeley Public Health Division in determining the top health needs and priority areas for their three-year strategic plan. The following section outlines the data collection and analysis methods used to conduct the community engagement process.

### Vulnerable Communities:

The Berkeley Public Health Division identified specific community populations that were recognized as having historical and sustained impacts of health inequities, and therefore would have valuable knowledge and expertise regarding the health needs of and focus areas for Berkeley. The Berkeley Public Health Division deliberately chose to weigh more greatly the experiences and opinions of these vulnerable communities. Examples of the communities include historical neighborhoods that were the results of practices, such as “red lining”, groups of people qualified for special protection by a **law, policy, or similar authority**, or communities that have experienced historical and present day “-isms” that have the potential to impact their ability to thrive. All of the ten identified vulnerable populations are represented in the community engagement data. The population categories are not mutually exclusive; participants had the opportunity to identify with more than one category.

The following community groups were identified as vulnerable populations:

- African American
- LatinX <sup>1</sup>(gender-neutral term for people of Latin decent)
- Older Adult (age 65+)
- Youth (age 10-24)
- Persons experiencing Homelessness
- Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual (LGBTQIA)
- Day Laborers
- Persons with Disabilities
- South Berkeley
- West Berkeley

### Partner Roundtable Event

On October 30, 2018, the Berkeley Public Health Division hosted a roundtable event with community partners. The purpose of the event was to gather input from multiple perspectives to inform the development of the City of Berkeley Public Health Division's strategic plan and collectively strategize on building new and strengthening existing partnerships. More than 50 community-based partners were identified through existing formal and informal partnerships as well as organizations that have not historically had formal partnerships with the City. All of the organizations and partners identified provided services to specific communities within Berkeley or with Berkeley residents and communities in general.

A total of 31 community partners participated in the event. Through brainstorming and facilitated decision making activities, community partners reviewed findings from the Health Status Report and prioritized the top health needs based on the report and through the lens of their respective experiences with the communities they serve. In addition to

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<sup>1</sup> <https://www.merriam-webster.com/words-at-play/word-history-latinx>

identifying the most pressing concerns to focus on for the next three years, the partners also identified existing community resources, service gaps, and potential strategies for partnership in order to address those concerns. Notes from the session were analyzed to examine the health needs identified by community partner participants.

## Health Status Report

In July 2018, the City of Berkeley released the Health Status Report (see Appendix 4 for Key Findings and link to full report). The Health Status Report is released periodically to provide a picture of the health status of the people who live in Berkeley. It also lays the groundwork from which the Berkeley Public Health Division, HHCS, the City, and the Berkeley community will identify priorities, develop a strategic plan, and implement tailored interventions to improve community health.

A selected group from the Berkeley Public Health Division prioritized the key findings from the report which were later used to prioritize the top health concerns in Berkeley.

## Data Collection Tools

### 2018 Community Health Survey

In the Fall of 2018, a total of 398 community respondents completed a Community Health Survey. The survey was disseminated through the City of Berkeley Public Health Division's website and social media platforms, as well as through their community partners. Each survey was completed electronically through Survey Monkey. Please note survey respondents were not given the opportunity to specify if they were disabled or day laborers but those populations are represented in the focus groups. All of the other vulnerable populations were represented in the survey findings. See Appendix 2 for the survey tool.

### Focus Groups and Interviews

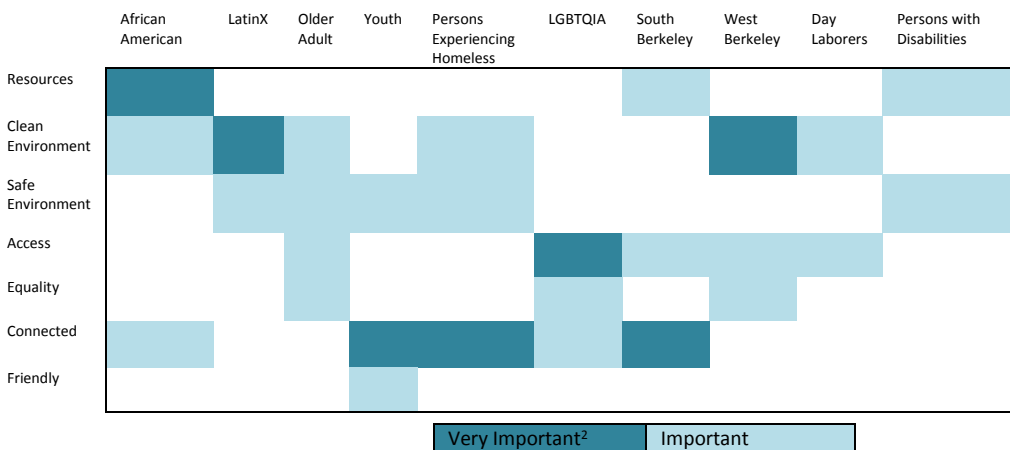
In addition to the survey tool and community partner roundtable event, focus groups and interviews were conducted with representatives from each of the identified vulnerable population groups. A total of 20 focus groups (n=179 total participants) and a total of 28 interviews were conducted in September through November 2018. The Berkeley Public Health Division developed focus group/interview questions, see Appendix 3. The focus groups and interviews were conducted in order to hear directly from the community their thoughts and perspectives on the health status of Berkeley residents, any challenges they may be facing that prevent them from being healthy, and any strategies or existing resources they can suggest for improving the health in Berkeley. Focus groups and interviews were monolingual, conducted in either English or Spanish. Staff from the Berkeley Public Health Division facilitated the majority of the focus groups and some interviews. Staff from Lifelong Medical Care and Multicultural Institute assisted in the effort in conducting focus groups and interviews with their clients and members of Promotions West facilitated the interviews at Berkeley Free Clinic. Notes from the sessions were analyzed, coded and themed to examine the health needs identified by focus group and interview participants.

## Dreaming of a Healthier Community

Survey and focus group participants were asked to describe or define a healthy community. All responses were coded and themed.

- Overall, the majority of respondents defined a healthy community as one that has a **clean environment**. Having a **clean environment** is also very important to the LatinX and West Berkeley communities. Community members are growing weary of seeing the streets of Berkeley covered in trash.
- Members from the Youth, Homeless and South Berkeley communities, defined a healthy community as one that is **connected**.
- According to the LGBTQIA community, it is very important for a healthy community to have **access** to basic needs and services.
- Members from the African American community defined a healthy community as one that has **resources and information** available to the community.

Figure 1.



<sup>2</sup> A theme was considered “Very Important” if the majority of respondents said it or if it was substantiated in both the survey and focus groups. A theme was considered “Important” if it was a recurring theme.

### Theme Definitions

**Resources** refers to the availability of resources and information for community members.

**Clean Environment** includes all built up areas. Community members want clean streets and sidewalks, clean parks and bathrooms, clean water and air.

**Safe Environment** refers to a community that is safe and secure. This includes safe parks and streets. A community that have little or no crime. A safe environment is also one that has safe sidewalks.

**Access** means that community members have access to basic needs and services, such as healthcare, housing, healthy food, transportation etc.

**Equality** refers to a community that is open, inclusive and tolerant. Everyone should have the same access to basic needs (i.e. medical services, housing, education etc.) and be treated the same.

**Connected** refers to community where members are committed, engaged, and all in it together. A healthy community is united, working together as one. A connected community provides and look out for one another.

**Friendly** refers to a community that is nice and friendly. Members of the community are kind to one another.

### Voices from the Community

*“A community that builds each other up and take care of each other.”*  
- Youth focus group participant

*“All community members have access to services and information including vulnerable groups such as homeless, non-English speakers.”*  
- African American focus group participant

*“No garbage everywhere in the streets.”*  
- Day Laborer focus group participant

*“Awareness of resources.”*  
- Person with Disabilities focus group participant



## Threats to Health in Berkeley

According to focus group participants, Berkeley residents feel it is difficult to be healthy. During their sessions, they identified the specific reasons that keep them from experiencing optimal health in Berkeley. Most of these barriers are not mutually exclusive. Several are inter-related, so if a person or community is struggling with one type of barrier, chances are they are experiencing others on this list.

- **Economy** was identified as the largest barrier. The cost of living in Berkeley is too high. Members from the LatinX community reported feeling as though they are getting “pushed out” of the community. Basic needs are expensive, i.e. healthcare, food, medication, transportation etc. Members from the LGBTQIA community, reported needing to work more than one job in order to survive and keep their head above water. Overall, community members are just trying to survive. Without money, they cannot access the services they need to be healthy.
- **Food Security** is another large threat to being healthy. The majority of members from the LatinX community reported that the convenience of unhealthy food options, specifically fast food, was a threat to their health. In some areas of Berkeley, there is limited access to healthy food options and can be extremely expensive to purchase. Members from the Older Adult community also reported challenges getting access to affordable fruits and vegetables. For some their preferred grocery locations are too far away. The bus shuttles are not frequent enough, and therefore, the groceries don’t stay fresh.
- Participants from the Homeless and LGBTQIA community identified **stress** as a serious barrier to their health. With the stresses of everyday life, people get too busy to take care of themselves. Many people are stressed and barely getting by from one day to the next. They reported feeling mentally and emotionally exhausted.

### Theme Definitions

**Economy** refers to the high cost of living in Berkeley. Income is not high enough to make ends meet.

**Food Security** includes the lack of accessible healthy food options and the convenience of fast/junk food. Grocery stores are too far away, healthier food options cost more money, and take time to prepare.

**Time** is a larger barrier for some community members. Many community members work all day or work multiple jobs and have less time to take care of themselves. Going to the gym not only takes money but time. Preparing healthier meals also take time.

**Stress** refers to a person’s response to demands or threats. Stress is often linked with mental health challenges such as depression or anxiety.

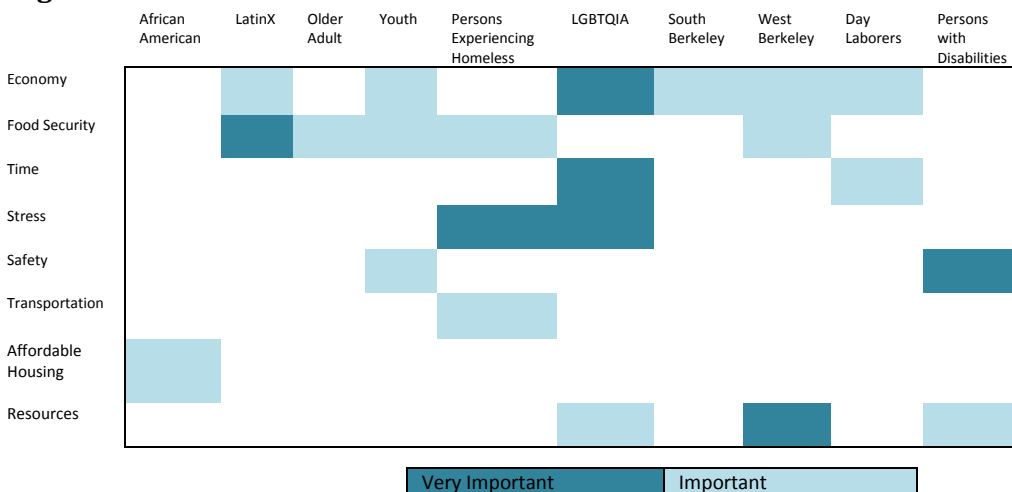
**Safety** refers to unsafe spaces where violence ensues as well as unsafe places to walk due to poorly maintained roads and walking spaces.

**Transportation** refers to barriers when community members are unable to get where they need to go. Shuttles don’t come often enough, and some community members cannot afford public transportation. That requires some people to walk or find other means for transportation.

**Affordable Housing** refers to the lack of affordable housing for community members. Rent is too high, and people are feeling like they are getting pushed out of the community. “Low income” housing is not at a low-income level.

**Resources** refers to the lack of resources and information available to community members.

Figure 2.



### Voices from the Community

*“Rent is ridiculous!”*  
- African American focus group participant

*“I work hard, I work every day and there is people that don’t work at all and have access to every service available but because I work, and my wife too, we don’t qualify for anything.”*  
- LatinX focus group participant.

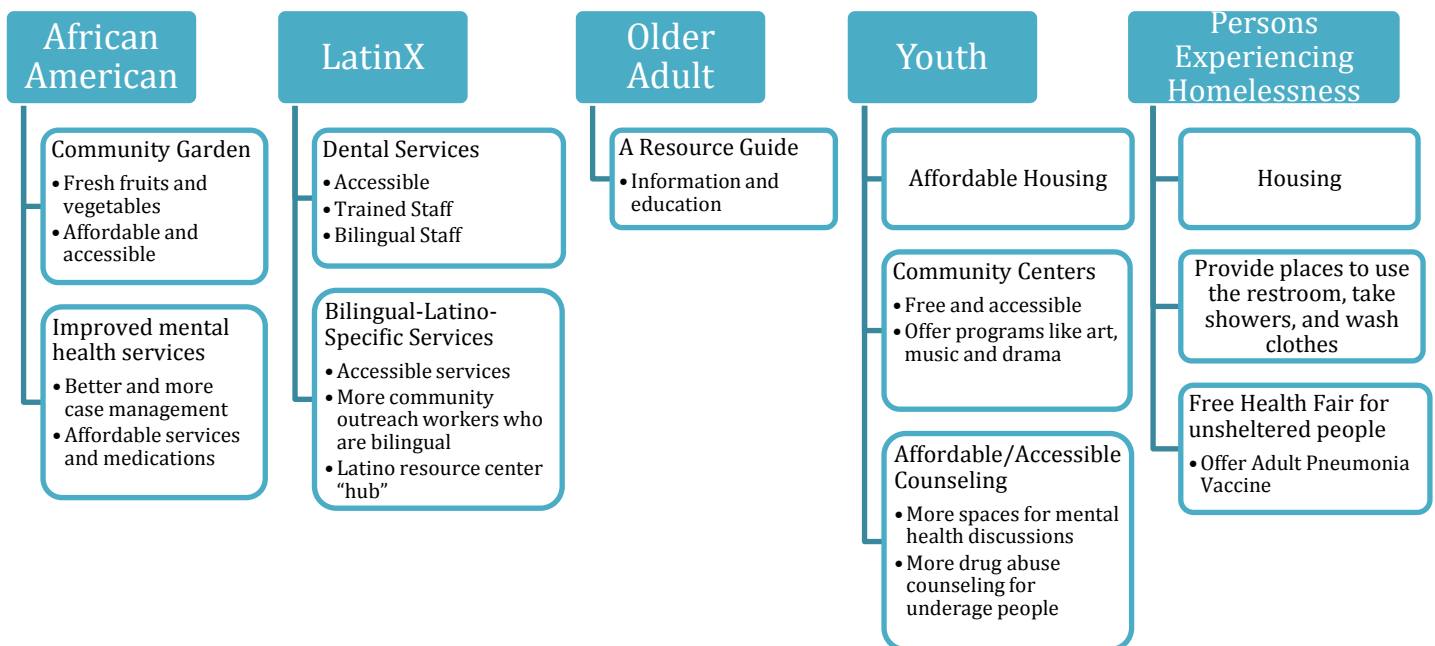
*“Being out here in the street for one. That’s really hard. Depression comes from being out here...leads to major stress.”*  
- Person experiencing homelessness focus group participant

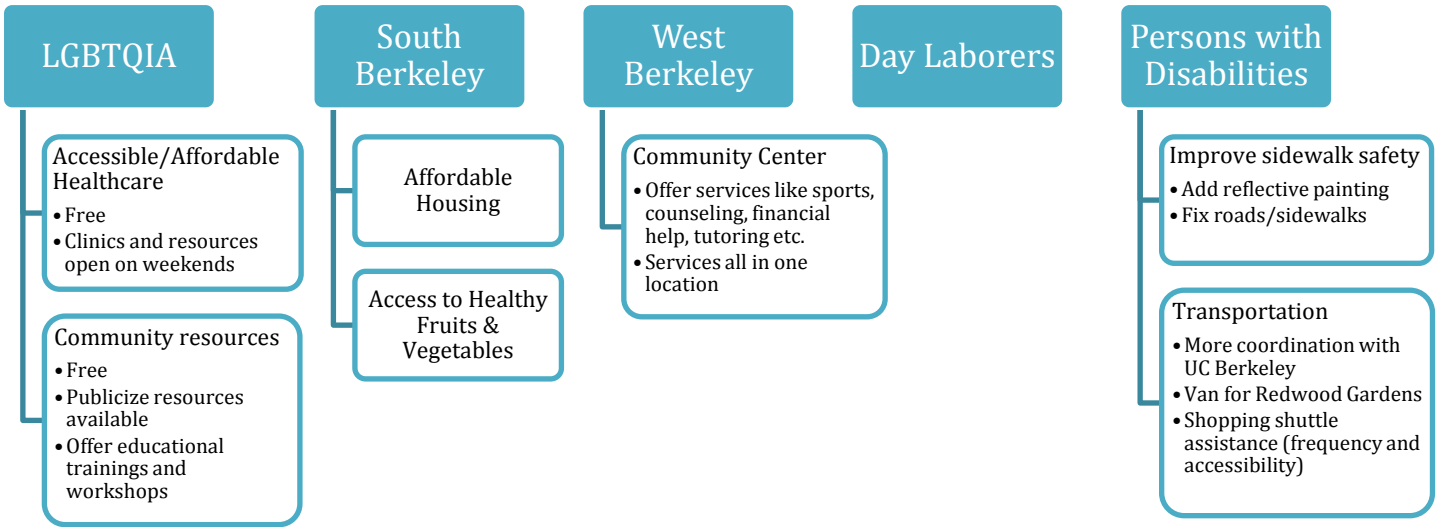
## Suggestions for Improving Health in Berkeley

Although respondents reported significant barriers to being healthy in Berkeley, many also suggested ways to improve health in Berkeley communities.

- A common suggestion from both the Youth and West Berkeley community was to create a **community center**. Community members want a center that is free, accessible, and offers fun programs and needed services all in one location.
- Members from the African American community and South Berkeley suggested more **affordable and accessible access to fresh fruits and vegetables**. The African American community want a community garden.
- A recurring barrier identified by several communities was the **lack of information and resources available**. Members from the Older Adult community suggested creating a resource guide, so the entire community has access to what is current and available.
- **Road safety** is a large concern among individuals with disabilities. Community members suggested fixing the roads and sidewalks in order to make it safer for travel. They also recommend adding reflective painting to the sidewalks.

Figure 3.





## Top Health Needs in Berkeley

Community participants were asked to identify the top health concerns in their community. On the survey, respondents were given 18 options from which to select and chose their top three answers. Focus group participants identified up to two top health concerns during their session. All responses from the focus groups were coded and themed.

- **Mental health** was the top choice across the majority of the community groups. When participants were talking about **mental health**, they were referring primarily to **depression and/or anxiety**, not necessarily severe mental illness (SMI).
- **Diabetes, substance abuse/tobacco use, and violence/crime** were the other top needs identified by the majority of community members.

**Figure 4.**



*[Mental Health] "That's the first thing!"*  
 – Person experiencing homelessness focus group participant

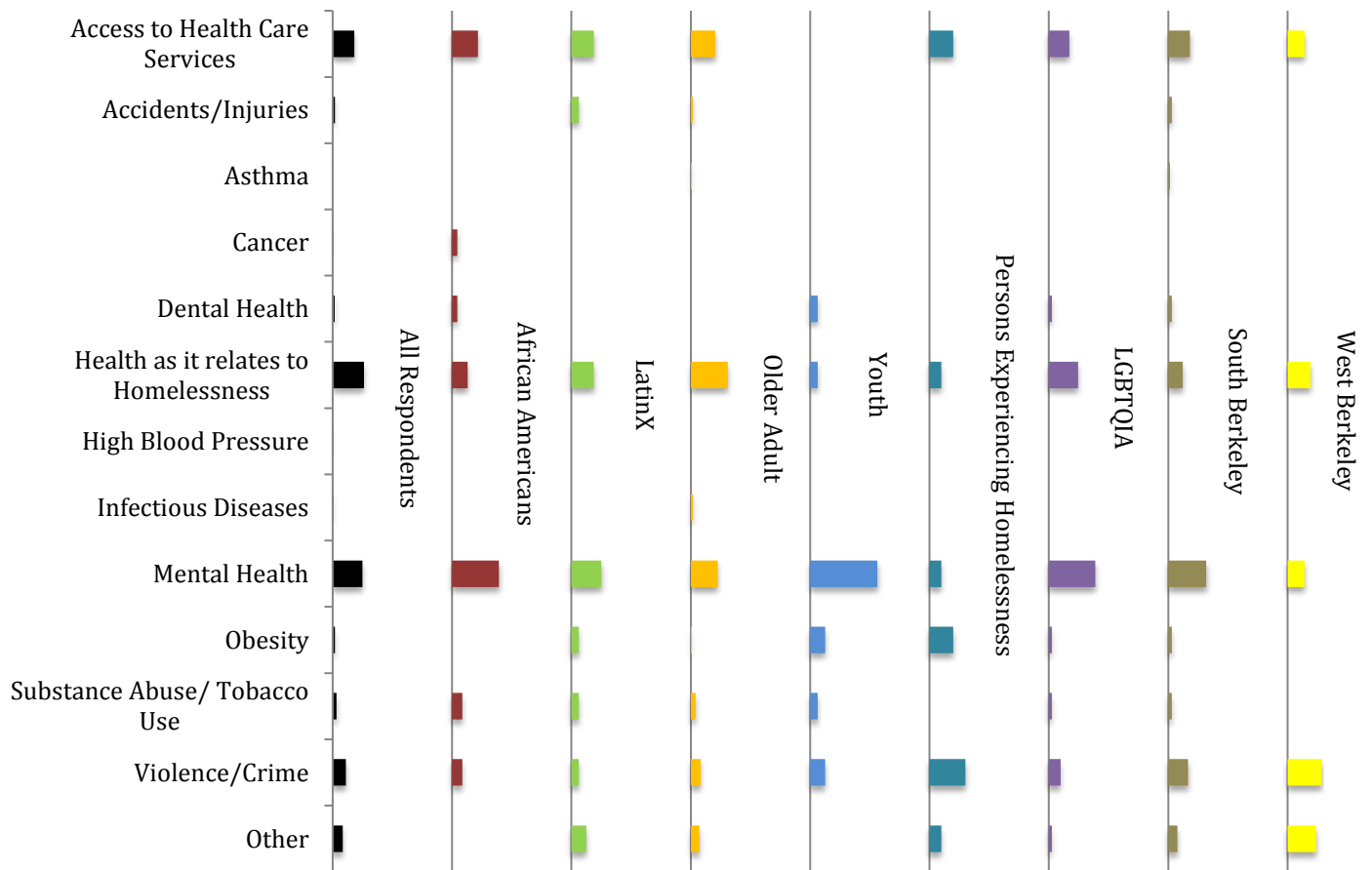
<sup>3</sup> Person with Disabilities and Day Laborers were not identified in the survey.

## Top Problems for City to Address

Survey respondents were asked to choose one health problem that they would want the City to work on the most.

- Overall, respondents reported that Health as it relates to Homelessness (26%) to be the top item the City of Berkeley should focus on, followed closely by Mental Health (25%), and Access to Health Care Services (18%).
- Health as it relates to homelessness was most important among the Older Adult (31%) population.
- Mental health was reported highest among the Youth (56%), followed by African Americans and LGBTQIA at 39%.
- Access to healthcare was reported the highest among African Americans (22%) and Older Adult (21%).
- Violence/Crime was reported as the top problem for the City to address by the Homeless (30%) and West Berkeley community (29%).

**Figure 5. Top Problem for City of Berkeley to Address (n=394)**

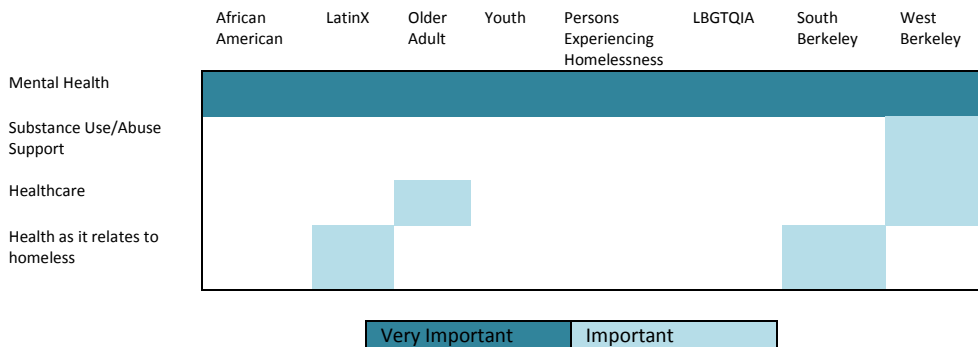


## Top Services for Public Health Clinic to Provide

Survey respondents were asked to suggest two services they would like to see the Berkeley Public Health Clinic provide. All responses were coded and themed.

- **Mental health** was the top service identified by each vulnerable population. This is corroborated with focus groups findings. This data suggests that **mental health** is the top need of Berkeley communities and should be a priority of the City of Berkeley Public Health Division.
- Members from the LatinX and South Berkeley communities suggested that Clinic provide **health services as it relates to the homeless**.
- Members from the Older Adult and West Berkeley communities recommended that the Berkeley Public Health Clinic provide **Healthcare** services.

Figure 6.



### Theme Definitions

**Mental Health** includes services such as case management, counseling, support groups, and assessments etc.

**Substance Use/Abuse Support** includes services such as harm reduction, rehabilitation, supervised drug consumption spaces, therapy etc.

**Healthcare** refers to all general health services. Includes anything from health screenings to dental, drop-in services to flu and vaccines etc.

**Health as it relates to homeless** refers to all health-related services specifically for the homeless population. This includes services such as mental health, support, increased access etc.

## Community Perception of City Strategies to Address Health Needs

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During the focus groups, community members were asked to reflect on the most health issues they see or experience in their communities and families. The majority of participants across all of the vulnerable communities indicated that very little was being done to address those issues in the community.

***“Nothing!”***

- Youth focus group participant

***“To be honest, nothing is being done.”***

- West Berkeley focus group participant

***“We are not being heard”***

- LatinX focus group participant

***“I don’t see much being done. And when it’s done, it’s little or just for a while, and then it stops happening. That makes problems come back.”***

- Day Laborer focus group participant

***“There seems to be a need for division in this community, homeless people here and rich people there. So, I’m not a part of the community, I’m treated like I don’t exist.”***

- Person experiencing homelessness focus group participant

***“Not much at all until someone gets very sick which is usually too late. There needs to be more resources available and more awareness and education.”***

- LGBTQIA focus group participant

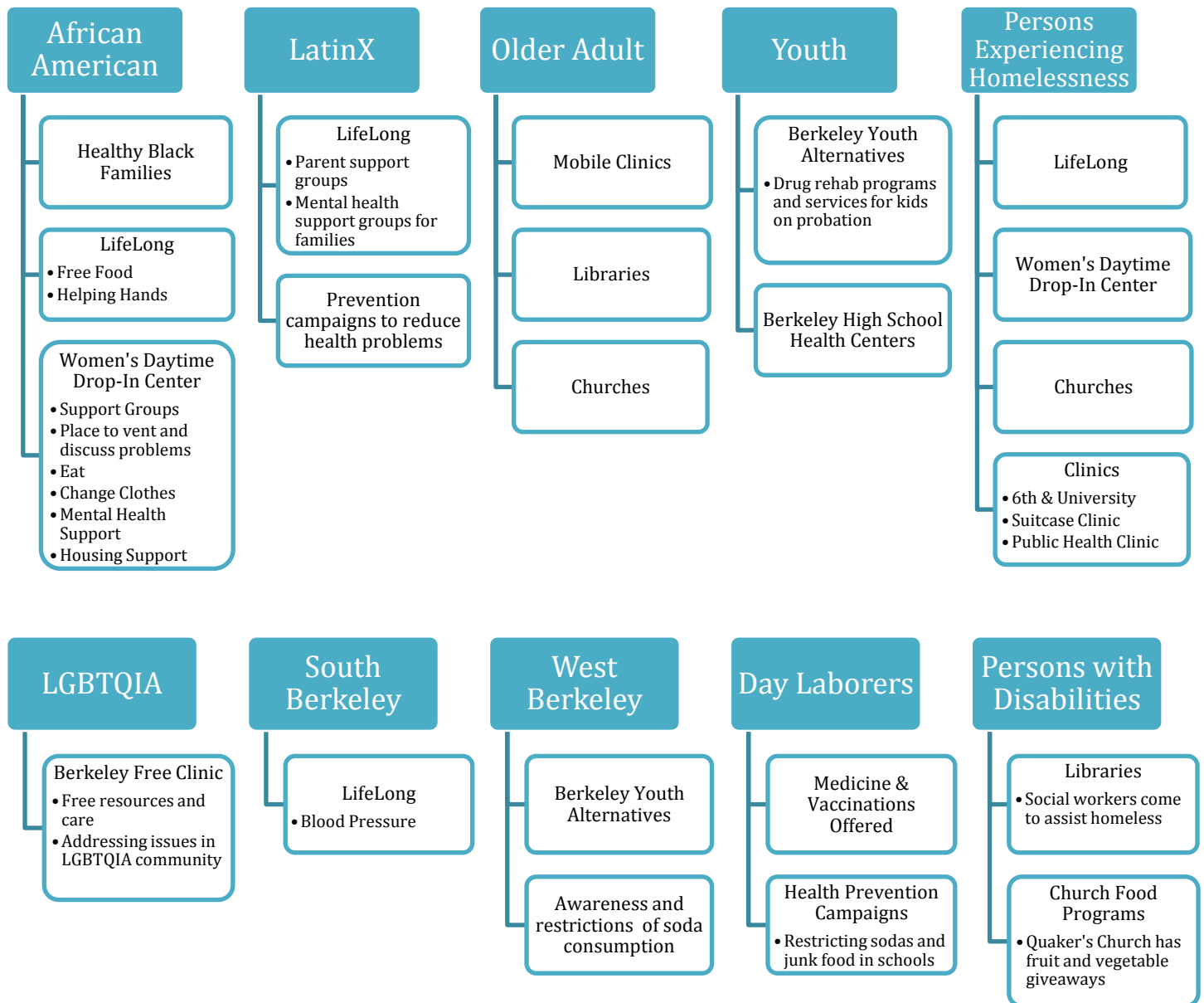


## Current Community Resources

Although the overall perception from community members is that very little or nothing is being done to address the health concerns that they identified, some focus group participants were able to identify current resources in the community, if not specific strategies.

- **LifeLong Medical Care** provide many services. Members from the African American, LatinX, Homeless, and South Berkeley communities reported using them.
- Members from the African American and Homeless communities also report accessing services from the **Women’s Daytime Drop-In Center**.
- Other community resources reported by focus group participants include **clinics, libraries** and **churches**.

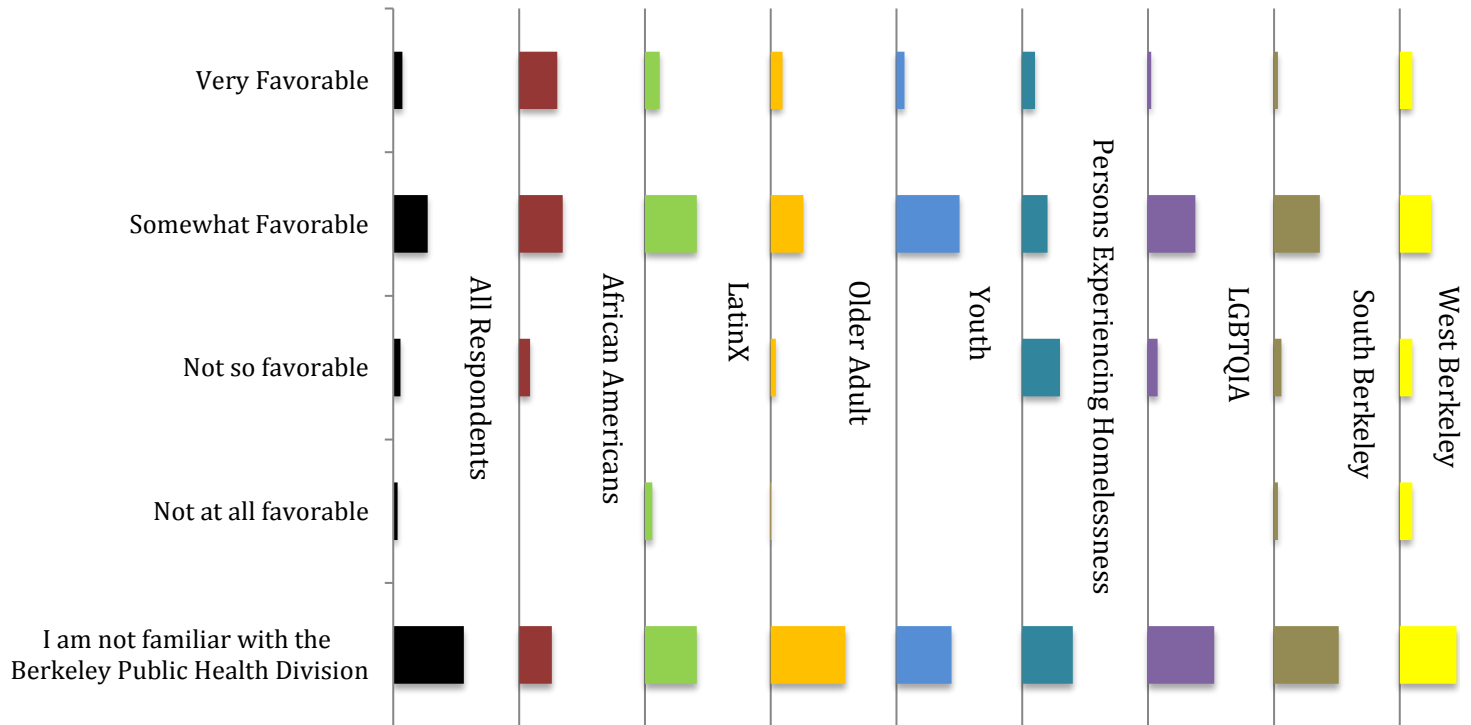
Figure 7.



## Community Opinions of the City of Berkeley Public Health Division

- Survey respondents were asked to specify their opinion of the City of Berkeley Public Health Division.
- Overall, most respondents were not familiar with the Berkeley Public Health Division (56%). Twenty-six percent of all respondents reported having a somewhat favorable opinion of the Berkeley Public Health Division.
- Across all the vulnerable populations, Older Adults (59%) reported being the least familiar with the Berkeley Public Health Division.
- African Americans (30%) reported having the most favorable opinion.
- Overall, very few (9%) respondents had non-favorable opinions of the City of Berkeley Public Health Division. However, 30% of respondents from the Homeless population reported having a not so favorable opinion.

**Figure 8. Opinion of Berkeley Public Health Division (n=383)**

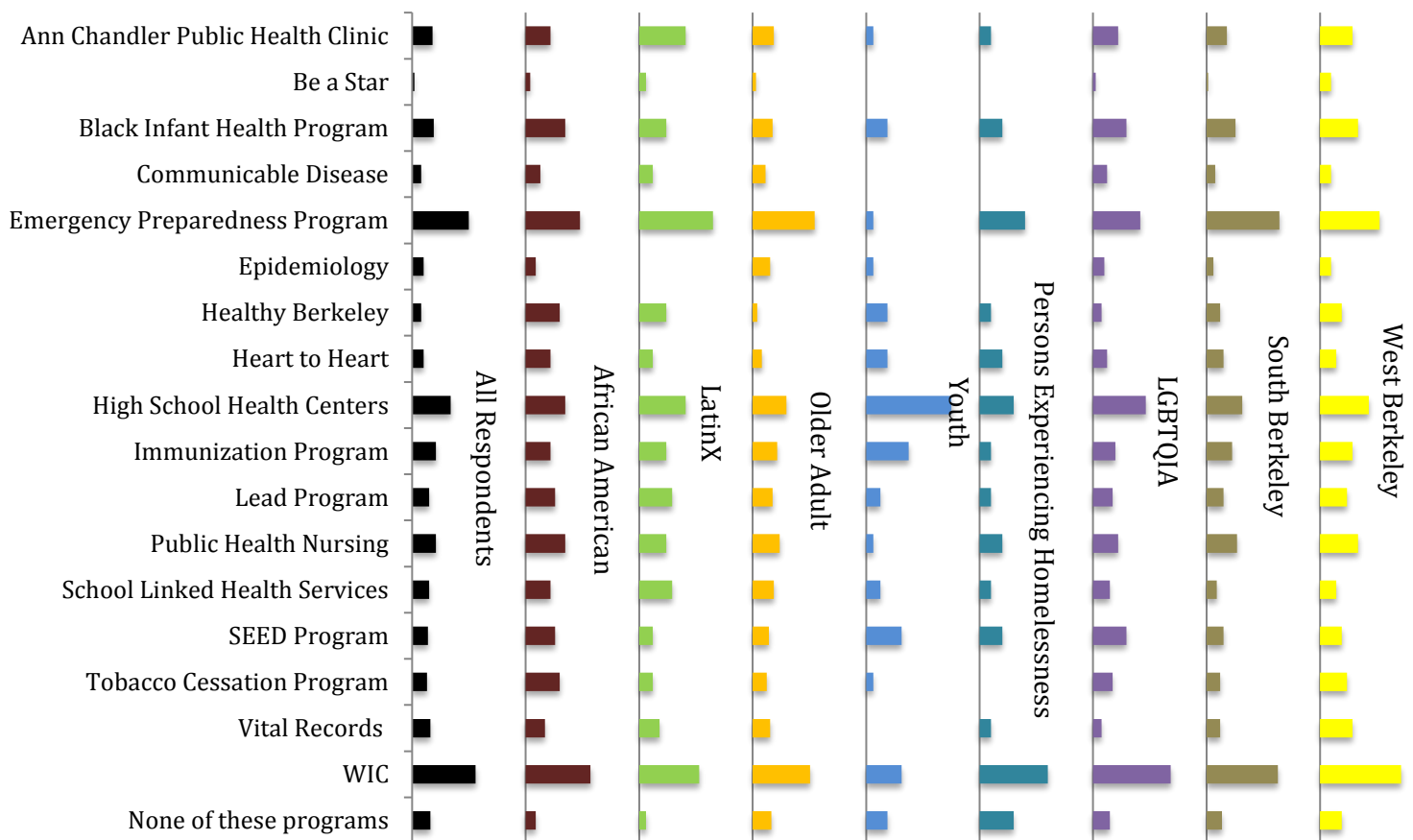


## Community Familiarity of the Berkeley Public Health Division’s Services

Survey respondents were asked to indicate which health and wellness services/programs they had heard of. They were given a list of 18 services/programs to choose from and check all that apply.

- Across most vulnerable communities, respondents identified the WIC Program (56%) and Emergency Preparedness (50%) as the top health and wellness services/programs they were most familiar with, followed by High School Health Centers (34%).
- Seventy-five percent of Youth reported being most familiar with High School Health Centers. This is not surprising, as these health centers are located on school campuses.
- Thirty-percent of respondents from the homeless population reported not knowing any of the programs or services. During the focus groups, homeless participants reported feeling disconnected from the community, and it is possible that this has contributed to their lack information regarding services and programs available.
- Members from the LatinX community were the most familiar with the Public Health Clinic (41%) followed by community members from West Berkeley (29%).

**Figure 9. Familiarity with Health and Wellness Services (n=397)**



## Greatest Health Impacts on Communities Served

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On October 30, 2018, a total of 31 community partners attended the roundtable event hosted by City of Berkeley, Public Health Division. During the event, partners reviewed findings from the Health Status Report and prioritized the top health needs based on the report. Using a voting system, they identified the six most pressing concerns to focus on for the next three years; housing, mental health, poverty, access to care, racism/ism, and social isolation, see Figure 14.

In addition to the most pressing concerns, the community partners also identified the health needs and/or inequities that have the greatest impact on communities/clients that they serve, including Economic Factors, Social and Environmental Factors. They brainstormed a list of communities they primarily serve and then used a voting system to identify the most pressing health impacts.

**Mental health** was identified as the greatest health impact on communities served by partners.

Additional health impacts identified were:

- Housing
- Access to care
- Systemic/Institutional Racism

During the event, each of the partners were broken into small groups and used these identified health impacts as the basis of their discussion for the remainder of the session.

## Partnership Opportunities for a Healthier Community

During the roundtable sessions, partners brainstormed opportunities for Berkeley residents to have a healthier community. They used the areas identified as the most pressing concerns to target their discussion. Within groups, partners assessed what is currently being done in these particular areas, what needs more attention, and suggested potential ideas or strategies for partnership.

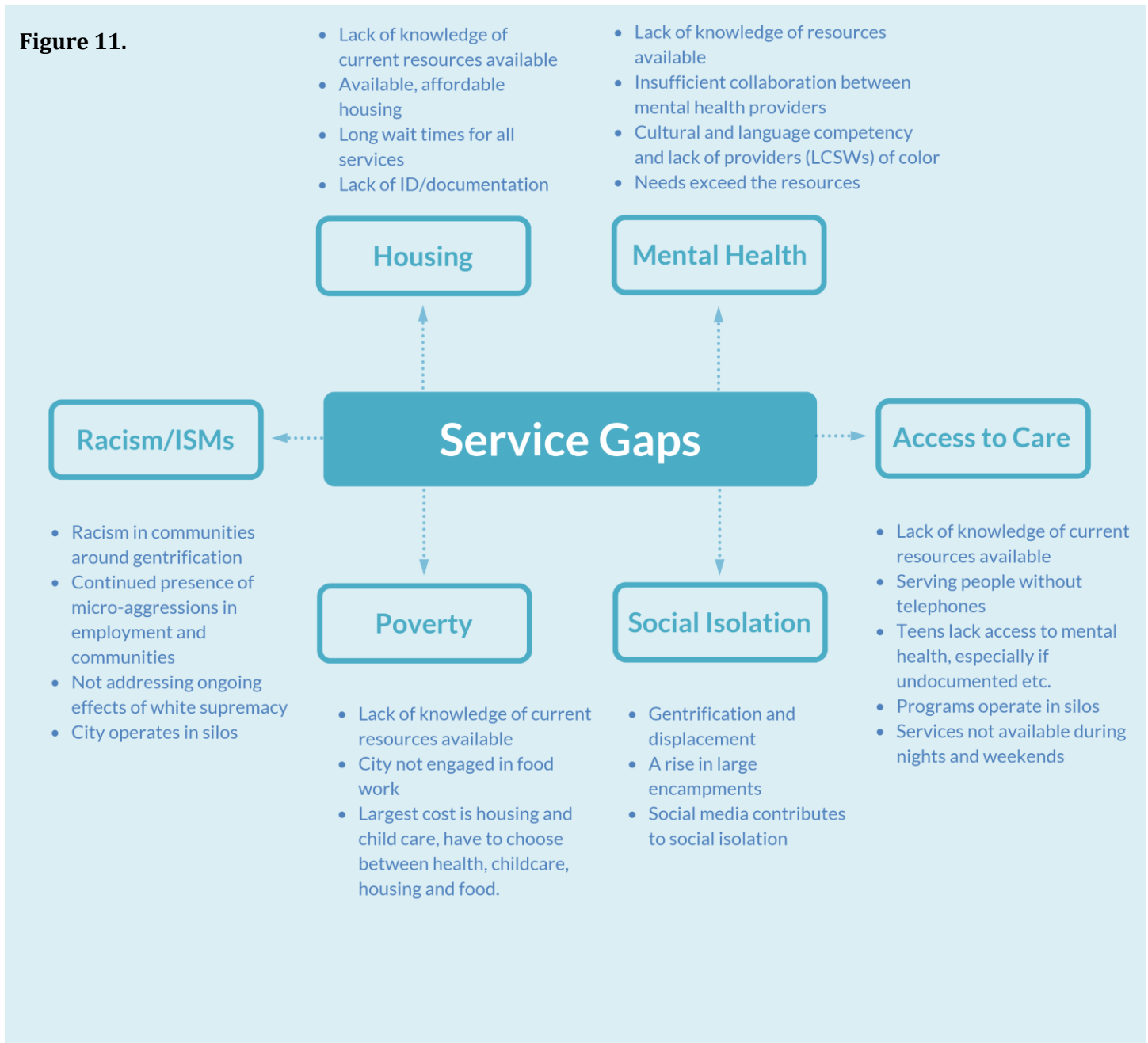
### Community Resources & Strengths

Partners identified existing community resources and strengths that could be leveraged to address the economic, social, and environmental factors that contribute to health inequities that their communities and clients face. The following is a list of some examples brainstormed by the groups, see Figure 10.



## Service Gaps

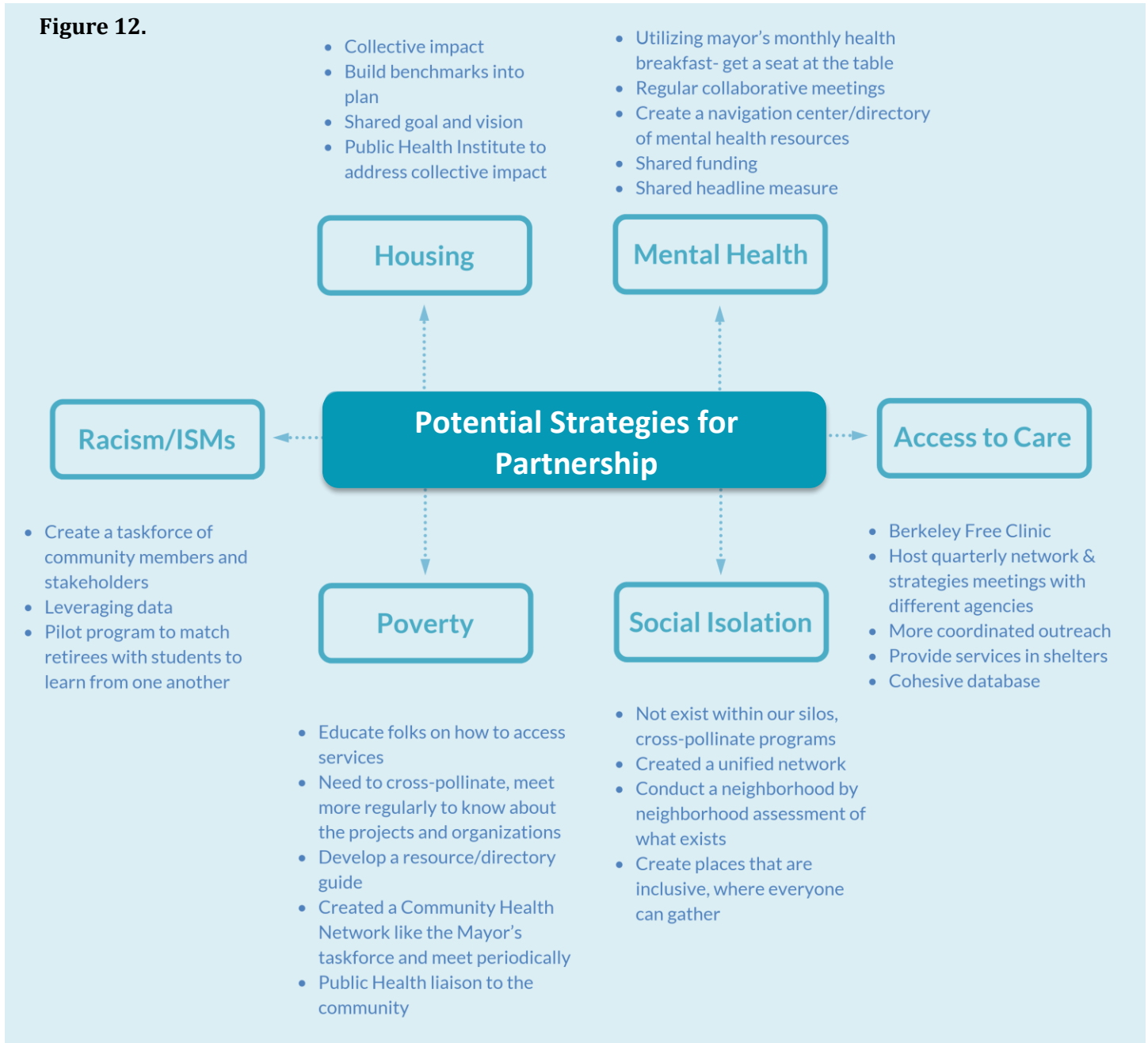
Each of the groups was tasked with identifying gaps and areas that need more attention to support communities and clients toward achieving optimal health and their ability to thrive. The following is a list of some examples brainstormed by the groups, see figure 11. **Lack of knowledge of current resources available** was a recurring theme discussed in many groups.



## Potential Strategies for Partnerships

The last segment of the roundtable event was spent discussing possible collaborations or strategies to guide partnerships. The following is a list of some examples brainstormed by the groups, see figure 12. More **collaboration** and **networking** were recurring themes across groups. Providers were very interested in meeting more frequently and coordinating efforts.

Figure 12.





# Health Status Report

The City of Berkeley released the Health Status Report (HSR) in September 2018, see Appendix 4. The Health Status Report shows the most current health concerns and trends. It also lays the groundwork from which the Public Health Division, HHCS, the City, and the Berkeley community will identify priorities, develop a strategic plan, and implement tailored interventions to improve community health.

According to the Health Status Report, the overall health of the City of Berkeley is improving, however, health inequities still persist. There are communities within the City of Berkeley that do not enjoy the benefit of improved health due to the impacts of systemic and historical practices and policies.

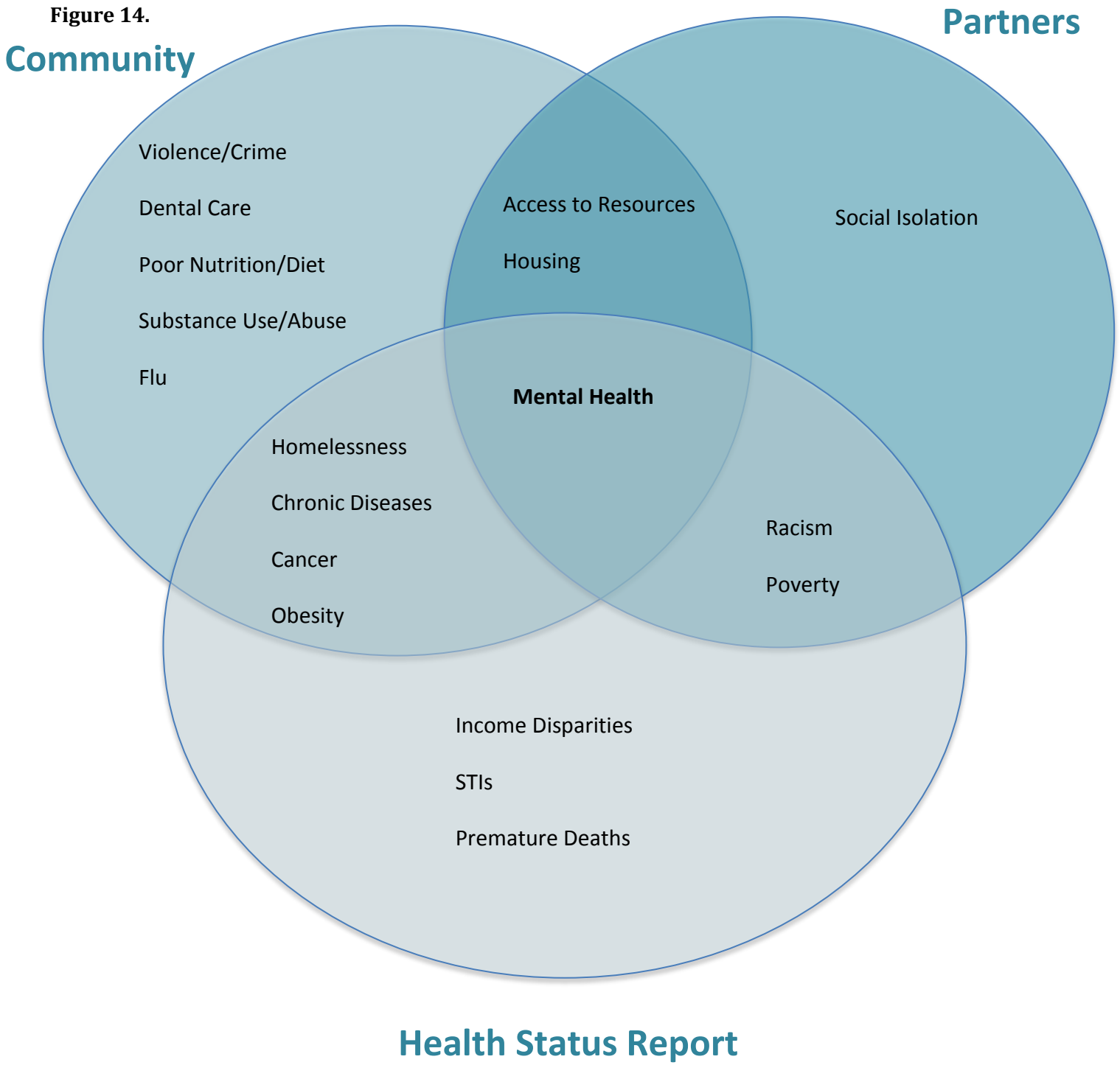
A group from City of Berkeley Public Health’s Division prioritized the key findings from the report.

Figure 13.



## Berkeley's Top Health Needs Identified

After reviewing all of the top health needs identified from the three different sources (community respondents, community partners, and the Health Status Report), **mental health** was identified as the priority. It is important to note, that the Venn Diagram below contains just the top needs. Relationships or topics that are not represented here does not indicate they were not discussed among the three sources.



## Discussion and Recommendations

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The findings from this assessment have demonstrated the many factors that have influenced the health of the Berkeley community. Specifically, mental health was identified by community members and partners as the biggest challenge facing Berkeley. The Berkeley Public Health Division intends to develop a three-year strategic plan that includes key priority areas and impact objectives for each priority area. The strategic plan is expected to be developed by June 2019. It is our recommendation that mental health is included in the strategic plan as a priority.

We suggest that the findings from this Community Health Assessment and the Health Status Report be used to drive the direction and implementation of the strategic plan. The overarching goal of the assessment was to inform and engage local decision-makers, key stakeholders, and the community-at-large in collaborative efforts to improve the health and well-being of all those that live in Berkeley. Communication and collaboration were key themes throughout this information gathering process, as demonstrated by the following points:

- Focus group and interview participants requested that the results from the community engagement process be shared with them.
- The community engagement process demonstrated that there is a lack of information and knowledge regarding resources available.
- The majority of focus group participants reported that “nothing” was being done to address their most pressing health needs or that they could not see anything being done.
- Community partners also requested continuing opportunities to coordinate, collaborate, and share information.

Based on this major theme, it is crucial for the Public Health Division to develop a communication plan that conveys and promotes transparency of the Division’s priorities, the action steps proposed, and the progress towards their goals, while opening opportunities for continuous and consistent engagement with community members and partners.

It is also recommended that the strategic plan include both an implementation and performance management framework. An implementation plan will strategize and articulate how the Berkeley Public Health Division plans to address the health needs identified in the Community Health Assessment and Health Status Report. A performance management framework will allow the Berkeley Public Health Division to track their performance over time and inform quality improvement efforts. We suggest measuring progress annually to assess if the Division’s efforts are on track to meeting their objectives and also allow the space to make adjustments as needed.

Another key to success for Berkeley is community capacity building and strengthening partnerships. There appeared to be a consensus across partners that the health in Berkeley is the collective responsibility of many entities throughout Berkeley, even if individual partner roles and contributions were not entirely clear. At the conclusion of this community and partner engagement work, there was also agreement across the Division and partners alike, that success of the strategic plan depends on a collaborative approach with other City Departments, community partners, and community members. As many of the top health needs identified in this assessment do not fall neatly within the direct scope of the 10 essential public health services, i.e. mental health, homelessness, housing etc., the Berkeley Public Health Division must consider forging new and strengthening existing partnerships to adequately address the existing and emerging health needs of the Berkeley community.

## Methodological Limitations

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Although the data collected has helped lay the foundation for the strategic plan, it is important to note the following limitations of surveys and focus groups:

1. The number of respondents for this survey (n=378) is a small sample of Berkeley residents and may not be representative of the entire Berkeley population. Also, the small sample size limits the ability to determine whether differences between different vulnerable communities are statistically significant.
2. There were a number of similar or repeat answers in the open-ended section of the survey tool. This might suggest that some respondents completed their surveys in a group setting and may have shared answers. It is possible that some of the answers to the open-ended questions reflected someone else's ideas and not necessarily the respondent's.
3. The qualitative data from the focus group and open-ended survey responses are subject to interpretation by the evaluators. Additionally, the participants may hold views that are different from those who did not attend the focus group.
4. The roundtables, focus groups, and interviews were conducted by different facilitators with different scribes and note takers. The consistency and quality across the data is not be the same and may have impacted how the data was interpreted.
5. Due to significant time constraints, the evaluator was unable to test for interrater reliability, and therefore, could not account for personal biases which may influence the findings.
6. Lastly, due to significant time constraints, the evaluator was unable to test the validity of the qualitative data using respondent validation. This process involves testing the initial results with participants to see if they are still authentic prior to the final analysis.

## Appendix 1. Description of Respondents

### Demographics

Note: This section only includes the number and percent of respondents that took the survey and participated in the focus groups/interviews.

Table 1.

Gender n=536	Percent
Female	66%
Male	33%
Transgender	1%
Other	1%

The majority (66%) of survey respondents were female.  
See Table 1.

Table 2.

Race/Ethnicity n=487	Percent
White or Caucasian	54%
Black or African American	19%
Asian or Asian American	5%
American Indian or Alaska Native	1%
Native Hawaiian or Pacific Islander	0%
More than one race/ethnicity	15%
Other	6%

The majority (54%) of survey respondents were White or Caucasian. Black/African Americans (19%) were the second largest race/ethnic group.  
See Table 2.

Table 3.

Hispanic, Latino, or Spanish Origin n=480	Percent
Yes	16%
No	84%

Only 5% of survey respondents were of Hispanic, Latino, or Spanish Origin.  
See Table 3.

Table 4.

Age n=524	Percent
10 to 14	2%
15 to 24	10%
25 to 44	27%
45 to 64	34%
65 plus	28%

The majority of participants were between ages 45-65 (62%).  
See Table 4.

Table 5.

Neighborhood n=285	Percent
Central	19%
Greater Downtown	15%
North East	27%
South	24%
South East	8%
West	7%

Of just survey respondents, the majority of participants lived in North East (27%) and South Berkeley (24%). This was assessed using Geo-Coding.  
See Table 5.



Table 6.

Number of Representatives from Vulnerable Communities	Focus Group	Survey
<b>African American</b>	32	23
<b>LatinX</b>	31	17
<b>Persons Experiencing Homelessness</b>	21	10
<b>Older Adult</b>	38	97
<b>Youth</b>	29	16
<b>LGBTQIA</b>	28	16
<b>Persons with Disabilities</b>	14	
<b>Day Laborers</b>	18	
<b>South Berkeley</b>	27	67
<b>West Berkeley</b>	15	21

The majority of community participants were from the Older Adult (n=135) population, followed by representatives from South Berkeley (n=94).

Only participants from the Disabled and Day Laborer populations were represented in the focus groups. See Table 6.

Table 7. Complete List of Vulnerable Populations Reached

Date	Data Collection Method	Data Collection Site	African American	LatinX	Older Adult	Youth	Persons Experiencing Homelessness	LGBTQI	Day Laborer	Persons with Disabilities	South Berkeley	West Berkeley	Low Income	Immigrant	# of participants
10/17/18	Focus Group	Berkeley Black Infant Health	11												11
10/18/18	Focus Group	South Berkeley Senior Center			10										10
10/19/18	Focus Group	South Berkeley Senior Center			9										9
10/29/18	Focus Group	North Berkeley Senior Center			5										5
10/19/18	Focus Group	Helios Apartments			9					X					9
10/24/18	Focus Group	Redwood Gardens Apts			5					X					5
10/25/18	Focus Group	Healthy Black Families- Sisters Together Empowering Peers	11												11
10/23/18	Focus Group	Women's Daytime Drop-In Center					7								7
10/23/18	Focus Group	H2H Health Advocates									8				8
11/2/18	Focus Group	Otis Street- Spanish speaking		10											10
10/29/18	Focus Group	BUSD- Office of Family Engagement and Equity				5									5
11/9/18	Focus Group	MCI - staff		6											6
11/9/18	Focus Group	Multi Cultural Institute (MCI) - Youth				17									17
11/9/18	Focus Group	MCI - Day Laborers, Spanish Speaking		X					18						18
10/25/18	Focus Group	Berkeley Youth Alternatives (BYA) - Adults										9			9
10/23/18	Focus Group	Berkeley Youth Alternatives (BYA)- Youth				X						6			6
11/7/18	Focus Group	Berkeley High School Youth				6									6
11/8/18	Focus Group	Lifelong WBFP - Spanish speaking		3											3
10/22/18	Focus Group	McGee Ave Baptist Church	10		X						X				10
11/20/18	Focus Group	Homeless /Civic Center Park					14								14
12/2/18	Interviews	Berkeley Free Clinic						28							28
	Survey	Survey Monkey	18	17	97	16	10	41					79	25	398
<b>Total</b>															<b>510</b>

Please note: An "X" refers to additional populations that were reached during a particular focus group.



## Appendix 2. Focus Group Questions

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1. When you think about “good health,” what comes to mind?
  - a. Probe: What does it look like?
  - b. Probe: What would you experience? Not experience?
  
2. What is your definition of a healthy community?
  - a. Probe: What are the strengths of a healthy community?
  - b. Probe: What would community members experience? Not experience?
  
3. What are the most common health issues you experience or see in your family or your community?
  - a. Probe: I heard you say that the most pressing health concerns in your community are \_\_\_\_\_ (*list what you heard them say*) Of these, if you had to pick 1 or 2 top health concerns, what would those be?
  
4. Thinking about the health issues you mentioned, what is currently being done to address those issues in the community?
  - a. Probe: What support systems do you have or need?
  - b. Probe: What programs, services, or organizations are working on the top health issues facing your community?
  - c. Probe: Describe an example of something being done in your community to tackle the top health issues in your community.
  
5. What makes it harder to be healthy?
  - a. Probe: Are there significant barriers to being healthy or making healthy choices in your community? What are those barriers?
  - b. Probe: What programs, services, or policies are missing in your community that would make it easier to be healthy?
  - c. Probe: Do people in your community experience barriers in accessing health care services? What are those barriers?
  - d. Probe: What about dental care? Are there any dental needs that you have or people in your community have that aren't being taken care of?
  
6. Thinking about the future, if you could do one thing to improve the health of people in your community, what would it be?
  - a. Probe: If you could change or start a new program, service, or policy, what would it be?
  - b. Probe: What organizations are / who is already leading this effort?
  
7. What are best ways to communicate, share back with you and continue to be engaged with community, with you?

## Appendix 3. Survey Tool



### What Does A Healthy Community Mean to You?

**The City of Berkeley Public Health Division is planning on how to support the future health of the Berkeley community. Please assist us by completing this brief survey. Your opinion makes a difference!**

1. What three words (or short phrases) would you use to describe a healthy community?

Word 1

Word 2

Word 3

2. Do you consider the City of Berkeley to be a healthy community?

Yes

No

I Don't Know

\* 3. What do you think are the top three (3) health challenges facing the Berkeley community?

Access to Health Care Services

Mental Health

Accidents/Injuries

Obesity

Asthma

Diabetes

Cancer

Dental Health

Infectious Diseases (e.g., measles, chicken pox, etc.)

Substance Abuse/Tobacco Use

High Blood Pressure

Sexually Transmitted Infections (STIs)

Heart Disease & Stroke

Teen Pregnancy

Health as it relates to Homelessness

Violence / Crime

Maternal and Infant Health

Other (please specify)

31

4. If you could choose one health problem that you want the City to work on the most, what would it be?

- Access to Health Care Services
- Accidents/ Injuries
- Asthma
- Cancer
- Infectious Diseases (e.g., measles, chicken pox, etc.)
- High Blood Pressure
- Heart Disease & Stroke
- Health as it relates to Homelessness
- Maternal and Infant Health
- Other (please specify)
- Mental Health
- Obesity
- Diabetes
- Dental Health
- Substance Abuse/Tobacco Use
- Sexually Transmitted Infections (STDs)
- Teen Pregnancy
- Violence / Crime



## 2018 Berkeley Community Health Survey

### Berkeley Public Health Services

5. What is your opinion of the City of Berkeley Public Health Division?

- Very favorable
- Somewhat favorable
- Not so favorable
- Not at all favorable
- I am not familiar with the Berkeley Public Health Division

6. Which of the following health and wellness services or programs have you heard of? (Check all that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Ann Chandler Public Health Clinic | <input type="checkbox"/> Tobacco Cessation Program                       |
| <input type="checkbox"/> Communicable Disease              | <input type="checkbox"/> WIC (Women, Infant, Children Nutrition Program) |
| <input type="checkbox"/> Be a Star                         | <input type="checkbox"/> Epidemiology                                    |
| <input type="checkbox"/> Black Infant Health Program       | <input type="checkbox"/> Healthy Berkeley                                |
| <input type="checkbox"/> Emergency Preparedness Program    | <input type="checkbox"/> Heart to Heart                                  |
| <input type="checkbox"/> Public Health Nursing             | <input type="checkbox"/> School Linked Health Services                   |
| <input type="checkbox"/> High School Health Centers        | <input type="checkbox"/> SEED Program                                    |
| <input type="checkbox"/> Immunization Program              | <input type="checkbox"/> Vital Records                                   |
| <input type="checkbox"/> Lead Program                      | <input type="checkbox"/> None of these programs                          |



2018 Berkeley Community Health Survey

7. What is your opinion of the City of Berkeley Public Health Clinic (Ann Chandler Public Health Clinic)?

- |  |  |
|--|--|
| <input type="radio"/> Very Favorable     | <input type="radio"/> Not at all Favorable   |
| <input type="radio"/> Somewhat Favorable | <input type="radio"/> Did not know there was a City of Berkeley Public Health Clinic |
| <input type="radio"/> Not So Favorable   |  |

8. What are two health services you would like to see the Public Health Clinic provide?

Service #1

Service #2



2018 Berkeley Community Health Survey

Tell Us a Little About Yourself

9. Please provide the closest street intersection to where you live (i.e. Milvia and Center) *Enter N/A if you do not live in the City of Berkeley*

10. What gender do you identify with?

- Female
- Male
- Other (please specify)
- Transgender
- Decline to answer

11. Are you of Hispanic, Latino, or Spanish origin?

- Yes
- No
- Decline to answer

12. How would you describe yourself?

- White or Caucasian
- Black or African American
- Asian or Asian American
- American Indian or Alaska Native
- Other (please specify)
- Native Hawaiian or other Pacific Islander
- More than one race/ethnicity
- Decline To Answer

13. What is your age group?

- 10-14
- 15-24
- 25-44
- 45-64
- 65+
- Decline to Answer

14. Do you identify with any of the following communities? (check as many as apply)

- Homeless
- LGBTI
- Immigrant
- Low Income
- Decline to Answer

15. Enter our raffle for a gift card for filling out this survey! Just enter below an email address or phone number where we can contact you if you are selected.

**Thank you for completing this survey! Your input is important for the Berkeley Public Health Division's planning efforts. For more information on the Public Health Division and its services please  
Go to our website.**

## Appendix 4. Health Status Report: Key Findings

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### Chapter 1: **Sociodemographic Characteristics and Social Determinants of Health**

- Since 2010, the African American population decreased from approximately 10% to 7% of the population, while other racial/ethnic groups have remained relatively stable.
- Income in Berkeley is unevenly distributed. Households with a White head of household are more likely to be higher income while those headed by African Americans are more likely to be below income. In other words, African Americans White households earned around 3 times more than African American households. Africans American households earn 33 cents for every dollar earned by a White household. All households have experienced an increase in median family
- Berkeley has the highest rate of homelessness per capita in the County. In Berkeley, there is one homeless person for every 124 people. This is in contrast to the County where there is one homeless person for every 300 people.
- Over 70% of residents have a bachelor, graduate, or professional degree, compared with 43% in Alameda County and 31% in California.
- The percentage of uninsured in Berkeley is lower (7%) than in Alameda County (10%). \*add in 85% of health is prevention

### Chapter 2: **Pregnancy and Birth**

- From 2004-2006 to 2014-2016 the overall teen birth rate in Berkeley decreased by 82%. African American teens have a birth rate 9 times higher than that of White teens and 2 times that of Latina teens.
- In 1993-1995, an African American woman in Berkeley was 5 times as likely as a White woman to have a low birth weight (LBW) infant. In 2014-2016, the risk of an African American mother having a LBW baby has fallen to 2.5 times higher than that of her White counterpart.
- African American babies, for the first time ever recorded, met the HP2020 objective for prematurity in 2014-2016 and LBW in 2008-2010

### Chapter 3: **Child and Adolescent Health**

- The number of asthma hospitalizations in Berkeley decreased from 122 in 2000 to 80 in 2014. Asthma hospitalization rates decreased for all racial/ethnic groups, including African Americans, but the disparity between Whites and African Americans persists.
- 49% of children in Berkeley belong to non-White racial/ethnic groups.
- 10% of children under the age of 18 in Berkeley live in poverty. 29% of African American children live in poverty, which is over 7 times the rate of poverty among White children and approximately 2–3 times the rate in any other group.
- Despite a decrease from 18.8% to 13.5% since 2010-2011, African Americans still have the highest high school drop-out rate in Berkeley.
- Berkeley children overall have a lower proportion of children who are overweight and obese (30.4%) compared to children in Alameda County (34.6%) and California (38.3%). African American children, however, have higher proportions of being overweight and obese in Berkeley as compared to Alameda County and California. Within Berkeley, African American and Latino populations have significantly higher proportions of overweight and obese children when compared to Asian and White children.
- The number of asthma hospitalizations in Berkeley decreased from 122 in 2000 to 80 in 2014. Asthma hospitalization rates decreased for all racial/ethnic groups, including African Americans, but the disparity between Whites and African Americans increased.
- The percentage of BUSD students who have been drunk or high on school property has steadily decreased for all grade levels over the past six years.
- Mental health hospitalizations in Berkeley decreased from 490 in 2008-2010 to 196 in 2012-2014. Over 50% of the hospitalizations are related to episodes of depression.
- Overall Chlamydia and Gonorrhea rates are higher in Berkeley than in Alameda County and California. However, among youth 15-19 year olds in Berkeley, rates are lower than Alameda County and California.

### Chapter 4: **Adult Health**

- Approximately 7.6% of Berkeley residents were smokers in 2014, which was a substantial decrease from 11.5% in 2012.
- In 2014, 15.7% of Berkeley adults were categorized as obese based on BMI, and those who are African American or Latino are more likely to be obese. [This represents an increase from 2012.]
- Berkeley's African American population experiences inequitably high rates of hospitalization due to uncontrolled diabetes and long-term complications, such as kidney, eye, neurological and circulatory complications. However, the hospitalization



rate among African Americans for lower-extremity amputation has substantially decreased between 2006 and 2014.

- White women have been affected at the highest rates of breast cancer compared to other racial/ethnic groups from 2006 to 2011, However, African American women begun to have a higher rate in 2012-2014.
- Among the 14 cities in Alameda County, Berkeley ranks 1<sup>st</sup> in mental illness hospitalizations.
- Mental health hospitalization rates are the highest among older adults ages 45-64.
- Berkeley receives an average of 1,400 communicable disease reports each year and over half of those are transmitted through unsafe sex. Up until recently, chlamydia rates in Berkeley and Alameda County had been lower than that of the State of California. In 2015, however, Berkeley's rate increased substantially, surpassing Alameda County's and California's. Gonorrhea rates in Berkeley are consistently higher than those of Alameda County and California. From 2011 to 2016, Berkeley's gonorrhea rate has increased from 94.8 per 100,000 to 267 per 100,000.

## Chapter 5: **Life Expectancy and Mortality**

- Breast and lung cancer are the top leading causes of cancer death for women, while lung and pancreatic cancer are the top leading causes of cancer death for men.
- African Americans met the HP2020 goals for lung cancer mortality rates for the first time ever
- Mortality rates in Berkeley are lower than those of surrounding Alameda County and California—reflecting the city's long life expectancy of 86.7 years for Berkeley women and 83 years for men.
- African Americans die younger (prematurely) than any other racial/ethnic group in Berkeley. The death rate for African Americans in Berkeley is twice the death rates of Whites, and the gap has remained consistent over time. African Americans account for a disproportionate number of YPLL in Berkeley. Although they comprise less than 8% of Berkeley's population, they account for almost 30% of YPLL in the total population.
- Cancer and heart disease are leading causes of death (as recorded on death certificates) in Berkeley. They account for almost half of all deaths. Cardiovascular disease death rates are almost twice as high among African Americans compared to the population as a whole.

**Link to full Health Status Report:** [https://www.cityofberkeley.info/uploadedFiles/Health\\_Human\\_Services/Level\\_3\\_-\\_Public\\_Health/2018-health-status-report-berkeley.pdf](https://www.cityofberkeley.info/uploadedFiles/Health_Human_Services/Level_3_-_Public_Health/2018-health-status-report-berkeley.pdf)

## Appendix 5. October 30<sup>th</sup> Partner Roundtable Event Questions

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### Part 1: Social Determinants of Health – Root Causes

The Health Status Report indicates that overall the health of the City of Berkeley is improving yet, health inequities persist. There are communities within the City of Berkeley that do not enjoy the benefit of improved health due to the impacts of systemic and historical practices and policies.

We are going to take some time to clearly identify some of the economic, social, and environmental factors that contribute to these health inequities.

- A) Let's start with what community do you primarily serve?
- B) Next, what do you think are the health needs and/ or health inequities that have the **greatest impact** on communities/ clients that you serve?

**Prompt:** Please consider health needs throughout the lifespan, particularly:

- i. Pregnancy and Birth
- ii. Youth and Adolescence
- iii. Young Adulthood/ Transitional Aged Youth
- iv. Adulthood
- v. Older Adulthood (Seniors)

**Prompt:** What are the **economic factors** that have the biggest influences on our communities/ clients that perpetuate and contribute to health inequities? *Examples may be: stable and high quality housing, sufficient income, quality schools, safe and stable jobs, hiring practices, cost of living, lack of affordable childcare, etc.*

**Prompt:** What are the **social factors** that have the biggest influences on our communities/ clients that perpetuate and contribute to health inequities? *Examples of these may be access to quality education, youth programs, safe neighborhoods, strong social networks, access recreational and leisure-time activities (e.g. parks, clubs, athletic teams, etc.), biases based on race, gender, sexual orientation, culture, and age, institutional practices, such as over criminalization and or disparate incarcerations of certain communities, etc.*

**Prompt:** Finally, what are some **environmental factors** that our communities/ clients face that perpetuate and contribute to health inequities? *Examples may include: such as pollution free neighborhoods, clean water, access to healthy and affordable food, safe and reliable transportation, public spaces for recreation, safe roads, violence, etc.*

- C) Let's choose our top 3 issues identified Some things to consider when voting:
  - What is something we can get started on immediately?
  - What can we move the needle on in about in the next 3 years?
  - What would have the greatest impact on our communities/ clients?

### Part 2: Existing Strategies/ programs and identifying gaps

"Our table topic is \_\_\_\_\_ and in this section, we are going to discuss existing resources and gaps in addressing this topic area."

- A) What existing community resources and strengths could be leveraged to address these the economic, social, and environmental factors that contribute to health inequities, particularly for this table topic?

Prompt: What are some of the existing, successful strategies and programs that your organizations already have in place to

address the challenges that our communities and clients face?

- B) What are the areas that need more attention? What gaps need to be addressed to support our communities and clients toward achieving optimal health and their ability to thrive?
- C) What key role do you see the City of Berkeley Public Health division playing in addressing this health need? (i.e. providing health services, influencing policy, advocacy, convening stakeholders, building capacity, conducting research)?

### Part 3: Potential Partnerships

Next we will spend some time talking about possible collaborations or strategies to guide our partnerships.

- A) What are some collaborative strategies and or partnerships that might help us collectively address the identified gaps or strengthen existing ones?

Prompt: What are some ideas/best practices that you have seen other cities adopt to better incorporate the needs of community members throughout the lifespan?

- B) What are some of the challenges to establishing these partnerships and/ or collaborative strategies?
- C) What would support the building of these partnerships?

Prompt: What steps would need to occur in order to establish these partnerships?

Prompt: What could the City of Berkeley do to assist in these efforts to build stronger partnerships?

- D) Are there any potential policies we can all promote and support to address institutional and systemic contributors to health inequities?

CITY OF BERKELEY PUBLIC HEALTH DIVISION

# STRATEGIC PLAN 2020-2022



## VISION



A vibrant and healthy Berkeley for all

## MISSION

The Public Health Division **collaborates** with community members and partners to achieve **health equity and optimal health** for all people in Berkeley through policy, institutional systems change and service provision.

## VALUES



**Respect** – Honoring and valuing others diverse experiences, knowledge, and choices with humility and empathy.



**Integrity** – We hold ourselves accountable to a high standard of honoring our commitments and being transparent in our work.



**Data Driven** - Use and share diverse types and sources of data to inform decision making while ensuring transparency and accountability through data sharing.



**Equity** – Ensuring that all people have inclusive and just opportunities for optimal health



**Community Engagement** – Continuous and sustained engagement of community members and {organizational} partners and that influences planning and decisions

## STRATEGIC PRIORITIES

MENTAL WELLNESS

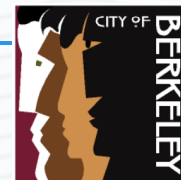
HOMELESSNESS

CHRONIC DISEASE

RACISM







*We seek to decrease clients' likelihood of developing severe mental illness and/ or Substance Use Disorders (SUD) by decreasing stress, depression, anxiety and other effects of trauma.*

1. Increased client ability to address stress, trauma, depression, and anxiety
2. Strengthened collaborative relationships in order to increase or improve services for those experiencing stress trauma, depression or anxiety
3. Increased organizational capacity to address trauma in the workplace
4. Increased organizational capacity to provide trauma informed care to clients

*We strive to support the health needs of individuals who are experiencing homelessness or at risk of homelessness in the hope that it increases their ability to seek services, to find and/ or sustain permanent housing, and achieve overall stability in their lives.*

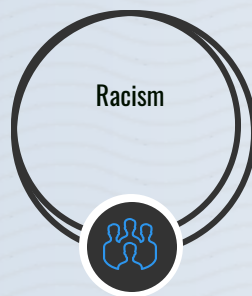
1. Increased access to services for those experiencing, or at risk for, homelessness
2. Strengthened collaborative relationships in order to increase or improve services for those experiencing, or at risk for homelessness.

*A decrease in stress overall can lead to a decreased risk of chronic disease or increase ability to manage existing chronic disease.*

1. Increased client awareness of stress and trauma and its impact on health
2. Improved client ability to address stress, trauma, depression, and anxiety
3. Strengthened collaborative relationships in order to increase or improve services, systems and environments for those experiencing, or at risk for, chronic disease.

*We strive to increase commitment to reduce our own contributions to the problem of institutional and historical racism in the hopes to reduce its contribution to social and health disparities.*

1. Programs and division-wide policies reflect racially equitable practices.
2. Public Health Division services are affirming, welcoming, and respectful
3. Strengthened collaborative relationships in order to achieve greater racial equity in Berkeley.







Office of the City Manager

INFORMATION CALENDAR  
December 10, 2019

To: Honorable Mayor and Members of the City Council  
 From: Dee Williams-Ridley, City Manager  
 Submitted by: LaTanya Bellow, Director of Human Resources  
 Subject: Report on Workers' Compensation Annual Program Review FY18-19

SUMMARY

This report is part of an ongoing series reporting the City's workers' compensation program and costs associated with the program. This report focuses on the workers' compensation claim activity for fiscal year July 1, 2018 – June 30, 2019.

CURRENT SITUATION AND ITS EFFECTS

Human Resources Staff continue to monitor and evaluate practices for effectiveness and efficiency within the workers' compensation program, with ongoing focus on injury prevention, early intervention, ergonomics, claim management, and employee safety and supervisor responsibility, with the goal of controlling claim volume and related costs.

Through the collaborative efforts of Human Resources and Innovative Claim Solutions, (ICS) we are reporting a multitude of successful outcomes for the comparative period of July 1, 2018 to June 30, 2019. A comprehensive analysis of these outcomes are listed under the section Workers' Compensation Trend Update. Listed below are the program success highlights of FY 2018-2019:

Costs

- Reduced Average Incurred Cost per Claim on new claims submitted during the comparative period of FY2017-2018 to FY2018-2019 by **17% (or \$2,531)**.
- Reduced the Total Paid on new claims submitted during the comparable period by **14% (or \$126,978)**.
- Reduced the Total Estimated Future Liability on new claims submitted during the comparable period by **33% (or \$521,122)**.
- Reduced the Total Estimated Future Liability on the entire program during this period by **15% (or \$3,091,348)**.
- Successfully recovered **\$677,375.39** from the City's excess carriers.
- Successfully recovered **\$4,945.10** through subrogation/contribution efforts.



- Reduced the total amount paid for TD/4850 on the entire program during this period by **6% (or \$66,050.00)**.
- Oversaw activities of the bill review company that realized a net savings of **\$2,937,274**.

Number of Injuries

- Reduced the number of Open Indemnity Claims on the entire program during this period by **4% (or 13 claims)**.

Lost Time

- Reduced the Average # of Disability Days per Lost Time Claim on new claims submitted during the comparative period by **17% (or 11.75 Days)**.

Claim Resolution

- Closed **51%** of new claims submitted during this period.
- Increased the number of Closed Indemnity Claims on the entire program during this period by **2% (or 3 claims)**.
- Successful resolution of **forty-nine (49)** claims.
- Reduced the number of New Notices of Representation filed on the entire program during this period by **2 notices, (or 8%)**.

WORKERS' COMPENSATION TREND UPDATE

Prior Year Claims

The cost for claims filed in prior years continue to contribute substantially to the overall cost of the City's Workers' Compensation Program. In FY18-19, the amount paid on claims increase due to settlement agreements by Stipulation as well as Compromise and Release (C&R). Claim closure by compromise and release is positive outcome for the City. As, C&R settlements close all future liability associated with the claim. Additionally, the utilization and medical peer review submissions increased due to mandatory state law that requires independent review of medical treatment requested by an injured worker's physician. This information is further detailed later in this report.

<b>Fiscal Year of Reported Injury</b>	<b>Amount Paid on Claims in Fiscal 2016-2017</b>	<b>Amount Paid on Claims in Fiscal 2017-2018</b>	<b>Amount Paid on Claims in Fiscal 2018-2019</b>
# of Claims Paid (open and closed)	603	581	564
<b>Total Amount Paid on Claims</b>	<b>\$5,039,459.08</b>	<b>\$5,033,122.18</b>	<b>\$6,290,346.37</b>

The City also experienced a decrease in total claim volume, with a notable decrease in claims with a date of injury in FY 2018-2019 by nineteen (19) claims (from 162 in FY 2017-2018 to 143 in FY 2018-2019), in spite of the slight increase of five (5) claims filed by Fire Safety Employees as noted below:

<b>All New Claims</b>				
	<b>FY 2016- 2017</b>	<b>FY 2017- 2018</b>	<b>FY 2018- 2019</b>	<b>Increase/Decrease (2018-2019 from 2017-2018)</b>
Fire Safety Employees	39	26	31	5
Police Safety Employees	44	56	51	-5
Non-Sworn Employees	88	80	61	-19
<b>Total</b>	<b>171</b>	<b>162</b>	<b>143</b>	<b>-19</b>

Indemnity claims have exposure beyond medical treatment with one or all of the following components present, i.e., lost time, permanent disability, litigation or surgery. These claims tend to be more severe and pose a greater liability to the City than Medical Only claims. Therefore, a reduction in Indemnity claims is a positive step in controlling the City's overall Workers' Compensation liability. As noted below, both Police and Non-Sworn Employees experienced a noteworthy reduction in Indemnity claims with a date of injury in FY 2018-2019 from FY 2017-2018.

<b>Indemnity Claims</b>			
	<b>FY 2017- 2018</b>	<b>FY 2018- 2019</b>	<b>Increase/Decrease (FY 2018-2019)</b>
Fire Safety Employees	18	21	3
Police Safety Employees	37	21	-16
Non-Sworn Employees	38	27	-11
<b>Total</b>	<b>93</b>	<b>69</b>	<b>-24</b>

For Medical Only claims (injuries that require minimal medical treatment and do not incur any lost time) the City experienced a reduction in Non-Sworn Employees. However, because Fire and Police Employees experienced an increase in claims filed in FY 2018-2019, overall the City experienced a net increase of five (5) claims as noted below:

<b>Medical Only Claims</b>			
	<b>FY 2017- 2018</b>	<b>FY 2018- 2019</b>	<b>Increase/Decrease (FY 2018-2019)</b>
Fire Safety Employees	8	10	2
Police Safety Employees	19	30	11
Non-Sworn Employees	42	34	-8
<b>Total</b>	<b>69</b>	<b>74</b>	<b>5</b>

Although difficult to predict whether the decrease in new claims, particularly indemnity claims, will continue, the City's continued focus on injury prevention, management and employee safety, as well as continued emphasis on citywide safety initiatives should contribute to controlling injuries in the workplace.

PROGRAM UPDATE

1. **Case Resolution:** Case resolution is an important aspect of any Workers' Compensation Program. A Workers' Compensation claim can be resolved (settled) and agreed to by the parties (injured employee and the City) either through "Stipulation" or "Compromise and Release". However, if the parties are unable to resolve and settle a claim with either a Stipulation or Compromise and Release, the matter could be ultimately be determined by a Workers' Compensation Appeals Board Judge who would issue a "Findings and Award". The definitions of each type of claim resolution are listed below.
  - a. Stipulation: A Stipulated Settlement is an agreement where the parties agree to the findings of a specific medical report(s). A Stipulated Settlement may result in future disability payments and medical treatment. The main components of a Stipulated Settlement are the percentage of disability the injured employee suffered and whether or not the injured employee needs further medical care. The percentage of disability derives from the doctor's medical opinion of the employee's level of disability as a result of the workplace injury. Under Workers' Compensation statutes, there is a set formula for determining the percentage of disability, which is based on the limitations set forth in the medical report, combined with the injured employee's age and occupation. The disability benefits under Stipulated Settlement are paid by the City over time. They are not paid in a lump sum unless the disability payment has already ended.
  - b. Compromise & Release: In contrast, in a Compromise & Release (C&R), the parties agree to resolve all outstanding issues and close the case, which eliminates the need for any future payments and release all liability for the claim. Although a C&R has the ability to close all future liability associated with the claim, an employee cannot be forced to release their right to future medical treatment or any other benefit associated with their claim, and therefore cannot be forced to settle by C&R. In addition, it is not cost effective for the City to enter into a C&R with an employee who is still working for the City, because another injury would create new potential liability, even if the current claim closed.
  - c. Findings & Award: A Findings & Award (F&A) is the award granted by the Workers' Compensation Appeals Board Judge after a decision is rendered following a trial.

During FY 2018-2019, forty-nine (49) cases were settled, thirty-three (33) by a Stipulation, with settlement amounts ranging from \$0 to \$106,502 and fifteen (15) by C&R, with settlement amounts ranging from \$0 to \$318,537 and one by a Judge's Finding and Award. Fifteen (15) claims did not require applicant attorney representation and seventeen claims did not require defense attorney representation.

2. **Claims Closure:** Innovative Claim Solutions, Inc., (ICS) the City's Workers' Compensation Third Party Administrator, continues to focus on closing new, as well as old claims. In FY 2018-2019, ICS closed a total of 192 claims (130 Indemnity Claims

and 62 Medical Only Claims). The goal of ICS continues to be to reduce the open claim inventory in order to control estimated future costs.

Claims Closed in each FY			
FY	Indemnity	Medical Only	Total
2016-2017	132	86	218
2017-2018	127	76	203
2018-2019	130	62	192

- Open Claims:** The chart below reflects the City’s Open Claim Inventory at the end of each fiscal year. As of June 30, 2019, the City’s total open claim inventory reflects a reduction from 378 in FY 2018, to 372 in FY 2019. Of the total open claims in FY 2019, 347 are Indemnity Claims and 25 are Medical Only Claims.

Open Claim Inventory			
FY	Indemnity	Medical Only	Total
2016-2017	360	25	385
2017-2018	360	18	378
2018-2019	347	25	372

- Bill Review Services:** An essential component of any successful workers’ compensation cost containment program is the bill review services. Bill review ensures that the fees for services submitted by medical providers comply with State mandated regulations. Diamond Bill Review, Inc. provides these services for the City of Berkeley. The following chart shows the results of the bill review process for this period compared to the same period last year.

Period	Bills	Bill Charges	Gross Savings	Net Savings	Net % Saved
7/1/17-6/30/18	5,832	\$4,782,423	\$3,196,248	\$2,973,987	62%
7/1/18-6/30/19	5,308	\$4,758,331	\$3,137,227	\$2,937,274	62%

- Subrogation/Recoveries:** Subrogation efforts can recover expenses when a third party is at fault for the injury. During this period \$4,945.10 was recovered through subrogation.
- Excess Insurance Recoveries:** At present, there are forty (40) open cases being reported to the City of Berkeley’s Excess Carriers. During this period \$677,375.39 was received from the City’s excess carriers.

**ENVIRONMENTAL SUSTAINABILITY**

There are no identifiable environmental effects or opportunities associated with the subject of this report.

**POSSIBLE FUTURE ACTION**

Human Resources Staff continues to evaluate the workers’ compensation program in an effort to reduce the exposure to workplace accidents and injuries.

FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Reduce future costs through continued aggressive workplace safety programs that involve participation of representatives of employee organizations and management staff.

CONTACT PERSON

LaTanya Bellow, Director of Human Resources, 981-6807

July Cole, Associate Human Resources Analyst, 981-6816

Attachments:

1: Appendix I - Innovative Claim Solutions (ICS) Comparative Data

**Comparative Statistical Analysis for the City of Berkeley 7/1/18 to 6/30/19**  
**Appendix 1**

<b>Claims Entered By Fiscal Year</b>	<b>7/1/17 to 6/30/18</b>	<b>7/1/18 to 6/30/19</b>	<b>Absolute Change</b>	<b>Percent Change</b>
Total Claims	162	143	-19	-12%
Total Indemnity Claims	85	69	-16	-19%
Total Medical Only Claims	77	74	-3	-4%
Avg. Incurred Cost per Claim	\$15,111	\$12,580	-\$2,531	-17%
Indemnity / MO Ratio	52% : 48%	48% 52%	-4	-8%
Closed Ind. Claims	30 35%	24 35%	-6	-20%
Closed MO Claims	59 77%	49 66%	-10	-17%
Total Closed Claims	89 55%	73 51%	-16	-18%
Total Paid	\$881,172	\$754,194	-\$126,978	-14%
Total Est. Future Liability	\$1,566,849	\$1,044,727	-\$521,122	-33%
Total Number of Lost Days	2925	2372	-533	-19%
Number of Lost Time Claims	42	41	-1	-2%
Avg. # of Disability Days per Lost Time Claim	69.6	57.85	-11.75	-17%
<b>Overall</b>				
Closed Indemnity Claims	127	130	3	2%
Closed MO Claims	79	62	-17	-22%
Total Closed Claims	203	192	-1	-5%
<b>Open Claim Inventory</b>	<b>6/30/2018</b>	<b>6/30/2019</b>	<b>Absolute Change</b>	<b>Percent Change</b>
Indemnity	360	347	-13	-4%
Medical Only	18	25	7	39%
Total Open Claims	378	372	-6	-2%
Est. Future Liability	\$21,318,680	\$18,227,332	-\$3,091,348	-15%

## Multiple Claims

An analysis of injured employees, who have sustained three or more injuries over the last three years since July 1, 2016 reveals 66 claims from 19 employees compared to 96 claims from 31 employees in last year's report. These claims represent \$777,209.17 in paid claim costs and \$1,922,934.86 in total incurred. Thirty-one (31) of these claims remain open at this time representing \$1,145,725.69 in estimated future liability.

During the one-year period ending June 30, 2019, two employees submitted three or more claims.

Please refer to the designated tab in this booklet for detailed information on these claims.

## Utilization and Peer Review Savings

During this period 539 RFA's for 1035 Procedures were submitted for Utilization or Peer/Physician Advisor Reviews. Of those Procedure requests submitted, 625 requests were recommended for denial. Of those requests denied, 62 were appealed through UR. 28 of the appeals were granted leaving 597 Procedure requests as denied.

In addition, we paid for 186 IMR evaluations during this period addressing prior UR denials. Of the 186 IMR evaluations paid, 161 upheld the prior UR denial while only 16 reversed the previously denied services and another 9 were partially overturned.

## Delays/Denials

During this period twenty-six claims were placed on delay. Additionally, there were twenty-four denials during this period.

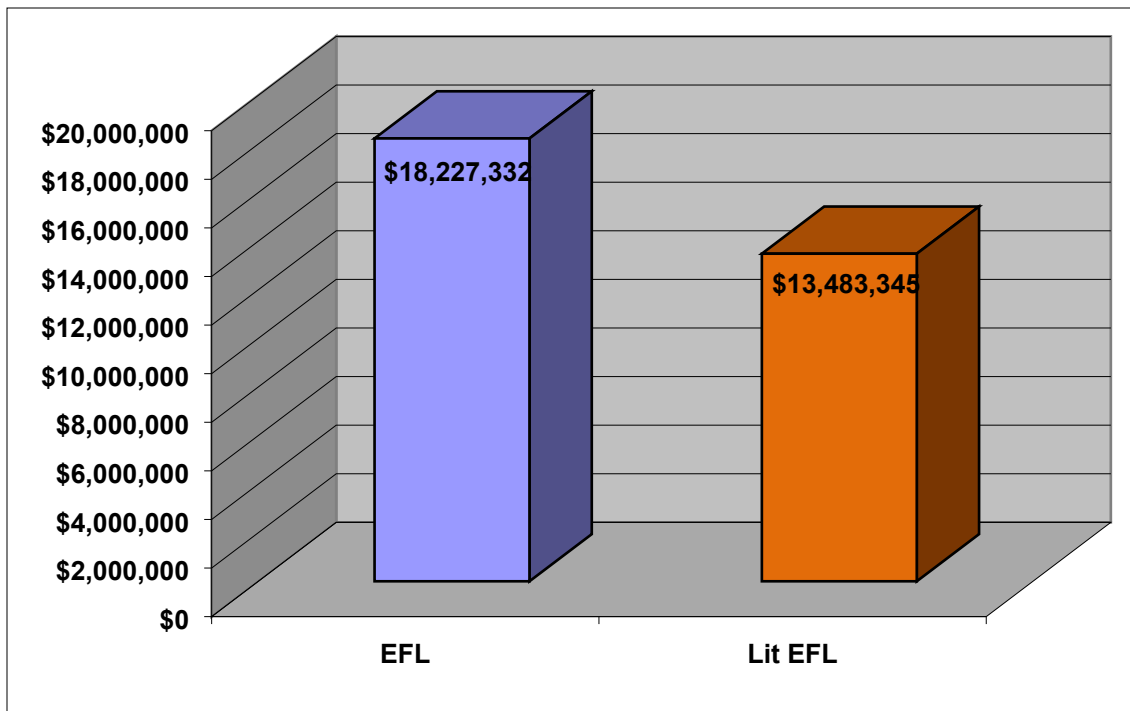
## Notices of Representation

During this period 23 notices of representation were received, filed by 16 individuals. This represents a decrease of 8%, or two notices, from the same period last year. This also represents a **16.1% litigation rate**, above the statewide average of 14%.

## Litigation

At present, there are two hundred two litigated open indemnity claims representing total incurred costs of \$47,398,477.64. The current estimated future liability on these claims is \$13,483,345.22 or 74%, of the total estimated future liability on this program. It should be noted that 84 of these claims are resolved and remain open only for management of a future medical award, and many others are settled but require long term payouts of awards including 100% cases and cases with life pension, or death benefit awards.





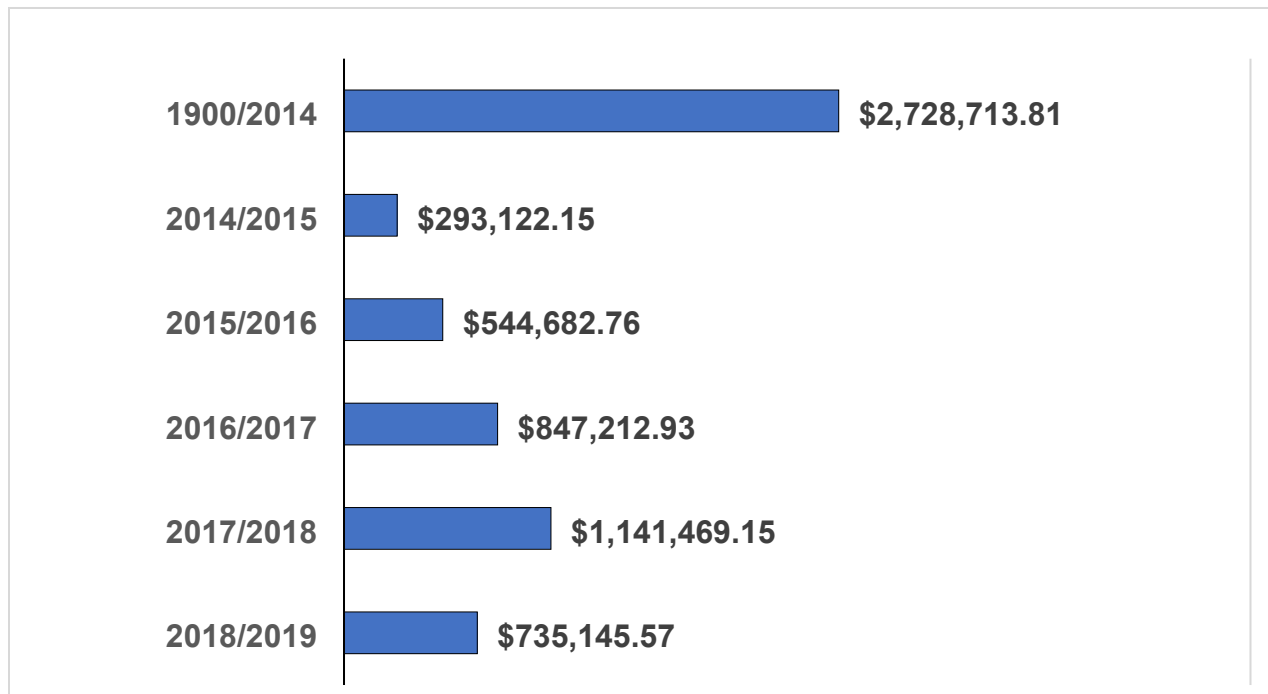
### Comparative Payment Analysis

The following chart depicts a comparison of total paid on all claims by pay type during the comparative periods.

All Payments in Fiscal Year	7/1/17 - 06/30/18	7/1/18 - 06/30/19	Absolute Change	Percent Change
TD/4850 Paid	\$1,127,519.69	\$1,061,469.69	-\$66,050.00	-6%
Permanent Disability	\$1,138,663.50	\$1,182,765.49	\$44,101.99	4%
C&R Indemnity	\$220,721.38	\$506,781.74	\$286,060.36	130%
C&R Medical	\$20,561.00	\$688,487.73	\$667,926.73	3249%
Hospital Paid	\$610,183.81	\$601,195.29	-\$8,988.52	-1%
Doctor Paid	\$494,132.19	\$530,552.29	\$36,420.10	7%
All other Medical Paid	\$797,589.37	\$981,985.44	\$184,396.07	23%
SJDB Paid	\$7,245.01	\$19,036.99	\$11,791.98	163%
Defense Attorney Paid	\$215,427.28	\$285,630.28	\$70,203.00	33%
Other Legal Paid	\$401,078.95	\$432,441.43	\$31,362.48	8%
<b>Total Paid:</b>	<b>\$5,033,122.18</b>	<b>\$6,290,346.37</b>	<b>\$1,257,224.19</b>	<b>25%</b>

### Comparative Payment Analysis by Date of Injury

The total paid out on all claims during this period is \$6,290,346.37. These payments were made on claims sorted by date of injury as depicted below:



### Temporary Disability/LC4850 Benefits Paid

The following chart depicts all TD/LC4850 benefits paid during this period listed by department regardless of date of injury as well as a comparison to what was paid during the same period of time last year:

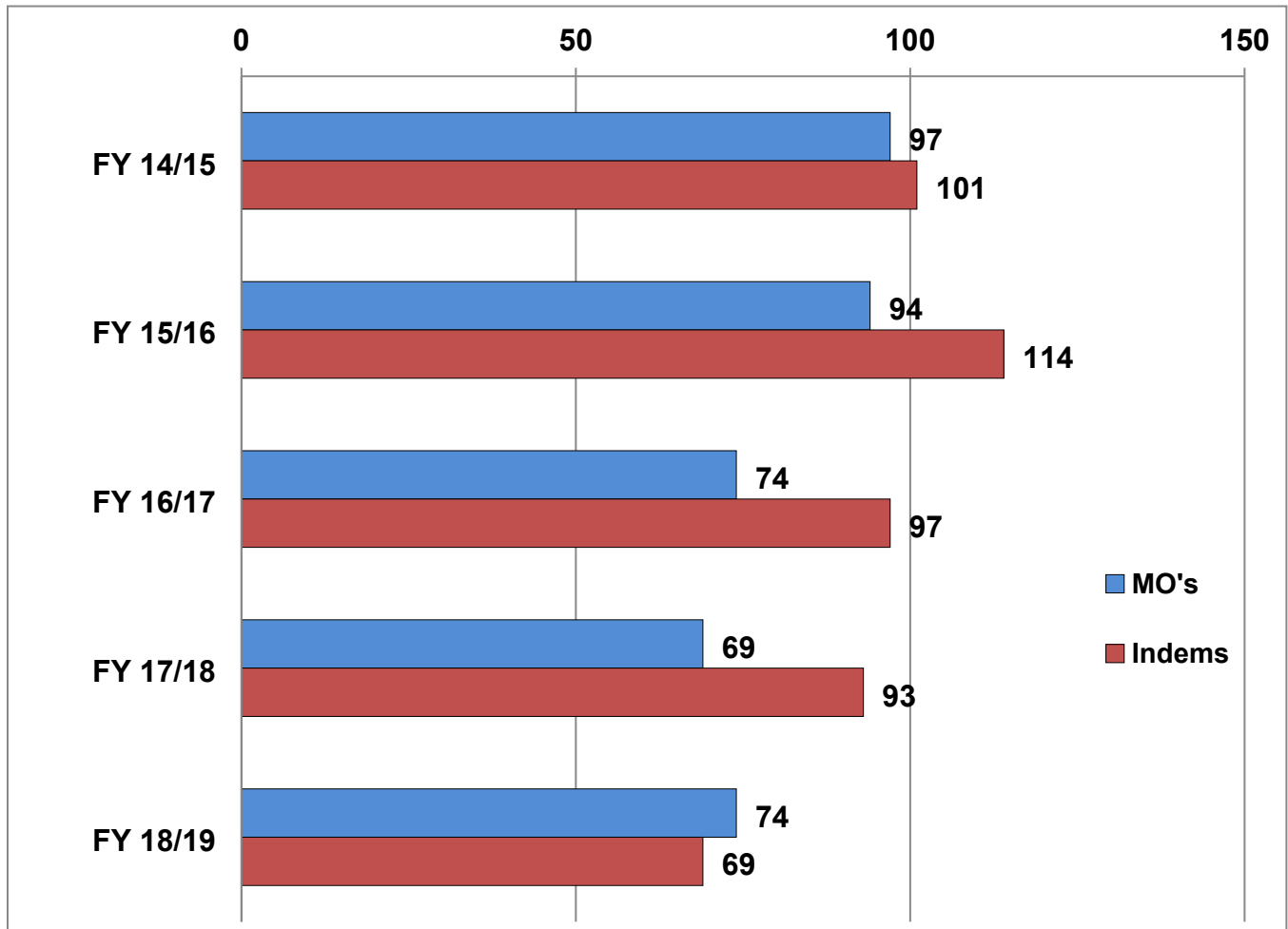
Department	Paid in FY 17/18	Paid in FY 18/19	Difference
CITY MANAGER	\$43,408.27	\$107,185.34	\$63,777.07
FIRE	\$223,253.44	\$248,791.37	\$25,537.93
HHCS	\$30,569.81	\$1,725.99	-\$28,843.82
PARKS, RECREATION & WATERFRONT	\$220,868.28	\$95,315.77	-\$125,552.51
POLICE	\$450,009.97	\$408,518.92	-\$41,491.05
PUBLIC WORKS	\$159,409.92	\$199,932.30	\$40,522.38
<b>Net Total Paid</b>	<b>\$1,127,519.69</b>	<b>\$1,061,469.69</b>	<b>-\$66,050.00</b>

### Average Indemnity Days by Department

For indemnity claims receiving temporary disability/LC 4850 benefits during this period, the following chart depicts the average number of indemnity days by department. The indemnity days are partial and full calendar days off due to injury.

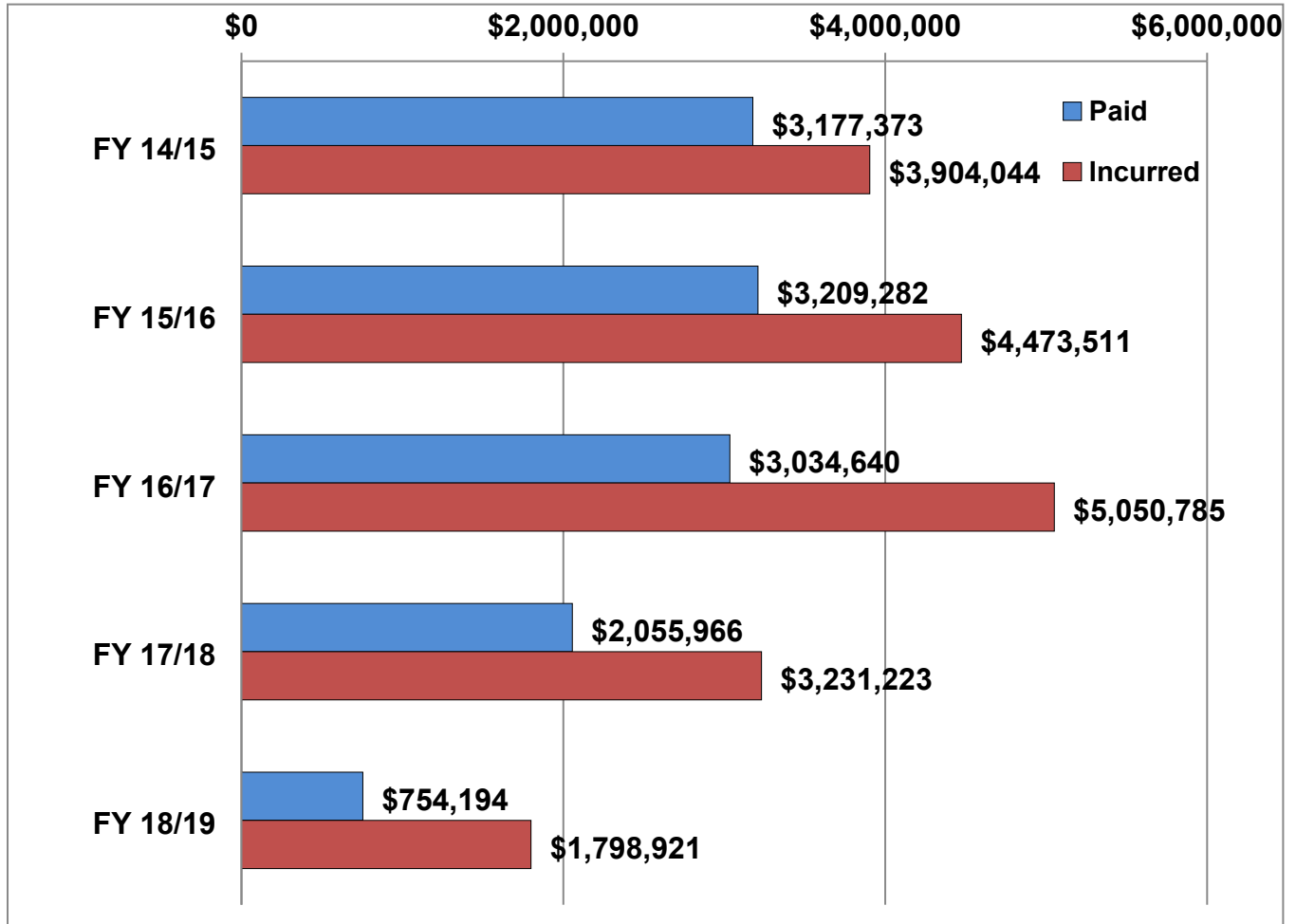
Department	Indem Days	Claims	Average
CITY MANAGER	983	3	328
FIRE	1,417	20	71
HHCS	12	2	6
PARKS, RECREATION & WATERFRONT	714	9	79
POLICE	2,487	29	86
PUBLIC WORKS	1,373	19	72

**Claims by Fiscal Year based on Date Entered**



Fiscal year entered	MO's	Indem	Total
FY 14/15	97	101	198
FY 15/16	94	114	208
FY 16/17	74	97	171
FY 17/18	69	93	162
FY 18/19	74	69	143

**Total Paid and Incurred by Fiscal Year based on Date Entered**

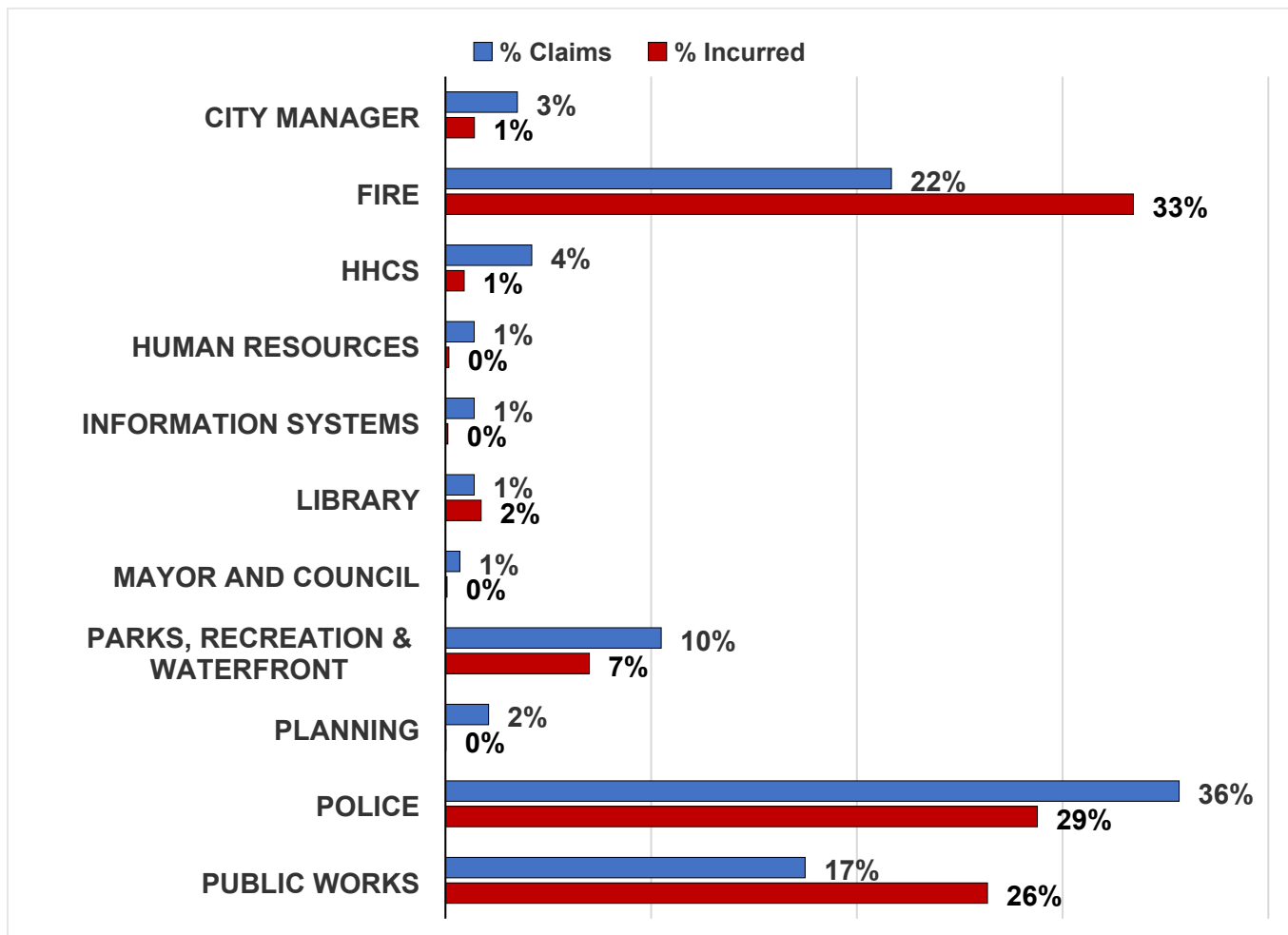


Fiscal year entered	Paid	EFL	Incurred
FY 14/15	\$3,177,373	\$726,671	\$3,904,044
FY 15/16	\$3,209,282	\$1,264,229	\$4,473,511
FY 16/17	\$3,034,640	\$2,016,145	\$5,050,785
FY 17/18	\$2,055,966	\$1,175,257	\$3,231,223
FY 18/19	\$754,194	\$1,044,727	\$1,798,921

**Frequency Analysis Summaries**

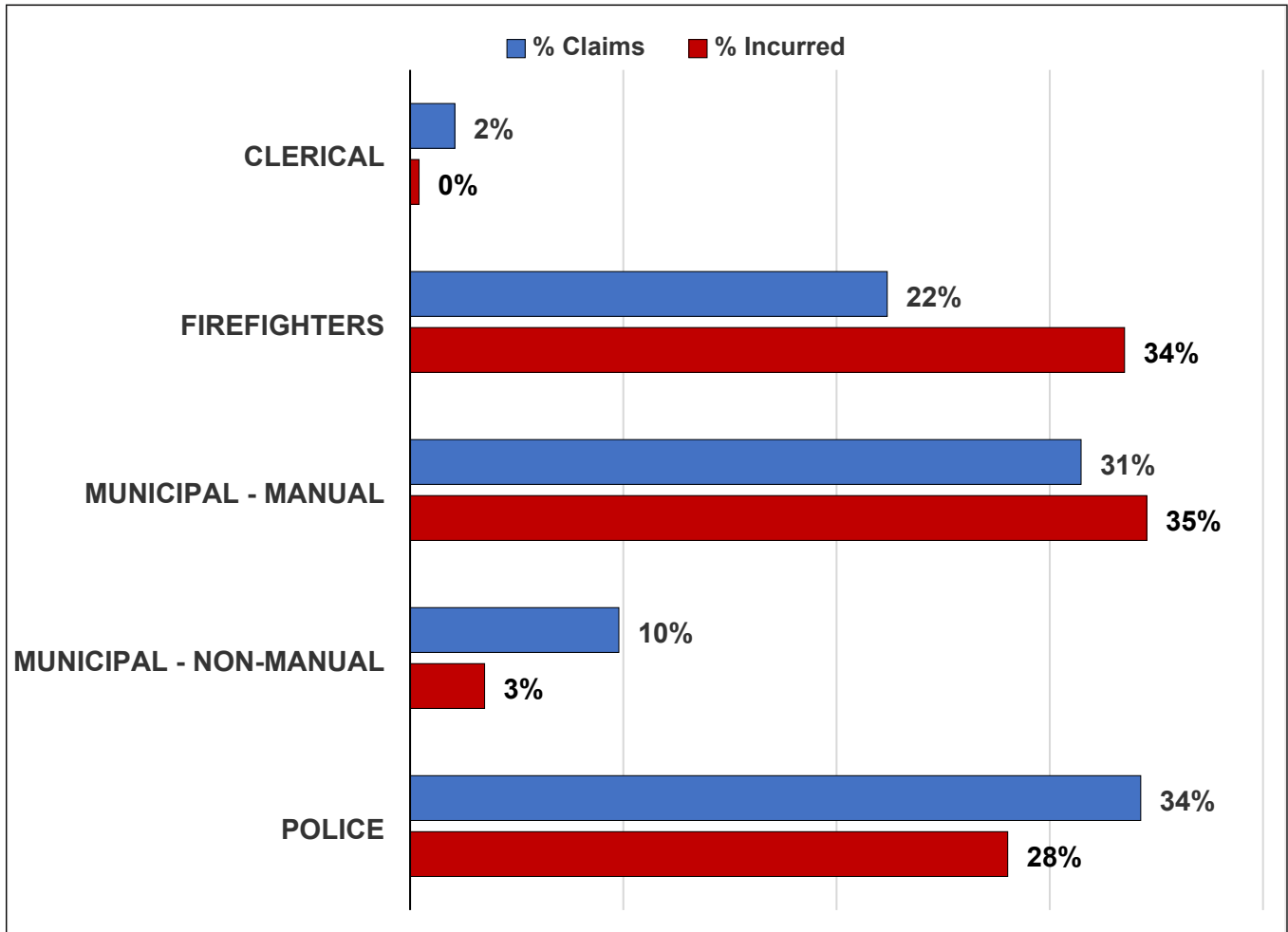
The following graphs are based on claims entered from 7/1/2018 through 6/30/2019.

### Claim Frequency by Department



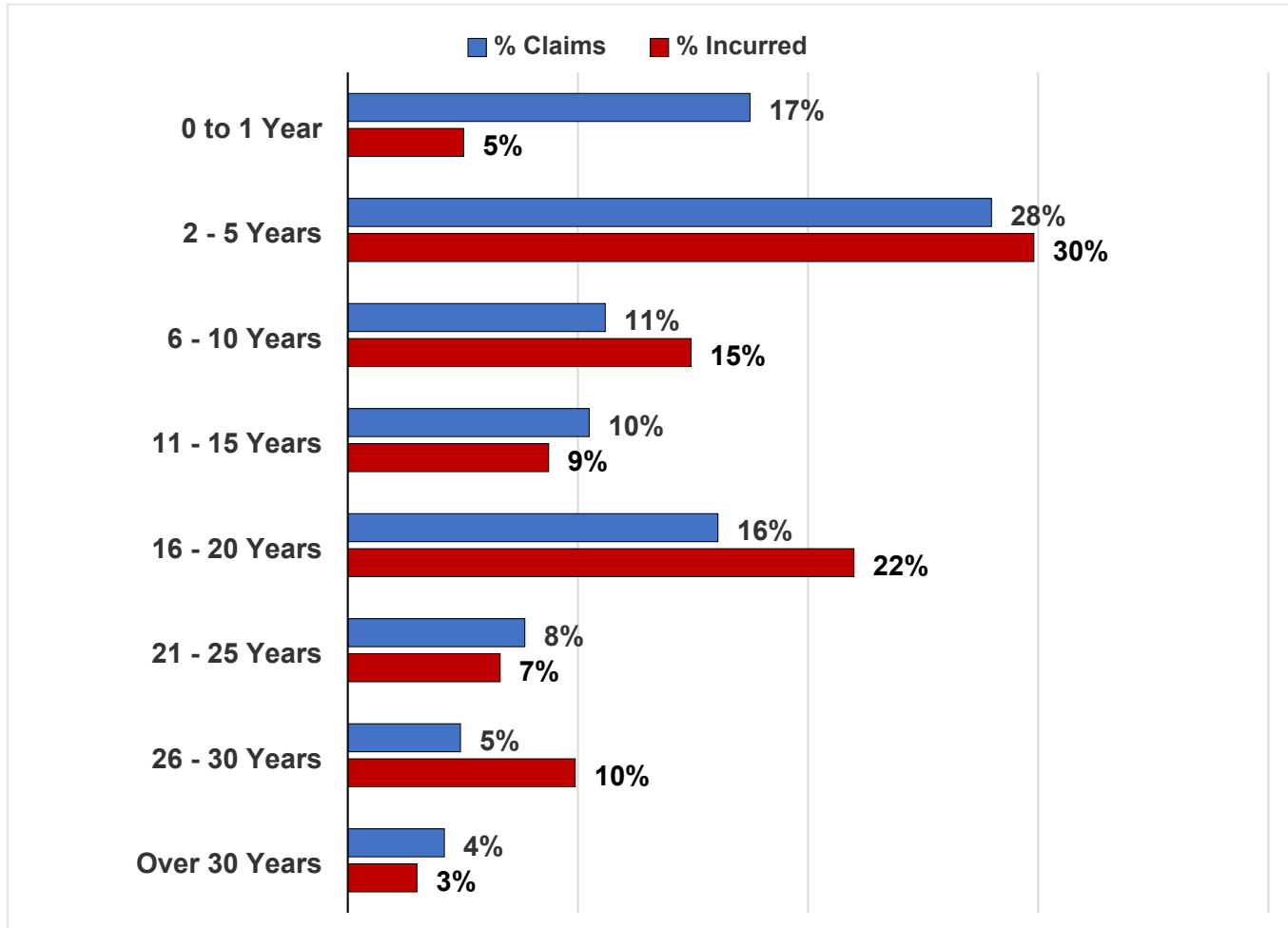
Department	Claims	% Claims	Incurred	% Incurred
CITY MANAGER	5	3%	\$25,328.85	1%
FIRE	31	22%	\$601,552.12	33%
HHCS	6	4%	\$16,391.74	1%
HUMAN RESOURCES	2	1%	\$3,016.82	0%
INFORMATION SYSTEMS	2	1%	\$2,117.06	0%
LIBRARY	2	1%	\$31,206.90	2%
MAYOR AND COUNCIL	1	1%	\$1,398.31	0%
PARKS, RECREATION & WATERFRONT	15	10%	\$125,863.34	7%
PLANNING	3	2%	\$422.47	0%
POLICE	51	36%	\$517,633.17	29%
PUBLIC WORKS	25	17%	\$473,989.84	26%
<b>Totals</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

Occupation



Occupation	Claims	% Claims	Incurred Total	% Incurred
CLERICAL	3	2%	\$7,575.63	0%
FIREFIGHTERS	32	22%	\$602,768.33	34%
MUNICIPAL - MANUAL	45	31%	\$621,511.05	35%
MUNICIPAL - NON-MANUAL	14	10%	\$62,874.03	3%
POLICE	49	34%	\$504,191.58	28%
<b>Total</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

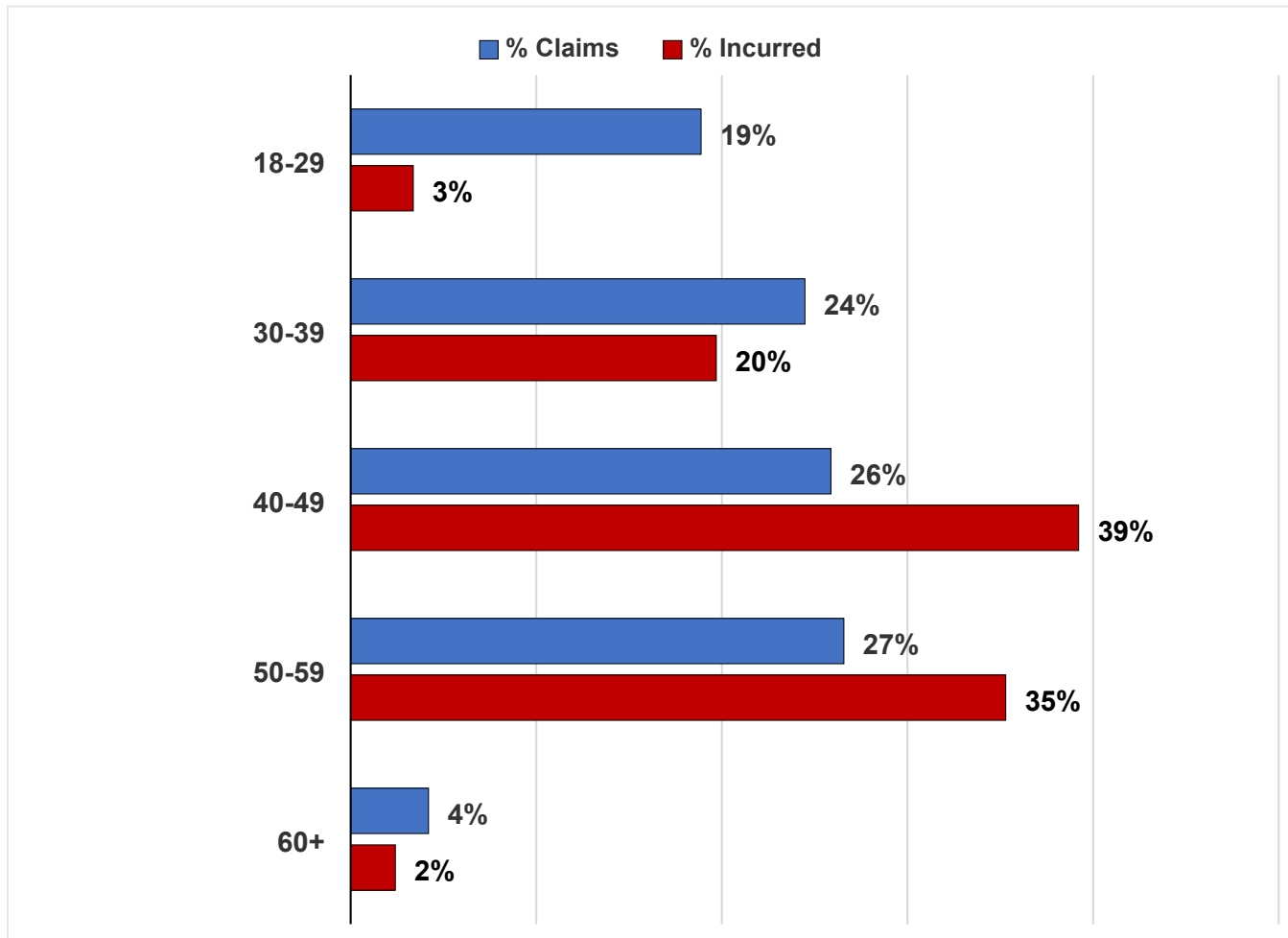
Length of Service



Length of Service	Claims	% Claims	Incurred	% Incurred
0 to 1 Year	25	17%	\$90,590.52	5%
2 - 5 Years	40	28%	\$536,306.91	30%
6 - 10 Years	16	11%	\$268,405.53	15%
11 - 15 Years	15	10%	\$157,009.99	9%
16 - 20 Years	23	16%	\$395,664.29	22%
21 - 25 Years	11	8%	\$119,086.92	7%
26 - 30 Years	7	5%	\$177,778.17	10%
Over 30 Years	6	4%	\$54,078.29	3%
<b>Totals</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

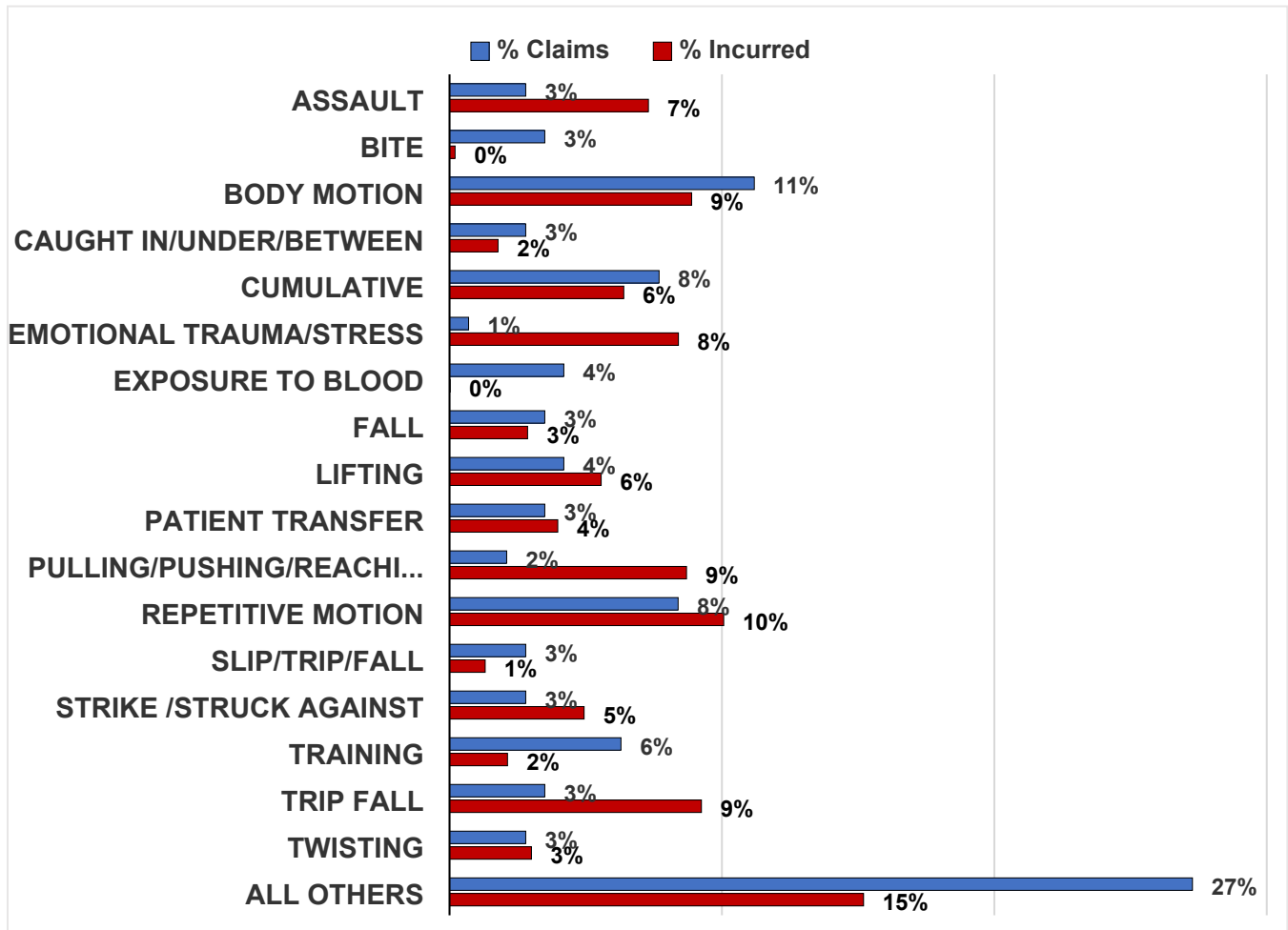


Age of Injured Worker



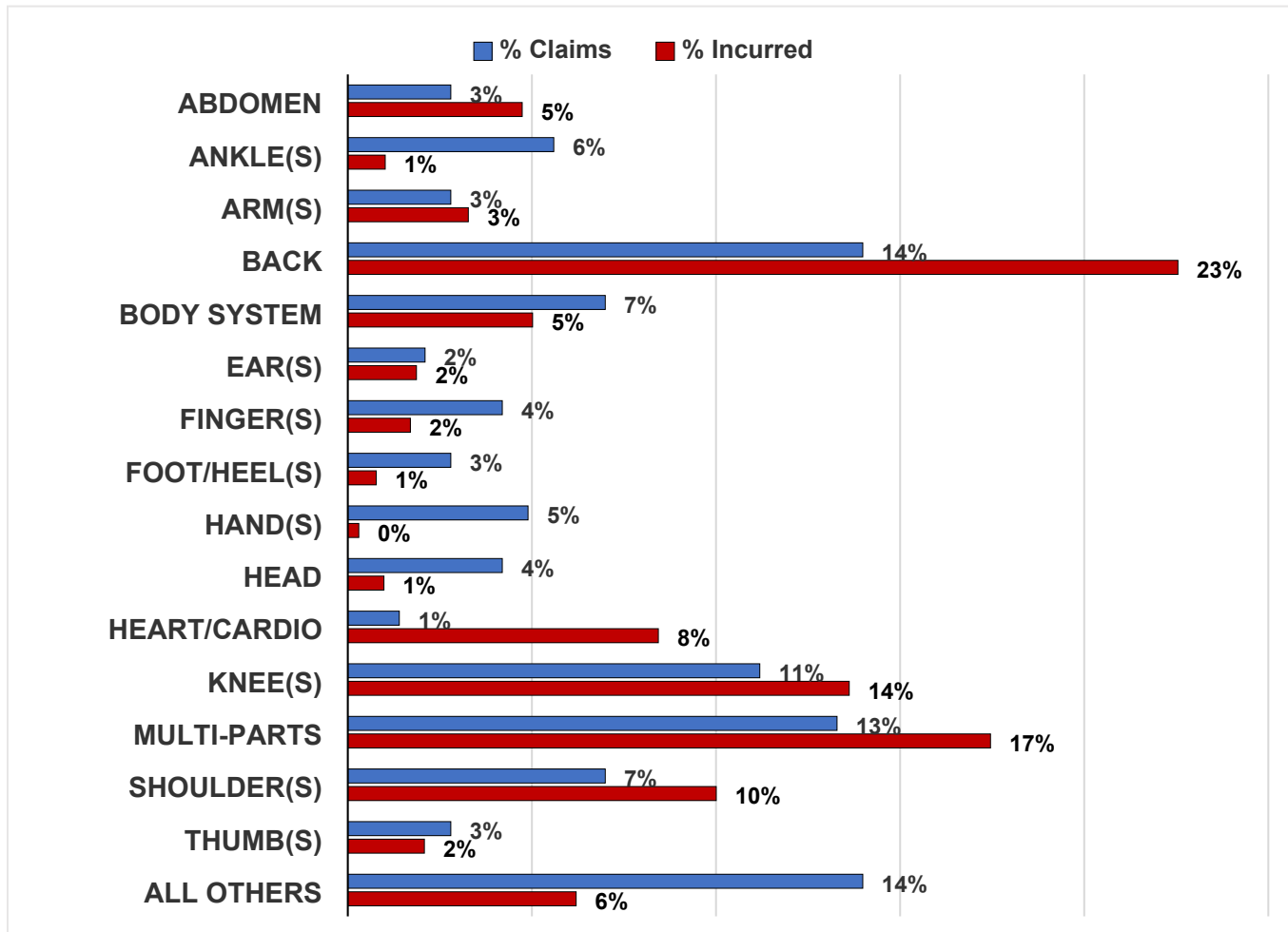
Age	Claims	% Claims	Incurred	% Incurred
18-29	27	19%	\$60,716.06	3%
30-39	35	24%	\$354,393.85	20%
40-49	37	26%	\$705,535.36	39%
50-59	38	27%	\$634,896.45	35%
60+	6	4%	\$43,378.90	2%
<b>Total</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

Cause of Injury



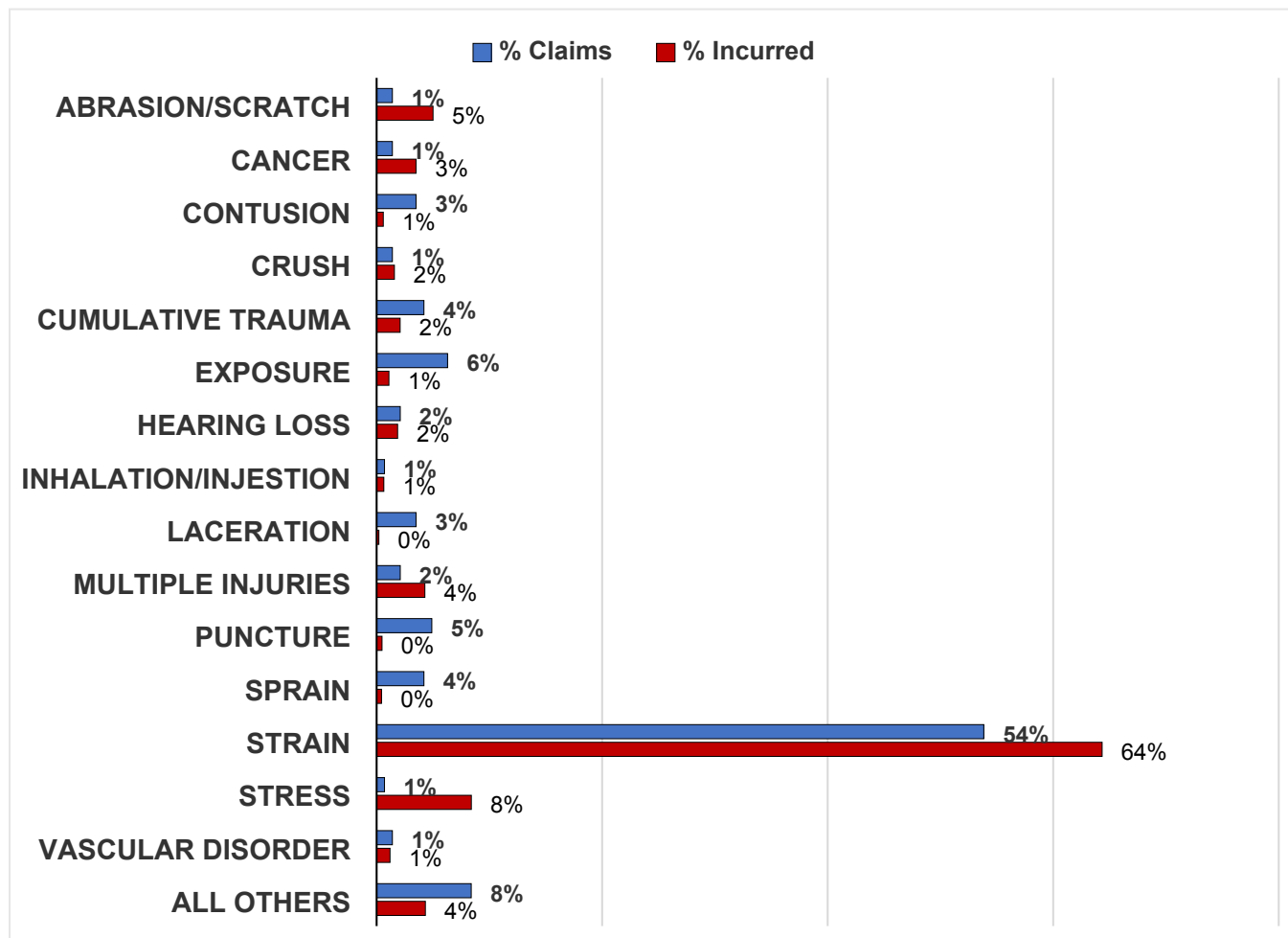
Cause	Claims	% Claims	Incurred	% Incurred
ASSAULT	4	3%	\$131,351.84	7%
BITE	5	3%	\$3,670.20	0%
BODY MOTION	16	11%	\$159,896.45	9%
CAUGHT IN/UNDER/BETWEEN	4	3%	\$32,035.88	2%
CUMULATIVE	11	8%	\$115,078.34	6%
EMOTIONAL TRAUMA/STRESS	1	1%	\$151,154.88	8%
EXPOSURE TO BLOOD	6	4%	\$415.07	0%
FALL	5	3%	\$51,554.29	3%
LIFTING	6	4%	\$100,135.75	6%
PATIENT TRANSFER	5	3%	\$71,480.66	4%
PULLING/PUSHING/REACHING	3	2%	\$156,508.19	9%
REPETITIVE MOTION	12	8%	\$181,072.64	10%
SLIP/TRIP/FALL	4	3%	\$23,542.05	1%
STRIKE /STRUCK AGAINST	4	3%	\$88,863.63	5%
TRAINING	9	6%	\$38,300.69	2%
TRIP FALL	5	3%	\$166,343.22	9%
TWISTING	4	3%	\$54,101.71	3%
ALL OTHERS	39	27%	\$273,415.13	15%
<b>Totals</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

Part of Body



Body part	Claims	% Claims	Incurred	% Incurred
ABDOMEN	4	3%	\$85,205.71	5%
ANKLE(S)	8	6%	\$18,282.89	1%
ARM(S)	4	3%	\$58,887.17	3%
BACK	20	14%	\$405,574.50	23%
BODY SYSTEM	10	7%	\$90,275.32	5%
EAR(S)	3	2%	\$33,533.34	2%
FINGER(S)	6	4%	\$30,566.79	2%
FOOT/HEEL(S)	4	3%	\$13,887.89	1%
HAND(S)	7	5%	\$5,374.75	0%
HEAD	6	4%	\$17,655.90	1%
HEART/CARDIO	2	1%	\$151,718.37	8%
KNEE(S)	16	11%	\$244,972.65	14%
MULTI-PARTS	19	13%	\$314,010.73	17%
SHOULDER(S)	10	7%	\$180,001.64	10%
THUMB(S)	4	3%	\$37,418.56	2%
ALL OTHERS	20	14%	\$111,554.41	6%
<b>Totals</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>

Nature of Injury



Nature	Claims	% Claims	Incurred	% Incurred
ABRASION/SCRATCH	2	1%	\$90,041.88	5%
CANCER	2	1%	\$62,833.86	3%
CONTUSION	5	3%	\$10,695.31	1%
CRUSH	2	1%	\$28,369.73	2%
CUMULATIVE TRAUMA	6	4%	\$37,504.63	2%
EXPOSURE	9	6%	\$19,653.21	1%
HEARING LOSS	3	2%	\$33,533.34	2%
INHALATION/INJECTION	1	1%	\$11,500.00	1%
LACERATION	5	3%	\$3,612.02	0%
MULTIPLE INJURIES	3	2%	\$76,976.50	4%
PUNCTURE	7	5%	\$8,611.25	0%
SPRAIN	6	4%	\$7,819.85	0%
STRAIN	77	54%	\$1,157,402.57	64%
STRESS	1	1%	\$151,154.88	8%
VASCULAR DISORDER	2	1%	\$21,386.35	1%
ALL OTHERS	12	8%	\$77,825.24	4%
<b>Total</b>	<b>143</b>	<b>100%</b>	<b>\$1,798,920.62</b>	<b>100%</b>





Office of the City Manager

INFORMATION CALENDAR

December 10, 2019

To: Honorable Mayor and Members of the City Council

From: Dee Williams-Ridley, City Manager

Submitted by: Phillip L. Harrington, Director, Public Works

Subject: goBerkeley Parking Management Program - Recommended Adjustments for February 1, 2020

INTRODUCTION

This report provides information to the City Council regarding planned parking rate and time limit adjustments included in the goBerkeley Parking Management Program (“goBerkeley parking program”).<sup>1</sup> These changes will take effect Sunday, February 1, 2020. On January 1, 2020, City staff will begin to notify the public through updates to the City website, and coordination with merchant groups in program areas. Please see the rate and time limit adjustments summarized as Attachment 1 to this report.

CURRENT SITUATION AND ITS EFFECTS

The goBerkeley parking program regularly monitors parking conditions in the program areas of Elmwood, Southside/Telegraph, Northside (Euclid/Hearst), and Downtown Berkeley to ensure a majority of block faces<sup>2</sup> in these areas maintain parking occupancies of 65% to 85%. goBerkeley areas consist of “Premium” and “Value” zones, which are designed to balance demand for parking in and around popular commercial districts by increasing driver choices. Typically, “Premium” zones feature higher prices and shorter time limits to improve access in high-demand core commercial areas, while peripheral “Value” zones feature lower prices and longer time limits, offering customers the option to park in areas with lower demand for a longer duration.

Staff collected and analyzed parking demand data in fall 2019 at on-street meters, and City-owned off-street parking lots and garages. The following summary presents the City’s key findings and recommended adjustments in these areas:

I. Downtown Berkeley

During summer and fall 2019, the City’s Shattuck Reconfiguration Project and utility work has significantly impacted on-street parking supply in the Downtown Berkeley area. A total of 93 parking spaces on 14 block faces in the Premium zone

<sup>1</sup> These changes are made in compliance with the July 12, 2016 Resolution No. 67,613-N.S. that specifies how demand-responsive on-street and off-street parking is implemented within goBerkeley parking program areas.

<sup>2</sup> Blockface - one side of one block, e.g., the north side of Center Street between Milvia Street and Shattuck Avenue.

(approximately 13% of total Premium on-street supply) were completely closed to general metered parking at the 12 p.m. peak weekday hour during the study period. This analysis considers parking availability at block faces that either had no construction, or construction activity that only affected a portion of parking spaces.

#### A. Observed Conditions

- Over 75% of block faces in the two-hour “Premium” zone continues to exceed the target occupancy rate of 65%-85%. Parking occupancy in the “Value” zone also exceeds the target rate.
- There is excess capacity at the Center Street Garage, with total parking occupancy under 45% and short-term occupancy just over 30% at the peak hour.
- While Berkeley Way Lot is nearly full at the peak hour, short-term parking occupancy at the Oxford Garage falls within the target parking occupancy rate.
- On average, parking transactions and paid parking duration in the Downtown have remained consistent since the April 1, 2019 adjustment. The average length of stay at a 4-hour Value zone meter is just over one (1) hour.

#### B. Recommended Adjustments

- “Premium” zone meters: Increase hourly rate from \$3.75/hour to \$4.00/hour, which may shift some users into the Center Street Garage, which has a lower hourly rate of \$3.00/hour for up to four hours. While high parking occupancy rates warrant a higher price increase to \$4.25, staff recognize that construction has placed artificial constraints on supply that may be exacerbating parking availability and a few of these constraints are expected to be removed in early 2020. Thus, a lower rate increase is recommended as conditions will be monitored, allowing lowering of the hourly rate at the next adjustment if warranted by evolving conditions.
- “Value” zone meters (excluding Berkeley Way Lot): Increase hourly rate from \$2.50/hour to \$2.75/hour, and extend time limit to eight (8) hours to provide additional low-cost options for employees and/or visitors to the Downtown area.
- Center Street Parking Garage: Reduce hourly rate from \$3.00/hour to \$2.50/hour.
- Berkeley Way Lot: No changes. The Lot is planned to close permanently by March 2020.
- Oxford Parking Garage: No changes.

## II. Southside/Telegraph

#### A. Observed Conditions

- A total of 23 parking spaces on two block faces (5% of total Premium supply) were completely closed to parking during the study period.
- While most block faces in the two-hour “Premium” zone exceeded 85% occupancy, nearly as many achieved the target occupancy of 65-85%.
- A majority of block faces in the “Value” zone exceeded the target rate, indicating that the changes to the zone boundaries made on April 1, 2019 successfully drew drivers to previously underutilized areas.



- On average, Telegraph Channing Garage short-term parking reaches optimal occupancy rates during peak hours, and has high parking availability throughout the day.

#### B. Recommended Adjustments

- “Premium” zone meters: Increase hourly rate from \$3.25/hour to \$3.50/hour.
- “Value” zone meters: Increase hourly rate from \$2.50/hour to \$3.00/hour.
- Telegraph Channing Garage: No change.

### III. Elmwood

#### A. Observed Conditions

- A total of six parking spaces were unavailable for parking during the study period (7% of overall Premium parking supply).
- Most block faces achieve optimal occupancy rates in the “Premium” zone, though there are nearly as many that exceed the target rate.
- At the Elmwood Lot, the area’s lone “Value” zone, parking occupancy achieves the target occupancy rate at the peak hour.

#### B. Recommended Adjustments

- “Premium” zone meters: No change.
- Elmwood Lot “Value” zone: No change.

### IV. Northside

#### A. Observed Conditions

- Most “Premium” zone block faces exceeded the target parking occupancy rate at the peak hour, and the one “Value” zone on Scenic Avenue was also nearly full.

#### B. Recommended Adjustments

- “Premium” zone meters: Increase hourly rate from \$2.00/hour to \$2.25/hour.
- “Value” zone meters: Increase hourly rate from \$1.50/hour to \$1.75/hour.

### Notification

Department of Public Works Transportation Division staff met with goBerkeley’s Community Advisory Group in November 2019 and provided an update on the proposed adjustments. Attendees included representatives from the Downtown Berkeley Association, Telegraph Business Improvement District, and the Elmwood Business Association. Notifications to inform the public of upcoming changes will begin January 1, 2020. Activities will include:

- Updates via City of Berkeley website. A notification will be posted on the City’s website at [www.cityofberkeley.info/Public\\_Works/Transportation](http://www.cityofberkeley.info/Public_Works/Transportation).
- Outreach in partnership with Downtown Berkeley Association, Telegraph Business Improvement District, and Elmwood Merchants Association to notify their members through email and in-person outreach.

### BACKGROUND

The City uses parking meters to manage parking demand, particularly in commercial areas where parking availability and turnover are critical for visitor access and convenience. The program consists of a suite of strategies and initiatives designed to improve economic vitality and reduce greenhouse gas emissions. The program features improved parking availability that improves pedestrian and bicyclist safety by reducing the likelihood of incidents of distracted driving as drivers search for parking. Clearer signage and longer on-street parking time limits also provide better customer service.

### ENVIRONMENTAL SUSTAINABILITY

The goBerkeley parking program's recommended rate adjustments should improve parking management and lessen traffic congestion and vehicle emissions, as drivers are anticipated to spend less time searching for available parking spaces. Reducing greenhouse gas emissions produced by vehicular traffic is one of the City's 2009 Climate Action Plan goals.

### POSSIBLE FUTURE ACTION

If Council takes no action regarding the recommended rate adjustments, staff will begin public notification January 1, 2020 through the City website, distribution of flyers, and outreach to business associations. Staff anticipates implementing these rate adjustments February 1, 2020.

### FISCAL IMPACTS OF POSSIBLE FUTURE ACTION

Fiscal impacts are difficult to forecast as demand-responsive parking pricing recommendations include increased or decreased parking rates in different areas, and parking behaviors resulting from these price adjustments may vary, particularly at on-street meters. Staff anticipates incremental parking revenue from the goBerkeley parking program should continue to be sufficient to cover expected expenditures of the program.

### CONTACT PERSON

Farid Javandel, Transportation Manager, Public Works (510) 981-7061  
Danette Perry, Parking Services Manager, Public Works (510) 981-7057  
Gordon Hansen, Senior Planner, Public Works (510) 981-7064

### Attachments:

- 1: City Council Notification Report
- 2: Average Weekday Peak Parking Occupancy (12 p.m.)
- 3: Parking Garage Occupancy – September 2019

**PARKING CHANGES**

The following tables show the seven elements that staff updates Council and the public on prior to each goBerkeley Program change.

1. Types of Parking Affected		
<input checked="" type="checkbox"/> ON-STREET METERS	<input checked="" type="checkbox"/> GARAGES	<input type="checkbox"/> LOTS

2. Dates		
Date of Proposed Change	Date of Previous Change	Days Between Change
February 1, 2020	January 1, 2020 (New North Shattuck area)	31 days (1 months, 0 days)

3. Areas Affected			
Area Name	Area Zone	Boundaries	Map
Downtown Berkeley	Premium	No boundary changes recommended at this time.	See Attachment 3.
	Value	No boundary changes recommended at this time.	
	Berkeley Way Lot		
Southside/ Telegraph	Premium	No boundary changes recommended at this time.	
	Value	No boundary changes recommended at this time.	
Elmwood	Premium	No boundary changes recommended at this time.	
	Elmwood Lot		
Northside	Premium	No boundary changes recommended at this time.	
	Value	No boundary changes recommended at this time.	

<b>4. Rate Changes</b>				
<b>Name</b>	<b>Parking Type</b>	<b>Existing Rate</b>	<b>Proposed Rate</b>	<b>Change</b>
Downtown Berkeley	Premium	\$3.75/hour	\$4.00/hour	+ \$0.25
	Value	\$2.50/hour	\$2.75/hour	+ \$0.25
	Berkeley Way Lot	\$2.50/hour	\$2.50/hour	N/A
	Center Street Garage	\$3.00/hour	\$2.50/hour	- \$0.50
Southside/ Telegraph	Premium	\$3.25/hour	\$3.50/hour	+ \$0.25
	Value	\$2.50/hour	\$3.00/hour	+ \$0.50
Elmwood	Premium	\$2.75/hour	\$2.75/hour	N/A
	Elmwood Lot	\$1.25/hour	\$1.25/hour	N/A
Northside	Premium	\$2.00/hour	\$2.25/hour	+ \$0.25
	Value	\$1.50/hour	\$1.75/hour	+ \$0.25

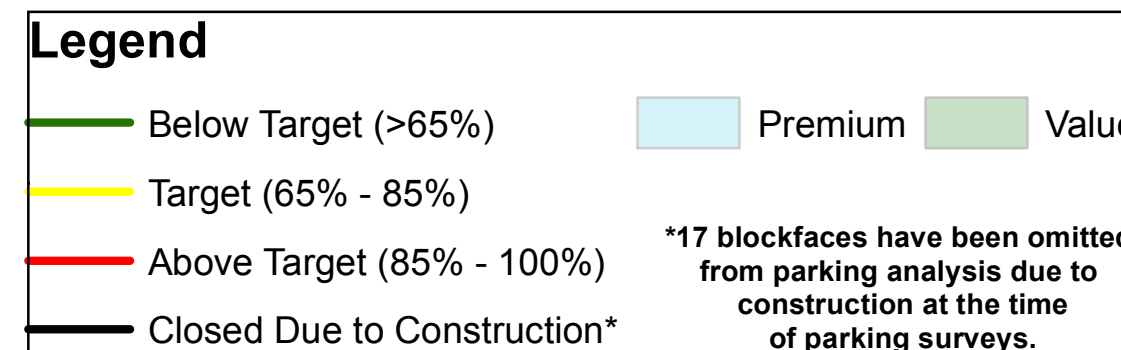
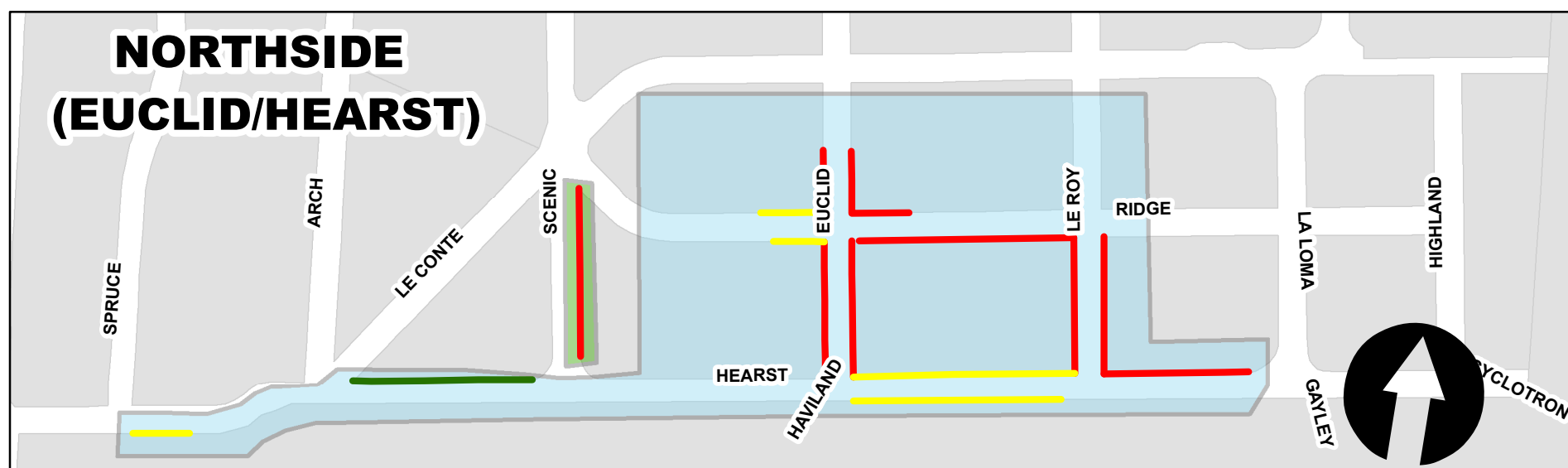
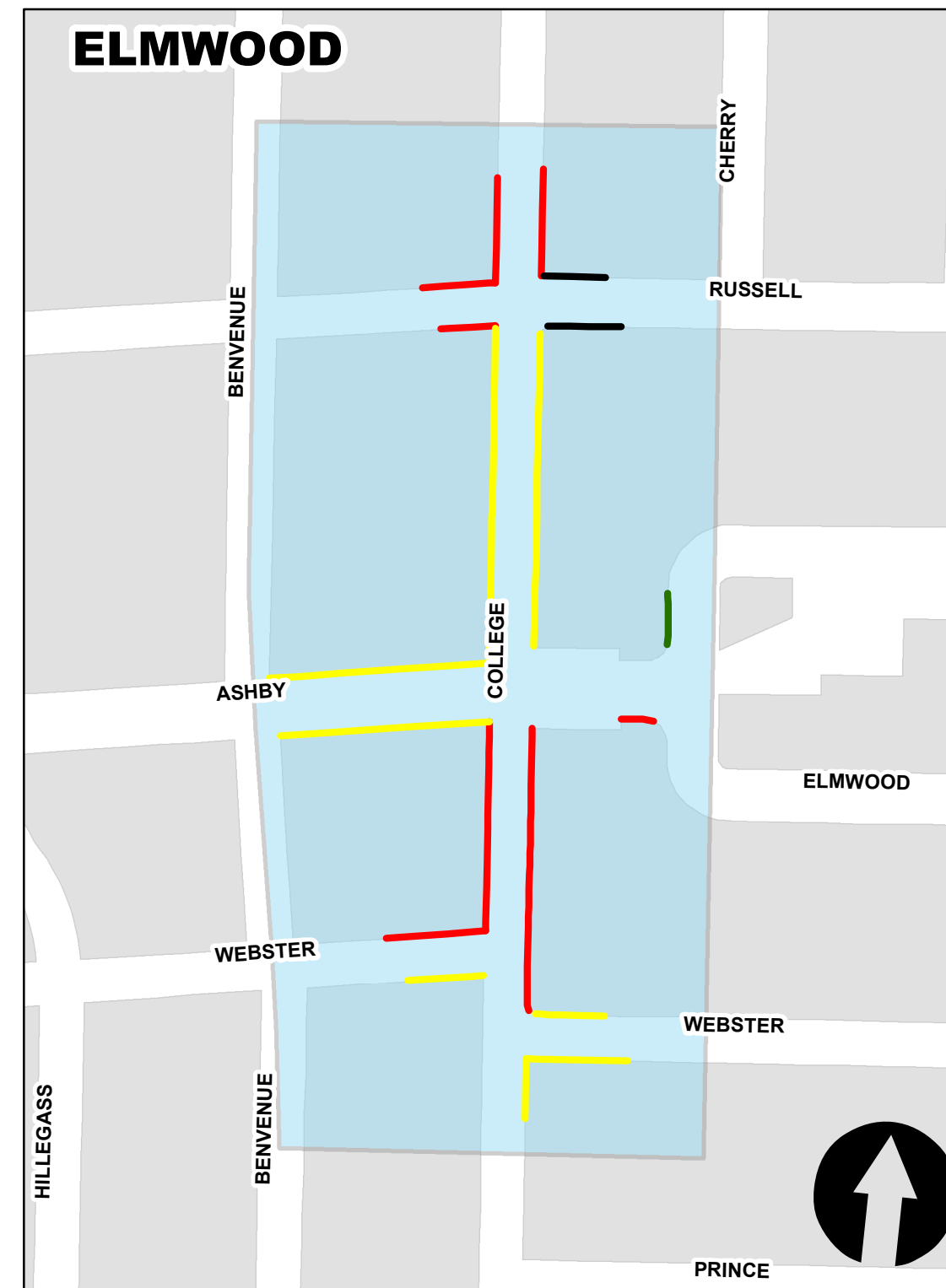
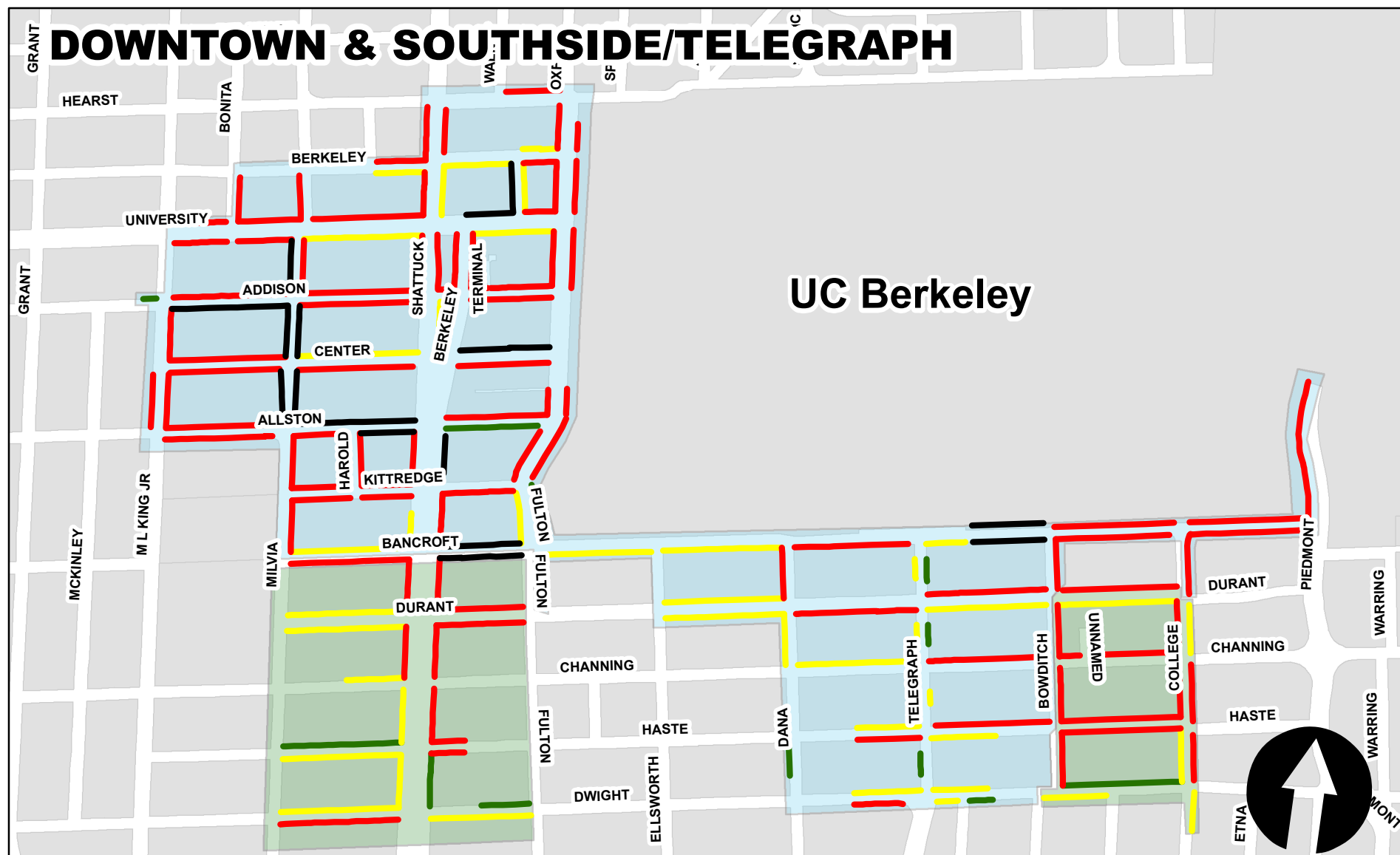
<b>5. Time Limit Changes</b>			
<b>Area Name</b>	<b>Area Zone</b>	<b>Existing</b>	<b>Proposed</b>
Downtown Berkeley	Value	240 minutes	480 minutes

<b>6. Hours of Operation</b>			
<b>Area Name</b>	<b>Area Zone</b>	<b>Existing</b>	<b>Change</b>
No changes recommended at this time.			

<b>7. Parking Occupancy</b>				
<b>Area Name</b>	<b>Area Zone</b>	<b>Occupancy Type*</b>	<b>Proportion of On-Street Block Faces</b>	<b>Garage/Lot Occupancy %</b>
Downtown Berkeley	Premium (2 Hour)	Under	5%	N/A
		Target	18%	
		<b>Over</b>	<b>77%</b>	
	Value (4 Hour)	Under	21%	
		Target	33%	
		<b>Over</b>	<b>46%</b>	
	Center Street Garage	Short-Term Occupancy <sup>1</sup>	N/A	31%
Oxford Garage	Short-Term Occupancy	N/A	74%	
Berkeley Way Lot	Total Occupancy	N/A	98%	
Southside/ Telegraph	Premium (2 Hour)	Under	19%	N/A
		Target	40%	
		<b>Over</b>	<b>42%</b>	
	Value (8 Hour)	Under	6%	
		Target	31%	
Telegraph Channing Garage	Short-Term Occupancy	N/A	65%	
Elmwood	Premium (3 Hour)	Under	12%	N/A
		<b>Target</b>	<b>47%</b>	
		Over	41%	
Elmwood Lot	Total Occupancy	N/A	78%	
Northside (Euclid/Hearst)	Premium (2 Hour)	Under	7%	
		Target	33%	
		<b>Over</b>	<b>60%</b>	
	Value (4 Hour)	Under	0%	
		Target	0%	
		<b>Over</b>	<b>100%</b>	
<b>*Occupancy Ranges:</b>			<b>Average Weekday (T, W, Th),<sup>2</sup> September 2019</b>	
"Under" = 0-65%    "Target" = 65-85%    "Over" = 85%+				

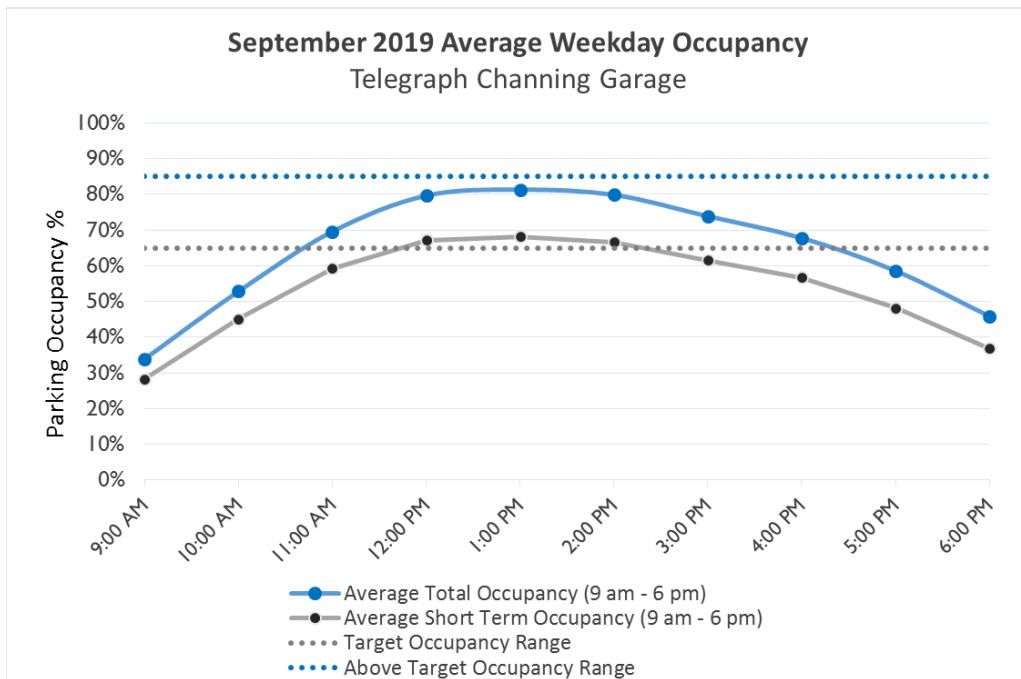
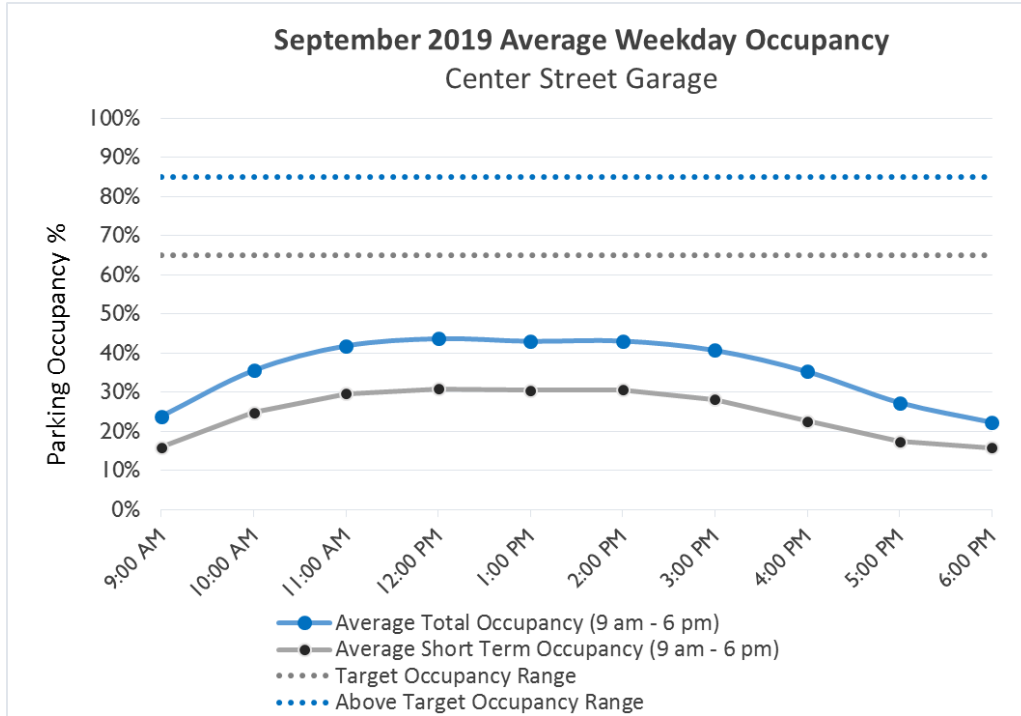
<sup>1</sup> Short-term parking refers to parking durations up to four hours. Excludes monthly parking.

<sup>2</sup> Weekday = Average of typical daily peak (12PM) of Tuesday, September 17, Wednesday, September 25, and Thursday, September 19, 2019.

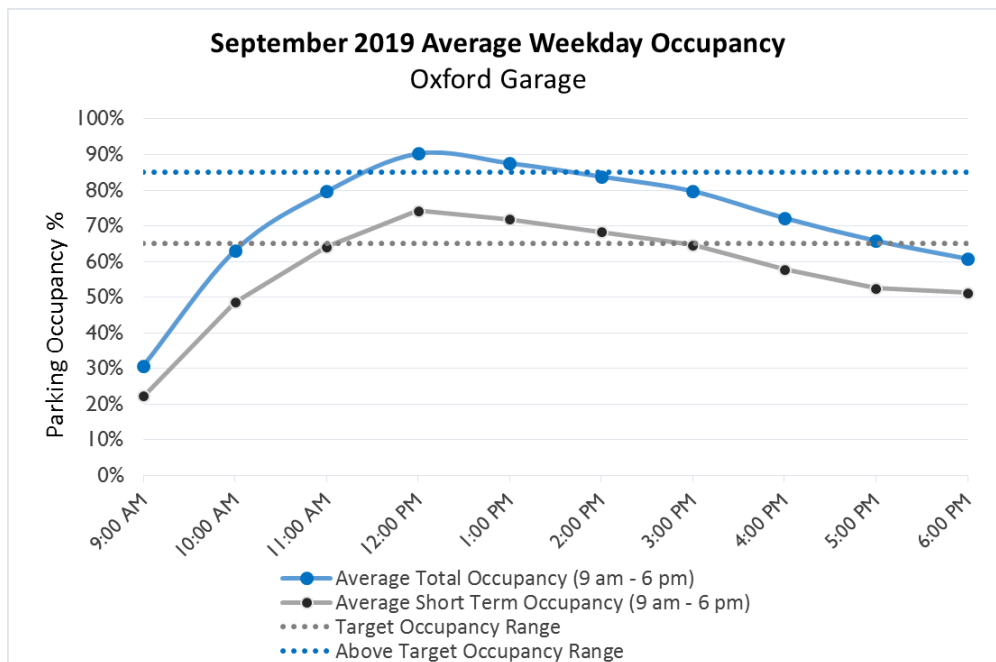


**Average Weekday Peak Parking Occupancy (12 p.m.)**  
 Fall 2019

**Parking Garage Occupancy (Average Weekday)**







INFORMATION CALENDAR

December 10, 2019

**To:** Honorable Mayor and Members of the City Council  
**From:** Jenny Wong, City Auditor *zw*  
**Subject:** Recommendation Follow Up Report, December 2019

CURRENT SITUATION AND ITS EFFECTS

Since our last report in February 2019, City management has fully addressed 53 of over 100 outstanding audit recommendations. In addition, seven audits are now closed and seven were reported to City Council during this time. Action taken includes Finance implementing collections activities based on our audit of business license taxes yielding \$1.3 million from delinquent accounts. While significant progress has been made on those recommendations, there has been no progress made on two audits. The Leases Audit is over 10 years old and the Grants Management Audit has not been reported to City Council since its release in July 2009.

The intent of this report is to keep City Council informed about the implementation status of recommendations made by the City Auditor. We welcome suggestions or recommendations for improving this report to enhance your ability to monitor the effective implementation of City Auditor recommendations.

BACKGROUND

Audit follow-up activities are conducted for every audit to assess whether City management implemented the agreed-upon audit recommendations. The Auditor's Office issues follow-up audit reports to City Council on the status of our recommendations. Our office measures the audit recommendation implementation rate as an indicator of the degree to which the City is using information provided by our audit reports to mitigate identified risks and to enhance efficiency and effectiveness of operations.

City Municipal Code allows the City Auditor to request periodic status reports from auditees regarding actions taken to address reported deficiencies and audit recommendations every six months. These status reports establish the Auditor's ability to determine the adequacy, effectiveness, and timeliness of management's actions to correct reported issues and recommendations.

FISCAL IMPACTS

Our audits identify a variety of risks, including financial loss to the city. Addressing our recommendations can result in financial revenues, as in the case of establishing a process of collections for business license taxes, which yielded \$1.3 million. We identified financial loss as one of the top risks associated with our outstanding audit recommendations.

ENVIRONMENTAL SUSTAINABILITY

There are no identifiable environmental effects or opportunities associated with this report.

CONTACT PERSON

Jenny Wong, City Auditor, City Auditor's Office, 510-981-6750

Attachments:

1: Recommendation Follow Up Report, December 2019

# Recommendation Follow Up Report

December 2019



BERKELEY CITY AUDITOR

Promoting transparency and accountability in Berkeley government

## Recommendations Follow Up Report Highlights

December 2019

### Accomplishments

Taking action on our audit recommendations leads to increased revenues and operational improvements. Several departments took action to close out all our open audit recommendations or made headway by implementing some of them. The **Finance Department** took action to increase collections by designing processes based on our audit recommendations. The Finance Revenue Collection team actively reviews delinquent accounts and successfully recouped \$1.3 million in delinquent Business License Tax accounts as of October 2019. The **City Manager’s Office** implemented an ethics hotline that allows employees to bring forward their concerns.

### Statistics

This report reflects the status of all the Berkeley City Auditor open audit recommendations. During this reporting cycle, we verified that departments and related entities fully addressed 53 recommendations of the 108 (49 percent) based on our reporting in February 2019.

**Figure 1: City Management Fully Addressed 53 Audit Recommendations Since December 2018**

Number of Recommendations	Status of Recommendations
53	Implemented/Closed
22	Partially Implemented
33	Not Implemented
<b>108</b>	<b>Total</b>

Note: The City has implemented or partially implemented 38 of the 71 “Not Implemented” recommendations reported in February 2019.

Source: Auditor’s analysis

We added 25 new recommendations from our 911 Dispatcher and Fire Inspection Prevention audits that were published in the Spring.

### Major Risks

We assigned each of the open audit recommendations to one of five risk categories—financial loss, safety/health, reputational, compliance, and misinformation. The majority of the open recommendations fall under the financial loss and safety/health risk categories.

Our Leases Audit was released in June 2009 with recommendations aimed at improving the City’s facility lease oversight. Seven recommendations remain not implemented after 10 years and the financial loss risk associated with them has not been addressed.

Our Grants Management Audit was released in July 2016 with 15 recommendations aimed at improving the City’s grant management process to prevent the loss of grant revenue and provide management and staff with accurate and timely information. In the three years since the audit release, City management has never reported to Council on the status of these recommendations.



## Open Audits as of December 10, 2019

Report Title	Date Issued	Department	# of Rec's made	Implemented/ Open	Not Implemented	Partially Implemented	Implemented/ Closed
<a href="#">Leases Audit: Conflicting Directives Hinder Contract Oversight</a>	6/2/2009	City Manager	24*	7	-	-	16
<a href="#">Underfunded Mandate: Resources, Strategic Plan, and Communication Needed to Continue Progress Toward the Year 2020 Zero Waste Goal</a>	7/1/2014	Public Works	15*	6	5	-	3
<a href="#">Most Contracts Executed Timely But Contract Project Managers Could Use Better Tools and Guidance</a>	10/6/2015	Finance	5	1	-	-	4
<a href="#">Citywide Grants Management (formerly Public Works Grant Follow Up)</a>	7/19/2016	City Manager	15	14	-	-	1
<a href="#">Unified Vision of Zero Waste Activities Will Help Align Service Levels with Billing and Ensure Customer Equity</a>	9/20/2016	Public Works	12	1	5	-	6
<a href="#">City at Crossroads as Long-Standing Need for Structured Approach to Line of Business Experts Function Intersects with ERP Implementation</a>	1/24/2017	City Manager & Information Technology	5	-	3	-	2
<a href="#">Berkeley's Ethical Climate Rate Strong Overall and Management Working to Make it Better</a>	3/14/2017	City Manager & Human Resources	6	2	3	-	1
<a href="#">Code Enforcement Resources Significantly Constrained and Improvements Needed in Case Management and Oversight</a>	6/26/2018	City Manager & City Council	12	1	6	-	5
<a href="#">Credit Card Use: Clearer Guidance Needed</a>	6/26/2018	Finance	3	1	-	-	2
<a href="#">911 Dispatchers: Understaffing Leads to Excessive Overtime and Low Morale</a>	4/25/2019	Police	14	14	-	-	-
<a href="#">Fire Prevention Inspections: Insufficient Resources Strain Code Compliance</a>	5/9/2019	Fire	11	11	-	-	-
<b>Total</b>			<b>122</b>	<b>58</b>	<b>22</b>	<b>40</b>	

\* The auditee decided they would not implement one of our recommendations. They accepted the risk to the city that the recommendation was meant to address and is unable or unwilling to implement the recommendation.

## Table of Contents

Summary of Results.....	5
Accomplishments .....	6
Five Areas of Risk to the City .....	9
Audits Closed Since Last Report.....	10
Recommendations Open More Than Two Years .....	12
Audits Not Reported to Council .....	13
Implementation Status of Open Recommendations .....	14
Leases Audit: Conflicting Directives Hinder Contract Oversight .....	14
Underfunded Mandate: Resources, Strategic Plan, and Communication Needed to Continue Progress Toward the Year 2020 Zero Waste Goal.....	17
Most Contracts Executed Timely But Contract Project Managers Could Use Better Tools and Guidance .....	22
Citywide Grants Management.....	24
Unified Vision of Zero Waste Activities Will Help Align Services Levels with Billing and Ensure Customer Equity .....	30
City at Crossroads as Long-Standing Need for Structured Approach to Line of Business Experts Function Intersects with ERP Implementation .....	33
Berkeley’s Ethical Climate Rated Strong Overall and Management Working to Make it Better .....	35
Code Enforcement Resources Significantly Constrained and Improvements Needed in Case Management and Oversight .....	38
Credit Card Use: Clearer Guidance Needed .....	42
911 Dispatchers: Understaffing Leads to Excessive Overtime and Low Morale ..	43
Fire Prevention Inspections: Insufficient Resources Strain Code Compliance .....	48



## Summary of Results

The Berkeley City Auditor’s Office conducts audits and makes recommendations to strengthen accountability and improve the efficiency and effectiveness of City programs. The Office monitors progress toward implementing recommendations and periodically reports on the status of all open audit recommendations.

This report reflects the status of all the Berkeley City Auditor open audit recommendations. We contacted departments directly to gather recommendation status information, reviewed all outstanding recommendations, and placed the recommendations into the following status categories:

<b>Implemented/Closed</b>	Auditee has completely implemented or closed the recommendation
<b>Partially Implemented</b>	Auditee has implemented 50 percent or more of the recommendation
<b>Not Implemented</b>	Auditee has not yet taken action to implement the recommendation
<b>Will Not Implement</b>	The auditee has accepted the risk to the City that the recommendation is meant to address and is unable or unwilling to implement the recommendation

City management has continued to make significant progress toward implementing open audit recommendations. As of our last recommendation follow up report for the period ending December 2018, there were 107 open recommendations. One recommendation moved from implemented to partially implemented, bringing the total to 108. Since then, we have issued two performance audits that added 25 new recommendations.

During this reporting cycle, we verified that departments and related entities had fully addressed 53 recommendations out of the 108 (49 percent) since our last report. The results of our review for this reporting cycle are as follows:

**Figure 2: City Management Fully Addressed 53 Audit Recommendations Since December 2018**

Number of Recommendations	Status of Recommendations
53	Implemented/Closed
22	Partially Implemented
33	Not Implemented
<b>108</b>	<b>Total</b>

Note: The City has implemented or partially implemented 38 of the 71 “Not Implemented” recommendations reported in February 2019.

Source: Auditor’s analysis

## Accomplishments

Taking action on our audit recommendations leads to increased revenues and operational improvements. Several departments took action to close out all our open audit recommendations or made headway by implementing some of them. The following outlines accomplishments made as a direct result of our audits:

### Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues

The **Finance Department** took action to increase collections by designing processes based on our audit recommendations. The Finance Revenue Collection team actively reviews delinquent accounts and successfully recouped \$1.3 million in delinquent Business License Tax accounts as of October 2019.

### Construction Permits: Monitor Performance and Fee Assessments to Ensure Excellent and Equitable Customer Service

The **Planning and Development Department** is set to install a new state-of-the-art queuing solution for the Permit Service Center and to procure a new digital permitting system. This will improve the customer service experience by reducing customer wait times and monitoring activity for process improvement needs.

### Berkeley Fire Department Ambulance Billing Follow Up Audit

The **Berkeley Fire Department** selected a new billing service provider who will actively reach out to individuals who are delinquent on paying for their ambulance service, including identifying insurance companies who could pay. Our office was instrumental in compelling the Department to fully implement this recommendation after hesitation from management. The vendor will work with individuals who are having difficulty making payments and offer payment extensions or payment plans, including a no payment option. This is expected to increase revenue needed for emergency response services.

### City at Crossroads as Long-Standing Need for Structured Approach to Line of Business Experts Function Intersects with ERP Implementation

The **Information Technology Department** defined the roles and responsibilities of those who support information systems and clarified their charges to other departments to accurately reflect the cost of service Information Technology provides to each department. This included creating service level agreements that serve as excellent models for all city departments to use in defining how they provide for and charge for services to other city departments. The agreements improve city operations through continued, consistent, and adequate support from Information Technology.

## Berkeley's Ethical Climate Rated Strong Overall and Management Working to Make it Better

The **City Manager's Office** implemented an ethics hotline that allows employees to bring forward their concerns. The City Manager's Office also created an ethics committee comprised of management personnel that serves as the lead body in supporting the citywide implementation of initiatives to build a transparent, equitable, and ethical workplace. These actions will help build a positive and supportive workplace that, in turn, will result in better public service.

## Parks, Recreation, and Waterfront On-Call Program: Ensure Equity by Developing Procedures for Charging for Services, and Improve Monitoring Practices and Communication

The **Parks, Recreation, and Waterfront Department** improved their cost-accounting practices by establishing a new system for allocating on-call charges. This action provides transparency in costs and links services to the appropriate fund. The department has also improved operations through monitoring activities and establishing guidelines for triaging after-hours calls so that staff respond to only urgent needs.

## Stronger Oversight Necessary to Ensure Continued Assistance for Severely Physically Disabled Persons

The **Health, Housing, and Community Services Department (HHCS)** incorporated the remaining open audit recommendations into the City's contract granting Easy Does It (EDI) city funding for their services. Doing so provides a mechanism by which to hold EDI accountable for addressing the risks associated with our findings and recommendations. Our office worked closely with HHCS during this audit and will continue to offer our support as they follow up on these recommendations through the contract monitoring process.

## \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures

The **Finance Department** included a new cashiering system in the contract for enterprise resource planning software and implementation. Finance has also been doing more surprise cash counts as a deterrent to fraud and misuse, and to check on compliance with city procedures.

## Examination of Department Directors Transition Procedures Follow Up Audit

The **City Manager's Office** successfully completed property checklists for all department directors as a means for ensuring property is retrieved during director transitions, and the **Information Technology Department** clarified its guidance for issuing and retrieving communications equipment.

## Credit Card Use: Clearer Guidance Needed

The **Finance Department** improved guidance by issuing a new administrative regulation clarifying when food and beverage purchases are allowable. The policy clarifies that food purchases are limited to situations that benefit the city and requires employees to submit itemized receipts to support their purchases. Finance also issued a memo to credit-card holders that clarifies how they are to use their cards consistent with the city's various purchasing policies.

## Five Areas of Risk to the City

We have assigned each of the open audit recommendations to the five risk categories below:



**Financial loss:** fraud/misuse; reduced revenues; and similar



**Safety/health:** both to City staff and the public



**Reputational:** lack of public faith in city operations



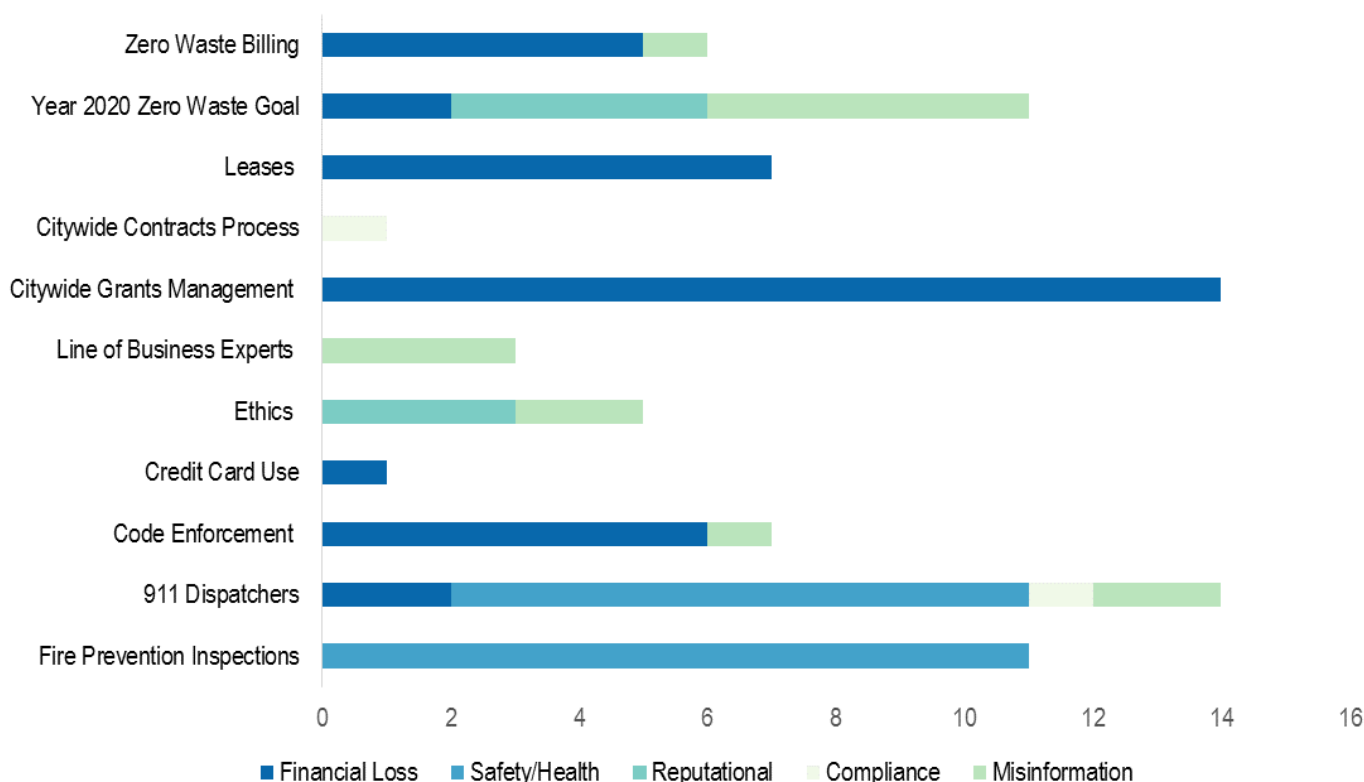
**Compliance:** failure to comply with legal requirements



**Misinformation:** management using poor/inaccurate information for budget and operational decisions

Each recommendation was categorized under one of the risk categories as shown in Figure 3. We recognize some recommendations can fall under more than one category. These additional risks can be found on the audit specific pages of this report. The chart below shows the breakdown of risks in recommendations that the City has not yet fully implemented.

**Figure 3: The Majority of Recommendations Fall Under the Financial Loss and Safety/Health Risk Categories**



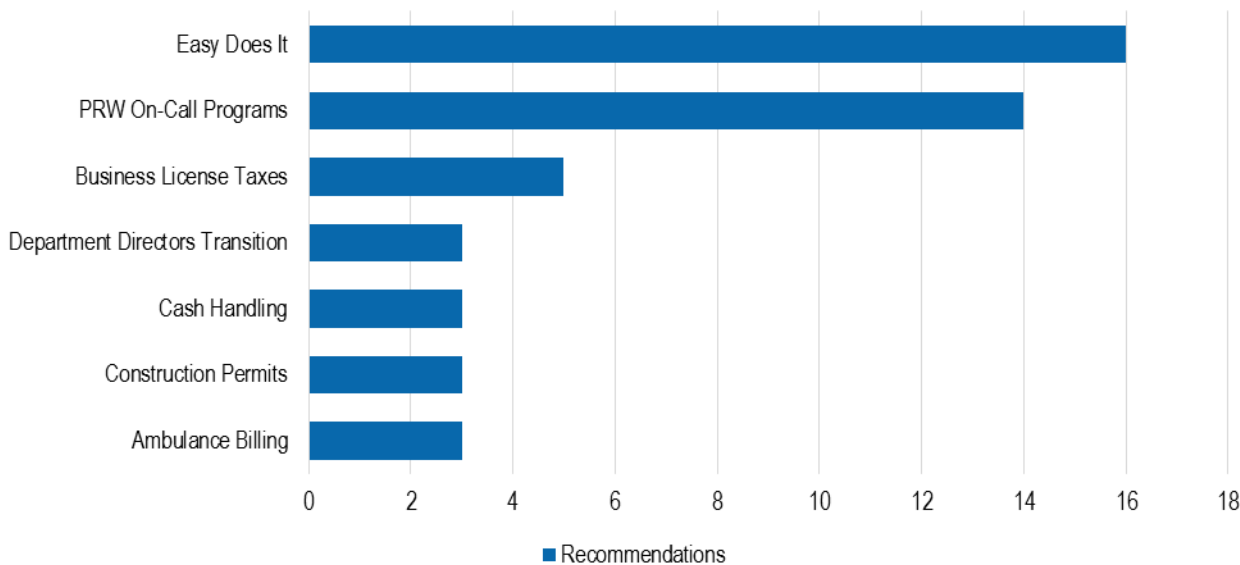
Source: Auditor's analysis

## Audits Closed Since Last Report

As of our last recommendation follow-up report for the period ending December 31, 2018, there were 16 open audit reports. An open audit report is any report that has one or more recommendations that have not been fully addressed. Since that time, seven audits have been closed. Below are the audits that were determined closed during the reporting period:

1. Stronger Oversight Necessary to Ensure Continued Assistance for Severely Physically Disabled Persons (Easy Does It) - *Health, Housing, & Community Services*
2. PRW On-Call Program: Ensure Equity by Developing Procedures for Charging for Services, and Improve Monitoring Practices and Communication - *Parks, Recreation, & Waterfront*
3. Business License Taxes: Providing Better Guidance and Customer Service Will Increase Revenues - *Finance*
4. Construction Permits: Monitor Performance and Fee Assessments to Ensure Excellent and Equitable Customer Service - *Planning*
5. Berkeley Fire Department Ambulance Billing Follow Up Audit - *Fire*
6. Examination of Department Directors Transition Procedures Follow Up Audit - *City Manager*
7. \$52,000 Theft: More Can Be Expected Without Citywide Changes in Culture and Procedures - *Finance*

**Figure 4: Seven Audits Related to 47 Recommendations Closed During Reporting Period**



Source: Auditors Analysis

In addition to the audits closed, management reported on the progress of the seven following audits and associated recommendations:

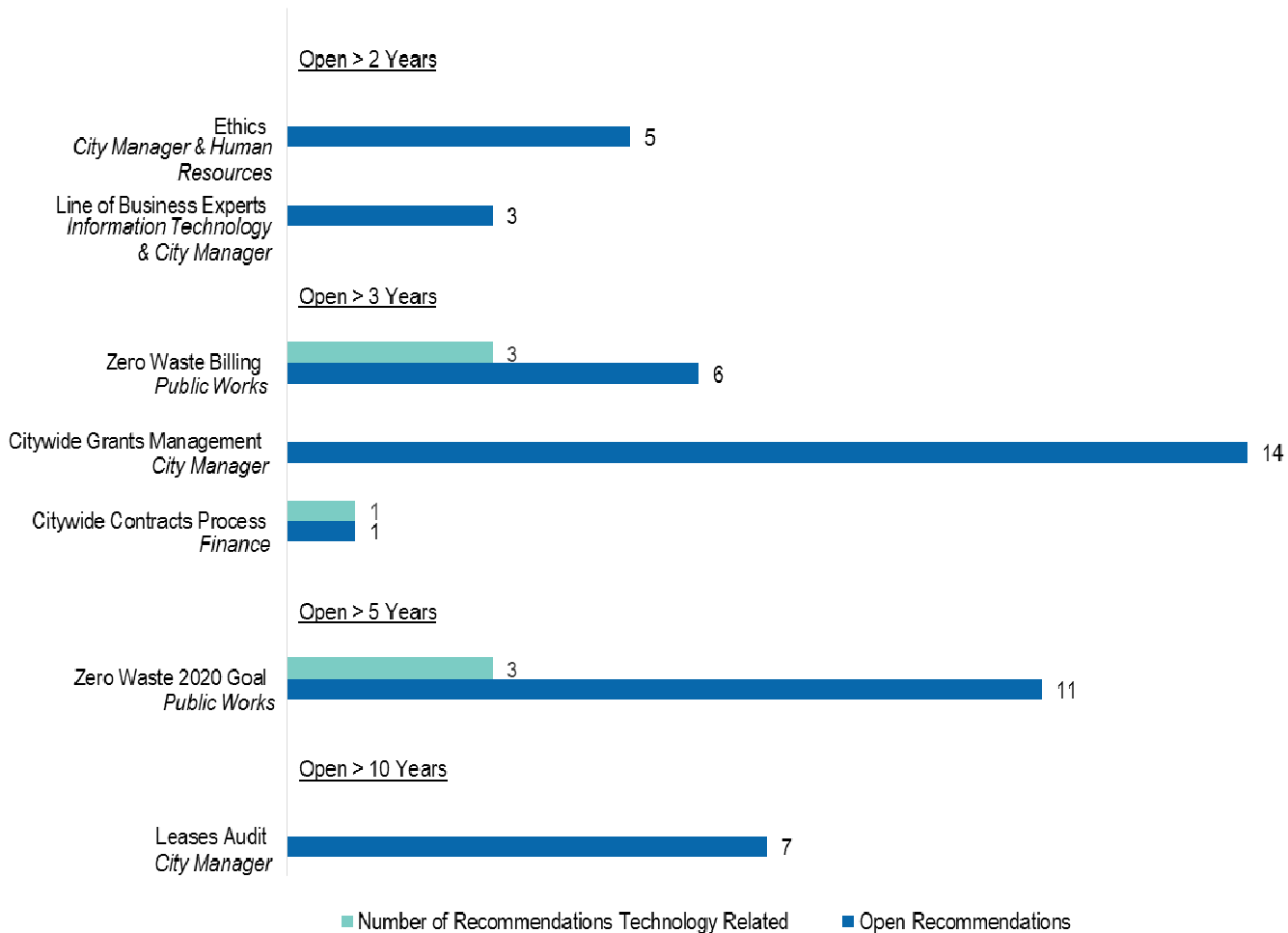
1. **Underfunded Mandate: Resources, Strategic Plan, and Communication Needed to Continue Progress Toward the Year 2020 Zero Waste Goal - *Public Works***
2. **Unified Vision of Zero Waste Activities Will Help Align Service Levels with Billing and Ensure Customer Equity - *Public Works***
3. **City at Crossroads as Long-Standing Need for Structured Approach to Ling of Business Experts Function Intersects with ERP Implementation - *City Manager and Information Technology***
4. **Berkeley's Ethical Climate Rate Strong Overall and Management Working to Make it Better - *City Manager and Human Resources***
5. **Code Enforcement Resources Significantly Constrained and Improvements Needed in Case Management and Oversight - *City Manager***
6. **Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance - *Finance***
7. **Credit Card Use: Clearer Guidance Needed - *Finance***



## Recommendations Open More Than Two Years

The chart below shows 47 recommendations that have been open for more than two years. Of these recommendations, seven are related to technology improvements. A typical standard among performance auditors is that recommendations will be fully implemented within two years of a report issuance. We expect that technology improvements may take longer than two years to implement, but all recommendations should be implemented within a five year period.

**Figure 5: 47 Recommendations Open More Than Two Years, Only Seven Related to Technology Improvements**

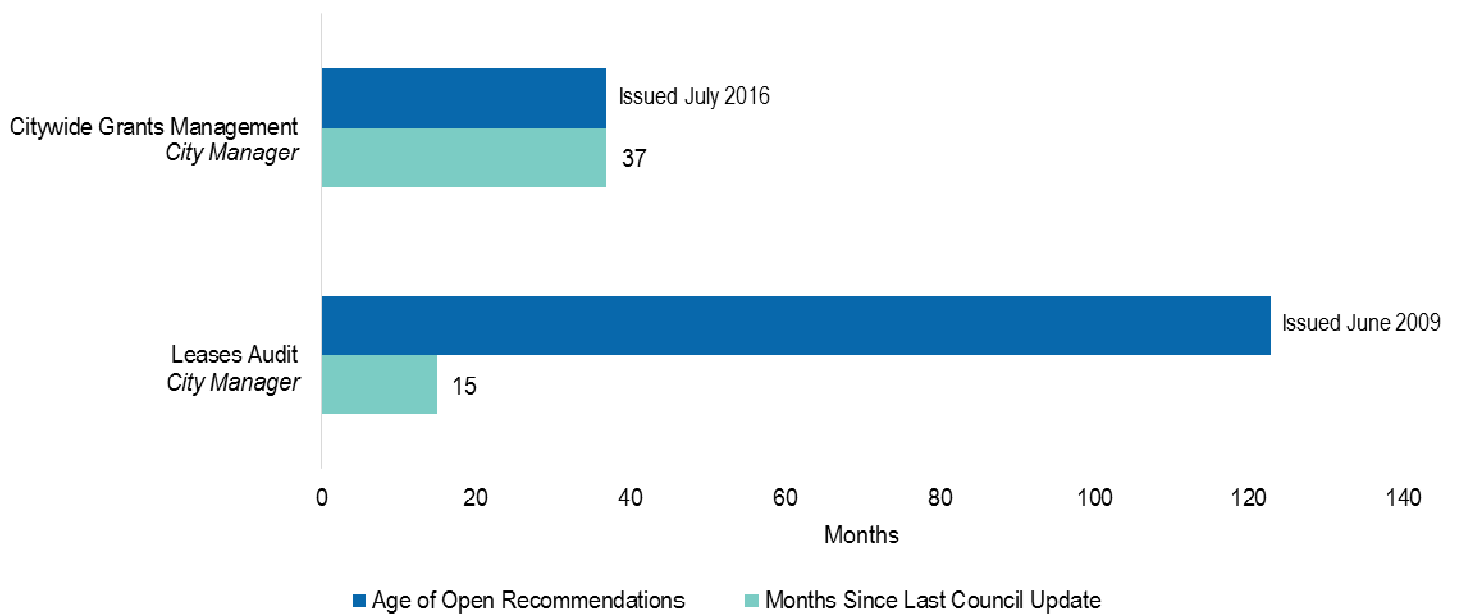


Source: Auditor’s analysis

## Audits Not Reported to Council

In the last year, management reported to Council on the status of seven audit reports, however, they failed to report on the status of two audit reports with 21 open recommendations (26 percent of remaining open recommendations). Berkeley City Municipal Code allows the City Auditor to request periodic status reports from auditees regarding actions taken to address reported deficiencies and audit recommendations every six months. These status reports establish the Auditor’s ability to determine the adequacy, effectiveness, and timeliness of management’s actions to correct reported issues. Below is a chart that shows the audits that are past due for a status report to Council, including how many months since the last time reported to Council and the age of the open recommendations.

**Figure 6: Two Audits Past Due for Updates to Council**



Source: Auditor’s analysis

## Implementation Status of Open Recommendations

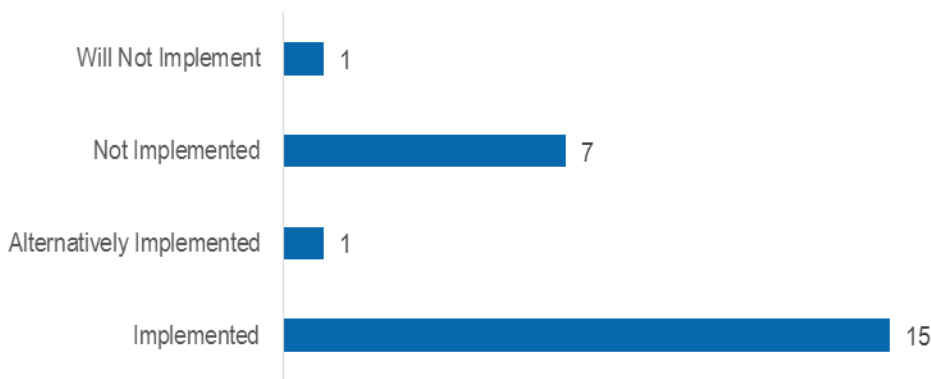
The next section of this report is broken down by open audits. Each audit page details the recommendations that are still open and what the City has done so far to implement the recommendations.

### Leases Audit: Conflicting Directives Hinder Contract Oversight

The Leases Audit contains nine findings and 24 recommendations aimed at improving the City’s facility lease oversight. Finance decided they will not implement our recommendation to establish lease performance expectations for the departments and provide a written report to the Director of Public Works on a quarterly basis. The audit was released in June 2009.

Since the audit’s release, the department has implemented 16 recommendations. Public Works created a central repository file with entries for relevant lease information. The department has also updated the lease contract review form and Administrative Regulation 6.6. Due to the length of time since we issued this report, staff turnover, and what we have learned recently about lease oversight, we do not know for certain if the previously implemented recommendations are still relevant. We only looked into open recommendations as part of this follow up report. Management has made progress towards implementing seven other recommendations. The progress for these recommendations is detailed below.

Figure 7: Seven Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

#### Summary of Audit

The objective for this audit was to determine the effectiveness of the City’s facility lease oversight. Deficiencies were identified in lease oversight in particular and contracts in general. Oversight of the City’s leases has not been effective. Clear, formalized expectations regarding lease management are lacking. There is a striking disconnect between the City Manager’s Office lease management policies and procedures and actual staff practice citywide. There are weak controls and missing information, as well as apparent inefficiencies.

**Finding 1: The City’s 2002 plan to centralize property and facility lease management has not been implemented.**

1.1 The City Manager should formalize and approve the division of responsibilities between the Public Works department and other departments regarding lease management.

**Not Implemented.** The City Manager’s Office is in the process of identifying an alternative citywide approach to lease management.



Risk Category: Financial

1.2 The Public Works department should determine and formally define the role of the real property administration staff given available resources.

**Not Implemented.** The City Manager’s Office is in the process of identifying an alternative citywide approach to lease management.



Risk Category: Financial

1.3 Develop and finalize a property management plan that documents the specific responsibilities of Public Works and of other departments for lease management.

**Not Implemented.** The City Manager’s Office is in the process of identifying an alternative citywide approach to lease management.



Risk Category: Financial

1.4 The property management plan should be coordinated with affected City departments, including the Contract Administrator in Finance/Purchasing, before finalizing.

**Not Implemented.** The City Manager’s Office is in the process of identifying an alternative citywide approach to lease management.



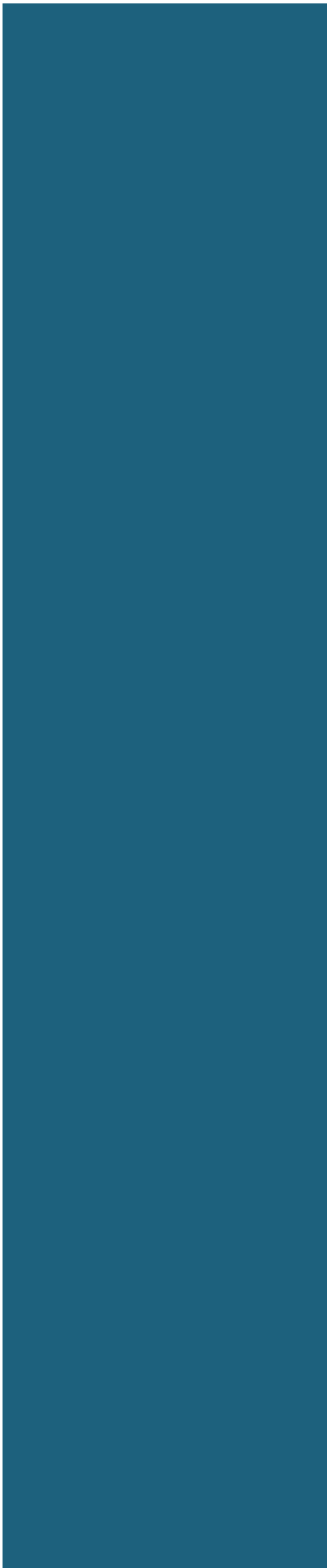
Risk Category: Financial

1.5 Formally communicate the plan with all affected City departments.

**Not Implemented.** The City Manager’s Office is in the process of identifying an alternative citywide approach to lease management.



Risk Category: Financial



**Finding 2: City Staff did not comply with City rules and regulations because the City lacks clear guidelines and simple tools for effective lease negotiations, review, approval, and oversight.**

2.1 Administrative Regulation 6.6 and Contracts Online should be updated to give clear direction to City staff regarding administration and execution of lease agreements.

**Not Implemented.** The City Manager's Office is in the process of identifying an alternative citywide approach to lease management.



Risk Category: Financial

**Finding 3: There are no performance measures to document expectations of and performance by the Real Property Administrators or departmental lease managers.**

3.3 Public Works should update the City's real property administration policies and procedures to align with management's expectations.

**Not Implemented.** The City Manager's Office is in the process of identifying an alternative citywide approach to lease management.



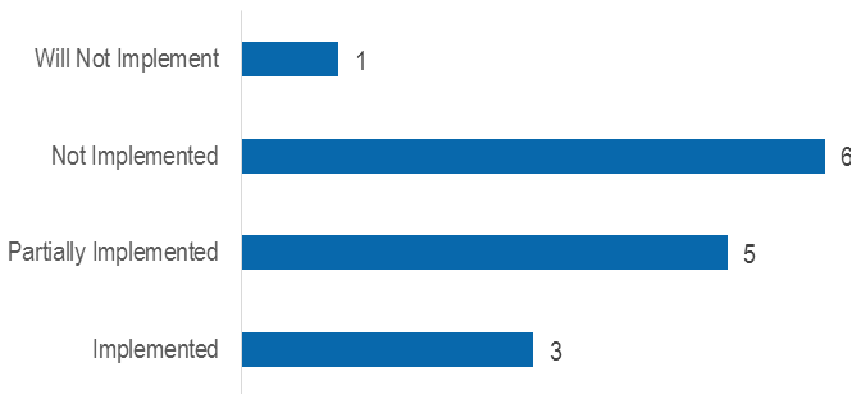
Risk Category: Financial

## Underfunded Mandate: Resources, Strategic Plan, and Communication Needed to Continue Progress Toward the Year 2020 Zero Waste Goal

The 2020 Zero Waste Goal Audit contains two findings and 15 recommendations aimed at improving Public Work’s ability to achieve zero waste by 2020. The Department is not on track to meet the City’s goal. Public Works decided they will not implement our recommendation to obtain permission to collect garbage biweekly instead of weekly. The audit was released in July 2014.

Since the audit’s release, the Public Works department has implemented three recommendations. The department has improved their public education by updating the city website and distributing press releases to educate the public about the Zero Waste Program. The Zero Waste Division also meets monthly with other departments in order to address operational and reporting needs, and has automated their Customer Relation Management system to ensure all cases undergo appropriate reviews before a case can be closed. Public Works has made progress towards implementing five other recommendation and has not implemented six. The progress for these recommendations is detailed below.

Figure 8: 11 Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: Insufficient data and resources (for planning, strategy, or execution) dedicated to Berkeley’s zero waste by 2020 resolution

1.1 Request the City Council to redefine and then reaffirm its commitment to zero waste (i.e., the percentage that the Council considers to be success), and to ensure sufficient resources to fund appropriate staffing and the

#### Summary of Audit

The objective of this audit was to assess the progress made toward achieving the City’s goal of zero waste by 2020 and to identify ways that data can inform management decisions. The City is at risk of not meeting Council’s goal to achieve zero waste by 2020. The City defines zero waste as reducing solid waste by reusing, recycling, and composting as well as avoiding waste as much as possible. Council has not allocated sufficient funding for reaching its zero waste goal. Public Works needs more resources to develop a comprehensive, written strategic plan that clearly defines the roles and responsibilities for those managing the zero waste program, and that assigns sufficient resources for public education and outreach. Without a clear plan, Public Works cannot properly ensure the City’s compliance with state, county, and city regulations related to zero waste objectives.

necessary infrastructure to achieve stated goals by 2020.

**Partially Implemented.** The Zero Waste Division (ZWD) has developed an RFP to: 1) develop a Zero Waste Strategic Plan to delineate terminology, 2) define and clarify what the City's Zero Waste Goal will be, and 3) develop a plan for the division to implement to attain that goal. The RFP is in administrative review.



Risk Category: Reputational

1.2 Draft and obtain Council approval of a written strategic plan to achieve zero waste by 2020, including annual or biennial interim waste diversion goals. Topics that the strategic plan should discuss include:

- Objectives and long-term and interim goals
- Actions to be taken
- Responsible parties
- Expected cost and impact of implementation
- Performance measures
- External factors affecting performance and progress

**Partially Implemented.** ZWD has developed an RFP to: 1) develop a Zero Waste Strategic Plan to delineate terminology, 2) define and clarify what the City's Zero Waste Goal will be, and 3) develop plan for the division to implement to attain that goal. The RFP is in administrative review.



Risk Category: Reputational

1.3 Prepare detailed annual work plans that contain:

- Objectives
- Annual/biennial (short-term) goals
- Actions to be taken
- Budget allocated for the actions
- Timeline for completion
- Lead staff responsible for task completion
- Full-time equivalent employees assigned to the tasks
- Performance measures

**Partially Implemented.** Public Works is drafting an RFP for a Zero Waste Strategic plan to guide the City's policy and decision making and paths of implementation to the goal of Zero Waste. IT and the



ZWD are in the process of selecting a vendor to implement an entirely new Zero Waste software solution that includes routing, billing, and work orders. Once the new software system is in place and the Strategic Plan has been completed, a more accurate work plan could be created that would include performance measures.

 Risk Category: Reputational

1.4 Regularly communicate zero-waste goals and achievements to City staff and the Council, and offer training to staff on how they can help Berkeley achieve zero waste. This includes sharing strategic and annual work plan goals and regular updates regarding progress and completion.

**Partially Implemented.** City staff have been encouraged to participate in the visioning sessions for the Transfer Station redesign in January 2019. Also, the Zero Waste Division has developed an RFP to develop a Zero Waste Strategic Plan. Once the strategic plan is completed, it will be shared with City staff.

 Risk Category: Reputational

1.5 Determine if additional funds are needed for the education, outreach, compliance, and enforcement necessary to reach zero-waste goals. If sufficient funds are not available, propose to Council a separate fee to cover those costs for the City's zero-waste program, such as a regulatory fee as allowed under Proposition 218.

**Partially Implemented.** Public Works has determined through the internal budget process that Zero Waste needs two additional full time staff members to oversee the education, outreach, compliance, and enforcement necessary to reach zero-waste goals. The Zero Waste Division will be determining additional funding beyond staffing needed to increase education, outreach, compliance, and enforcement during the strategic planning process.

 Risk Category: Financial

## Finding 2: Limited use of available technologies affects operational efficiencies

2.1 Work with the Department of Information Technology to configure the CRM system with a required field that auto populates valid route information based on address and service delivery type so that

route-specific data can be collected on a going-forward basis.

**Not Implemented.** IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018. The new system will require route optimization and will have an onboard system for drivers containing route information based on address and service delivery type so that route-specific data can be collected on a going-forward basis. The details of this system will be evaluated and developed as part of implementation.



Risk Category: Misinformation

2.2 Work with the Department of Information Technology to create a link between RouteSmart and the CRM system (or the software implementation of Recommendation 2.5 below).

**Not Implemented.** Working with RouteSmart for further integration was deemed not worthwhile as that system does not integrate with ArcGIS, which is the City's primary system for spatial data. IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018.



Risk Category: Misinformation

2.4 Designate a business-line expert within the Zero Waste Division and require that expert to develop internal capacity to configure optimal collection routes and produce standardized reports for route-specific reporting using existing software (or the software implementation of Recommendation 2.5 below). The reports developed should allow measurement of the performance metrics developed in Recommendation 1.2 and 1.3 above.

**Not Implemented.** Additional staffing positions have been proposed as part of the budget process with both the Senior Solid Waste Supervisor and an Associate Management Analyst being tasked with route optimization once new software has been identified and implemented. An RFP process for this software is currently underway.



Risk Category: Misinformation

2.5 Assess the benefits of using mobile technologies that would allow drivers to enter information directly into the CRM system while on their routes, take pictures of why pickups were skipped, and implement electronic route books and other mobile field reporting. Include in the assessment changes to job responsibilities that might require a meet and confer with union representatives. Purchase the software and hardware if cost beneficial.

**Not Implemented.** The new software system will utilize onboard mobile hardware. In addition, this system will integrate with the new GPS solution which will integrate with the Zero Waste solution to allow for real time decision making and route information.

 Risk Category: Misinformation

2.7 Use the reports developed from implementing recommendation 2.4 to monitor customer complaints and determine what impact the annual bid process has on customer service. If the information demonstrates the annual bid process significantly affects customer service, meet and confer with union representatives to discuss the elimination the annual route bidding process to help reduce customer complaints and improve service delivery. Implement change if agreement is reached.

**Not Implemented.** The Zero Waste Division is now in a position to numerically determine if the annual bid system is affecting customer service. When this information for the bid process is analyzed, Zero Waste will have the information to meet and confer with the Union.

 Risk Category: Misinformation

2.8 Create a method for community members to track the status of their cases online, which will reduce the call volume to the 311 Call Center.

**Not Implemented.** The City is in the process to replacing Zero Waste and Customer Service software. One of the objectives of these new systems is to provide customers the ability to track their requests.

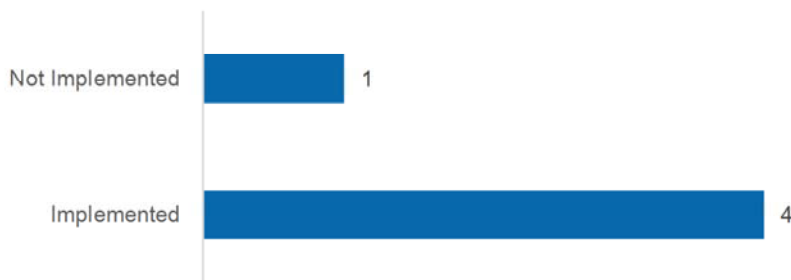
 Risk Category: Financial

## Most Contracts Executed Timely but Contract Project Managers Could Use Better Tools and Guidance

The Contracts Audit contains one finding and five recommendations aimed at improving the City’s contracting process and ensure that contracts are fully executed before work is performed. The audit was released in October 2015.

Since the audit’s release, the department has implemented four recommendations. Finance has improved contract planning resources by providing training and contract preparation timelines for project managers. The City has also included contract management needs as part of the City’s Enterprise Resource Planning. Finance has not implemented one recommendation. The progress for the recommendation is detailed below.

Figure 9: One Recommendation Needs to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: The City vastly improved its performance in securing fully executed agreements before contract work commences, but barriers to full compliance must be addressed

1.5 Require departments to document their specific procedures for contract preparation, oversight, and management. Procedures should include:

- planning for department specific actions, e.g., obtaining management’s approval
- tracking contract status and funding needs
- attending City training courses when offered, e.g., contract preparation and FUNDS 101
- describing shared contract management responsibilities between project managers and support staff
- requiring project managers to coordinate with and respond to support staff’s needs for contract administration

#### Summary of Audit

The objective of this audit was to determine whether the City had allowed vendors to perform work without a fully executed contract in place. Our review of 226 expenditure contracts entered into in fiscal year 2014 determined that the City did not have fully executed contracts in place prior to commencement of services in 15 of those contracts, or 7 percent. In total, the City incurred costs in the amount of \$80,498 for vendor services provided without fully executed contracts in place. The primary obstacles preventing the City from executing all of its contracts in a timely manner are (1) the lack of an effective contract management system; (2) inadequate training and procedural guidance for staff assigned as project managers; and (3) inadequate planning for contracts.

- requesting contract extensions
- aligning contract needs with department work plans
- using Finance's contract process timelines and On Demand report of expiring contracts for contract planning (also see recommendations 1.1 and 1.2)
- minimum level of documentation needed to effectively manage contracts

**Not Implemented.** Finance is planning to alternatively implement this recommendation. The department is going to revamp Contracts Online and will include a section that identifies departments responsibilities based on the recommendation.

Risk Category: Compliance

## Citywide Grants Management (formerly titled Public Works Grants Follow-up Audit FY16)

The Citywide Grants Audit contains one finding and 15 recommendations aimed at improving the City’s grant management process to prevent the loss of grant revenue and provide management and staff with accurate and timely information. The audit was released in July 2016. Our office changed that audit title to clarify that the changes are needed on a citywide level and not just in the Public Works Department (PW).

Since the audit’s release, the department has implemented one recommendation. The City Manager’s Office updated the Administrative Regulations related to grants and Finance added language to contracts online clarifying that all grants must be packaged in accordance with Contracts Online procedures. Management has not made progress towards implementing the 14 remaining recommendations. Details regarding these recommendations are below.

Figure 10: 14 Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

**Finding 1: Of our six original recommendations, only one is currently implemented, two are partially implemented, and three are unimplemented**

1.1 Issue an internal policy assigning the division responsible for overall grants accounting (e.g., billing and monitoring receivables) and reporting. Make it clear to project managers that they are responsible for providing information on the grants they manage to the appointed division to assist with grants accounting.

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager’s Office is looking into how to address the issue because it is citywide. The City Manager’s Office has not yet identified an action plan. Council needs

### Summary of Audit

The objective of this audit was to follow up on the status of our previous audit recommendation to determine whether management’s action plans are still in place, and, if not, examine why they became unimplemented. Though management previously reported all six of our recommendations as implemented, only one is currently implemented, two are partially implemented, and three are unimplemented. There is a lack of clear procedural guidance and well-defined roles and responsibilities. The absence of these vital internal control components has created confusion among staff as to who or what department is responsible for procedures.

an update on actual actions management took to address our recommendation.



Risk Category: Financial

1.2 Create a work team of Public Works staff who administer and manage grants. Team members should include the position responsible for overall grants accounting and reporting, and staff from the divisions that manage grants (e.g., Engineering and Transportation). The team should work collectively to evaluate their respective functions and their interrelated roles and responsibilities for grants management, billing, and accounting; and work towards developing an effective workflow that provides for accurate and timely grants accounting and reporting.

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

1.3 Require the grants team to work collectively to develop a written procedures manual that clearly explains roles, responsibilities, and workflows. The manual should:

- provide guidance on the overall grant application, approval, and monitoring process within the department
- refer to other applicable policies and procedures such as City Administrative Regulation 1.17 and Contracts Online
- describe the specific tasks performed within divisions and/or by job classification
- identify the forms and data sheets that staff are to use for recording, tracking, and monitoring grants (also see Recommendations 5.1 and 6.2)
- describe coordinating efforts needed between divisions and with the grant coordinator in Finance
- identify timelines and requirements for reporting, performing



reconciliations, and providing information to the Finance grant coordinator (also see Recommendation 2.2)

- provide enough detail to more easily train new hires or staff with new responsibilities

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

1.4 Require the grants work team to have regular meetings to share information and discuss workflows between their divisions. These meetings may need to be more frequent at first, e.g., quarterly, and less frequent over time, e.g., annually. The team should invite the Finance grant coordinator to their meetings to ensure the coordinator is receiving the necessary information for recording grants to the central repository and issuing grants receivables reports.

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

2.1 Provide the Finance grant coordinator with a list of personnel who are responsible for grants management, accounting, and reporting so that they can be notified when the grant coordinator posts the grants reports to the City's shared drive.

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

2.2 Require the division responsible for grants accounting and reporting to use Finance's grant reports to:

- reconcile Public Works' grant financial records with FUNDS to ensure that the department is recording expenditures and payments to the correct accounts
- work with Finance to make any necessary corrections to FUNDS financial data when they identify discrepancies and errors

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

3.1 Take ownership of City Administrative Regulation 1.16 and:

- review and update the regulation so that it is consistent with City practices and procedures, and cross reference the regulation to other guidance and policies, e.g., Contracts Online and City Administrative Regulation 1.17
- reissue the updated guidance to all City staff with emphasis on ensuring that project managers and those responsible for identifying and applying for grant funding are notified of the update

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

4.1 Request that all department directors notify their grant management and accounting staff of City Administrative Regulation 1.17, and their expectations that staff adhere to the guidance.

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

5.1 Require those responsible for grant accounting use the summary of charges sheet and work with project managers and the Finance grant coordinator to obtain the data they need to populate the sheet (also see Recommendations 1.3 and 1.4).

**Not Implemented.** PW gave no information on its plan to implement at the time of issue, however, the City Manager's Office is looking into how to address the issue because it is citywide. The City Manager's Office has not yet identified an action plan. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

6.1 Require that all department directors ensure that their staff with grants management and fiscal responsibilities receive the following training:

- City Administrative Regulation 1.17: Pre-Award Authorization and Post-Award Grant Requirements
- Contracts Online, in particular, the revenue contract requirements

**Not Implemented.** City Manager said office will coordinate training sessions. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

6.2 Require all departments that receive financial assistance from a third-party to ensure that their written procedures clarify that all such awards are consider grants and must be packaged in accordance with

Contracts Online, and to follow City Administrative Regulation 1.17 to ensure that the grant coordinator receives the grant accounting data sheet (also see Recommendation 1.3).

**Not Implemented.** City Manager said office will coordinate training sessions. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

6.3 Notify department directors when the grant coordinator finds that project managers and administrative staff are not providing grant information in accordance with City policy. Request that the department directors refer their staff to City Administrative Regulation 1.17, Contracts Online, and departmental procedures for guidance on ensuring they adhere to required grant policies and procedures.

**Not Implemented.** Finance said they will draft correspondence. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

6.5 Survey project managers and administrative staff who are responsible for grants management, reporting, and accounting to identify ways to improve the current grant database and reporting so that data are current and accurate, and reports are more user-friendly.

**Not Implemented.** Finance said they will survey project managers. Council needs update on actual actions management took to address our recommendation.



Risk Category: Financial

6.6 Use the information learned from surveying project managers and administrative staff (Recommendation 6.5) to identify critical business needs for the purchase of a comprehensive grants management system. Provide this information to the Department of Information Technology to use as part of Enterprise Resource Planning.

**Not Implemented.** Finance said they will survey project managers. Council needs update on actual actions management took to address our recommendation.



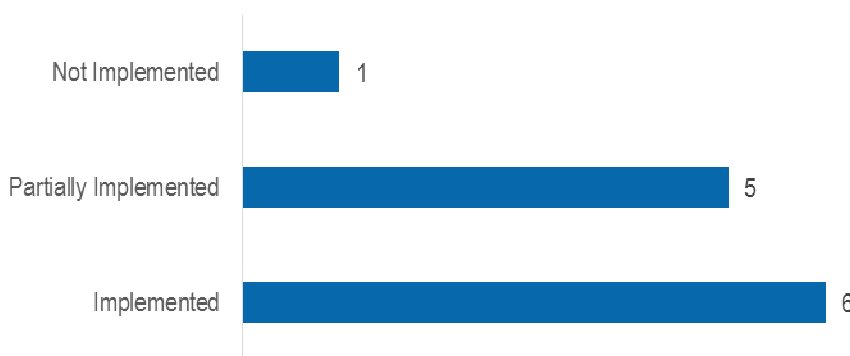
Risk Category: Financial

## Unified Vision of Zero Waste Activities Will Help Align Service Levels with Billing and Ensure Customer Equity

The Zero Waste Billing Audit contains one finding and made 12 recommendations aimed at improving the City’s Zero Waste activities to minimize billing errors, improve customer account management, and provide management with data to analyze its zero waste strategies. The audit was released in September 2016.

Since the audit’s release, Public Works has implemented six recommendations. The department has implemented a cross-departmental Zero Waste Team that meets monthly to discuss operational issues and has hired a Zero Waste Division Operational Manager with cross-functional responsibilities with other departments associated with Zero Waste. The department has made progress toward implementing five out of twelve recommendations. During this reporting period, one recommendation moved from implemented to partially implemented.

Figure 11: Six Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: Integrated thinking about zero waste operations will help ensure accurate billings and customer equity

1.3 Require the zero waste team formed in response to recommendation 1.2 to develop written procedures that clearly support cross-departmental strategies and help staff perform their work, as well as understand how their work contributes to success. Include information that helps promote the unified view of zero waste operations, while also explaining the individual tasks that take place within the departments and how those connect. Examples include, but are not limited to, describing the process for routing

#### Summary of Audit

The objectives of this audit were to assess whether the City is correctly billing customers based on their actual refuse collection service levels; whether all Berkeley residents are signed up to receive refuse services as required by the BMC; and whether there are opportunities for improving both refuse and service delivery operations. Berkeley’s overall information systems architecture for zero waste activities results in inefficient use of staff time, billing and service delivery errors, and barriers to effective account management. Currently, staff are burdened by manual workflows. This is arduous work that takes staff away from other service delivery and revenue collection needs and led to rate adjustment, billing, and service level errors:

- 347 customer accounts were not accurately updated with the new 2015 zero waste rates, leading to approximately \$38,000 in underbillings and \$29,000 in overbillings for the City’s first billing cycle of the new fiscal year.
- Four percent of customer service-level changes did not result in the necessary updates in the zero waste billing system.
- 21 percent of customer service-level changes did not make it into RouteSmart.

customer cases from 311 calls, and detailing in layman's terms the monthly updates that take place to align the CX and RouteSmart systems. Also see recommendation 1.2.

**Partially Implemented.** IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018. The RFP was for a Zero Waste Management System and Professional Services consisting of a Waste Billing System, a Waste Computerized Maintenance Management System and a Route Optimization System.



Risk Category: Financial

1.5 In collaboration with Information Technology and as part of Enterprise Resource Planning, budget for, select, and install an account management system designed for zero waste activities. Use information from the zero waste team evaluation (recommendation 1.2) and zero waste strategy analysis (recommendation 1.8) to identify the critical business needs that should be included in the purchase of new zero waste account management system, or that should be considered when determining whether sufficient middleware options exist to fully integrate existing systems with the new account management software. Also see recommendations 1.2 and 1.8.

**Partially Implemented.** IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018.



Risk Category: Financial

1.8 Request that Information Technology use the CX module data extracts, such as the one used for this audit, to provide Public Works staff with the data they need to analyze zero waste strategies. Use the data extracts to further identify the critical business needs for new zero waste account management software. Also see recommendation 1.5.

**Partially Implemented.** IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018.



Risk Category: Misinformation

1.9 Perform, or contract for, a fully comprehensive route audit to align service delivery with billing rates. Use the route audit to:

- Make CX module and/or RouteSmart system updates to ensure

customers are billed correctly for their City provided services.

- Ensure that all residential accounts are receiving required services.
- Ensure that the commercial accounts that the City is responsible for receive and pay for the zero waste services required by City policy.
- Verify that roll-off bin customers serviced by the Zero Waste Division are accurately billed.

**Partially Implemented.** IT released an RFP on behalf of Public Works for Zero Waste Management software in October 2018.



Risk Category: Financial

1.11 When drafting the new franchise hauler agreements:

- Clearly define the fee calculation requirements.
- Clearly define the type of financial data and reports that the haulers must submit to support their fee calculations.
- Create and enforce the use of standardized forms for the franchise haulers to use when remitting their fees to facilitate Public Works staff's review.

**Not Implemented.** Zero Waste does not anticipate issuing new Franchise Agreements but will work with the three existing Franchisees during the next Franchise Agreement renewal process in 2020 to enhance reporting requirements.



Risk Category: Financial

1.12 Continue to investigate whether the franchise hauler erroneously removed recyclables from its fee calculations and, if so, back bill as allowable, per state law and city code.

**Partially Implemented.** Beginning in March 2018, the Zero Waste Division began collecting commercial waste in house, except for roll-off and compactor services. Written procedures that describe the correct calculations are in progress in concurrence with the implementation the City's new financial system.



Risk Category: Financial



## City at Crossroads as Long-Standing Need for Structured Approach to Line of Business Experts Function Intersects with ERP Implementation

The Line of Business Experts Audit contains one finding and five recommendations aimed at preparing for the City’s Enterprise Resource Planning implementation. The audit was released in January 2017.

Since the audit’s release, the Department of Information Technology (IT) has implemented two recommendations. IT developed Service Level Agreements that include the description of services, and presented cost allocations to all appropriate departments. IT has made progress towards implementing the remaining three recommendations. Details regarding these recommendations are below.

Figure 12: Three Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: Underdeveloped line of business experts function poses risks for City’s ERP implementation

1.1 Clearly define the purpose, responsibilities, minimum qualifications, and training requirements for the line of business experts function.

**Partially Implemented.** The Department of IT is working to define templates for roles and responsibilities for the projects as the new systems are implemented.

 Risk Category: Misinformation

1.2 Work with Information Technology to establish written policies and procedures for the line of business experts function at the appropriate organizational level based on the guiding principles established in Recommendation 1.1.

#### Summary of Audit

The objective of this audit was to determine if the City had developed a structured approach to its line of business experts function that defines the purpose and function; establishes minimum qualifications and training requirements; delineates the roles and responsibilities of all parties involved; and clearly documents these elements in service level agreements between IT and its client departments. We found that the City had not addressed the long-standing need for a structured approach to its line of business experts function. The frustration caused by the lack of a structured approach was reflected in many of the responses to our survey of the City’s 38 line of business experts. Approximately 57 percent of participants surveyed said they had some level of difficulty in getting information about their roles and responsibilities, and half of them expressed some frustration with the lack of clarity of information provided. Three respondents were unaware of their designation as line of business experts. Only 38 percent felt they were adequately prepared for the job.

**Partially Implemented.** With ERMA implementation, new information is being collected that would identify roles and responsibilities of the line of business experts.



Risk Category: Misinformation

1.5 Work with Human Resources to revise the job classification used for the portfolio coordinator position. Minimum qualification factors might include, but are not limited to:

- IT Governance/Portfolio Management experience;
- Project Management Professional certification;
- Project coordination experience; and
- Excellent verbal and written communication skills.

**Partially Implemented.** IT is working with Human Resources Department to release an RFP to complete classification studies.



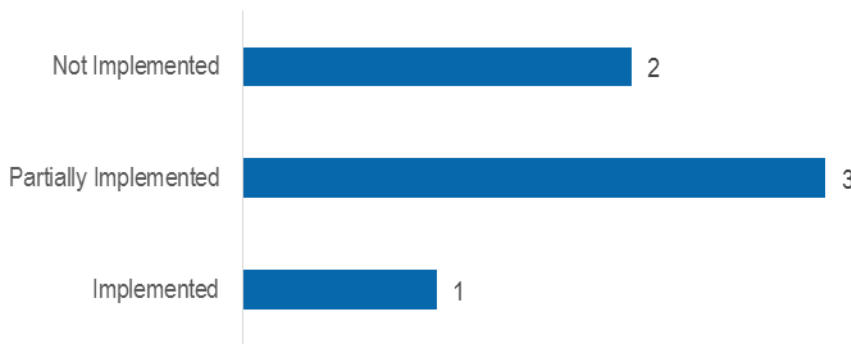
Risk Category: Misinformation

## Berkeley's Ethical Climate Rated Strong Overall and Management Working to Make it Better

The Ethics Audit contains one finding and six recommendations aimed at strengthening the City's ethical climate. The audit was released in March 2017.

Since the audit's release, Human Resources (HR) has implemented one recommendation. The City Manager's Office issued a new code of ethics, created a formal ethics committee, and implemented an ethics hotline. HR has made progress towards implementing three other recommendations and has not implemented two recommendations. Details regarding these recommendations is below.

Figure 13: Five Recommendations Need to Be Implemented to Close the Audit



Source: Auditor's review of audit progress

### Finding 1: The City can improve service delivery, employee morale, and public trust by further strengthening its ethical climate

#### 1.2 Promote ethical standards to employees and the public by:

- 1) Including the City's ethics statement in the new employee packet and discussing the City's commitment to ethical standards in new employee orientation
- 2) Providing all employees with training covering the City's ethics related policies and incorporating key aspects of the Fair Political Practices Commission ethics training
- 3) Providing a variety of ways to access ethics information and resources for employees, including those with no regular computer access at work, such as:

#### Summary of Audit

The objective of this audit was to determine whether Berkeley's workplace ethical climate promotes trust, positive leadership, and doing the right thing, and, if not, identify the problem areas and what can be done to address them. We surveyed Berkeley employees to learn whether they believe their workplace promotes honesty, fairness, respect, trust, and good stewardship of public resources. Overall, employees rated Berkeley as having a strong ethical climate. Support staff gave the City's ethical climate lower ratings than management when asked about rewarding employees based on performance; being encouraged to speak up about ethically questionable situations; and understanding where to turn for ethics advice.

- Posters and wallet cards
- Centralized, intranet based ethics resource center
- Periodic inclusion of ethics statement in Berkeley Matters

4) Emphasizing the City’s commitment to workplace ethics during formal meetings, informal staff discussions, and regular communications with outside parties

5) Making the code of ethics available to the public, such as including the ethics code and related material in a centralized location on the City’s public internet

**Partially Implemented.** New code of ethics is discussed as part of new employee orientation; city is incorporating ethics in different training modules, including supervisors and managers training; and new ethics committee is identifying new channels to promote code of ethics.

 Risk Category: Reputational

1.3 Provide supervisors and midlevel management with written guidance and training on how to:

- Initiate and encourage discussions of ethical issues to help dispel misconceptions and alert management to actual problems
- Report concerns or complaints to management or an external resource, and conduct investigations of ethics related complaints according to the City’s procedures

**Partially Implemented.** The Human Resources department provides a New Supervisor training to all new supervisors/managers and supervisors/managers who are new-to-the-city. This training includes guidance on the ethical expectations for public employees and city policies relating to ethics.

 Risk Category: Reputational

1.4 Develop a system for tracking, analyzing, and reporting on suspected misconduct, including written guidance and forms (or similar) to assist employees in making reports.

**Not Implemented.** Currently, the City relies on Microsoft Excel to track reports of suspected misconduct. The Human Resources

department is working with the IT department to identify and procure a modern case management system.

 Risk Category: Misinformation

1.5 Provide employees and the City Council with summary reports about investigation and resolution of employee ethics complaints, such as the reports already provided about EEO complaints, taking care to protect confidential and identifying information.

**Not Implemented.** No Progress.

 Risk Category: Reputational

1.6 Monitor and regularly evaluate the effectiveness of the ethics program and make improvements based on results.

**Partially Implemented.** The HR department is working with IT to identify and procure a modern case management system which will aide in analysis and evaluation efforts.

 Risk Category: Misinformation

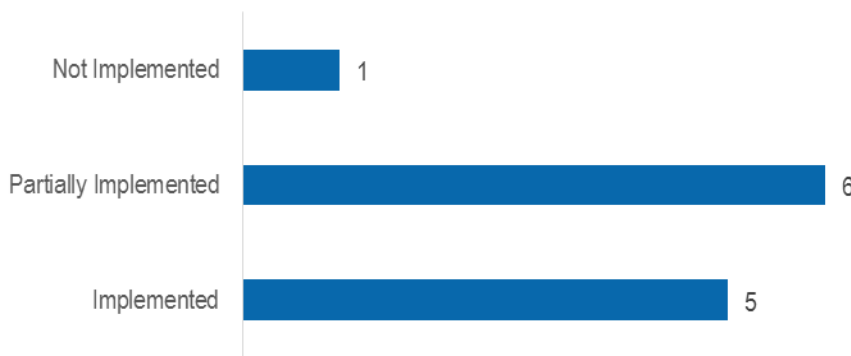


## Code Enforcement Resources Significantly Constrained and Improvements Needed in Case Management and Oversight

The Code Enforcement Audit contains two findings and 12 recommendations aimed at improving the City’s processes for effective code enforcement. The audit was released in June 2018.

Since the audit’s release, the Code Enforcement Unit has implemented five recommendations. Code Enforcement has created a new procedure manual and implemented a complaint matrix that identifies the process workflow and enforcement authority of common complaints. City Council passed Resolution No. 68726-N.S. creating a new Policy Committee structure. The Department has made progress towards implementing five other recommendations and one recommendation remains not implemented. Details regarding these recommendations is below.

Figure 14: Seven Recommendations Need to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: Code Enforcement Unit resources are insufficient to meet demand.

1.1 Implement a resource analysis process by which proposed legislation is discussed with City management to evaluate the impact on current City resources and determine the feasibility of making the intended impact. The analysis should take place before the policy is presented to Council for adoption and include considerations of:

- Staff time and other City resource needs, including the fiscal impact of those resource needs
- Opportunity cost, i.e., consideration of other activities that will be deprioritized in order to meet new demands

#### Summary of Audit

The objective of this audit was to determine whether the Code Enforcement Unit has the resources it needs to enforce City codes and whether it has reliable processes for effective enforcement. We found that the Code Enforcement Unit lacks sufficient resources. The unit has been dealing with years of unstable staffing and lacks modern technological solutions to perform its work, yet has experienced an overall workload increase. Code violations captured via Berkeley’s community call center are on the rise and workload expectations continue to expand as the City Council passes more ordinances requiring code enforcement activities. Despite these increases, the CEU has remained budgeted at four full-time equivalents with insufficient attention given to improving processes for more effective use of limited resources. We determined that Council passes some ordinances without fully analyzing the resources needed for enforcement and without understanding current staffing capacity.

- Feasibility impact to determine how best to rollout out new legislation

**Partially Implemented.** City Council adopted Resolution No. 68726-N.S., which included the framework and procedures for standing Policy Committees as part of the City’s legislative process. During the Policy Committee review of resolutions, ordinances, and referrals, staff will undertake a high-level, preliminary analysis of potential costs, timelines and staffing demands associated with the item. Reports leaving a Policy Committee must adequately identify budget implications, administrative feasibility, basic legal concerns, and staff resource demands in order to allow for informed consideration by the full Council.



Risk Category: Financial and Safety/Health

1.3 Conduct a staffing analysis to determine the appropriate staffing level needed for the Code Enforcement Unit to effectively enforce City codes. In conducting the analysis, include an assessment of the workload impact created by the codes for which the CEU is solely responsible as well as those created by the codes for which CEU shares responsibility with other enforcement units.

**Partially Implemented.** Staff released an RFP for a staffing analysis. The RFP did not generate any proposals and will be reposted.



Risk Category: Financial and Safety/Health

1.4 Use the staffing analysis performed in response to Recommendation 1.3 to:

- Quantify the full burden cost of additional staff
- Determine if sufficient budgetary funding is available for additional staff
- Request additional staffing from Council during the annual appropriations process

**Not Implemented.** No progress.



Risk Category: Financial and Safety/Health



1.5 If budgetary constraints prevent additional staffing or if Council does not approve the budget needed to fund additional staffing, report to Council the restrictions placed on the Code Enforcement Unit's ability to effectively enforce City codes. Include information explaining the hindrance this will cause for any new ordinances the City Council may want to pass in the future. Provide this information regularly, for example, annually as part of the budget process, to keep Council informed of the CEU's capacity restrictions. See also Recommendation 1.7.

**Partially Implemented.** CEU and the Planning Department negotiated the relocation of the Assistant Planner position, which was vacant, to the Planning Department's Land Use Planning Division. All enforcement associated with the position, which includes use permit, short term rental, and zoning code enforcement will transition with the position.



Risk Category: Financial and Safety/Health

1.7 Implement code enforcement software that:

- Identifies case assignment to CEU officers and other work units
- Prioritizes cases, in particular high-risk cases posing health and safety risks
- Captures pertinent case dates, e.g., opened, notice of violation, citation issuance, and closed
- Tracks enforcement actions taken within the CEU and other work units
- Quantifies citations issued and collected
- Allows for readily identifying repeat offenders
- Includes performance measurement tools, e.g., turnaround times within defined specifications (see Recommendation 2.2)
- Allows for uploading information from mobile technologies (see Recommendation 1.8)
- Includes reporting tool to showcase workload trends and capacity restrictions (i.e., backlogs)

**Partially Implemented.** CEU staff continues to work with IT and have researched Red Alert, currently used by the Fire Department, and AMANDA, the software being considered by Environmental Health to replace Envision Connect.



Risk Category: Financial and Safety/Health

1.8 Implement mobile computers and printers to allow Code Enforcement Officers to complete more work in the field, thus improving their time spent in the community and reducing time in the office. Mobile computers should have the capacity to interface with the code enforcement case management software implemented in response to Recommendation 1.7.

**Partially Implemented.** At this time, CEU's software does not support printing documentation in the field. Manual notices will continue to serve this function until such time as the enforcement software described in Recommendation 1.7 is implemented, and can support printing documents in the field.



Risk Category: Financial

2.2 Implement performance metrics and goals to:

- Assess the effectiveness of code enforcement operations and goal achievement
- Identify constraints preventing goal attainability.
- Submit regular reports, e.g., biannually, to City management on performance.

Include a metric to provide at least some proactive code enforcement activities. Develop this metric after implementing the process and system improvement recommendations made in this report.

**Partially Implemented.** CEU provides a monthly report to City management on the unit's performance, which notes constraints to goal attainability and includes a breakdown of proactive code enforcement activities conducted in the preceding month.



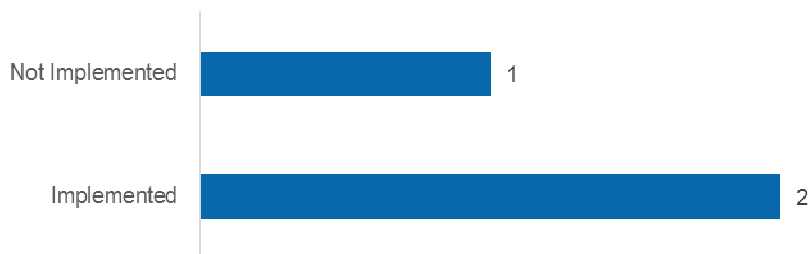
Risk Category: Misinformation

## Credit Card Use: Clearer Guidance Needed

The Credit Card Audit contains one finding and three recommendations aimed at improving the City’s internal controls related to credit card use. The audit was released in June 2018.

Since the audit’s release, Finance has implemented two of the recommendations and has not addressed one. Details regarding open recommendations are below.

Figure 15: One Recommendation Needs to Be Implemented to Close the Audit



Source: Auditor’s review of audit progress

### Finding 1: Credit Card use practices out of alignment with City purchasing policies

1.3 Align City policies and procedures reflecting purchasing requirements and restrictions: purchasing; travel and attendance; petty cash; credit card use; food purchases; and any others that, if not updated, would create disconnect regarding the City’s expectations and create confusion for City staff expected to adhere to City policy.

**Not Implemented.** Finance will align all related administrative regulations to reflect purchasing requirements and restrictions once the department finalizes its new processes resulting from implementation of the city’s new financial system.



Risk Category: Financial

#### Summary of Audit

The objectives of this audit were to determine whether staff used their city-issued credit cards in accordance with City policies and whether the City would benefit from adopting industry best practices to manage its credit card program. Necessitated by a business need to pay vendors who do not accept purchase orders, the use of credit cards has expanded faster than the City’s response to create and update policies and procedures regarding their use. Though clear and consistent written guidance was lacking, staff generally limited their use of credit cards to legitimate business purchases. We examined 232 credit card transactions with an emphasis on those with the highest related fraud and misuse risk. None indicated a pattern of fraud and misuse. We found that there are additional best practices that would further strengthen internal controls and prepare the City for rolling out its planned purchasing card program, which will likely increase the volume of transactions and involve more employees in the process.

## 911 Dispatchers: Understaffing Leads to Excessive Overtime and Low Morale

The 911 Dispatch Audit contains three findings and 14 recommendations aimed at improving the Communications Center’s staffing levels and morale among dispatchers. The audit was released in April 2019.

Since the audit’s release, the Police Department has begun working towards implementing the recommendations. All 14 recommendations remain not implemented at this point. An update from the Police Department was due to Council this fall. Details regarding the open recommendations are below.

### Finding 1: It is taking longer to answer 911 calls and there are not enough call takers.

1.1 Conduct an annual staffing analysis of required minimum staffing levels and budgeted dispatchers to ensure budget staffing requests and scheduling efforts meet demand and limit the use of overtime where possible (see also Finding 2). Use the staffing analysis to communicate to Council and the public during the annual appropriations process:

- Service level demands
- The full-burdened cost of budgeting for additional staff
- Whether there is sufficient funding available to budget for the additional staff or a shortfall (quantified in dollars)
- Additional staffing requests, if needed

**Not Implemented.** The Department has already begun to consider several automated scheduling programs to replace the current manual method.

 Risk Category: Safety/Health

1.2 Use the staffing analysis performed in response to recommendation 1.1, to determine future resource needs of the Communications Center, including staffing, equipment, and physical space. Take into account planned changes to services and factors that may influence call volume.

**Not Implemented.** The Department has already begun discussion on the Communications Center’s spatial needs.

 Risk Category: Safety/Health

### Summary of Audit

The objectives of this audit were to determine whether there is sufficient staff to handle workloads and service demands, what contributes to overtime use, and how working conditions affect morale. We found that it is taking longer than previous years for call takers to answer 911 calls. The Communications Center’s staffing levels are not sufficient to meet current call demands and, with predicted population growth, the Center will soon need even more resources to maintain its emergency response service levels. We determined that due to consistent under-staffing, the Communications Center relies heavily on overtime to meet minimum staffing requirements, spending nearly \$1 million per year on overtime. The Police Department works to fill vacant positions, but the hiring and training processes are lengthy and extensive. There are opportunities to improve those processes to reduce both the number of continuous vacancies and the significant reliance on overtime. Under-staffing also leads to low morale in the Communications Center.

**Finding 2: The Communications Center relies on significant overtime leading to inadequate training and an unhealthy work environment.**

**2.1 Open all dispatcher positions to continuous recruitment.**

**Not Implemented.** Human Resources has already agreed to open and continuous hiring for lateral Public Safety Dispatcher II classification and Management has requested the same for both the non-lateral and Public Safety Dispatcher I classifications.

 Risk Category: Safety/Health

**2.2 Work with Communications Center staff to create a specific recruitment plan for dispatcher positions including recruitment events and marketing material. Use recruitment best practices to reach potential applicants and increase the number of applicants.**

**Not Implemented.** The Department created a Recruitment and Retention Team in 2018 in order to address the departmental recruitment needs. This was the first step in setting out a concrete plan.

 Risk Category: Safety/Health

**2.3 Identify and implement feasible option to improve turnaround time on background checks for dispatcher positions. This can include outsourcing background investigations or working with Human Resources to ensure that the Department is able to complete all background investigations in a timely manner.**

**Not Implemented.** In April 2019, the Department contracted with a background investigation firm.

 Risk Category: Safety/Health

**2.4 Design a way to retain staff that are unable to pass the Police Desk training, for example, keep staff as PSD I and have them work as a call taker or create a new job classification for a call taking position.**

**Not Implemented.** The Police Department is creating a proposal for adding a call taker position.

 Risk Category: Safety/Health

2.5 Evaluate the results from dispatcher recruitment routinely (e.g., annually or at the end of a recruitment cycle) to determine areas for improvement. Update recruitment plans.

**Not Implemented.** The Department plans to improve tracking and review of the number of applicants, how successful applicants are through the process, and where they most often are “lost” in the process. The Department also plans to review these results in line with testing processes in order to adjust as necessary.



Risk Category: Financial

2.6 Implement an automated scheduling software that has built-in decision-making capabilities to automatically fill shifts based on specified qualifications and staff availability.

**Not Implemented.** The Police Department has begun to review potential software vendors.



Risk Category: Financial

2.7 Decrease the concentration of overtime among dispatchers.

**Not Implemented.** The Department is working to hire more dispatchers in order to reduce overtime levels.



Risk Category: Safety/Health

2.8 Develop and implement a Communications Center training plan to ensure compliance with POST training requirements. Evaluate training processes and update training plans routinely.

**Not Implemented.** The Communications Center leadership team plans to track POST training requirements along with yearly Performance Appraisal Reviews.



Risk Category: Compliance

### Finding 3: Working conditions adversely affect dispatcher morale.

3.1 Create a comprehensive stress management program specifically for the Communications Center that includes the following:

- Stress management training for all staff, 8 hours minimum during career

- Access to on-site educational resources to help with stress and related risks, e.g., directory of local therapists specializing in treatment of stress and traumatic stress disorders and City programs that provide information on how and where to access help
- Procedures assuring participation of staff in critical incidence stress management activities (e.g., debriefing sessions when involved in traumatic call events)
- A Peer Support Program
- Comprehensive, ongoing training on structured call-taking processes

**Not Implemented.** Communications Center leadership team plans to work with Personnel and Training to expand current stress management toolset to include a mandatory 8 hour stress management course for all Communications Center staff.



Risk Category: Safety/Health

3.2 Develop and implement plans to address workplace cleanliness and equipment and furniture maintenance and replacement.

**Not Implemented.** Police management plans to improve the cleanliness of the Communications Center through quarterly deep cleanings and the purchase of HEPA filters.



Risk Category: Safety/Health

3.3 Conduct regular supervisor level meetings to share information about operations and staffing. Use these meetings to improve understanding of the supervisor role, identify problems, discuss changes that may affect operations, and establish communications plans for distributing information to all staff.

**Not Implemented.** The Communications manager is in the process of creating a web based information portal which includes sections for polices, Supervisory blog, Communications Center blog, resources, health and wellness, new dispatcher training, and links to web based training opportunities for tenured staff.



Risk Category: Safety/Health



3.4 Routinely have Police and Fire staff meet with all Center Supervisors to solicit feedback on Center operations and to address any issues. Use these meetings to improve understanding of the dispatcher role and current policies of public safety, identify problems that should be evaluated for further discussion, and discuss known and expected changes that may affect the Communications Center.

**Not Implemented.** The Department plans to invite Police and Fire staff to attend the weekly supervisor meetings whenever problems are identified or whenever known or anticipated changes may affect the Communications Center.

 Risk Category: Safety/Health

## Fire Prevention Inspections: Insufficient Resources Strain Code Compliance

The Fire Inspections Audit contains three findings and 11 recommendations aimed at improving the Fire Department’s ability to meet fire inspections mandates. The audit was released in May 2019.

Since the audit’s release, the Fire Department has begun working towards implementing the recommendations. All 11 recommendations remain not implemented at this point. An update from the Fire Department was due to Council this fall. Details regarding the open recommendations are below.

### Finding 1: Fire Not Meeting Inspection Mandates; Extensive Code Requirements and Population Growth Impact Staffing Workload

1.1 Analyze the short- and long-term impact of putting forth a change to the Berkeley Municipal Code to reduce the types or frequency of fire prevention inspections.

**Not Implemented.** Fire plans to research the history and rationale for the local adoption of an annual commercial inspection program. Based on the research results, Fire will evaluate the risk versus benefits of the type and frequency of fire prevention inspection that are not mandated by the state laws.

 Risk Category: Safety/Health

1.2 Perform a workload analysis to quantify the staff needed now and in the future to comply with the local fire prevention inspection requirements.

**Not Implemented.** No progress.

 Risk Category: Safety/Health

### Finding 2: Fire Relies on Incomplete Data to Manage Inspections

2.1 Develop a process, in consultation with the Information Technology Department, for sharing information on property changes and additions between Fire and other City database platforms.

**Not Implemented.** With support from IT, Fire is currently seeking a software that can communicate with the software used by the Planning and Finance Department.

 Risk Category: Safety/Health

#### Summary of Audit

The objectives of this audit were to determine whether the Fire Department met the mandated inspection requirements, how they manage inspections, and what challenges remain in fire inspections. The Fire Department is not meeting inspection mandates. In fiscal year 2018, the Department’s unresolved violations increased to nearly 2,500 and it did not inspect over 500 properties. Without increased staffing, the Department is strained by both City inspection requirements that go beyond California’s requirements and the impacts of population growth. The Fire Department’s database does not contain a complete inventory of properties requiring inspections and lacks controls to ensure complete data. The Fire Department staff need more support to be able to complete mandated inspections. Fire does not perform complete risk assessments or sufficiently communicate within the Department and with the community.

2.2 Work with both the database’s software vendor and the Information Technology Department to strengthen controls over the database, including:

- Assessing the needs for required fields for processing an inspection, such as unit, shift, inspector name, address, violation details, and violation location.
- Formatting drop-down menus for inspection status, inspection type, and violation status. Formatting the options available for the violation code numbers and violation description fields.

**Not Implemented.** Fire Prevention will reach out to Red Alert to determine their ability to customize fields within the software. Additionally, Fire and IT are actively reviewing available software that can meet the needs of Fire and is compatible with software used by the other city departments.

 Risk Category: Safety/Health

**Finding 3: Fire Staff Do Not Have Enough Support to Get Inspections Done**

3.1 Coordinate work plans with Suppression for all mandated fire prevention inspections. These should take into consideration the volume and nature of the other work Suppression performs.

**Not Implemented.** Fire plans to update General Order to give clear expectations of inspection policy and procedure.

 Risk Category: Safety/Health

3.2 Create a risk-assessment plan to identify those properties that are most at risk of a fire.

**Not Implemented.** The Fire Chief is researching the resources needed to conduct such assessments using other cities’ programs as models.

 Risk Category: Safety/Health

3.3 Issue a General Order to the Department on the importance and necessity of performing fire prevention inspections.

**Not Implemented.** The Fire Chief will revise the General Order to stress the importance and the expectations of Fire Prevention Inspections to the Suppression personnel.



Risk Category: Safety/Health

3.4 The Fire Marshal and Suppression Management jointly develop a communication plan between Fire Prevention and Suppression.

**Not Implemented.** In the long term, with the revised General Order, the designated Shift Fire Inspector will take on a more active role as a resource to guide the suppression staff on conducting annual inspections.



Risk Category: Safety/Health

3.5 Revise the fire prevention inspection training to provide hands-on training, using experienced Suppression staff, on how to conduct inspections and interact with residents and community members during inspections.

**Not Implemented.** The Fire Chief plans to revise the General Order to clearly spell out training requirements and expectations. The Department also plans to allocate more time for staff for be trained and require the Shift Fire Inspector to provide hands-on training as needed.



Risk Category: Safety/Health

3.6 Develop and distribute educational information to property owners prior to the beginning of the inspection cycle to provide information on the fire prevention inspection program, common violations, and any upcoming inspections for that area of the City.

**Not Implemented.** The Fire Department is planning to create new public education materials for the city website and will be preparing a comprehensive Wildfire Safety packed for all property owners.



Risk Category: Safety/Health

3.7 Create a process for issuing, tracking, and following up on administrative citations for properties with repeat or high-risk violations, including revenue collections and tracking. That process should collaborate with other City work units that perform enforcement activities to provide consistency.

**Not Implemented.** The Fire Department plans to review internal policies and procedures and update the Fire Prevention General Order.

  Risk Category: Safety/Health and Financial



**Mission Statement**

Promoting transparency and accountability in Berkeley government.

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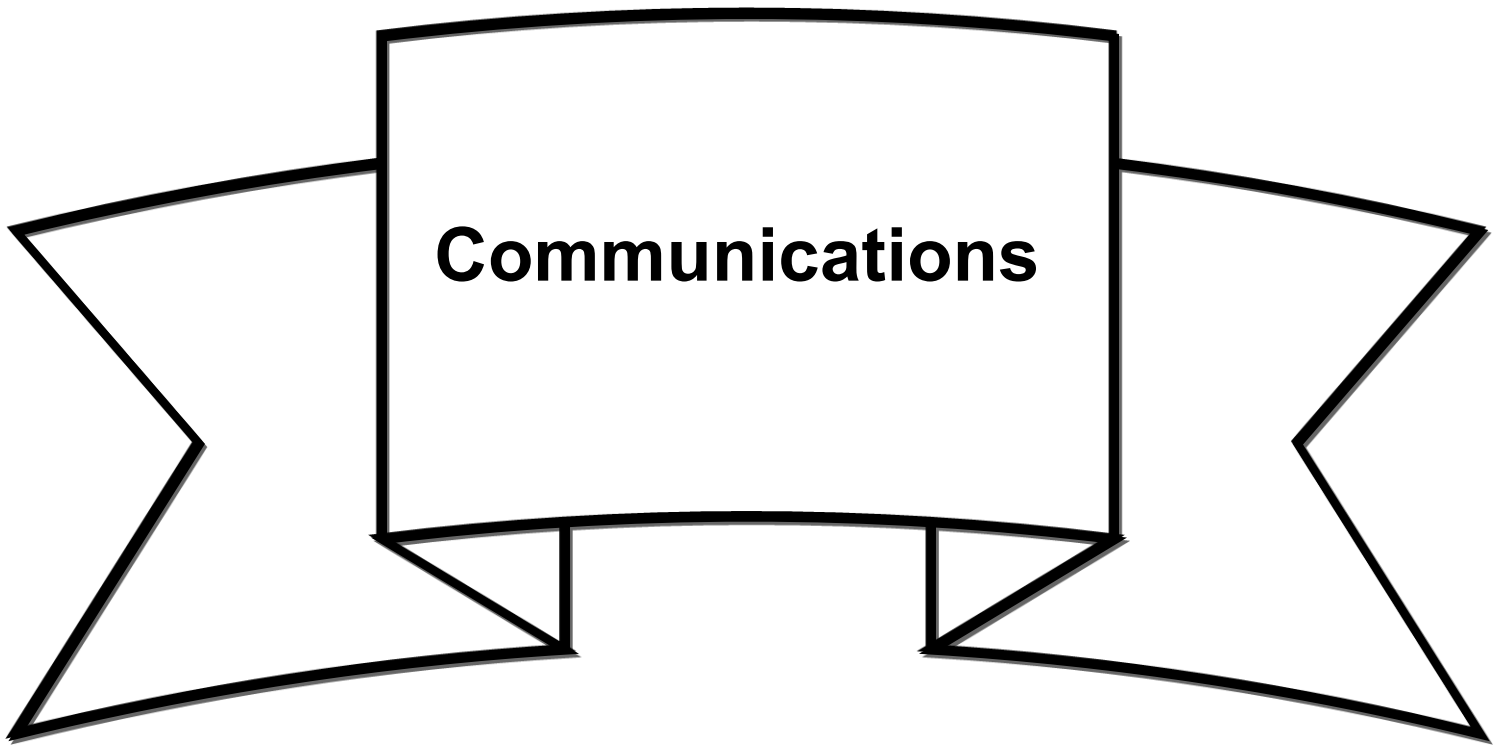
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BERKELEY CITY AUDITOR



All communications submitted to the City Council are public record. Communications are not published directly to the City's website. Copies of individual communications are available for viewing at the City Clerk Department and through Records Online.

**City Clerk Department**

2180 Milvia Street  
Berkeley, CA 94704  
(510) 981-6900

**Records Online**

<http://www.cityofberkeley.info/recordsonline>

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1. Select Search Type = “Public – Communication Query (Keywords)”
2. From Date: Enter the date of the Council meeting
3. To Date: Enter the date of the Council meeting (this may match the From Date field)
4. Click the “Search” button
5. Communication packets matching the entered criteria will be returned
6. Click the desired file in the Results column to view the document as a PDF