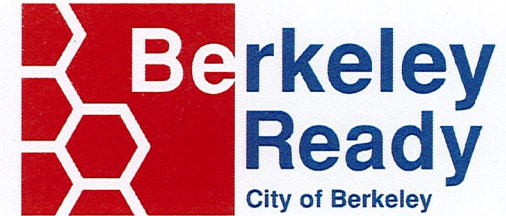


JAN 28 2020

OFFICE OF THE CITY CLERK
CITY OF BERKELEY



Fire and Emergency Services Funding and System Design

Objective

FOR CITY COUNCIL TO PROVIDE DIRECTION ON FUNDING OPTIONS REGARDING:

- Addressing immediate funding needs of the Fire Department;
- Enhancing Emergency Medical Services (EMS);
- Enhancing fire suppression staffing and deployment;
- Implementing Emergency Medical Dispatch (EMD);
- A comprehensive wildland urban interface (WUI) program including emergency notification systems and utility undergrounding;
- Long-term facility needs; and
- Funding for the City's Above Ground Water System.

Strategic Plan

PROPOSED SYSTEMS ALIGN WITH THE CITY'S STRATEGIC PLAN, ADVANCING OUR GOALS TO:

- Provide state-of-the-art, well-maintained infrastructure, amenities, and facilities
- Create a resilient, safe, connected, and prepared city
- Provide an efficient and financially-health City government
- Attract and retain a talented and diverse City government workforce

Challenges

IMMEDIATE FUNDING NEEDS OF THE FIRE DEPARTMENT

<i>\$'s in Thousands</i>					
	FY 17	FY 18	FY 19	FY 20 Projected	FY 21 Projected
General Fund (1)	\$29,898	\$31,494	\$31,801	\$37,219	\$39,335
Paramedic Tax	3,198	3,561	3,673	3,853	3,955
CFD#1	62	84	111	176	180
Measure GG	4,756	4,666	4,016	4,250	4,281
Other Funds	1,211	524	408	81	83
Total	\$39,125	\$40,329	\$40,008	\$45,579	\$47,834

For FY 20 and FY 21, the General Fund has been increased to account for Measure P resources allocated for 5150 transports. For FY 20, this includes \$1.2 M and in FY 21, this includes \$2.4 M

Challenges

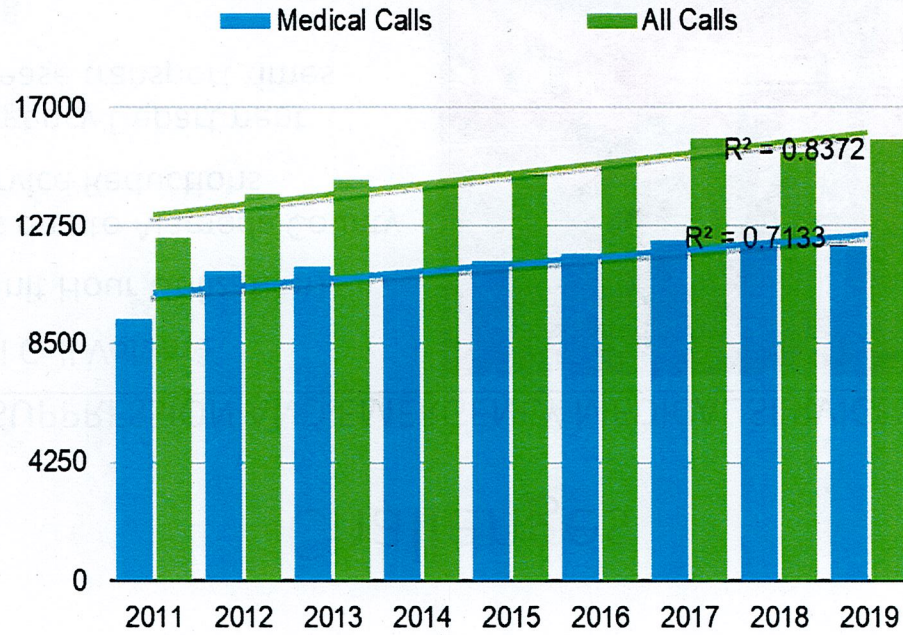
FIRE SUPPRESSION AND EMERGENCY MEDICAL SERVICES (EMS)

- Increase in Total Call Volume
- Time on Task (Unit Hour Utilization)
- Increasing Costs due to Alameda County Funding and Service Reductions
- Alta Bates Emergency Department closure will increase transport times
- Population Aging
- Patients Experiencing Homelessness
- Changes in the Built Environment
- Recruitment and Retention



Challenges

TOTAL CALL VOLUME IS INCREASING



Challenges

TIME ON TASK (UNIT HOUR UTILIZATION) IS INCREASING

Berkeley Fire Department UHU Based on ePCR Time Stamps					
Year	Total Trsp.	*Hrs Per Trsp.	Total Hours	Ttl Unit Hrs.	UHU
2014	7192	.95	6,832.4	26,280	0.256
2018	6767	1.6	10,827.2	35,040	0.308

Challenges

INCREASING COSTS DUE TO ALAMEDA COUNTY FUNDING AND SERVICE REDUCTIONS

- Eliminated First Responder Advanced Life Support (FRALS) funding (approximately \$240,000) which helped pay for the City's FRALS program
- 5150 patient transport for the City of Berkeley
- Required equipment purchases
 - Lucas Devices



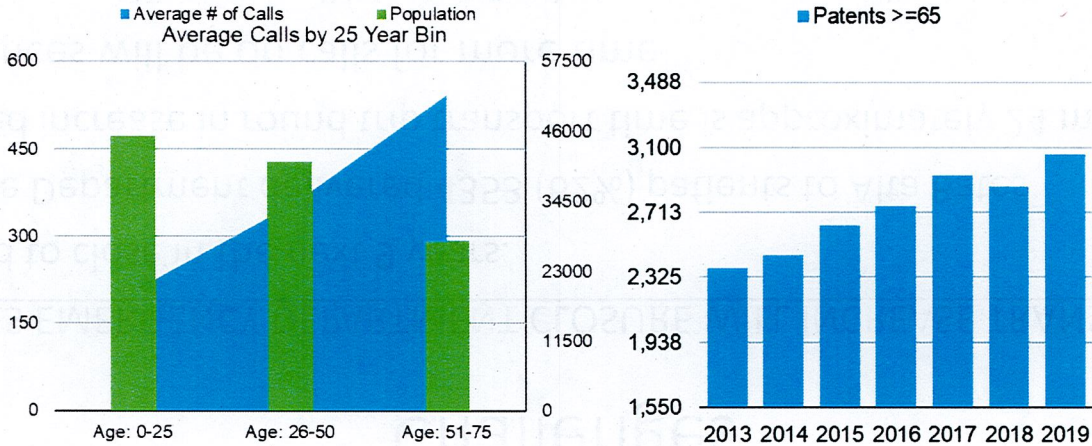
Challenges

ALTA BATES EMERGENCY DEPARTMENT CLOSURE WILL INCREASE TRANSPORT TIMES

- Expected to close in the next 9 years.
- 2018, the Department delivered 4353 (62%) patients to Alta Bates
- Estimated increase in round trip transport time is approximately 24 minutes
- Ambulances will be on calls for more time
- Ambulances will physically leave Berkeley on every call

Challenges

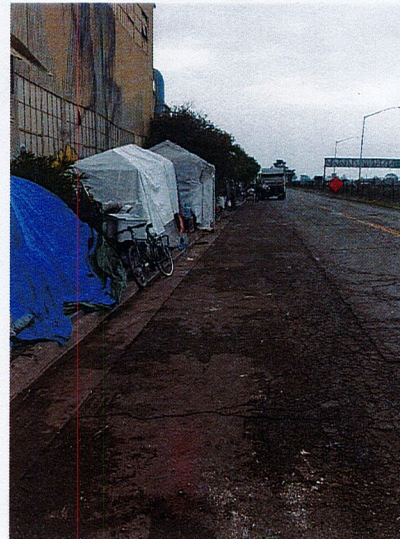
BERKELEY'S POPULATION IS AGING



Challenges

PATIENTS EXPERIENCING HOMELESSNESS

- 14% of all patients since 2013
- Increase to 18% of all patients in the past 16 months
- Fire calls to encampments are challenging
 - Rapid spread through tents and light materials
 - Growing number of propane tanks
- The fire department is the safety net



Challenges

CHANGES IN THE BUILT ENVIRONMENT

- Density
- Height of buildings
- Bike and pedestrian improvements
 - Milvia Bikeway
 - Bancroft Way
 - Adeline Corridor



Challenges

RECRUITMENT AND RETENTION

- 134 Sworn Firefighters
- Decreasing diverse pool of paramedic applicants
 - 2002 over 900 paramedic applicants
 - 2018 only 180 paramedic applicants
- Cost of living
- Lateral firefighter academies
- B-STEP



Challenges

EMERGENCY MEDICAL DISPATCH (EMD) – TODAY'S DISPATCH SYSTEM

- When a medical call is comes in:
 - Berkeley dispatches Fire engines and ambulances code 3
 - Alameda County Regional Emergency Communications Center provides pre-arrival medical instructions
- Why is EMD important?
 - Caller gets potentially life-saving instructions from an emergency medical dispatcher.
 - Required by Alameda County to explore providing additional service.

Challenges

EMERGENCY MEDICAL DISPATCH (EMD) – FUTURE DISPATCH SYSTEM

- Emergency medical dispatching is the standard in modern fire and EMS dispatching
- In-house EMD will provide better care to 9-1-1 callers
- Sorting and triaging of 9-1-1 calls to make sure appropriate resources are dispatched
- Allows for a more efficient expansion of Berkeley EMS resources.
- Improved training and responsibility for dispatchers.

Challenges

WILDLAND URBAN INTERFACE (WUI)

- All of Berkeley is vulnerable.
 - Dense, old wooden buildings
 - Vulnerable populations
 - Isolated seniors
 - Persons with access and functional needs
 - Students
 - Children
 - People with pets
- Vegetation management is inconsistent and unenforceable
- Evacuation planning and training is underway
- Emergency Notification Challenges

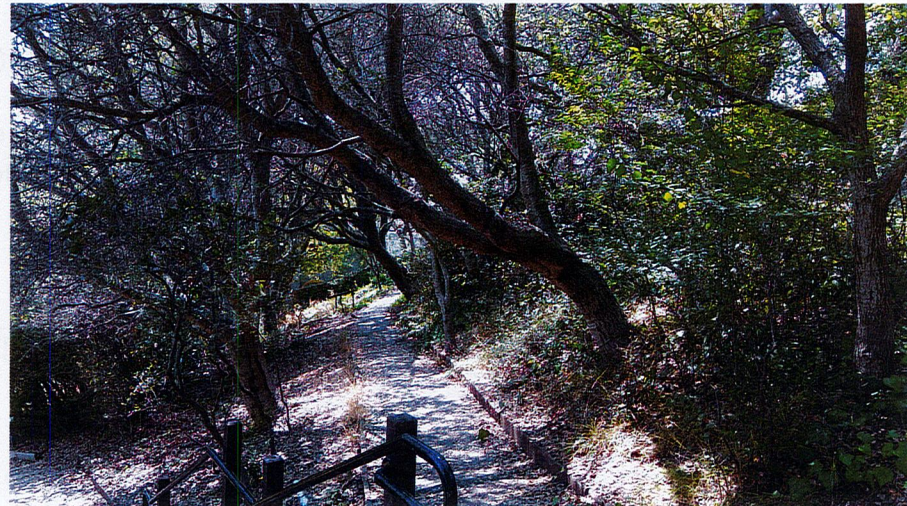


16

Challenges

WILDLAND URBAN INTERFACE (WUI)

- Fire District following 1991 Tunnel Fire
 - 3 Fire Inspectors
 - Chipper and Fire Fuel Debris Bin Program
 - Allowed to expire following passage of Proposition 218



Challenges

LONG-TERM FACILITY NEEDS

- Ten (10) facilities
 - Seven (7) fire stations
 - Division of Training and EMS
 - Above Ground Water System warehouse
 - Fire Administration offices at the Public Safety Building
- Most stations were built in the 1950s and 1960s
- Earthquake retrofitted in the 1990
- Station 7 which opened in 2007.
- The aging infrastructure is completely filled by our current deployment



Challenges

EMERGENCY WATER SUPPLY

- The Community Facility District 1 – Procurement of Disaster Fire Equipment (CFD1) – Mello Roos (Measure Q)
- Funded the purchase of an Above Ground Water System
- Provides a mobile system to pump water up to 6 miles
- Funded the land and construction of a warehouse to house the system.
- This tax repays a 20-year bond and operational costs.
- Final installment will be in FY 2022.



Solutions

DO NOTHING, MAINTAIN STATUS QUO

- Continued General Fund support of the Paramedic Tax
- Not addressing the growing call volume or changing nature of the City
- Burden the General Fund with annual funding needs for wildfire safety
- Sunset the Above Ground Water System in 2025
- Not consider near or long-term facility needs for the Fire Department

Solutions

INCREASING THE EXISTING PARAMEDIC TAX

	Est. Annual Cost	Est. Additional Tax Rate Per Square Foot	Est. Additional Annual Cost for a 1,900 sq ft residence	Est. Total Tax Rate Per Square Foot	Est. Total Annual Cost for a 1,900 sq ft residence
Address existing deficits	\$900,000	\$0.01105	\$21.00	\$0.05035	\$95.67
Implement Emergency Medical Dispatch	\$3,200,000	\$0.03930	\$74.67	\$0.07860	\$149.34
5150 Transport 3 rd -Party Contractor (existing service model)	\$2,400,000	\$0.02948	\$56.01	\$0.06878	\$130.68
Establish Transport Division (Single Function / Basic Life Support)	\$4,200,000	\$0.05162	\$98.08	\$0.09092	\$172.75
Add Two (2) Additional Ambulances (Firefighter Paramedics / Advanced Life Support)	\$5,500,000	\$0.06755	\$128.34	\$0.10685	\$203.01

Solutions

ESTABLISH A NEW FIRE AND EMERGENCY SERVICES TAX

- New tax would be used to fund a re-design of the Fire Department
 - Emergency medical dispatch capability
 - Increasing staffing on suppression apparatus
 - Using a mix of staffing models on ambulances to meet the needs of:
 - Mental health patients
 - Emergency 9-1-1 medical patients
 - Grow along with the new height and dense nature of the built city
 - Cost estimate
 - \$8.0 million per year in new funding
 - Facilities improvements based on a facility study



Solutions

CONSIDER FUNDING FOR PROGRAMS TO MITIGATE WILDFIRE RISK AND EDUCATE AND TRAIN THE PUBLIC ON WILDFIRE SAFETY AND EVACUATION.

	Estimated Annual Cost	Estimated One-Time Cost
a. Wildfire Fuel Mitigation Plan	\$0	\$500,000
b. Wildland Fire Inspectors (4 FTE)	700,000	0
c. Safe passages	200,000	0
d. Vegetation Management Crew	350,000	0
e. Evacuation Training and Exercise	100,000	0
f. Undergrounding	5,000,000	0
g. Outdoor Emergency Warning System	250,000	2,000,000
h. Weather Radio Distribution	200,000	1,000,000

Solutions

ABOVE GROUND WATER SYSTEM

- Repair and Replacement
Timeline of 25 years
beginning 2022
 - Vehicles
 - Pumps
 - Hose
 - Facilities
 - 1 FTE
- Estimated budget of
\$6,000,000



Solutions

STUDIES

- Direct staff to budget one-time funding for the followings studies:
 - Standards of Cover Study \$150,000
 - Comprehensive Facility Study \$200,000

Next Steps

- February 4 – Worksession Regarding Community Survey and Ballot Measures
- February 11 – Provide direction to staff regarding Community Survey and Ballot Measures