



Community Health Commission
Andy Katz, Chair
Kellie Knox, Staff Secretary

Community Health Commission

Thursday, September 28, 2023, 6:30 – 9:00pm

Meeting Location:

Judge Henry Ramsey Jr. South Berkeley Senior Center
2939 Ellis Street, Berkeley, CA 94703
Phone: 510-981-5170

AGENDA

Preliminary Matters

1. Call to Order by Chair
2. Roll Call by Secretary
3. Land Acknowledgement – **Attachment 6**
4. Announcements & Introductions
5. Confirm note taker – if needed
6. Public Comment

The public may comment virtually about any item **not** on the agenda. Public comments are limited to two minutes per speaker.

Presentation – Sarah Moore, City of Berkeley, Planning Department on Environmental Justice Plan.

Discussion and Action Items

Public comments regarding agenda items will be heard while the Commission is discussing the item. Public comments are limited to two minutes per speaker.

1. Approval of Draft Minutes from 7/27/2023 Regular Meeting – **Attachment 1**
2. Add/Remove Subcommittees/ Members (Katz) – **Attachment 3**
3. Public Health Officer's/Staff's Report
4. Commission Chair's Report
5. Subcommittee Reports
6. November's scheduled meeting date and plan for Special Meeting
7. City Council Referral on Long Term Care Facility Oversight - Bartlett (Katz) – **Attachment 7**
8. Light Pollution Control (Katz) – **Attachment 8**

Future Agenda items

Adjournment

Attachments

1. Draft minutes from July 27, 2023 CHC Regular meeting
2. CHC 2023 Work Plan
3. CHC Subcommittee Roster 2023
4. CHC Meeting Calendar 2023
5. City Council and Community Health Commission Timeline 2023

A Vibrant and Healthy Berkeley for All

6. Land Acknowledgement
7. Long Term Health Care Facility Oversight Referral
8. Light Pollution Control

The *next meeting* of the Community Health Commission will be held on Thursday, October 26, 2023 with a *deadline of Tuesday, October 17, 2023 for the public's submission of agenda items and materials for the agenda packet*. Dates are subject to change. Please contact the Commission Secretary to confirm.

Any writings or documents provided to a majority of the commission regarding any item on this agenda will be made available for public inspection at Health, Housing & Community Services Department located at 2180 Milvia Street, 2nd floor, Berkeley, CA 94704 during regular business hours. The Commission Agenda and Minutes may be viewed on the City of Berkeley website: [Boards & Commissions | City of Berkeley \(berkeleyca.gov\)](#) (SB 343)

CONFLICT OF INTEREST INFORMATION: City commissioners, pursuant to Government Code section 1090, are responsible for recusing themselves from all commission discussions and actions in which they may have a conflict of interest. If your affiliation, paid or unpaid, with other agencies has changed since the last meeting of this commission, your ability to participate in commission activities may have changed. Individual guidance is available from the City Attorney's Office (CAO). Commissioners are encouraged to consult with the CAO if they have questions, concerns, or would like clarification about matters related to potential conflicts of interest.

The CAO may be reached at:

Email: attorney@cityofberkeley.info

TEL: (510) 981-6950 TDD: (510) 981-6903, FAX: (510) 981-6960

2180 Milvia Street 4th Floor, Berkeley, CA 94704 - Office Hours: Mon-Fri, 8am-5pm

COMMUNITY 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 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.

Communications to Berkeley boards, commissions or committees 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 a City board, commission or committee, 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 secretary of the relevant board, commission or committee. 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 commission secretary for further information.

Secretary:

Kellie Knox

Health, Housing & Community Services Department

2180 Milvia Street, 2nd Floor

Berkeley, CA 94704

Meeting Agenda – CHC Commission

9/28/2023

Page 2 of 2

(510) 981-5301

kknox@berkeleyca.gov



Community Health Commission

Community Health Commission

DRAFT MINUTES

Regular Meeting, Thursday, July 27, 2023

The meeting convened at 6:44 p.m. with Commission Chair Katz presiding.

ROLL CALL

Present: Bechtolsheim, Adams, Lee, Katz.

Absent: None.

Excused: Commissioners Webber, Smart, Spigner.

Staff present: Kellie Knox.

Community Members: None.

COMMENTS FROM THE PUBLIC: N/A

ACTION ITEM

1. M/S/C (Katz/Adams/Lee): Motion to adopt minutes from the May 25, 2023 and June 22, 2023, meetings.

Ayes: Commissioner Bechtolsheim, Adams, Lee, Katz.

Noes: None.

Abstain: None.

Absent from vote: N/A

Excused: Commissioners Webber, Smart, Spigner.

Motion Passed.

DISCUSSION ITEMS:

3. Add/Remove Subcommittees/ Members (Katz) – N/A
4. Public Health Officer's Report - *Secretary gave update in absence of PHO.*
5. Commission Chair's Report by Chair Katz - Discussion

A Vibrant and Healthy Berkeley for All

6. Subcommittee Reports
 - c. Entheogenic - discussion
 - e. Health Facilities - discussion
7. City Council Referral on Long Term Care Facility Oversight - Bartlett (Katz) – *Discussion*
8. Light Pollution Control (Katz) – *Discussion*

This meeting adjourned at 8:30 p.m.

Minutes will be voted on at September 28, 2023 meeting.

Minutes approved on: _____

Respectfully submitted,
Kellie Knox, Commission Secretary _____

Community Health Commission 2023 Work Plan

Guiding Philosophy: To look at health through the lens of equity, and to address, ameliorate, and abolish health inequities in Berkeley through our work while advancing other public health efforts.

Mission/Purpose:

1. Collaborate with the community and the Berkeley Health Officer Unit and Public Health Division, and City of Berkeley to eliminate health inequity by:
 - a. Advocating for good policy to council that has the potential to improve the health of Berkeley residents that can be implemented, monitored, and evaluated.
 - b. Representing the community through the diversity of this commission
 - c. Increasing the public education/social marketing efforts, understanding, and awareness of issues.
 - d. Advocating together with the residents of Berkeley most affected by institutional, social, organizational inequities/disparities.
 - e. Providing a public forum for all community members to share concerns, ideas
2. Achieve general public health progress by being responsive to community needs and facilitating general health and safety.

Overall goals, issues & priorities: All issues can be addressed through a health equity lens.

- Include a focus on the impact of COVID-19 and the city's response to it
- Increase healthy food security
- Advocate for the expansion of affordable housing
- Continue to urge that Alta Bates Berkeley Medical Campus remain open while also helping to suggest actions to address consequences of planned closure
- Be responsive in potential recommendations to help Berkeley residents, and care providers and clinics cope with potential federal disruption in healthcare policy and federal spending cuts
- Further address more social determinants of health
- Continue to be a community advocate to City Council to address structural, institutional, and health inequities impacting all underserved populations
- Work to have community health data measures documented in a timely manner and to promptly evaluate and act on novel data such as the Health Status Report
- Work to support policies and initiatives that advance UHC such as Medicare for all
- Advise the City Council as HHCS and Public Health Division develop their

strategic plans, community health assessment and community health improvement plan.

General steps and actions needed to meet priorities:

1. Conduct outreach to encourage Berkeley community members to engage with the CHC
2. Collaborate with other commissions to share resources and support recommendations
3. Focused/specialized ad-hoc subcommittees, as needed
4. Keep track of local, state, and federal policy and data flow

Specific steps and actions needed to meet priorities:

➤ Basic Needs Security

Focus on healthy food security and affordable/accessible housing

- In terms of healthy food security:
 - Advocate for policies to mitigate unhealthy food consumption
 - Advocate for affordability and accessibility of healthy foods in supporting programs like the Berkeley Food Institute, etc.,
- In terms of accessible/affordable housing:
 - Advocate for affordable housing
 - Advocate for increased rent control
- Connect with the community based organizations and appropriate city of Berkeley departments to acquire information about available resources for Berkeley residents.

➤ Chronic Disease Prevention

- Recommend interventions to address diabetes, obesity, heart diseases, and other chronic conditions highlighted by the Berkeley health status report.
- Recommend interventions to respond to deferred preventative care due to COVID-19

➤ Health Equity

- Review the Health Status Report- dialogues with staff and community to investigate the data and identify populations experiencing inequities, and recommend program interventions for the City Public Health Division
 - Engage Stakeholders on LGBT health equity issues to help complement findings of the Health Status Report
 - Investigate and implement efforts to improve immigrant access to health care
- Advocate for the implementation of strategies that will reduce health inequities:
 - Investigate community access to telehealth and other technologies to improve healthcare equity
 - Work on cultural competency for health care providers
 - Continue to support the development of the African American Holistic Resource Center

➤ Health Facilities

- Continue to recommend actions to keep Alta Bates open
- Consider ways to increase emergency care access in Berkeley
- Respond to City Council referral regarding Long Term Care Facilities

➤ Policy tracking

- Track City Council minutes, state, and national legislative actions
- Bring policy updated to the Commission as appropriate.

District	Last	First	Community Health Commission Subcommittees 2023				
			Health Facilities	Health Equity	Basic Needs Security	Chronic Disease Prevention	Entheogenic
1	Webber	Sara			X		
2	Bechtolsheim	Benjamin	X			X	
3							
4	Smart	Karma		X	X		X
5	Spigner	Tora	X	X			
6	Adams	Joseph					X
7	Lee	Eric	X				
8							
M	Katz	Andy	X				
			4	2	2	1	2

updated 9/27/23

2023 Commission Meeting Dates

Name of Commission: Community Health Commission

Commission Secretary: Kellie Knox

Please Note the Commission Meeting Dates for 2023 Below

Please fill in meeting date below. If no meeting for the month is scheduled please note as "No Meeting."

Example

Month	Meeting Day and Date	Time
February 2022	Wednesday 2/10/2022	7:00 pm

Month	Meeting Day and Date	Time
July 2022	No Meeting	

2023 Meeting Dates

Month	Meeting Day and Date	Time
January 2023	Thursday 1/26/2023	6:30 pm
February 2023	Thursday 2/23/2023	6:30 pm
March 2023	Thursday 3/23/2023	6:30 pm
April 2023	Thursday 4/27/2023	6:30 pm
May 2023	Thursday 5/25/2023	6:30 pm
June 2023	Thursday 6/22/2023	6:30 pm

Month	Meeting Day and Date	Time
July 2023	Thursday 7/27/2023	6:30 pm
August 2023	CHC Does not meet in August 2023	
September 2023	Thursday 9/28/2023	6:30 pm
October 2023	Thursday 10/26/2023	6:30 pm
November 2023	Thursday 11/23/2023	6:30 pm
December 2023	CHC does not meet in December 2023	

commission@cityofberkeley.info

City Clerk Department

Please contact our office at (510) 981-6908 with any questions.

2023			Thursday 12:00 PM	Thursday 12:00 PM	Monday 2:30 PM	Wednesday 11:00 AM	Thursday 5:00 PM
COUNCIL MEETING DATE	Reports Due to Dept. Director	Reports Due to CAO	Dept. Reports Due to Clerk Day 33	Agenda Committee Packet to Print Day 19	Agenda Committee Meeting Day 15	Final Agenda Meeting - (Print Agenda on wed.) Day 13	Council Agenda Delivery Day 12
Winter Recess [December 14, 2022 through January 16, 2023]							
Jan 17	12/1	12/1	12/15	12/29	1/4	1/4	1/5
Jan 31	12/9	12/9	12/29	1/12	1/16	1/18	1/19
Feb 14	12/29	12/29	1/12	1/26	1/30	2/1	2/2
Feb 28	1/12	1/12	1/26	2/9	2/8 (Tues)	2/15	2/10
Mar 14	1/26	1/26	2/9	2/23	2/22 (Tues)	3/1	3/2
Mar 21	2/2	2/2	2/16	3/2	3/6	3/8	3/9
Spring Recess [March 22 through April 10, 2023]							
Apr 11	2/23	2/23	3/9	3/23	3/27	3/29	3/30
Apr 25	3/9	3/9	3/23	4/6	4/10	4/12	4/13
May 9	3/23	3/23	4/6	4/20	4/24	4/26	4/27
May 23	4/6	4/6	4/20	5/4	5/8	5/10	5/11
May 30	4/13	4/13	4/27	5/11	5/15	5/17	5/18
Jun 6	4/20	4/20	5/4	5/18	5/31 (Tues)	5/24	5/25
Jun 13	4/27	4/27	5/11	5/25	5/29	5/31	6/1
Jun 27	5/11	5/11	5/25	6/8	6/12	6/14	6/15
Jul 11	5/25	5/25	6/8	6/22	6/26	6/28	6/29
Jul 25	6/8	6/8	6/22	7/6	7/10	7/12	7/13
Summer Recess [July 26 through September 11, 2023]							
Sep 12	7/27	7/27	8/10	8/24	8/28	8/30	8/31
Sep 19	8/3	8/3	8/17	8/31	9/6 (Tues)	9/6	9/7
Oct 3	8/11	8/11	8/25	9/8	9/12	9/14	9/15
Oct 10	8/25	8/25	9/8	9/22	9/28 (Wed)	9/28	9/29
Nov 7	9/15	9/15	9/29	10/13	10/19 (Wed)	10/19	10/20
Nov 14	9/28	9/28	10/12	10/26	10/30	11/1	11/2
Nov 28	10/12	10/12	10/26	11/10	11/13	11/15	11/16
Dec 5	10/19	10/19	11/2	11/17	11/20	11/22	11/23 (Wed)
Dec 12	10/27	10/27	11/9	11/23 (Wed)	11/27	11/29	11/30
Winter Recess [December 13, 2023 through January 15, 2024]							

Revised 09/29/2022

VTO Affected Dates

Holiday Affected Dates

Religious Holiday Affected Date

Land Acknowledgement Statement

The City of Berkeley recognizes that the community we live in was built on the territory of xučyun (Huchiun (Hooch-yoon)), the ancestral and unceded land of the Chochenyo (Cho-chen-yo)-speaking Ohlone (Oh-low-nee) people, the ancestors and descendants of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to all of the Ohlone Tribes and descendants of the Verona Band. As we begin our meeting tonight, we acknowledge and honor the original inhabitants of Berkeley, the documented 5,000-year history of a vibrant community at the West Berkeley Shellmound, and the Ohlone people who continue to reside in the East Bay. We recognize that Berkeley's residents have and continue to benefit from the use and occupation of this unceded stolen land since the City of Berkeley's incorporation in 1878. As stewards of the laws regulating the City of Berkeley, it is not only vital that we recognize the history of this land, but also recognize that the Ohlone people are present members of Berkeley and other East Bay communities today.


BEN BARTLETT

CITY COUNCILMEMBER, DISTRICT 3

CONSENT CALENDAR

December 14, 2021

To: Honorable Mayor and Members of the City Council
 From: Councilmember Ben Bartlett
 Subject: Health Care Facility Oversight

RECOMMENDATION

Refer to the City Manager and the Community Health Commission an assessment of the breadth of regulatory control the City of Berkeley can exert on skilled nursing facilities, and create a process of accountability if complaints are found to be substantiated that threaten, or could potentially escalate to the point of threatening, the wellbeing of patients and/or violate federal, state, or local law; the business license of the offending facility will be suspended until the skilled nursing facility submits a report demonstrating rectification of the situation.

BACKGROUND

The California Department of Public Health (CDPH) mandates that skilled nursing facilities provide 3.5 hours of patient care to each patient per day.¹ For instance, some care facilities in Berkeley are reported to have as few as 6 staffers serving 66 patients, meaning that even if the staff worked around the clock, at most they would be able to offer 2.1 staff hours per patient per day. In 2021 alone, the facility has received 12 complaints, but not a single one has been followed up by an enforcement action². This is just a single example in an egregious pattern of lack of care met with lack of enforcement. In 2019, for example, skilled nursing facilities were found to violate an average of 23 federal and state laws per facility. Yet, in the 77 skilled nursing facilities across California, not a single regulation was enforced. As a result, there has been a history of negligence, mistreatment, and patient abuse within Californian care facilities.³

CURRENT SITUATION

The City has received numerous grievances from concerned community members over the quality of care in certain skilled nursing facilities in Berkeley. Community members complain of neglect, indifference, and harmful, negligent behavior with sometimes tragic consequences.

The City must address these hazards by creating internal procedures and policies designed to prevent further harmful acts. Precedence for license revocation policies can be found in other municipalities. For example, Chapter 6 Section 1.80 of Superior, Colorado Municipal Code states that business licenses can be suspended “when any activity conducted by the licensee, his or her employee or agent violates any federal, state or local rule, regulation or law.”⁴ The City

¹<https://canhrnews.com/guidelines-for-3-5-direct-care-service-hours-per-patient-day-dhppd-staffing-audits/>

² <https://www.cdph.ca.gov/Programs/CHCQ/LCP/CalHealthFind/Pages/SearchResult.aspx>

³ <https://calmatters.org/health/2021/10/nursing-homes-oversight-california-hearing/>

⁴ https://library.municode.com/co/superior/codes/municipal_code?nodeId=CH6BULIRE

of Berkeley could adopt such an ordinance to shutter inept care facilities and deter improper conduct and mismanagement.

Furthermore, to ensure enforcement, the City could mandate that all complaints be forwarded to the Environmental Health Division to be reviewed in a timely manner. This would prevent a backlog of complaints and strengthen City follow-through.

The City of Berkeley needs to enforce strict regulations over the performance and conditions of skilled nursing care facilities to ensure that patients are not stripped of their right to quality care. As stated above, a particularly skilled nursing care facility received 12 complaints in 2021, but there was zero enforcement action taken against them. With this recommendation, there will be a strict standard that skilled nursing care facilities must meet to guarantee that issues are adequately addressed by the City of Berkeley. Furthermore, it provides safeguards to ensure that patients are not neglected by those assigned to look after them.

FINANCIAL IMPLICATIONS

Determine as part of City Manager and Commission response.

Suppose the City can regulate skilled nursing facilities (generally not a City role). In that case, there could be significant financial implications because there is currently no staff assigned to this work in the City.

COMMUNITY CONSULTATIONS

This item was informed by consultations with and complaints raised by community members.

CONTACT PERSONS

Councilmember Ben Bartlett
James Chang
Hillary Phan
Jerry Wong

bbartlett@cityofberkeley.info
jchang@cityofberkeley.info
510-981-7130
510-981-7135

**BEN BARTLETT**

CITY COUNCILMEMBER, DISTRICT 3

CONSENT CALENDAR

December 14, 2021

To: Honorable Mayor and Members of the City Council
 From: Councilmember Ben Bartlett
 Subject: Health Care Facility Oversight

RECOMMENDATION

Refer to the City Manager and the Community Health Commission an assessment of the breadth of regulatory control the City of Berkeley can exert on skilled nursing facilities, and create a process of accountability if complaints are found to be substantiated that threaten, or could potentially escalate to the point of threatening, the wellbeing of patients and/or violate federal, state, or local law; the business license of the offending facility will be suspended until the skilled nursing facility submits a report demonstrating rectification of the situation.

BACKGROUND

The California Department of Public Health (CDPH) mandates that skilled nursing facilities provide 3.5 hours of patient care to each patient per day.¹ For instance, some care facilities in Berkeley are reported to have as few as 6 staffers serving 66 patients, meaning that even if the staff worked around the clock, at most they would be able to offer 2.1 staff hours per patient per day. In 2021 alone, the facility has received 12 complaints, but not a single one has been followed up by an enforcement action². This is just a single example in an egregious pattern of lack of care met with lack of enforcement. In 2019, for example, skilled nursing facilities were found to violate an average of 23 federal and state laws per facility. Yet, in the 77 skilled nursing facilities across California, not a single regulation was enforced. As a result, there has been a history of negligence, mistreatment, and patient abuse within Californian care facilities.³

CURRENT SITUATION

The City has received numerous grievances from concerned community members over the quality of care in certain skilled nursing facilities in Berkeley. Community members complain of neglect, indifference, and harmful, negligent behavior with sometimes tragic consequences.

The City must address these hazards by creating internal procedures and policies designed to prevent further harmful acts. Precedence for license revocation policies can be found in other municipalities. For example, Chapter 6 Section 1.80 of Superior, Colorado Municipal Code states that business licenses can be suspended “when any activity conducted by the licensee, his or her employee or agent violates any federal, state or local rule, regulation or law.”⁴ The City

¹<https://canhrnews.com/guidelines-for-3-5-direct-care-service-hours-per-patient-day-dhppd-staffing-audits/>

² <https://www.cdph.ca.gov/Programs/CHCQ/LCP/CalHealthFind/Pages/SearchResult.aspx>

³ <https://calmatters.org/health/2021/10/nursing-homes-oversight-california-hearing/>

⁴ https://library.municode.com/co/superior/codes/municipal_code?nodeId=CH6BULIRE

of Berkeley could adopt such an ordinance to shutter inept care facilities and deter improper conduct and mismanagement.

Furthermore, to ensure enforcement, the City could mandate that all complaints be forwarded to the Environmental Health Division to be reviewed in a timely manner. This would prevent a backlog of complaints and strengthen City follow-through.

The City of Berkeley needs to enforce strict regulations over the performance and conditions of skilled nursing care facilities to ensure that patients are not stripped of their right to quality care. As stated above, a particularly skilled nursing care facility received 12 complaints in 2021, but there was zero enforcement action taken against them. With this recommendation, there will be a strict standard that skilled nursing care facilities must meet to guarantee that issues are adequately addressed by the City of Berkeley. Furthermore, it provides safeguards to ensure that patients are not neglected by those assigned to look after them.

FINANCIAL IMPLICATIONS

Determine as part of City Manager and Commission response.

Suppose the City can regulate skilled nursing facilities (generally not a City role). In that case, there could be significant financial implications because there is currently no staff assigned to this work in the City.

COMMUNITY CONSULTATIONS

This item was informed by consultations with and complaints raised by community members.

CONTACT PERSONS

Councilmember Ben Bartlett
James Chang
Hillary Phan
Jerry Wong

bbartlett@cityofberkeley.info
jchang@cityofberkeley.info
510-981-7130
510-981-7135

Date of Hearing: March 28, 2023

ASSEMBLY COMMITTEE ON BUSINESS AND PROFESSIONS

Marc Berman, Chair

AB 38 (Lee) – As Introduced December 5, 2022

SUBJECT: Light pollution control.

SUMMARY: Requires state agencies to ensure that an outdoor lighting fixture that is installed or replaced, on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and adheres to additional lighting requirements.

EXISTING LAW:

- 1) Establishes the California Building Standards Commission (CBSC) within the Department of General Services and requires any building standards adopted or proposed by state agencies to be submitted to, and approved by, the CBSC prior to codification into the California Building Standards Code. (Health and Safety Code §§ 18901 *et seq.*)
- 2) Requires the State Energy Resources Conservation and Development Commission to adopt, among other regulations, lighting and other building design and construction standards that increase efficiency in the use of energy for new residential and nonresidential buildings to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy, including energy associated with the use of water, and to manage energy loads to help maintain electrical grid reliability. (Public Resources Code §§ 25000 *et seq.*)

THIS BILL:

- 1) Defines “correlated color temperature” to mean the temperature, measured in Kelvin, of a radiating black body that presents the same apparent color to the human eye as the light source.
- 2) Defines “Department” to mean the Department of General Services.
- 3) Defines “light trespass” to mean light emitted by an outdoor lighting fixture that shines beyond the boundary of the property on which the fixture is located.
- 4) Defines “outdoor lighting fixture” to mean an outdoor artificial illuminating device or luminaire, whether permanent or portable, including, but not limited to, artificial illuminating devices installed on a building or structure and used for illumination or advertisement, including, but not limited to, searchlights, spotlights, and floodlights, used for architectural lighting, parking lot lighting, landscape lighting, billboards, or street lighting.
- 5) Specifies that “outdoor lighting fixture” does not include artificial illuminating devices that are worn or held in the hand, including flashlights, lanterns, and headlamps.
- 6) Defines “shielded” to mean that all of the light rays emitted by an outdoor lighting fixture in its installed position, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where the light is emitted and effectively obscures visibility of the lamp.

- 7) Defines “state agency” to include every state office, officer, department, division, bureau, board, and commission; and to exclude the California State University.
- 8) Requires state agencies to ensure that an outdoor lighting fixture that is installed or replaced on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and meets all of the following criteria:
 - a) Uses a lamp with a correlated color temperature that does not exceed 2700 Kelvin.
 - b) Uses the minimal illuminance required for the intended purpose of the outdoor lighting fixture, with consideration to recognized building and safety standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society.
 - c) Is one or more of the following:
 - i) Dimmable to no more than 50% of its maximum possible brightness and dimmed between the hours of 11 p.m. and sunrise, unless a compelling safety or other state interest requires the fixture to be at full illumination.
 - ii) Extinguishable by an automatic or manual shutoff device.
 - iii) Motion-activated with an activated duration of fewer than 15 minutes and equipped with an automatic shutoff device.
 - d) Requires a state agency to consider cost efficiency, energy conservation, minimization of light trespass and glare, and preservation of the natural night environment.
- 9) Specifies that the requirements above do not apply in any of the following circumstances:
 - a) A federal law or regulation that preempts state law.
 - b) A local municipal or county ordinance that establishes requirements that more stringently control light trespass or glare or conserve the natural night sky.
 - c) The outdoor lighting fixtures are advertisement signs or other fixtures on interstate highways or federal primary highways.
 - d) A compelling safety interest or existing legal requirement requires such lighting, including any of the following:
 - i) Navigational lighting for aircraft safety.
 - ii) Outdoor lighting needed for the safe navigation of watercraft, including, but not limited to, lighthouses and outdoor lighting in marinas.
 - iii) Outdoor lighting fixtures necessary for worker health and safety or public health and safety, pursuant to the regulations promulgated by the Department of Industrial Relations, the Agricultural Labor Relations Board, and the Public Employment Relations Board.

- iv) Lighting that is used by law enforcement officers, firefighters, medical personnel, or correctional personnel, including, but not limited to, lighting used at Department of Corrections and Rehabilitation facilities and Department of State Hospitals facilities.
 - v) Lighting intended for tunnels and roadway underpasses.
 - vi) Outdoor lighting used for programs, projects, or improvements of a state agency related to construction, reconstruction, improvement, or maintenance of a street, highway, or state building, structure, or facility.
 - vii) Outdoor lighting on historic sites or structures, to the extent necessary to preserve the historic appearance.
 - viii) Lighting sources of less than 1,000 lumens, including but not limited to, seasonal and decorative lighting.
 - ix) Other circumstances where a significant interest exists to protect safety or state property that cannot be feasibly addressed by another method, including, but not limited to, lighting needed to discourage vandalism of state agency buildings, structures, and facilities.
- 10) Specifies that if an exemption applies, a state agency shall make reasonable efforts to install fixtures and employ light management practices that conserve energy, minimize light trespass, and preserve the dark sky while still fully meeting the purposes and requirements of the light fixtures.
- 11) Makes numerous legislative findings and declarations.

FISCAL EFFECT: Unknown. This bill is keyed fiscal by Legislative Counsel.

COMMENTS:

Purpose. This bill is sponsored by *Audubon California* and the *Santa Clara Valley Audubon Society*. According to the author:

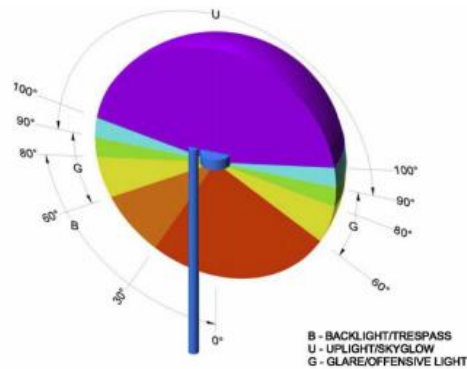
Increased light pollution throughout California and globally is disrupting the circadian rhythms and migratory patterns of animals, which is harming our ecosystems. According to the National Audubon Society, 80% of birds that migrate do so at night using the dark skies to help them navigate to and from their breeding grounds.

In addition to disrupting circadian rhythms, excessive artificial light at night (ALAN) can also disorient birds, which can result in fatal collisions. To address this issue, [this bill] will require outdoor lighting fixtures on state buildings and structures to have an external shield to direct light to where it is needed or be equipped with a shutoff device. This sensible reform promotes safety for migratory birds, ecosystems, and people.

Background.

Light pollution. Light pollution, which has been found to have adverse effects on human health and wildlife, is caused by increasingly large urban areas and the excessive and inefficient use of artificial light.¹ Light pollution is characterized by skyglow (brighter sky in urban areas), light trespass (shining of lights in unneeded or unwanted areas), and glare (brightness resulting in visual discomfort).

Figure 1: Backlight, Uplight, and Glare



Source: California Energy Commission

Light pollution was first recognized as a problem by astronomers in the 1970s upon discovery that thousands of stars and other objects in space could not be seen as clearly despite the use of powerful equipment. In suburbs and cities where a few thousand stars should be visible at night, only a few hundred or a few dozen, respectively, can be seen.

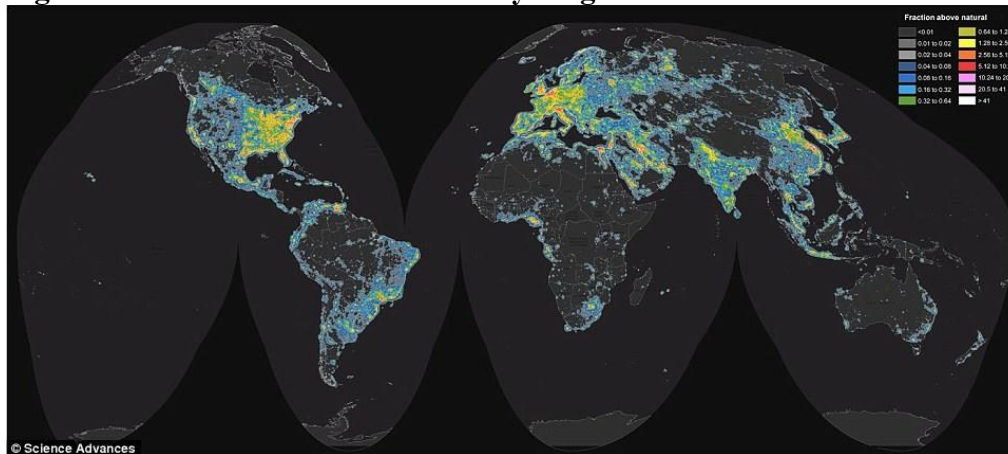
In addition to obscuring stars, light pollution can directly impact human health by interfering with natural circadian rhythms caused by a decrease in the amount of melatonin produced in the body. Sleep disorders, depression, cancer, and other adverse health conditions have been linked to circadian disruption.

Similarly, wildlife are also subject to adverse impacts of light pollution. Studies have demonstrated that light pollution can alter the behavior of wildlife, often resulting in the death or decline of species such as turtles, birds, fish, reptiles, and other wildlife.

Light pollution has also been known to impact the ability for the military to conduct nighttime trainings, which is done to simulate combat situations. In 2007, Texas, at the request of the military, began to regulate the use of outdoor lighting in counties with several military bases and more than one million residents.

¹ Schultz, J. (2022, March 25). *States Shut Out Light Pollution*. National Conference of State Legislatures. Retrieved March 16, 2023, from <https://www.ncsl.org/environment-and-natural-resources/states-shut-out-light-pollution>

Figure 2: World Atlas of Artificial Sky Brightness



Credit: Falchi et al., Science Advances, including Dan Duriscoe/NPS; Bob Meadows/NPS; Jakob Grothe/NPS contractor, and Matthew Price/CIRES and CU-Boulder

California Green Building Standards Code (CALGreen). In 2007, the CBSC developed green building standards to help the state achieve its greenhouse gas reduction goals.² CALGreen is the first-in-the-nation mandated green building standards code and includes regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CBSC is authorized to propose CALGreen standards for non-residential structures and any others that are not under the jurisdiction of another state agency. CALGreen Section 5.106.8 currently imposes specific light pollution reduction standards for non-residential buildings. Outdoor lighting systems must be designed and installed to prevent light escaping in unwanted or unnecessary directions from an outdoor light fixture. Specifically the light produced may not exceed the allowable backlight (light directed behind the fixture), uplight (light directed above the horizontal plane of the fixture), and glare (light emitted at high angles that cause a glare) (BUG) ratings per lighting zone. Lighting zones range from natural environments with extremely limited outdoor lighting to urban areas with extensive use of outdoor lighting. CALGreen specifies that if a local ordinance is more stringent than the CALGreen requirements, the building owner must comply with the local ordinance. CalGreen currently exempts a variety of light fixtures, including but not limited to those used for aviation; landscaping; temporary use outdoors; sports and athletic fields; children's playgrounds; tunnels and bridges; stairs and ramps; and lighting for industrial sites. CALGreen also exempts emergency lighting; building façade that meet specified requirements; and some custom lighting features.

Other states. Nineteen states, the District of Columbia, and Puerto Rico have enacted laws to reduce light pollution.³ "Dark skies" laws typically require outdoor lighting fixtures to be shielded so that light is emitted downwards only, to use low-glare or low-wattage lightbulbs, or to be restricted during certain hours.

Governor's Veto. In 2021, Governor Gavin Newsom vetoed a bill substantially similar to this one, AB 2382 (Lee), stating in part the following:

² Building Standards Commission. (n.d.). *CalGreen*. California Department of General Services. Retrieved March 17, 2023, from <https://www.dgs.ca.gov/BSC/CALGreen>

³ Ibid.

While I appreciate the stated goals of this bill to conserve energy and decrease ambient light in the night sky, the provisions create an overly broad mandate that raises concerns for health and safety, security, and crime prevention. Further, the California Green Building Standards Code includes light pollution reduction standards for nonresidential buildings. These standards are developed during a public, deliberative process.

Furthermore, the costs associated with this bill are unfunded and potentially significant. There are 24,000 state-owned buildings, in addition to the state's leased and managed properties. Requiring all outdoor lighting at these locations to be shielded, include shutoff devices, or have a motion sensor may cost millions of dollars not accounted for in the budget.

With our state facing lower-than-expected revenues over the first few months of this fiscal year, it is important to remain disciplined when it comes to spending, particularly spending that is ongoing. We must prioritize existing obligations and priorities, including education, health care, public safety and safety-net programs. The Legislature sent measures with potential costs of well over \$20 billion in one-time spending commitments and more than \$10 billion in ongoing commitments not accounted for in the state budget. Bills with significant fiscal impact, such as this measure, should be considered and accounted for as part of the annual budget process.

This bill is a second attempt to enact legislation requiring state agencies to reduce light pollution stemming from structures or land that they own, lease, or manage.

Prior Related Legislation.

AB 2382 (Lee) of 2022 was substantially similar to this bill. *Vetoed.*

ARGUMENTS IN SUPPORT:

According to *Natural Resources Defense Council*, this bill will “provide safety for people, ecosystems, and other wildlife;” “conserve energy and reduce our state’s carbon footprint;” and “help the state save money and help us meet our climate goals.”

According to the *California Institute for Biodiversity*,

The science is clear: Artificial Light at Night (ALAN) has increased to unprecedented levels globally. This has resulted in a disruption to circadian rhythms in plants and animals, which harm our ecosystems and sensitive biodiversity.

The tremendous impacts on insects are most widely known, and contribute to the catastrophic decline in pollinators and insects known as the “Insect Apocalypse.” However, impacts are widespread. For example, light attracts nocturnal-migratory birds and diverts them from safe migration routes to human environments, where they are more susceptible to collisions with buildings and other human-made structures. A study found that reducing indoor artificial night light by half can result in roughly 60% fewer bird collisions.

Excessive artificial lighting also has detrimental effects on humans. These multifold impacts are unnecessary and result from widespread and unnecessary waste. It is

estimated that at least 30% of all outdoor lighting in the United States alone is wasted – primarily by lights that aren't covered. That wasted light totals \$3.3 billion in lost electricity costs and the release of 21 million tons of carbon dioxide per year. It is time to reverse this trend and protect our night sky and biosphere.

ARGUMENTS IN OPPOSITION:

None on file.

POLICY ISSUE(S) FOR CONSIDERATION:

Breadth and stringency of this bill. In 2022, this committee passed AB 2832 (Lee), which, at the time, required state agencies to ensure that outdoor lighting fixtures affixed to *buildings* or *structures* that are owned, leased, or managed by a state agency are *either* shielded, turned off manually or automatically, or motion activated between 11 p.m. and sunrise. Although the author subsequently amended that bill to limit its application to *newly installed* and *replaced* outdoor lighting fixtures, which this bill reflects, this bill applies to any structure or *land* that is owned, leased, or managed by a state agency. Consequently, this bill may affect lighting in state parks, including camp grounds. If this bill passes this committee, the author may wish to amend this bill to limit its applicability to structures only.

Additionally, this bill is more stringent than last year's bill in that it requires newly installed or replaced outdoor lighting fixtures to be both shielded *and* dimmable, turned off automatically, or motion-activated. Additionally each outdoor lighting fixture must not exceed 2700 Kelvin and use the least amount of light required for its intended purpose. Some outdoor lighting fixtures may not be compatible with a shield. Given that certain outdoor lighting fixtures may not be compatible with a shield, if this bill passes this committee, the author may wish to amend this bill to give state agencies more flexibility to select the most feasible option to reduce light pollution.

IMPLEMENTATION ISSUES:

Compatibility with CALGreen. This bill requires outdoor lighting fixtures that are installed or replaced to use a lamp with a correlated color temperature that does not exceed 2700 Kelvin, thereby regulating the *color* of the light produced. In contrast, existing CALGreen light pollution standards regulate the *brightness* of light produced by an outdoor lighting fixture. If this bill passes this committee, the author may wish to remove the requirement that lamps with a correlated color temperature not exceed 2700 Kelvin.

Although CALGreen's light pollution standards currently only apply to new, nonresidential construction that is not under the jurisdiction of another state agency (e.g., schools and state hospitals), their requirements and application can be revised during an intervening (every 18 months) or triennial (every three years) building code cycle. If this bill passes this committee, the author may wish to consider working within the existing framework of CALGreen's regulations to avoid the possibility of conflicting requirements for state agencies.

Exemptions. This bill currently exempts from its requirements "other circumstances where a *significant* interest exists to protect safety or state property than cannot be feasibly addressed by another method, including, but not limited to, lighting needed to discourage vandalism of state agency building, structures, and facilities" (*emphasis added*). The term "significant" may be

interpreted differently by state building managers, thereby resulting in inconsistent application of the bill. If this bill passes this committee, the author may wish to amend the bill to delete the qualifier, “significant.”

Bill structure. This bill currently lists a number of specified exemptions that are included because of “a compelling safety interest or existing legal requirement.” However, some of the exemptions listed (e.g., outdoor lighting to preserve the appearance of historic buildings and holiday lights) are not intended to protect safety or necessary to comply with an existing legal requirement. If this bill passes this committee, the author may wish to consider removing the broad and ambiguous description of the nature of the exemptions listed in this bill.

Lessee/Lessor Arrangements. This bill would apply to any outdoor lighting fixture that is installed or replaced on a building or structure that is owned, *leased*, or managed by the state agency. As a lessee, a state agency may not have the authority to make changes to lighting fixtures affixed to privately owned buildings or structures. If this bill passes this committee, the author may wish to consider exempting outdoor lighting fixtures affixed to privately owned structures or land that are leased by state agencies.

In contrast, this bill would also apply to buildings and properties that are owned by a state agency and leased to non-state agency. If this bill passes this committee, the author may wish to consider the bill’s potential impact on buildings and structures that are subject to public-private partnerships.

Availability of Outdoor Lighting Fixtures and Accessory Components. This bill does not include an exemption for state agencies in the event that no compliant outdoor lighting fixtures or required accessory components (i.e. shield) are available. If this bill passes this committee, the author may wish to include an exemption that addresses this circumstance.

Enforcement. While this bill directs state agencies to adhere to specified outdoor lighting requirements, there is no mechanism for enforcement.

Definitions. This bill defines “department” but makes no reference to the department elsewhere in the bill.

Drafting error. This bill erroneously includes the word “preservation” twice in the same sentence.

AMENDMENTS:

- 1) Because this bill makes no reference to “department” other than to define it as the Department of General Services, this bill should be amended as follows:

11901. For purposes of this chapter, all of the following definitions apply:

(a) “Correlated color temperature” means the temperature, measured in Kelvin, of a radiating black body that presents the same apparent color to the human eye as the light source.

~~(b) “Department” means the Department of General Services.~~

~~(e)~~(b) “Light trespass” means light emitted by an outdoor lighting fixture that shines beyond the boundary of the property on which the fixture is located.

~~(d)~~(c) “Outdoor lighting fixture” means an outdoor artificial illuminating device or luminaire, whether permanent or portable, including, but not limited to, artificial illuminating devices installed on a building or structure and used for illumination or advertisement, including, but not limited to, searchlights, spotlights, and floodlights, used for architectural lighting, parking lot lighting, landscape lighting, billboards, or street lighting. “Outdoor lighting fixture” does not include artificial illuminating devices that are worn or held in the hand, including flashlights, lanterns, and headlamps.

~~(e)~~(d) “Shielded” means all of the light rays emitted by an outdoor lighting fixture in its installed position, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where the light is emitted and effectively obscures visibility of the lamp.

~~(f)~~(e) “State agency” means a state agency as defined in Section 11000.

2) To correct a drafting error, this bill should be amended as follows:

11902. (a) Except as specified in Section 11903, a state agency shall ensure that an outdoor lighting fixture that is installed or replaced on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and meets all of the following criteria:

(1) Uses a lamp with a correlated color temperature that does not exceed 2,700 Kelvin.

(2) Uses the minimal illuminance required for the intended purpose of the outdoor lighting fixture, with consideration to recognized building and safety standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society.

(3) Is one or more of the following:

(A) Dimmable to no more than 50 percent of its maximum possible brightness and dimmed between the hours of 11 p.m. and sunrise, unless a compelling safety or other state interest requires the fixture to be at full illumination.

(B) Extinguishable by an automatic or manual shutoff device.

(C) Motion-activated with an activated duration of fewer than 15 minutes and equipped with an automatic shutoff device.

(b) In complying with this section, a state agency shall consider cost efficiency, energy conservation, minimization of light trespass and glare, and preservation of the natural night environment ~~preservation~~.

REGISTERED SUPPORT:

Active San Gabriel Valley

Audubon California (*co-sponsor*)
California Institute for Biodiversity
California Waterfowl Association
Chemical and Toxics Safety
Defenders of Wildlife
District
FACTS Families Advocating for
Green Foothills
Greenbelt Alliance
Midpeninsula Regional Open Space
Mono Lake Committee
Planning and Conservation League
Santa Clara Valley Audubon Society (*co-sponsor*)
Breast Cancer Prevention Partners
California Institute for Biodiversity
Natural Resources Defense Council
Santa Clara Valley Open Space Authority
Sierra Nevada Alliance
Trust for Public Land

REGISTERED OPPOSITION:

None on file.

Analysis Prepared by: Kaitlin Curry / B. & P. / (916) 319-3301

Date of Hearing: March 28, 2023

ASSEMBLY COMMITTEE ON BUSINESS AND PROFESSIONS

Marc Berman, Chair

AB 38 (Lee) – As Introduced December 5, 2022

SUBJECT: Light pollution control.

SUMMARY: Requires state agencies to ensure that an outdoor lighting fixture that is installed or replaced, on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and adheres to additional lighting requirements.

EXISTING LAW:

- 1) Establishes the California Building Standards Commission (CBSC) within the Department of General Services and requires any building standards adopted or proposed by state agencies to be submitted to, and approved by, the CBSC prior to codification into the California Building Standards Code. (Health and Safety Code §§ 18901 *et seq.*)
- 2) Requires the State Energy Resources Conservation and Development Commission to adopt, among other regulations, lighting and other building design and construction standards that increase efficiency in the use of energy for new residential and nonresidential buildings to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy, including energy associated with the use of water, and to manage energy loads to help maintain electrical grid reliability. (Public Resources Code §§ 25000 *et seq.*)

THIS BILL:

- 1) Defines “correlated color temperature” to mean the temperature, measured in Kelvin, of a radiating black body that presents the same apparent color to the human eye as the light source.
- 2) Defines “Department” to mean the Department of General Services.
- 3) Defines “light trespass” to mean light emitted by an outdoor lighting fixture that shines beyond the boundary of the property on which the fixture is located.
- 4) Defines “outdoor lighting fixture” to mean an outdoor artificial illuminating device or luminaire, whether permanent or portable, including, but not limited to, artificial illuminating devices installed on a building or structure and used for illumination or advertisement, including, but not limited to, searchlights, spotlights, and floodlights, used for architectural lighting, parking lot lighting, landscape lighting, billboards, or street lighting.
- 5) Specifies that “outdoor lighting fixture” does not include artificial illuminating devices that are worn or held in the hand, including flashlights, lanterns, and headlamps.
- 6) Defines “shielded” to mean that all of the light rays emitted by an outdoor lighting fixture in its installed position, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where the light is emitted and effectively obscures visibility of the lamp.

- 7) Defines “state agency” to include every state office, officer, department, division, bureau, board, and commission; and to exclude the California State University.
- 8) Requires state agencies to ensure that an outdoor lighting fixture that is installed or replaced on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and meets all of the following criteria:
 - a) Uses a lamp with a correlated color temperature that does not exceed 2700 Kelvin.
 - b) Uses the minimal illuminance required for the intended purpose of the outdoor lighting fixture, with consideration to recognized building and safety standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society.
 - c) Is one or more of the following:
 - i) Dimmable to no more than 50% of its maximum possible brightness and dimmed between the hours of 11 p.m. and sunrise, unless a compelling safety or other state interest requires the fixture to be at full illumination.
 - ii) Extinguishable by an automatic or manual shutoff device.
 - iii) Motion-activated with an activated duration of fewer than 15 minutes and equipped with an automatic shutoff device.
 - d) Requires a state agency to consider cost efficiency, energy conservation, minimization of light trespass and glare, and preservation of the natural night environment.
- 9) Specifies that the requirements above do not apply in any of the following circumstances:
 - a) A federal law or regulation that preempts state law.
 - b) A local municipal or county ordinance that establishes requirements that more stringently control light trespass or glare or conserve the natural night sky.
 - c) The outdoor lighting fixtures are advertisement signs or other fixtures on interstate highways or federal primary highways.
 - d) A compelling safety interest or existing legal requirement requires such lighting, including any of the following:
 - i) Navigational lighting for aircraft safety.
 - ii) Outdoor lighting needed for the safe navigation of watercraft, including, but not limited to, lighthouses and outdoor lighting in marinas.
 - iii) Outdoor lighting fixtures necessary for worker health and safety or public health and safety, pursuant to the regulations promulgated by the Department of Industrial Relations, the Agricultural Labor Relations Board, and the Public Employment Relations Board.

- iv) Lighting that is used by law enforcement officers, firefighters, medical personnel, or correctional personnel, including, but not limited to, lighting used at Department of Corrections and Rehabilitation facilities and Department of State Hospitals facilities.
 - v) Lighting intended for tunnels and roadway underpasses.
 - vi) Outdoor lighting used for programs, projects, or improvements of a state agency related to construction, reconstruction, improvement, or maintenance of a street, highway, or state building, structure, or facility.
 - vii) Outdoor lighting on historic sites or structures, to the extent necessary to preserve the historic appearance.
 - viii) Lighting sources of less than 1,000 lumens, including but not limited to, seasonal and decorative lighting.
 - ix) Other circumstances where a significant interest exists to protect safety or state property that cannot be feasibly addressed by another method, including, but not limited to, lighting needed to discourage vandalism of state agency buildings, structures, and facilities.
- 10) Specifies that if an exemption applies, a state agency shall make reasonable efforts to install fixtures and employ light management practices that conserve energy, minimize light trespass, and preserve the dark sky while still fully meeting the purposes and requirements of the light fixtures.
- 11) Makes numerous legislative findings and declarations.

FISCAL EFFECT: Unknown. This bill is keyed fiscal by Legislative Counsel.

COMMENTS:

Purpose. This bill is sponsored by *Audubon California* and the *Santa Clara Valley Audubon Society*. According to the author:

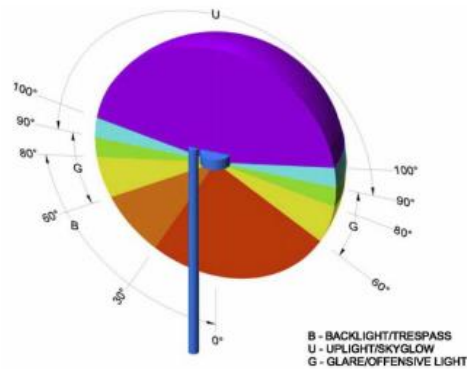
Increased light pollution throughout California and globally is disrupting the circadian rhythms and migratory patterns of animals, which is harming our ecosystems. According to the National Audubon Society, 80% of birds that migrate do so at night using the dark skies to help them navigate to and from their breeding grounds.

In addition to disrupting circadian rhythms, excessive artificial light at night (ALAN) can also disorient birds, which can result in fatal collisions. To address this issue, [this bill] will require outdoor lighting fixtures on state buildings and structures to have an external shield to direct light to where it is needed or be equipped with a shutoff device. This sensible reform promotes safety for migratory birds, ecosystems, and people.

Background.

Light pollution. Light pollution, which has been found to have adverse effects on human health and wildlife, is caused by increasingly large urban areas and the excessive and inefficient use of artificial light.¹ Light pollution is characterized by skyglow (brighter sky in urban areas), light trespass (shining of lights in unneeded or unwanted areas), and glare (brightness resulting in visual discomfort).

Figure 1: Backlight, Uplight, and Glare



Source: California Energy Commission

Light pollution was first recognized as a problem by astronomers in the 1970s upon discovery that thousands of stars and other objects in space could not be seen as clearly despite the use of powerful equipment. In suburbs and cities where a few thousand stars should be visible at night, only a few hundred or a few dozen, respectively, can be seen.

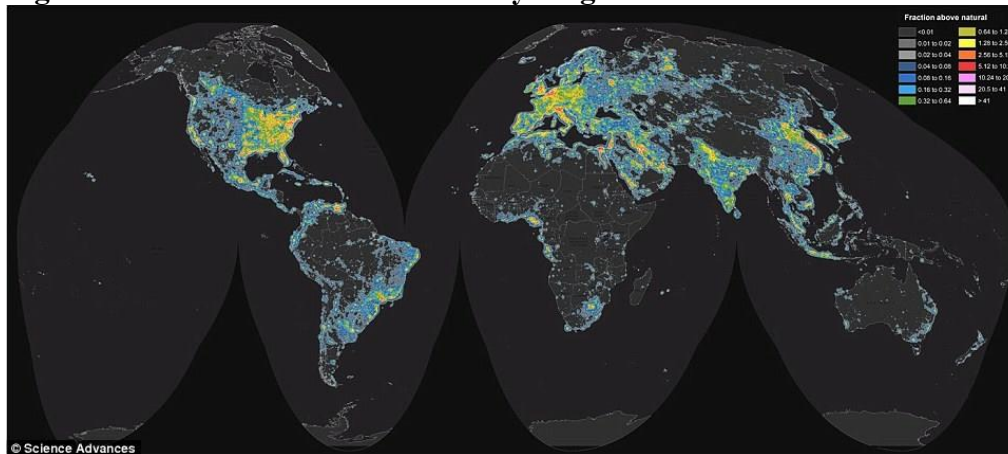
In addition to obscuring stars, light pollution can directly impact human health by interfering with natural circadian rhythms caused by a decrease in the amount of melatonin produced in the body. Sleep disorders, depression, cancer, and other adverse health conditions have been linked to circadian disruption.

Similarly, wildlife are also subject to adverse impacts of light pollution. Studies have demonstrated that light pollution can alter the behavior of wildlife, often resulting in the death or decline of species such as turtles, birds, fish, reptiles, and other wildlife.

Light pollution has also been known to impact the ability for the military to conduct nighttime trainings, which is done to simulate combat situations. In 2007, Texas, at the request of the military, began to regulate the use of outdoor lighting in counties with several military bases and more than one million residents.

¹ Schultz, J. (2022, March 25). *States Shut Out Light Pollution*. National Conference of State Legislatures. Retrieved March 16, 2023, from <https://www.ncsl.org/environment-and-natural-resources/states-shut-out-light-pollution>

Figure 2: World Atlas of Artificial Sky Brightness



Credit: Falchi et al., Science Advances, including Dan Duriscoe/NPS; Bob Meadows/NPS; Jakob Grothe/NPS contractor, and Matthew Price/CIRES and CU-Boulder

California Green Building Standards Code (CALGreen). In 2007, the CBSC developed green building standards to help the state achieve its greenhouse gas reduction goals.² CALGreen is the first-in-the-nation mandated green building standards code and includes regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality. CBSC is authorized to propose CALGreen standards for non-residential structures and any others that are not under the jurisdiction of another state agency. CALGreen Section 5.106.8 currently imposes specific light pollution reduction standards for non-residential buildings. Outdoor lighting systems must be designed and installed to prevent light escaping in unwanted or unnecessary directions from an outdoor light fixture. Specifically the light produced may not exceed the allowable backlight (light directed behind the fixture), uplight (light directed above the horizontal plane of the fixture), and glare (light emitted at high angles that cause a glare) (BUG) ratings per lighting zone. Lighting zones range from natural environments with extremely limited outdoor lighting to urban areas with extensive use of outdoor lighting. CALGreen specifies that if a local ordinance is more stringent than the CALGreen requirements, the building owner must comply with the local ordinance. CalGreen currently exempts a variety of light fixtures, including but not limited to those used for aviation; landscaping; temporary use outdoors; sports and athletic fields; children's playgrounds; tunnels and bridges; stairs and ramps; and lighting for industrial sites. CALGreen also exempts emergency lighting; building façade that meet specified requirements; and some custom lighting features.

Other states. Nineteen states, the District of Columbia, and Puerto Rico have enacted laws to reduce light pollution.³ "Dark skies" laws typically require outdoor lighting fixtures to be shielded so that light is emitted downwards only, to use low-glare or low-wattage lightbulbs, or to be restricted during certain hours.

Governor's Veto: In 2021, Governor Gavin Newsom vetoed a bill substantially similar to this one, AB 2382 (Lee), stating in part the following:

² Building Standards Commission. (n.d.). *CalGreen*. California Department of General Services. Retrieved March 17, 2023, from <https://www.dgs.ca.gov/BSC/CALGreen>

³ Ibid.

While I appreciate the stated goals of this bill to conserve energy and decrease ambient light in the night sky, the provisions create an overly broad mandate that raises concerns for health and safety, security, and crime prevention. Further, the California Green Building Standards Code includes light pollution reduction standards for nonresidential buildings. These standards are developed during a public, deliberative process.

Furthermore, the costs associated with this bill are unfunded and potentially significant. There are 24,000 state-owned buildings, in addition to the state's leased and managed properties. Requiring all outdoor lighting at these locations to be shielded, include shutoff devices, or have a motion sensor may cost millions of dollars not accounted for in the budget.

With our state facing lower-than-expected revenues over the first few months of this fiscal year, it is important to remain disciplined when it comes to spending, particularly spending that is ongoing. We must prioritize existing obligations and priorities, including education, health care, public safety and safety-net programs. The Legislature sent measures with potential costs of well over \$20 billion in one-time spending commitments and more than \$10 billion in ongoing commitments not accounted for in the state budget. Bills with significant fiscal impact, such as this measure, should be considered and accounted for as part of the annual budget process.

This bill is a second attempt to enact legislation requiring state agencies to reduce light pollution stemming from structures or land that they own, lease, or manage.

Prior Related Legislation.

AB 2382 (Lee) of 2022 was substantially similar to this bill. *Vetoed.*

ARGUMENTS IN SUPPORT:

According to *Natural Resources Defense Council*, this bill will “provide safety for people, ecosystems, and other wildlife;” “conserve energy and reduce our state’s carbon footprint;” and “help the state save money and help us meet our climate goals.”

According to the *California Institute for Biodiversity*,

The science is clear: Artificial Light at Night (ALAN) has increased to unprecedented levels globally. This has resulted in a disruption to circadian rhythms in plants and animals, which harm our ecosystems and sensitive biodiversity.

The tremendous impacts on insects are most widely known, and contribute to the catastrophic decline in pollinators and insects known as the “Insect Apocalypse.” However, impacts are widespread. For example, light attracts nocturnal-migratory birds and diverts them from safe migration routes to human environments, where they are more susceptible to collisions with buildings and other human-made structures. A study found that reducing indoor artificial night light by half can result in roughly 60% fewer bird collisions.

Excessive artificial lighting also has detrimental effects on humans. These multifold impacts are unnecessary and result from widespread and unnecessary waste. It is

estimated that at least 30% of all outdoor lighting in the United States alone is wasted – primarily by lights that aren't covered. That wasted light totals \$3.3 billion in lost electricity costs and the release of 21 million tons of carbon dioxide per year. It is time to reverse this trend and protect our night sky and biosphere.

ARGUMENTS IN OPPOSITION:

None on file.

POLICY ISSUE(S) FOR CONSIDERATION:

Breadth and stringency of this bill. In 2022, this committee passed AB 2832 (Lee), which, at the time, required state agencies to ensure that outdoor lighting fixtures affixed to *buildings* or *structures* that are owned, leased, or managed by a state agency are *either* shielded, turned off manually or automatically, or motion activated between 11 p.m. and sunrise. Although the author subsequently amended that bill to limit its application to *newly installed* and *replaced* outdoor lighting fixtures, which this bill reflects, this bill applies to any structure or *land* that is owned, leased, or managed by a state agency. Consequently, this bill may affect lighting in state parks, including camp grounds. If this bill passes this committee, the author may wish to amend this bill to limit its applicability to structures only.

Additionally, this bill is more stringent than last year's bill in that it requires newly installed or replaced outdoor lighting fixtures to be both shielded *and* dimmable, turned off automatically, or motion-activated. Additionally each outdoor lighting fixture must not exceed 2700 Kelvin and use the least amount of light required for its intended purpose. Some outdoor lighting fixtures may not be compatible with a shield. Given that certain outdoor lighting fixtures may not be compatible with a shield, if this bill passes this committee, the author may wish to amend this bill to give state agencies more flexibility to select the most feasible option to reduce light pollution.

IMPLEMENTATION ISSUES:

Compatibility with CALGreen. This bill requires outdoor lighting fixtures that are installed or replaced to use a lamp with a correlated color temperature that does not exceed 2700 Kelvin, thereby regulating the *color* of the light produced. In contrast, existing CALGreen light pollution standards regulate the *brightness* of light produced by an outdoor lighting fixture. If this bill passes this committee, the author may wish to remove the requirement that lamps with a correlated color temperature not exceed 2700 Kelvin.

Although CALGreen's light pollution standards currently only apply to new, nonresidential construction that is not under the jurisdiction of another state agency (e.g., schools and state hospitals), their requirements and application can be revised during an intervening (every 18 months) or triennial (every three years) building code cycle. If this bill passes this committee, the author may wish to consider working within the existing framework of CALGreen's regulations to avoid the possibility of conflicting requirements for state agencies.

Exemptions. This bill currently exempts from its requirements "other circumstances where a *significant* interest exists to protect safety or state property than cannot be feasibly addressed by another method, including, but not limited to, lighting needed to discourage vandalism of state agency building, structures, and facilities" (*emphasis added*). The term "significant" may be

interpreted differently by state building managers, thereby resulting in inconsistent application of the bill. If this bill passes this committee, the author may wish to amend the bill to delete the qualifier, “significant.”

Bill structure. This bill currently lists a number of specified exemptions that are included because of “a compelling safety interest or existing legal requirement.” However, some of the exemptions listed (e.g., outdoor lighting to preserve the appearance of historic buildings and holiday lights) are not intended to protect safety or necessary to comply with an existing legal requirement. If this bill passes this committee, the author may wish to consider removing the broad and ambiguous description of the nature of the exemptions listed in this bill.

Lessee/Lessor Arrangements. This bill would apply to any outdoor lighting fixture that is installed or replaced on a building or structure that is owned, *leased*, or managed by the state agency. As a lessee, a state agency may not have the authority to make changes to lighting fixtures affixed to privately owned buildings or structures. If this bill passes this committee, the author may wish to consider exempting outdoor lighting fixtures affixed to privately owned structures or land that are leased by state agencies.

In contrast, this bill would also apply to buildings and properties that are owned by a state agency and leased to non-state agency. If this bill passes this committee, the author may wish to consider the bill’s potential impact on buildings and structures that are subject to public-private partnerships.

Availability of Outdoor Lighting Fixtures and Accessory Components. This bill does not include an exemption for state agencies in the event that no compliant outdoor lighting fixtures or required accessory components (i.e. shield) are available. If this bill passes this committee, the author may wish to include an exemption that addresses this circumstance.

Enforcement. While this bill directs state agencies to adhere to specified outdoor lighting requirements, there is no mechanism for enforcement.

Definitions. This bill defines “department” but makes no reference to the department elsewhere in the bill.

Drafting error. This bill erroneously includes the word “preservation” twice in the same sentence.

AMENDMENTS:

- 1) Because this bill makes no reference to “department” other than to define it as the Department of General Services, this bill should be amended as follows:

11901. For purposes of this chapter, all of the following definitions apply:

(a) “Correlated color temperature” means the temperature, measured in Kelvin, of a radiating black body that presents the same apparent color to the human eye as the light source.

~~(b) “Department” means the Department of General Services.~~

~~(e)~~(b) “Light trespass” means light emitted by an outdoor lighting fixture that shines beyond the boundary of the property on which the fixture is located.

~~(d)~~(c) “Outdoor lighting fixture” means an outdoor artificial illuminating device or luminaire, whether permanent or portable, including, but not limited to, artificial illuminating devices installed on a building or structure and used for illumination or advertisement, including, but not limited to, searchlights, spotlights, and floodlights, used for architectural lighting, parking lot lighting, landscape lighting, billboards, or street lighting. “Outdoor lighting fixture” does not include artificial illuminating devices that are worn or held in the hand, including flashlights, lanterns, and headlamps.

~~(e)~~(d) “Shielded” means all of the light rays emitted by an outdoor lighting fixture in its installed position, either directly from the lamp or indirectly from the fixture, are projected below a horizontal plane running through the lowest point on the fixture where the light is emitted and effectively obscures visibility of the lamp.

~~(f)~~(e) “State agency” means a state agency as defined in Section 11000.

2) To correct a drafting error, this bill should be amended as follows:

11902. (a) Except as specified in Section 11903, a state agency shall ensure that an outdoor lighting fixture that is installed or replaced on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency is shielded and meets all of the following criteria:

(1) Uses a lamp with a correlated color temperature that does not exceed 2,700 Kelvin.

(2) Uses the minimal illuminance required for the intended purpose of the outdoor lighting fixture, with consideration to recognized building and safety standards, including, but not limited to, recommended practices adopted by the Illuminating Engineering Society.

(3) Is one or more of the following:

(A) Dimmable to no more than 50 percent of its maximum possible brightness and dimmed between the hours of 11 p.m. and sunrise, unless a compelling safety or other state interest requires the fixture to be at full illumination.

(B) Extinguishable by an automatic or manual shutoff device.

(C) Motion-activated with an activated duration of fewer than 15 minutes and equipped with an automatic shutoff device.

(b) In complying with this section, a state agency shall consider cost efficiency, energy conservation, minimization of light trespass and glare, and preservation of the natural night environment ~~preservation~~.

REGISTERED SUPPORT:

Active San Gabriel Valley

Audubon California (*co-sponsor*)
California Institute for Biodiversity
California Waterfowl Association
Chemical and Toxics Safety
Defenders of Wildlife
District
FACTS Families Advocating for
Green Foothills
Greenbelt Alliance
Midpeninsula Regional Open Space
Mono Lake Committee
Planning and Conservation League
Santa Clara Valley Audubon Society (*co-sponsor*)
Breast Cancer Prevention Partners
California Institute for Biodiversity
Natural Resources Defense Council
Santa Clara Valley Open Space Authority
Sierra Nevada Alliance
Trust for Public Land

REGISTERED OPPOSITION:

None on file.

Analysis Prepared by: Kaitlin Curry / B. & P. / (916) 319-3301

AMENDED IN ASSEMBLY MAY 18, 2023

AMENDED IN ASSEMBLY MARCH 29, 2023

CALIFORNIA LEGISLATURE—2023–24 REGULAR SESSION

ASSEMBLY BILL

No. 38

Introduced by Assembly Member Lee
(Coauthor: Senator Becker)

December 5, 2022

An act to add Chapter 12 (commencing with Section 11900) to Part 1 of Division 3 of Title 2 of the Government Code, relating to state government.

LEGISLATIVE COUNSEL'S DIGEST

AB 38, as amended, Lee. Light pollution control.

Existing law, the California Building Standards Law, establishes the California Building Standards Commission within the Department of General Services and sets forth its powers and duties, including approval and adoption of building standards and codification of those standards into the California Building Standards Code.

Existing law, the Warren-Alquist State Energy Resources Conservation and Development Act, requires the State Energy Resources Conservation and Development Commission to adopt, among other regulations, lighting and other building design and construction standards that increase efficiency in the use of energy for new residential and nonresidential buildings to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy, including energy associated with the use of water, and to manage energy loads to help maintain electrical grid reliability. Existing law also requires the commission to adopt standards for minimum levels of operating

efficiency and other cost-effective measures to promote the use of certain energy- and water-efficient appliances.

This bill would require, with certain exceptions, a state agency, as defined, to ensure that an outdoor lighting fixture that is installed or replaced on or after January 1, 2024, on a structure or land that is owned, leased, or managed by the state agency ~~is shielded, as defined, and meets additional specified criteria.~~ *meets prescribed criteria, including using a lamp with a correlated color temperature that does not exceed 2,700 Kelvin.*

Vote: majority. Appropriation: no. Fiscal committee: yes. State-mandated local program: no.

The people of the State of California do enact as follows:

1 SECTION 1. Chapter 12 (commencing with Section 11900)
2 is added to Part 1 of Division 3 of Title 2 of the Government Code,
3 to read:

4
5 CHAPTER 12. LIGHT POLLUTION CONTROL

6
7 Article 1. General Provisions and Definitions

8
9 11900. The Legislature finds and declares all of the following:

- 10 (a) Energy costs in California are substantially higher than in
- 11 many other states in the United States.
- 12 (b) Properly directed and managed lighting fixtures can reduce
- 13 operational costs resulting in more efficient use of state tax dollars.
- 14 (c) Properly directed and managed light fixtures can reduce
- 15 light trespass, light pollution, and glare, and preserve the view of
- 16 California’s dark sky, one of the state’s natural resources.
- 17 (d) Unnecessary light pollution can have adverse effects on
- 18 people and disrupt natural circadian rhythms and sleep patterns.
- 19 (e) Unnecessary light pollution has deleterious effects on wildlife
- 20 and can alter migratory, breeding, and foraging behavior in ways
- 21 that adversely affect wildlife species.
- 22 (f) It is the policy of the State of California to regulate outdoor
- 23 night lighting and encourage the use of outdoor lighting fixtures
- 24 to conserve energy, reduce our carbon footprint, minimize light
- 25 trespass, and preserve the aesthetic qualities of the night sky and

1 pollution while promoting safety for people, birds, and other
2 wildlife.

3 11901. For purposes of this chapter, all of the following
4 definitions apply:

5 (a) “Correlated color temperature” means the temperature,
6 measured in Kelvin, of a radiating black body that presents the
7 same apparent color to the human eye as the light source.

8 (b) “Light trespass” means light emitted by an outdoor lighting
9 fixture that shines beyond the boundary of the property on which
10 the fixture is located.

11 (c) “Outdoor lighting fixture” means an outdoor artificial
12 illuminating device or luminaire, whether permanent or portable,
13 including, but not limited to, artificial illuminating devices installed
14 on a building or structure and used for illumination or
15 advertisement, including, but not limited to, searchlights, spotlights,
16 and floodlights, used for architectural lighting, parking lot lighting,
17 landscape lighting, billboards, or street lighting. “Outdoor lighting
18 fixture” does not include artificial illuminating devices that are
19 worn or held in the hand, including flashlights, lanterns, and
20 headlamps.

21 (d) “Shielded” means all of the light rays emitted by an outdoor
22 lighting fixture in its installed position, either directly from the
23 lamp or indirectly from the fixture, are projected below a horizontal
24 plane running through the lowest point on the fixture where the
25 light is emitted and effectively obscures visibility of the lamp.

26 (e) “State agency” means a state agency as defined in Section
27 11000.

28

29

Article 2. Lighting Fixtures

30

31 11902. (a) Except as specified in Section 11903, a state agency
32 shall ensure that an outdoor lighting fixture that is installed or
33 replaced on or after January 1, 2024, on a structure or land that is
34 owned, leased, or managed by the state agency ~~is shielded and~~
35 meets all of the following criteria:

36 (1) Uses a lamp with a correlated color temperature that does
37 not exceed 2,700 Kelvin.

38 (2) Uses the minimal illuminance required for the intended
39 purpose of the outdoor lighting fixture, with consideration to
40 recognized building and safety standards, including, but not limited

1 to, recommended practices adopted by the Illuminating Engineering
2 Society.

3 (3) Is one or more of the following:

4 (A) Dimmable to no more than 50 percent of its maximum
5 possible brightness and dimmed between the hours of 11 p.m. and
6 sunrise, unless a compelling safety or other state interest requires
7 the fixture to be at full illumination.

8 (B) Extinguishable by an automatic or manual shutoff device.

9 (C) Motion-activated with an activated duration of fewer than
10 15 minutes and equipped with an automatic shutoff device.

11 (D) *Shielded*.

12 (b) In complying with this section, a state agency shall consider
13 cost efficiency, energy conservation, minimization of light trespass
14 and glare, and preservation of the natural night environment.

15 11903. (a) Section 11902 does not apply in any of the
16 following circumstances:

17 (1) A federal law or regulation that preempts state law.

18 (2) A local municipal or county ordinance that establishes
19 requirements that more stringently control light trespass or glare
20 or conserve the natural night sky.

21 (3) The outdoor lighting fixtures are advertisement signs or
22 other fixtures on interstate highways or federal primary highways.

23 (4) A compelling safety interest or existing legal requirement
24 requires such lighting, including any of the following:

25 (A) Navigational lighting for aircraft safety.

26 (B) Outdoor lighting needed for the safe navigation of
27 watercraft, including, but not limited to, lighthouses and outdoor
28 lighting in marinas.

29 (C) Outdoor lighting fixtures necessary for worker health and
30 safety or public health and safety, pursuant to Title 8 of the
31 California Code of Regulations.

32 (D) Lighting that is used by law enforcement officers,
33 firefighters, medical personnel, or correctional personnel, including,
34 but not limited to, lighting used at Department of Corrections and
35 Rehabilitation facilities and State Department of State Hospitals
36 facilities.

37 (E) Lighting intended for tunnels and roadway underpasses.

38 (F) Outdoor lighting used for programs, projects, or
39 improvements of a state agency relating to construction,

1 reconstruction, improvement, or maintenance of a street, highway,
2 or state building, structure, or facility.

3 (G) Outdoor lighting on historic sites or structures, to the extent
4 necessary to preserve the historic appearance.

5 (H) Lighting sources of less than 1,000 lumens, including, but
6 not limited to, seasonal and decorative lighting.

7 (I) Other circumstances where a significant interest exists to
8 protect safety or state property that cannot be feasibly addressed
9 by another method, including, but not limited to, lighting needed
10 to discourage vandalism of state agency buildings, structures, and
11 facilities.

12 (b) If an exemption from Section 11902 pursuant to subdivision
13 (a) applies, a state agency shall make reasonable efforts to install
14 fixtures and employ light management practices that conserve
15 energy, minimize light trespass, and preserve the dark sky while
16 still fully meeting the purposes and requirements of the light
17 fixtures.