

Brent Blackaby
Councilmember District 6

REVISED AGENDA MATERIAL for Supplemental Packet 2

Meeting Date: June 17, 2025

Item Number: #43c.

Item Description: EMBER Implementation Plan, Vegetation Management Working Group, and Clarifying Fire Code Language

Submitted by: Councilmember Brent Blackaby (Author), Councilmember O'Keefe (Co-Sponsor), Mayor Ishii (Co-Sponsor)

Based on community input, added additional suggestions to the Roll-Out and Implementation Plan section and made one change to the FAQ.

Added the Mayor as a co-sponsor

Added the following attachments:

1. Letters of endorsement
2. How to obtain free gutter guards & wire mesh for home hardening
3. EBRPD Fire Service Update including response readiness and prevention efforts
4. Governor's Proclamation of a State of Emergency



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Councilmember District 6

Tracked Changes

ACTION CALENDAR

June 17, 2025

To: Honorable Mayor and Members of the City Council

From: Councilmember Blackaby (Author), Councilmember O'Keefe (Co-Sponsor),
[Mayor Ishii \(Co-Sponsor\)](#)

Subject: EMBER Implementation Plan, Vegetation Management Working Group, and
Clarifying Fire Code Language

RECOMMENDATION

1. Refer to the City Manager to develop a comprehensive roll-out and implementation plan for EMBER; then return to City Council by September 9, 2025
2. Refer to the City Manager to create a working group of Berkeley residents and stakeholders to review the vegetation management portion of the Fire Code to ensure that it is clear, reflects unique local conditions, and incorporates the best available fire science (inclusive of any more conservative code adopted by the California Board of Forestry); then return with additional amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process
3. Refer to the City Manager to incorporate additional clarifying language listed in this report; then return amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process

FINANCIAL IMPLICATIONS

No additional financial implications; staff will be updating the Fire Code and is actively engaged in making EMBER more user-friendly for residents.

CURRENT SITUATION AND ITS EFFECTS

The City's EMBER (Effective Mitigation for Berkeley's Ember Resilience) proposal outlines new fire safety standards designed to reduce the risk of home ignition from wildfire embers, protecting individual homes, neighborhoods, and the entire community from a catastrophic wildfire. EMBER's scientifically validated mitigation measures advance the City's Strategic Plan Goal to create a resilient, safe, connected, and prepared city.

If City Council adopts the EMBER proposal's updated Fire Maps and Fire Code amendments on June 17th, that will establish a clear new policy for Zone Zero

vegetation management in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area, going into effect on January 1, 2026. The City and the Fire Department must next lay out a more detailed plan for rollout and implementation to gain widespread participation from residents in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area in order to achieve maximum community risk reduction in the months ahead.

Furthermore, over the past five months since Fire Chief David Sprague and his team introduced the EMBER proposal, the City has held a wide variety of outreach and information meetings. Council has received significant community input from residents to help strengthen the EMBER proposal and clarify language in the proposed Fire Code. The requested changes in this report would ease the burden of implementing EMBER while keeping the core efficacy of the EMBER Strategy in place.

The Fire Department is already required to return to Council with the City's Triennial Fire Code Update by the end of 2025. We recommend making additional EMBER-related refinements and clarifications to the Fire Code as part of this existing process.

1. Roll-out & Implementation Plan should help educate, advise, and support residents in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area to implement Zone Zero. The following should be included in the Plan, at minimum:

BFD to return with proposed Roll-out and Implementation Plan, Including Support for Residents – *by September 9, 2025*. Main components for EMBER roll-out, including but not limited to:

Timeline:

- Neighborhood site visits, homeowner implementation workshops, and landscaper/contractor training begin July 2025
- Inspections begin May 2026 (12 months from now)
- Homeowners don't get cited if work is in progress
- Regular ongoing communications via mail, email, online video, and in-person visits to inform residents about EMBER, update them frequently about other wildfire mitigation work being done by the City and regional partners (including EBRPD, PG&E, EBMUD, UC Berkeley, Berkeley Lab, and neighboring jurisdictions), and provide personalized implementation advice and support

Financing:

- Deploying \$1+ million in grant funds for Zone Zero vegetation management (age 65+ and/or below median income, medically unable)
- Transfer tax credit (up to 0.5% of home value)

➤ Low-interest loan program

- More to come

Facilitate neighborhood organizing:

- Continue the chipper program and provide other tools needed for community workdays
- Help neighborhoods coordinate to organize vegetation management work collectively, rather than individually, for better contractor pricing
- BerkeleyCorp volunteer days-of-action
- Create an improved detailed map so residents can clearly see if their home is in the Grizzly Peak or Panoramic Hill Mitigation Areas
- Provide free wire mesh and gutter guards to all homeowners in the Grizzly Peak and Panoramic Hill Mitigation Areas, to encourage home hardening alongside Zone Zero vegetation management

Regular Report-Backs to Council:

- BFD & City Manager to inform Council if the State of California changes their Zone Zero requirements, so we can then revisit our standards
- BFD & City Manager to provide semi-annual updates to Council on wildfire mitigation efforts by regional partners (including EBRPD, PG&E, EBMUD, UC Berkeley, Berkeley Lab, and neighboring jurisdictions)

2. Create Resident & Stakeholder Working Group to Review Vegetation Management Portion of Fire Code – to be adopted during Triennial Fire Code update in December 2025:

As a part of the Triennial Fire Code Update, the City should engage Berkeley residents and stakeholders, under the leadership of the Fire Department, to conduct a more detailed review of the vegetation management section of the Berkeley Municipal Code to ensure that it is clear, reflects unique local conditions, and incorporates the best available fire science (inclusive of any more conservative code adopted by the California Board of Forestry); then return amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process.

3. Make Additional Fire Code Changes – to be adopted during Triennial Fire Code update in December 2025:

1. Section 104.9 is an existing section that allows for property-specific modifications when there are practical difficulties to carry out the provisions of the fire code.

Section 104.10 provides a process by which Alternate Means and Materials can be proposed by a resident so long as they provide for conditions that are as safe or safer than the code language. Staff should research and consider proposing language allowing modifications where necessary to address an environmental concern, including for (1) protecting endangered, rare, or threatened plant or animal species; (2) avoiding significant erosion or sedimentation of surface waters; (3) avoiding removal of healthy, mature, scenic trees; (4) avoiding impacts to an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies, including historical resources. Staff should also more clearly define the process for how residents would identify these exceptions and present their findings to allow for consideration of alternative materials and methods.

2. Under proposed language in the local modifications of Section 4906.7, the statement that “no trees are permitted in Zone 0,” even though it is followed with exceptions, seems to send a different message than what staff states is the intent. Staff should reformat that language to clearly state what is allowed, and then call out the exceptions that are not allowed. In particular, the language should make clear that Section 4906.7 does not require the removal of healthy, mature, scenic trees.
3. Similarly, later in Section 4906.7, staff should provide more clarity when it comes to the handling of trees with “Continuous Tree Canopy.” It appears to be staff’s intention that where it is infeasible or impractical to create canopy separation, that the understory can be cleaned up instead. This should be stated explicitly in the code.
4. Staff should remove the local amendments about misdemeanors in Section 104.13. This language has been carried through multiple code adoptions, is quite dated, and needs to be revisited to make clear that this authority should be removed.

BACKGROUND

Wildfire has historically hit Berkeley every 20 years since 1905, with 2024 marking the 33rd year since the last major fire; we are overdue. Climate change has exacerbated the conditions for wildfire. The state passed Zone Zero Legislation in 2020 but stalled on developing the regulations so it was not implemented. The fire tragedy suffered by the Los Angeles area spurred our Fire Department to develop the Zone Zero proposal, named EMBER (Effective Mitigation for Berkeley’s Ember Resilience) to proactively protect our community against an urban conflagration.

On February 11, 2025 the City Council held a Special Meeting on the EMBER Proposal where the Fire Chief and staff outlined the proposal and asked for feedback.

On April 15, 2025, the Berkeley Fire Chief brought the EMBER Proposal to Council for their consideration. Council approved the ordinance unanimously. Council will consider the second reading of the ordinance at this June 17, 2025 meeting. This item is in

support of the second reading and seeks both clarifying language of the ordinance and a roll-out plan upon its approval.

The following public announcements, Council Meetings, Forums and Outreach about EMBER have taken place since January 2025:

- 1/11/2025: [Berkeleyside](#) / [Berkeley Scanner](#) Op-Ed
- 1/22/2025: Presentation at the [City's Disaster Fire Safety Commission](#)
- 2/05/2025: Citywide outreach Surveys in [Berkeley Considers](#)
- 2/05/2025: [Berkeley Scanner](#) Article
- 2/05/2025: FireWise meeting
- 2/07/2027: Berkeleyside Article
- 2/10/2025: Information Session with Wildcat Canyon Neighbors
- 2/11/2025: [Special Council Meeting](#): EMBER Proposal – for feedback & next steps
- 2/24/2025 FireWise meeting
- 2/27/2025: [East Bay Wildfire Coalition Presentation](#)
- 3/10/2025: FireWise Meeting
- 3/05/2025: Information Session with Park Hills Community
- 3/20/2025: District 6 Community EMBER webinar
- 3/24/2025: [Public Safety Policy Committee](#)
- 3/26/2025: City of Berkeley [Community E-Mail & Web Message](#)
- 4/15/2025: [Berkeley Scanner](#) and numerous national publications
- 4/15/2025: Council Meeting: approve 1st reading of Fire Code Amendments Ordinance
- 5/15/2025: EMBER Community Workshop via Zoom Webinar
- 5/27/2025: EMBER Community Workshop in-person at Northbrae Community Church
- [6/1/2025: EMBER 1:1 Home Consultation meetings with neighbors at Station 7](#)
- [6/7/2025: EMBER 1:1 Home Consultation meetings with neighbors at Station 7](#)

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Reducing likelihood of wildfire turning into an urban conflagration supports Berkeley's environmental sustainability goals and reduces climate impacts.

CONTACT PERSON

Councilmember Brent Blackaby Council District 6 510-981-7160

Attachments:

1: EMBER 2-page overview

2: EMBER FAQ

3: [Letters of Endorsement from Sierra Club, League of Women Voters, Berkeley Disaster and Fire Safety Commission, Berkeley Firewise Leaders, and Berkeley FireSafe Council](#)

4: [How to obtain free gutter guards & wire mesh from the City of Berkeley for home hardening](#)

5: [EBRPD Fire Service Update including response readiness and prevention efforts](#)

6: [Governor's Proclamation of a State of Emergency](#)

EMBER

Effective Mitigation for Berkeley's Ember Resilience

**FIRE
SAFE
BERKELEY**

Clarifying What's Required in the City's EMBER Proposal

Zone 0 will become effective 1/1/2026 in two areas identified in the map below, with inspections commencing in mid-2026. This provides residents and the City a year to work together before inspections begin.

What is Required?

Make these updates within five feet of structures, attached decks, and stairs (Zone 0):

- No in-ground vegetation
- No climbing vines
- No combustible mulch
- No wooden or combustible fences that attach to structures (replace the first 5 feet with a non-combustible alternative)

EXCEPTIONS:

- Mature trees as long as they are well maintained and limbed up 10 feet above the roof
- Plants in non-combustible planters/pots (≤ 5 gal) and less than 18-inches in height



Map Shows Proposed Implementation Areas east of Grizzly Peak Blvd. and Panoramic Hill



Examples of Beautiful Bay Area Gardens that include Zone 0



BERKELEY FIRE DEPARTMENT



510-981-5620

www.berkeleyfiresafe.org

EMBER

Effective Mitigation for Berkeley's Ember Resilience

EMBER Does Not Require any Home Hardening

There are no home hardening measures proposed in the proposal before the Berkeley City Council, this includes:

- Installing ember-resistant vents. **Not Required**
- Upgrading to dual pane windows. **Not Required**
- Upgrading to a Class A roof. **Not Required**
- Screening gutters. **Not Required**



While the City is not requiring these mitigations, home hardening, when coupled with defensible space that includes Zone 0, offers the best way to improve the chances a home will survive a wildfire.

EMBER is a collaboration between the City and residents rooted in an education first approach

The City and Fire Department have and will continue to take an education first approach. This is demonstrated by Defensible Space Inspection program three year performance (below). Note the extremely low number of citations issued when compared to total inspections and total violations discovered:

21,000 Inspections
Of homes in Berkeley



9,000 Violations
Identified for correction



70 citations issued
0.8% of violations, 0.3% of inspections



Fines are rarely more than \$100 are only issued when a homeowner repeatedly ignores fire hazards, since one unsafe property can endanger the entire neighborhood. Like health or building codes, enforcement ensures public safety when voluntary compliance through education and coaching fails.

BERKELEY FIRE DEPARTMENT

 510-981-5620 www.berkeleyfiresafe.org



Effective Mitigation for Berkeley's Ember Resilience (EMBER) FAQ's

1. What is the science underlying Zone Zero proposed in EMBER?

There's a robust set of evidence, based on experiments, studies, actual experience from firefighters, and post-wildfire analysis, that provides the foundation of the EMBER proposal. Key links to review the scientific consensus around Zone Zero & home hardening:

- The 2021 peer-reviewed study titled "[Housing Arrangement and Vegetation Factors Associated with Single-Family Home Survival in the 2018 Camp Fire](#)" analyzed factors influencing home survival during the 2018 Camp Fire. Key findings indicate strong associations between both distance to nearest destroyed structure and vegetation within 100 m and home survival. This indicates building and vegetation modifications substantially improve outcomes including home hardening, defensible space, and eliminating near-home combustibles, especially in areas closest to the home (0-5 feet).
- [Defensible Space Analysis in California](#): Following an analysis of over 2000 structures in San Diego County, Syphard et al. concluded that structures were more likely to survive a fire with an effective defensible space "immediately adjacent" to them. Syphard et al. also report that reducing woody vegetation cover up to 40% immediately adjacent to structures and preventing vegetation from overhanging or touching structures were the most effective actions to reduce risk of home ignition.
- Post-wildfire investigations support both experimental and computational research in that the elimination of combustible material from Zone 0 is a necessary mitigation action to reduce the risk of home ignitions. The investigation performed after the [Grass Valley Fire in 2008](#) (Cohen et al. 2008) concluded that home ignitions were caused by embers igniting buildings or creating spot fires in the immediate areas around the building rather than high intensity flames. [The National Institute of Standards and Technology's post-Camp Fire](#) report likewise concludes that overhanging trees, fences, and other combustible items within Zone 0 provided fuel pathways that led to home ignitions (photos below 2min apart show fire spreading from the fence and tree to the home). Additionally, this work provided examples where overhanging trees within the 0–5-foot zone could also ignite the building.

Similarly, the IBHS post-Glass Fire investigation observed vegetation that likely provided a pathway for ignition when plants—even in small amounts—touch the building

as shown in photo below. The house in the photo below was likely defended by first responders during the event.



- The IBHS white paper "[Return of Conflagration to the Built Environment](#)" examines how modern suburban communities, especially those in the wildland-urban interface (WUI), are increasingly vulnerable to wildfire-driven conflagrations due to factors such as drought, high winds, human-caused ignitions, dense combustible structures, and inadequate building codes. Historical urban fires, like the 1871 Great Chicago Fire, were mitigated through improved building practices and codes; however, similar vulnerabilities have reemerged in today's suburban areas, as evidenced by recent events like the Marshall Fire in Colorado and the Lahaina Fire in Hawaii, where over 1,000 structures were destroyed within hours. The report emphasizes the necessity of comprehensive community-level strategies—including ignition-resistant construction, elimination of combustible materials near homes, and coordinated planning—to prevent and mitigate the spread of such devastating fires.
- The [NIST Technical Note 2228](#), titled Wind-Driven Fire Spread to a Structure from Fences and Mulch, investigates how common landscaping elements like fences and mulch contribute to the spread of wildfires in wildland-urban interface

(WUI) areas. Through 187 controlled experiments, researchers found that combustible materials, especially when combined—such as wooden fences adjacent to mulch beds—significantly accelerate fire spread, with flames reaching nearby structures in as little as four minutes. The study emphasizes the need for homeowners to avoid placing combustible materials in close proximity and advocates for the adoption of fire-resistant landscaping practices to mitigate wildfire risks.

- The [NIST Technical Note 2205](#) introduces the Hazard Mitigation Methodology (HMM), a performance-based framework designed to reduce wildfire risk in Wildland-Urban Interface (WUI) communities by addressing vulnerabilities at the structure, parcel, and community levels. The methodology emphasizes the necessity of complete ember hardening for all structures, as partial measures do not proportionally reduce risk, and highlights the importance of managing combustible materials and structural layouts to prevent fire spread via embers and direct flame contact. By integrating strategies such as fuel reduction, structure hardening, and community-wide planning, HMM aims to enhance the resilience of WUI communities against increasingly severe wildfire threats.



[Click here](#) to watch a video of the Balch Springs Fire in Texas spread from low grass and then use connective fuels to move from one structure to another.

- The IBHS report [Wildland Fire Embers and Flames: Home Mitigations That Matter](#) emphasizes that protecting homes from wildfires requires a comprehensive, two-tiered approach: first, implementing foundational defenses against embers; second, adding measures to guard against direct flame exposure. Key recommendations include installing Class A fire-rated roofing, using noncombustible gutter covers, screening vents with fine metal mesh, maintaining a five-foot noncombustible perimeter around the home (known as Zone 0), and ensuring fences and decks near the structure are made of fire-

resistant materials. The report underscores that partial mitigation efforts are insufficient; only a fully integrated strategy addressing all vulnerable components can significantly reduce the risk of home ignition during wildfires.

- The IBHS report [Near-Building Noncombustible Zone](#) emphasizes the critical role of maintaining a 0–5 foot noncombustible zone around structures to mitigate wildfire risks. Through controlled experiments simulating ember exposure and radiant heat, the study found that combustible materials within this zone significantly increase the likelihood of ignition, especially at building corners where wind patterns can intensify heat exposure. Recommendations include removing flammable items such as wooden fences, mulch, and vegetation within this area and replacing them with noncombustible alternatives like gravel or concrete to enhance the building's resilience against wildfires.
- The IBHS report on the [2023 Lahaina Fire](#) identifies three primary factors contributing to the rapid spread of the conflagration: high structure density, the presence of combustible connective fuels (such as vegetation and vehicles), and the use of building materials that were insufficiently fire-resistant under extreme thermal conditions. The study emphasizes that effective mitigation requires a comprehensive, community-wide approach, including increasing the spacing between structures, removing combustible materials that can act as fire pathways, and constructing homes with materials resistant to both embers and direct flame exposure. The report also highlights the critical role of homes located at the edges of communities, particularly those adjacent to grasslands, noting that if these homes are built with fire-resistant materials and maintain adequate defensible space, they can serve as a crucial barrier against the spread of wildfires into more densely populated areas.
- [Fort McMurray Wildfire Investigative Report](#) (ICLR/FireSmart 2017): A post-fire investigation by the Institute for Catastrophic Loss Reduction into the 2016 Fort McMurray wildfire in Canada found that direct flames or radiant heat from the forest fire were not the main cause of home ignitions. Instead, wind-driven embers were identified as the primary cause of most early home ignitions as the fire entered neighborhoods, often igniting combustible materials immediately around homes. The study noted that homes which adhered to FireSmart guidelines – including maintaining a noncombustible 0–1.5 m (5 ft) zone around the structure – survived at significantly higher rates than those that did not, demonstrating that Zone 0 defensible space is highly effective in preventing home ignition. Home survival was not random; it depended on conditions in the home ignition zone, reinforcing that eliminating fuels right next to the house greatly improves survivability.
- Ember Accumulation Near Walls – [IBHS/UL Study \(Quarles et al. 2023\): A peer-reviewed study in International Journal of Wildland Fire](#) examined where wind-blown embers tend to accumulate around buildings using experiments at the IBHS Research Center. It found that ember accumulation was greatest right up against exterior walls, indicating the highest ignition vulnerability is immediately adjacent to the structure. Higher wind speeds delivered more embers to the

building and, critically, rough surfaces like wood mulch captured embers at the base of walls, whereas smoother noncombustible surfaces allowed embers to blow past – demonstrating that a noncombustible Zone 0 prevents embers from piling up and igniting next to the home

- [Australian Bushfire Case–Land Management Practices Associated with House Loss in Wildfires](#) (Gibbons et al. 2012): A rigorous statistical study of the devastating 2009 “Black Saturday” bushfires in Australia evaluated how fuel management around homes affected house loss. The logistic regression results showed the cover of trees and shrubs within 40 m of houses was the top predictor of home destruction, and all fuel-reduction measures were more effective the closer they were to the house. The authors conclude that focusing on “intensive fuel treatments close to property” (e.g. eliminating combustibles in the immediate 0–5 ft and near-yard area) will most effectively reduce wildfire impacts on homes, far more than distant vegetation management
- The [IBHS report](#) on the January 2025 Los Angeles County wildfires details how extreme wind conditions, with gusts exceeding 60 mph, rapidly transformed initial ignitions into widespread urban conflagrations, notably in Pacific Palisades and Altadena. The fires, fueled by dense housing, combustible landscaping, and inadequate defensible space, overwhelmed firefighting efforts, leading to the destruction of over 5,000 structures and eight fatalities. The report emphasizes the critical need for comprehensive mitigation strategies, including the elimination of combustible materials within five feet of structures (Zone 0), adherence to modern building codes, and community-wide planning to enhance resilience against future wildfires.
- The 2021 report [An Impact Analysis for the National Guide for Wildland-Urban Interface Fires](#), prepared by the Institute for Catastrophic Loss Reduction for the National Research Council of Canada, evaluates the potential benefits of implementing the National Guide for Wildland-Urban Interface (WUI) Fires. The analysis highlights that adopting the guide's recommendations—such as using fire-resistant building materials, creating defensible space around properties, and enhancing community planning—can significantly reduce the risk of wildfire-related damages and losses in WUI areas. The report underscores the importance of proactive mitigation strategies and coordinated efforts among stakeholders to enhance community resilience against wildfires.
- The 2023 Milliman report, [Town of Paradise California Resilience Challenge](#): Task 1 to Task 4, presents a comprehensive analysis of wildfire risk reduction strategies for the Town of Paradise, California, following the devastating 2018 Camp Fire. Conducted in collaboration with CoreLogic and supported by the Bay Area Council Foundation’s California Resilience Challenge, the study quantifies the effectiveness of various mitigation measures, including home hardening, zoning reforms, and the establishment of external buffers. The findings indicate that implementing these strategies could reduce wildfire-related losses by up to 75% and insurance premiums by up to 55%, offering a viable blueprint for enhancing resilience and affordability in wildland-urban interface communities.

- Alexandra Syphard's article about [The Role of Defensible Space for Residential Structural Protection During Wildfires](#). Some have suggested Ms. Syphard's research does not support Zone Zero. However, when we asked her, she replied that "Zone Zero requirements are one of the most important things residents can do to protect their property from wildfire." [Here is a letter](#) that Dr Syphard and Dr Gollner wrote to the CA Board of Forestry. Her letter explaining why Zone Zero is critical and is pasted here:

"I am sorry to learn that my work is being somewhat misrepresented in a way that could make residents more at risk to wildfire. The study in which I recommend that excessive defensible space may not be needed is specifically talking about those who want to far exceed the 100' minimum, or those who want to moonscape their property and thus invite excessive colonization by un-irrigated invasive annuals (a concern most relevant to southern CA). My study found significant benefits of defensible space, particularly the closer you are to the structure. It is my thought that the Zone Zero requirements are one of the most important things residents can do to protect their property from wildfire. Studies that show a relatively larger effect of construction materials should not be taken to mean that defensible space should not be done or that it will not have benefits. This is particularly the case for Zone Zero, but it is also important to maintain 100 feet of appropriate defensible space (i.e., according to Cal Fire guidelines) for firefighter safety and maneuverability. I would put less weight on the defensible space measurements in the 2019 paper because we did not measure defensible space ourselves. Please let me know if there is anything else I can do to help. Alexandra D. Syphard, PhD"

And here's a good digestible summary:

[Inconvenient truths about the fires burning in Los Angeles from two fire experts](#)

2. What, if any, plants are permitted in Zone Zero (the first 5 feet around your home)?

The plants allowed in Zone Zero are:

- Mature trees taller than your house with branches overhanging the roof at least 10-ft above the roof. Mature trees are less likely to ignite and pose an ignition risk to structures during a wildfire/ember storm. More fire prone species like Juniper, Monterey Pine, or Blue Gum Eucalyptus can be removed by the resident if desired to increase resiliency.
- Plants in pots are allowable if they are in areas that are not directly beneath, above, or adjacent to a window or eave; are kept in an unaffixed, non-combustible pot or container that is no larger than 5-gallon capacity; and set apart by 1.5 times the height of the plant or 12 inches, whichever is greater, from the structure and each other. These plants shall be no greater than 18 inches in height. Dead or dying material on, around and under the plants must be removed.

Many of these catastrophic wildfires follow periods of drought and are accompanied with extremely low humidity and hot winds. The combination of these factors will lead any plant, even fire resistive, native species to be ignitable during a wildfire. Further, most plants produce dead woody materials that are often not maintained and can cause

ignition. Pending California Board of Forestry regulations are very likely to **not** include exceptions for fire resistive plant species.

You can have [beautiful gardens](#) that adhere to Zone 0 guidelines.

See images below for just a couple examples:



Good use of gravel mulch and hardscape walkway in Zone 0



Colorful, low growing flower pots on rock mulch is a good design for Zone 0



Firesafe vegetation setback five feet (zone 0) with gravel path



3. Can I get financial support to help pay for Zone Zero work?

The Fire Department has already secured a \$1 million dollar grant, targeted toward the homes in the Grizzly Peak and Panoramic Hill Mitigation Areas, to help residents who are unable to remove vegetation within Zone 0. The city is also currently running the

Grizzly Peak Project, and can remove privacy hedges within 10 feet of the road on private property (and will extend the work further into the yard for hazardous species), and offers free plant replacement.

In addition, the City is working to secure additional sources of financing – ranging potentially from additional grants to tax credits and low-interest loans. City Council is lobbying the Legislature and Congress to enact several key bills, including AB888 (Calderon), AB389 (Willis), and the Firewall Act (Schiff), which, if enacted, would provide financial incentives and support for Zone Zero and Home Hardening.

4. Opportunities for Public Input and Engagement?

In August 2020 the State Legislature enacted AB-3074 to create an “ember-resistant-zone”. However, due to political and administrative issues, the formal rulemaking process necessary to implement the requirements has not yet been completed. Had the processes been completed, new houses would have had to comply by 2023 and existing homes by 2024. On February 6, 2025 Governor Newsom signed an [Executive Order “to further prepare for future urban firestorms, stepping up already nation-leading strategies.”](#) The order directs the State Board of Forestry to accelerate its work to adopt regulations known as “Zone 0.”

Given the clear science on Zone Zero and the devastation of the Los Angeles Fires, Berkeley Fire Chief David Sprague and his team moved forward with a local version in January 2025, known as EMBER - Effective Mitigations for Berkeley’s Ember Resilience.

The following public announcements, Council Meetings, Forums and Outreach about EMBER have taken place since that time:

- 1/11/2025: [Berkeleyside](#) / [Berkeley Scanner](#) OpEd
- 1/22/2025: Presentation at the [City’s Disaster Fire Safety Commission](#)
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- 2/10/2025: Information Session with Wildcat Canyon Neighbors
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- 3/20/2025: District 6 Community EMBER webinar
- 3/24/2025: [Public Safety Policy Committee](#)
- 3/26/2025: City of Berkeley [Community E-Mail & Web Message](#)
- 4/15/2025: [Berkeley Scanner](#) and numerous national publications
- 4/15/2025: Council Meeting: approve 1st reading of Fire Code Amendments Ordinance

We are holding two additional opportunities for community discussion on May 15 and May 27. City Council will meet on June 17th for the 2nd reading of the Ordinance. After the ordinance is approved, we will work with BFD to organize a wide variety of additional implementation workshops, neighborhood meetings, and individual homesite visits to help educate homeowners and provide additional guidance & support.

5. Broader environment impact from removing vegetation in Zone Zero (EIR?)

The environmental impact of a Wildland-Urban Interface (WUI) fire is tremendous. The National Institute for Health states that WUI fire emissions have disproportionately large impacts on global air quality and human health. Removing vegetation around a small area of a home to create a safe zone of defensible space against showering embers does not compare. This is especially true given the abundance of vegetation 5ft and beyond in the Berkeley Hills. Work within 30' (and up to 100') is categorically exempt from Environmental review if conducted for the purposes of wildfire risk reduction.

6. The City should FIRST focus on Eucalyptus Removal in Tilden Regional Park

Managing and thinning Eucalyptus groves is part of the solution, but it is not the solution. Why? Look at the Los Angeles fires and Lahaina fire. Both these fires burned in grass and shrubs but quickly spread to structures. Look at the [Balch Springs Fire video](#) from Texas – this fire spread in low grass. Fuel management beyond the immediate areas around structures accounts for just 20% of the ignition risk. Said another way, 80% of the risk of structural ignition is posed by the fuels within 30 feet of homes ([Brinkman et al. 2022](#)).

As a thought experiment, imagine if all Eucalyptus were removed, and native grasses and shrubs returned. Berkeley would still be a fire prone landscape with vegetative fuels that are capable of carrying fire quickly to the edge of the community and causing structural ignition.

7. The City should FIRST focus on PGE Undergrounding Power Lines

Yes, this should be part of the solution but it is not the solution. Similarly, to the wholesale removal of Eucalyptus, Berkeley is in a fire prone landscape. Fire ran through this land frequently pre-European settlement, pre-PGE. The most effective way to reduce the risk of structural ignition, no matter the source, is to implement defensible space, inclusive of Zone 0, and harden your home.

8. Enforcement Timeline, Violations and Fines are too Aggressive

The City and Fire Department have always taken an education first approach. This is demonstrated by its performance over the next three years and the extremely small number of citations issued when compared to total inspections and total violations discovered:

- 21,000 inspections completed
- 9,000 violations identified
- Fewer than 70 citations issued (0.8% of violations, 0.3% of inspections)

When EMBER is enacted the Fire Department is going to pivot all its resources to engage and support the Grizzly Peak and Panoramic Neighborhoods and employ the same education first approach. The understands that it is much more effective to build a coalition of the willing and uses citations only as a last resort.

The new Zone Zero would be effective January of 2026, however defensible space inspections wouldn't begin until May of 2026. This gives residents about a year from adoption (anticipated June 2025) to inspections (start May 2026) to create Zone Zero. Then, after inspections begin in May of 2026, the inspection cycle would provide another ten weeks before the process would result in citations.

The department has a general policy of citing at the lowest possible level when that becomes necessary. This starts at a \$100 citation for the first month (cumulative, not daily). Fines can increase sharply if required based on the severity of the violation if deemed prudent by the inspecting official, or if properties remain non-compliant. This has not yet occurred in our inspection process.

Big picture on enforcement: The Fire Department's goal is voluntary compliance, not penalization. Enforcement steps (citations, fines, abatement, etc.) are tools to ensure everyone follows the rules that keep our community safe. In public statements, fire officials have repeatedly emphasized that they intend to roll out these requirements with an emphasis on education, outreach, and phased compliance. Indeed, the City is phasing the Zone 0 requirement to start with two specific high-risk neighborhoods (the Panoramic Hill area and the Grizzly Peak/Wildcat Canyon interface) with a lead time for residents of almost a year. This shows a measured approach, not a "gotcha" approach. Homeowners will receive inspection reports identifying what needs correction, group and 1:1 coaching from the department and will have the opportunity to fix issues before any penalties. Fines or other enforcement actions only come if a homeowner persistently neglects to address the hazards. And even then, the fines are there because *an unchecked fire hazard at one property puts the whole neighborhood at risk*. It's comparable to health codes or building codes – if someone refuses to fix an imminent hazard, eventually authorities must step in for the greater good.

9. If I do all this work, will I keep my home insurance?

Thousands of policy holders in the Berkeley Hills have already been hit with substantial rate increases or notices of non-renewal. EMBER is aligned with regulations issued by the [California Department of Insurance](#) (CDI) and the Institute of Business and Home Safety (IBHS) [Wildfire Prepared Home Checklist](#). While conducting this work on and around your home does not guarantee insurance, or premium discounts, they are much more likely to occur when a home has adopted these protective measures. In many cases, this might be a larger reduction in one year's insurance than the cost of doing the vegetation work.

Note that [State Farm's website](#) lists discounts for wildfire mitigation on the community level and property level. ~~One Berkeley homeowner received a -29.4% adjustment after implementing Zone Zero.~~

10. Do I have to remove my fence?

No, you will not be required to remove or replace any fence that runs parallel to structures.

Fences that connect to a structure must have only the first five feet removed and/or replaced with a non-combustible

Why? Fences are connective fuels that act like a wick and move fire from one structure to another. See the [Balch Springs video](#) here for a perfect example or the pictures below from the Camp Fire in California.



The best practice based on volumes of scientific research, observed fire behavior over decades and after-action reports is that any fence within 5-feet of a structure should be moved to beyond that zone or replaced with a non-combustible alternative. **However, this will not be required in EMBER.**

11. Does EMBER require that I replace my roof?

EMBER does not require replacing your roof. For those residents that still have a wood shake roof, we know that these are one of the biggest contributors of additional structural ignitions during a wildfire and thus we strongly encourage replacement with a Class-A Fire Resistant Roof. However, EMBER does not require this.

12. Does EMBER require that I replace my deck?

EMBER does not require that you remove or replace your deck. Decks are considered part of your home. The area under decks must be maintained free of vegetative and non-vegetative combustible material and a Zone 0 must be maintained around decks and stairs. Once a wooden deck reaches the end of its useful life, **it should be replaced** with fire resistant materials.

13. Does EMBER require that I remove trees in Zone Zero?

Trees can remain in Zone 0 as long as they are mature: This means they are taller than the structure, are maintained free of any dead and dying branches and that branches are maintained ten feet (10') above the roof. No new trees may be planted in Zone 0.

14. Will I have a list of contractors to work with? Will I get guidance about how to do all this work?

Yes, the Berkeley Fire Safe Council (BFSC) has a [list of reputable contractors](#) who can create Zone Zero and do home hardening work and they are working towards increasing the numbers of contractors. The Fire Department will provide educational workshops to the contractors on Zone Zero and Home Hardening but cannot recommend contractors directly to residents.

15. Does EMBER include mandates for Home Hardening, or is it just about Zone Zero?

EMBER does not require residents to perform home hardening – it is focused on Zone Zero, and just in the two most vulnerable areas in the Berkeley Hills at this time, Grizzly Peak Mitigation Area and Panoramic Hill Mitigation Area.

Home Hardening is not mandated, but it is highly recommended. When Zone 0 and home hardening are done together – the risk of ignition will also substantially decrease. This may qualify homeowners for [insurance and/or insurance discounts](#) – check with your broker.

16. Will Fire Protection Plan (FPP) be Required for All Parcels?

The requirement is being misrepresented in public comments and is a long standing existing language. A Fire Protection Plan in the context of fire codes is a formal document that analyzes fire hazards and specifies mitigation measures for a given site or project. It is commonly required for new developments or construction in Wildland-Urban Interface (WUI) areas under the California Fire Code and building code. For example, California Code (CBC Chapter 7A / CFC Chapter 49) allows jurisdictions to require a Fire Protection Plan for new buildings in Very High Fire Hazard Severity Zones to ensure the design accounts for defensible space, ignition-resistant materials, water supply for firefighting, etc. Many Bay Area cities have adopted similar ordinance language. This is not a Berkeley invention – it's a standard tool in WUI fire safety. What Berkeley's existing FPP language does is extend the use of FPPs to certain existing situations where they can be helpful. It does *not* mean every individual homeowner will be randomly ordered to write up a plan for their home. The Fire Department doesn't have the bandwidth or desire to demand thousands of separate Fire Protection Plan documents from each homeowner – nor is that necessary. Instead, the ordinance's FPP provision is intended for special cases. For instance, if a property is unusually large, complex, or poses particular challenges, the Fire Code Official can require a customized Fire Protection Plan to ensure compliance. This could apply to, say: a large estate in the hills with multiple structures and extensive vegetation, or a situation where an owner is proposing an alternative method of compliance and needs to document it in a plan. Essentially, it's a way to require a site-specific wildfire safety plan when the basic one-size-fits-all rules might not suffice.

17. Scientists Don't Support Zone 0

There is an incredible amount of cherry-picking and miss-information that is being used by opponents of EMBER to elevate positions that are convenient to them – but not scientifically validated. It's often difficult to determine what is science, and what is an opinion of a scientist; especially one with little to no experience in this field. Below is an email from one of the leading researchers on the issue, Dr. Michael J. Gollner, Ph.D., [University of California, Berkeley Fire Lab](#):

Thanks for sharing this. A lot of information below, hopefully you can use this in discussion with neighbors and other residents.

I haven't seen this letter, but I've been working in this field for 15 years and involved with what IBHS has been promoting to the committee, including organizing several letters of support, and know some committee members and the long history in this

process. It's a little disturbing reading this letter as it reminds me of expert witness work - they'll selectively pick anything they can to promote their stance out of papers, ignoring those points that don't support their views. They also completely tried to tear apart our new manuscript without actually understanding the issues. I ran into the same issues when testifying to Congress, this appears to be a very political interpretation of the literature.

First, it's important to understand the scientific role of defensible space and home hardening. Homes can be exposed to large radiant heating from the wildfire itself or neighboring structures burning, direct flame contact from small flames adjacent to the structure, and flying embers that land and ignite new fires. The concept of protecting structures is to create a defensible space around the home that reduces exposure from the FIRE (both radiant and direct flame contact) to the home, and to make the outside "shell" of the home itself resistant to EMBERS and small flames. Defensible space therefore must accomplish moving flammable materials that can result in flames away from the structure. Hardening incorporates finer mesh over vents to prevent ember intrusion as well as fire resistant materials (and construction methods) to prevent embers from igniting outside materials. The issue is that even small flames, 1 foot tall can penetrate building materials that otherwise are fire resistant if left long enough. Heat fluxes from small sustained flames can far exceed ignition properties of most otherwise fire-resistant materials, therefore there is a need to support hardening on a home by moving any possible flames back some distance, preventing another "pathway" to ignition. The 5-foot zone "0" helps accomplish this.

Defensible space guidelines aren't to create completely barren landscapes. Within 30 feet there is room for "islands" of vegetation and other materials, however the 5 feet within the home has been highlighted to be clear of any flammable materials to prevent the intrusion of sustained flames to structures. I know it's a broad stroke, saying to remove everything flammable, but to take an alternative path would be incredibly complicated and have a lot to do with what materials a structure is made with, what wind and direction it might come from, the location of neighbors, and more details than we can possibly specify and understand. Keeping this small area as a "safe zone" around the structure will help give any hardening applied a real chance to actually survive the onslaught and help prevent more destruction. Because many houses are located so close to one another your neighbor's house is also a potential source so protecting entire communities is critical.

It's hard to make a better visual than IBHS' full scale

demonstrations: <https://www.youtube.com/watch?v=AYvwogREEk4>

We've been burning houses (7 now) on structure to structure experiments and we're learning a lot. I do believe the 5-foot zone is an integral part of the solution.

Regarding the criticism of our study (under revision in Nature Comm), what we did is really incorporate the interplay between variables using a machine learning method.

Most previous studies did not do this. It becomes apparent when we look at the end that you need BOTH defensible space and hardening to make a substantial difference in losses, but there is SOME reduction from either independently. Of course, home spacing is one of the most important, but we know this can't be changed. I think

whoever wrote this letter has no idea what fire modeling is or what the different techniques used were doing, or purposefully avoided stating the facts. The moisture conditions were set to match weather conditions input from NOAA weather data, which is standard fire modeling practice, and we don't use the fire modeling to influence the structure loss information, we use the fire modeling as an input of EXPOSURE (fire and embers), missing from all previous studies. Most previous studies also looked at 30-foot defensible space, not 5 feet. We had access to high resolution imagery and Lidar that allowed us to look closer at 5 feet. It's not perfect, you'd need pre-fire on the ground studies, but there is a strong and clear relationship between zone 0 and reduced destruction, especially combined with home hardening. That also makes physical sense, we expect zone 0 to be most influential in reducing those local exposures and making hardening more effective.

I know Alexandra Syphard and her stance on the trees blocking embers. There is no field or test evidence for that anywhere. There is compelling evidence from investigations that local fuels that are connected leading to a structure help drive the fire to the structure and lead to ignition. I think all scientists agree you need flammable materials out of the 5-foot zone, they are debating on what is "flammable" and that sort of depends on whether you are talking about ignition from embers, a small fire creeping up, or a massive flame from a neighbor's house that lights your bush on fire that then lights your house on fire.

Sorry there is a lot of information here, but you are welcome to share this with neighbors. I don't like how clear cut it has to be, but I understand how difficult any regulation in practice will be. A bush honestly is a bad idea - flammability, it's a lot of fuel if it dries out, litters, how is it maintained, etc. Mulch - we tested it, it is all pretty bad that close to a house. A little potted petunia, probably fine, but how to distinguish how large is not, or if the flower pot is flammable. Do we create a flower pot certification process? It's really hard. So, I support a straightforward plan that's going to lower risk in high risk areas.

Michael J. Gollner, Ph.D.

Associate Professor and Deb Faculty Fellow

Vice Chair for Graduate Studies

Department of Mechanical Engineering

University of California, Berkeley

<http://firelab.berkeley.edu>



Brent Blackaby
Councilmember District 6

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ACTION CALENDAR
June 17, 2025

To: Honorable Mayor and Members of the City Council

From: Councilmember Blackaby (Author), Councilmember O'Keefe (Co-Sponsor),
Mayor Ishii (Co-Sponsor)

Subject: EMBER Implementation Plan, Vegetation Management Working Group, and
Clarifying Fire Code Language

RECOMMENDATION

1. Refer to the City Manager to develop a comprehensive roll-out and implementation plan for EMBER; then return to City Council by September 9, 2025
2. Refer to the City Manager to create a working group of Berkeley residents and stakeholders to review the vegetation management portion of the Fire Code to ensure that it is clear, reflects unique local conditions, and incorporates the best available fire science (inclusive of any more conservative code adopted by the California Board of Forestry); then return with additional amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process
3. Refer to the City Manager to incorporate additional clarifying language listed in this report; then return amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process

FINANCIAL IMPLICATIONS

No additional financial implications; staff will be updating the Fire Code and is actively engaged in making EMBER more user-friendly for residents.

CURRENT SITUATION AND ITS EFFECTS

The City's EMBER (Effective Mitigation for Berkeley's Ember Resilience) proposal outlines new fire safety standards designed to reduce the risk of home ignition from wildfire embers, protecting individual homes, neighborhoods, and the entire community from a catastrophic wildfire. EMBER's scientifically validated mitigation measures

advance the City's Strategic Plan Goal to create a resilient, safe, connected, and prepared city.

If City Council adopts the EMBER proposal's updated Fire Maps and Fire Code amendments on June 17th, that will establish a clear new policy for Zone Zero vegetation management in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area, going into effect on January 1, 2026. The City and the Fire Department must next lay out a more detailed plan for rollout and implementation to gain widespread participation from residents in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area in order to achieve maximum community risk reduction in the months ahead.

Furthermore, over the past five months since Fire Chief David Sprague and his team introduced the EMBER proposal, the City has held a wide variety of outreach and information meetings. Council has received significant community input from residents to help strengthen the EMBER proposal and clarify language in the proposed Fire Code. The requested changes in this report would ease the burden of implementing EMBER while keeping the core efficacy of the EMBER Strategy in place.

The Fire Department is already required to return to Council with the City's Triennial Fire Code Update by the end of 2025. We recommend making additional EMBER-related refinements and clarifications to the Fire Code as part of this existing process.

1. Roll-out & Implementation Plan should help educate, advise, and support residents in the Grizzly Peak Mitigation Area and the Panoramic Mitigation Area to implement Zone Zero. The following should be included in the Plan, at minimum:

BFD to return with proposed Roll-out and Implementation Plan, Including Support for Residents – *by September 9, 2025*. Main components for EMBER roll-out, including but not limited to:

Timeline:

- Neighborhood site visits, homeowner implementation workshops, and landscaper/contractor training begin July 2025
- Inspections begin May 2026 (12 months from now)
- Homeowners don't get cited if work is in progress
- Regular ongoing communications via mail, email, online video, and in-person visits to inform residents about EMBER, update them frequently about other wildfire mitigation work being done by the City and regional partners (including EBRPD, PG&E, EBMUD, UC Berkeley, Berkeley Lab, and neighboring jurisdictions), and provide personalized implementation advice and support

Financing:

- Deploying \$1+ million in grant funds for Zone Zero vegetation management (age 65+ and/or below median income, medically unable)
- Transfer tax credit (up to 0.5% of home value)
- Low-interest loan program
- More to come

Facilitate neighborhood organizing:

- Continue the chipper program and provide other tools needed for community workdays
- Help neighborhoods coordinate to organize vegetation management work collectively, rather than individually, for better contractor pricing
- BerkeleyCorp volunteer days-of-action
- Create an improved detailed map so residents can clearly see if their home is in the Grizzly Peak or Panoramic Hill Mitigation Areas
- Provide free wire mesh and gutter guards to all homeowners in the Grizzly Peak and Panoramic Hill Mitigation Areas, to encourage home hardening alongside Zone Zero vegetation management

Regular Report-Backs to Council:

- BFD & City Manager to inform Council if the State of California changes their Zone Zero requirements, so we can then revisit our standards
- BFD & City Manager to provide semi-annual updates to Council on wildfire mitigation efforts by regional partners (including EBRPD, PG&E, EBMUD, UC Berkeley, Berkeley Lab, and neighboring jurisdictions)

2. Create Resident & Stakeholder Working Group to Review Vegetation Management Portion of Fire Code – *to be adopted during Triennial Fire Code update in December 2025:*

As a part of the Triennial Fire Code Update, the City should engage Berkeley residents and stakeholders, under the leadership of the Fire Department, to conduct a more detailed review of the vegetation management section of the Berkeley Municipal Code to ensure that it is clear, reflects unique local conditions, and incorporates the best available fire science (inclusive of any more conservative code adopted by the California Board of Forestry); then return amendments to the City Council before December 31, 2025 as part of the Fire Department's Triennial Fire Code Update Process.

3. Make Additional Fire Code Changes – *to be adopted during Triennial Fire Code update in December 2025:*

5. Section 104.9 is an existing section that allows for property-specific modifications when there are practical difficulties to carry out the provisions of the fire code. Section 104.10 provides a process by which Alternate Means and Materials can be proposed by a resident so long as they provide for conditions that are as safe or safer than the code language. Staff should research and consider proposing language allowing modifications where necessary to address an environmental concern, including for (1) protecting endangered, rare, or threatened plant or animal species; (2) avoiding significant erosion or sedimentation of surface waters; (3) avoiding removal of healthy, mature, scenic trees; (4) avoiding impacts to an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies, including historical resources. Staff should also more clearly define the process for how residents would identify these exceptions and present their findings to allow for consideration of alternative materials and methods.
6. Under proposed language in the local modifications of Section 4906.7, the statement that “no trees are permitted in Zone 0,” even though it is followed with exceptions, seems to send a different message than what staff states is the intent. Staff should reformat that language to clearly state what is allowed, and then call out the exceptions that are not allowed. In particular, the language should make clear that Section 4906.7 does not require the removal of healthy, mature, scenic trees.
7. Similarly, later in Section 4906.7, staff should provide more clarity when it comes to the handling of trees with “Continuous Tree Canopy.” It appears to be staff's intention that where it is infeasible or impractical to create canopy separation, that the understory can be cleaned up instead. This should be stated explicitly in the code.
8. Staff should remove the local amendments about misdemeanors in Section 104.13. This language has been carried through multiple code adoptions, is quite

dated, and needs to be revisited to make clear that this authority should be removed.

BACKGROUND

Wildfire has historically hit Berkeley every 20 years since 1905, with 2024 marking the 33rd year since the last major fire; we are overdue. Climate change has exacerbated the conditions for wildfire. The state passed Zone Zero Legislation in 2020 but stalled on developing the regulations so it was not implemented. The fire tragedy suffered by the Los Angeles area spurred our Fire Department to develop the Zone Zero proposal, named EMBER (Effective Mitigation for Berkeley's Ember Resilience) to proactively protect our community against an urban conflagration.

On February 11, 2025 the City Council held a Special Meeting on the EMBER Proposal where the Fire Chief and staff outlined the proposal and asked for feedback.

On April 15, 2025, the Berkeley Fire Chief brought the EMBER Proposal to Council for their consideration. Council approved the ordinance unanimously. Council will consider the second reading of the ordinance at this June 17, 2025 meeting. This item is in support of the second reading and seeks both clarifying language of the ordinance and a roll-out plan upon its approval.

The following public announcements, Council Meetings, Forums and Outreach about EMBER have taken place since January 2025:

- 1/11/2025: [Berkeleyside](#) / [Berkeley Scanner](#) Op-Ed
- 1/22/2025: Presentation at the [City's Disaster Fire Safety Commission](#)
- 2/05/2025: Citywide outreach Surveys in [Berkeley Considers](#)
- 2/05/2025: [Berkeley Scanner](#) Article
- 2/05/2025: FireWise meeting
- 2/07/2025: Berkeleyside Article
- 2/10/2025: Information Session with Wildcat Canyon Neighbors
- 2/11/2025: [Special Council Meeting](#): EMBER Proposal – for feedback & next steps
- 2/24/2025 FireWise meeting
- 2/27/2025: [East Bay Wildfire Coalition Presentation](#)
- 3/10/2025: FireWise Meeting
- 3/05/2025: Information Session with Park Hills Community
- 3/20/2025: District 6 Community EMBER webinar
- 3/24/2025: [Public Safety Policy Committee](#)
- 3/26/2025: City of Berkeley [Community E-Mail & Web Message](#)
- 4/15/2025: [Berkeley Scanner](#) and numerous national publications
- 4/15/2025: Council Meeting: approve 1st reading of Fire Code Amendments Ordinance
- 5/15/2025: EMBER Community Workshop via Zoom Webinar
- 5/27/2025: EMBER Community Workshop in-person at Northbrae Community Church
- 6/1/2025: EMBER 1:1 Home Consultation meetings with neighbors at Station 7

- 6/7/2025: EMBER 1:1 Home Consultation meetings with neighbors at Station 7

ENVIRONMENTAL SUSTAINABILITY AND CLIMATE IMPACTS

Reducing likelihood of wildfire turning into an urban conflagration supports Berkeley's environmental sustainability goals and reduces climate impacts.

CONTACT PERSON

Councilmember Brent Blackaby Council District 6 510-981-7160

Attachments:

- 1: EMBER 2-page overview
- 2: EMBER FAQ
- 3: Letters of Endorsement from Sierra Club, League of Women Voters, Berkeley Disaster and Fire Safety Commission, Berkeley FireSafe Council and Berkeley Firewise Leaders
- 4: How to obtain free gutter guards & wire mesh from the City of Berkeley for home hardening
- 5: EBRPD Fire Service Update including response readiness and prevention efforts
- 6: Governor's Proclamation of a State of Emergency

EMBER

Effective Mitigation for Berkeley's Ember Resilience



**FIRE
SAFE
BERKELEY**

Clarifying What's Required in the City's EMBER Proposal

Zone 0 will become effective 1/1/2026 in two areas identified in the map below, with inspections commencing in mid-2026. This provides residents and the City a year to work together before inspections begin.

What is Required?

Make these updates within five feet of structures, attached decks, and stairs (Zone 0):

- No in-ground vegetation
- No climbing vines
- No combustible mulch
- No wooden or combustible fences that attach to structures (replace the first 5 feet with a non-combustible alternative)

EXCEPTIONS:

- Mature trees as long as they are well maintained and limbed up 10 feet above the roof
- Plants in non-combustible planters/pots (≤ 5 gal) and less than 18-inches in height



Map Shows Proposed Implementation Areas east of Grizzly Peak Blvd. and Panoramic Hill



Examples of Beautiful Bay Area Gardens that include Zone 0



EMBER Effective Mitigation for Berkeley's Ember Resilience

EMBER Does Not Require any Home Hardening

There are no home hardening measures proposed in the proposal before the Berkeley City Council, this includes:

- Installing ember-resistant vents. **Not Required**
- Upgrading to dual pane windows. **Not Required**
- Upgrading to a Class A roof. **Not Required**
- Screening gutters. **Not Required**



While the City is not requiring these mitigations, home hardening, when coupled with defensible space that includes Zone 0, offers the best way to improve the chances a home will survive a wildfire.

EMBER is a collaboration between the City and residents rooted in an education first approach

The City and Fire Department have and will continue to take an education first approach. This is demonstrated by Defensible Space Inspection program three year performance (below). Note the extremely low number of citations issued when compared to total inspections and total violations discovered:

21,000 Inspections
Of homes in Berkeley



9,000 Violations
Identified for correction



70 citations issued
0.8% of violations, 0.3% of inspections



Fines are rarely more than \$100 are only issued when a homeowner repeatedly ignores fire hazards, since one unsafe property can endanger the entire neighborhood. Like health or building codes, enforcement ensures public safety when voluntary compliance through education and coaching fails.



Effective Mitigation for Berkeley's Ember Resilience (EMBER) FAQ's

1. What is the science underlying Zone Zero proposed in EMBER?

There's a robust set of evidence, based on experiments, studies, actual experience from firefighters, and post-wildfire analysis, that provides the foundation of the EMBER proposal. Key links to review the scientific consensus around Zone Zero & home hardening:

- The 2021 peer-reviewed study titled "[Housing Arrangement and Vegetation Factors Associated with Single-Family Home Survival in the 2018 Camp Fire](#)" analyzed factors influencing home survival during the 2018 Camp Fire. Key findings indicate strong associations between both distance to nearest destroyed structure and vegetation within 100 m and home survival. This indicates building and vegetation modifications substantially improve outcomes including home hardening, defensible space, and eliminating near-home combustibles, especially in areas closest to the home (0-5 feet).
- [Defensible Space Analysis in California](#): Following an analysis of over 2000 structures in San Diego County, Syphard et al. concluded that structures were more likely to survive a fire with an effective defensible space "immediately adjacent" to them. Syphard et al. also report that reducing woody vegetation cover up to 40% immediately adjacent to structures and preventing vegetation from overhanging or touching structures were the most effective actions to reduce risk of home ignition.
- Post-wildfire investigations support both experimental and computational research in that the elimination of combustible material from Zone 0 is a necessary mitigation action to reduce the risk of home ignitions. The investigation performed after the [Grass Valley Fire in 2008](#) (Cohen et al. 2008) concluded that home ignitions were caused by embers igniting buildings or creating spot fires in the immediate areas around the building rather than high intensity flames. [The National Institute of Standards and Technology's post-Camp Fire](#) report likewise concludes that overhanging trees, fences, and other combustible items within Zone 0 provided fuel pathways that led to home ignitions (photos below 2min apart show fire spreading from the fence and tree to the home). Additionally, this work provided examples where overhanging trees within the 0–5-foot zone could also ignite the building.

Similarly, the IBHS post-Glass Fire investigation observed vegetation that likely provided a pathway for ignition when plants—even in small amounts—touch the building

as shown in photo below. The house in the photo below was likely defended by first responders during the event.



- The IBHS white paper "[Return of Conflagration to the Built Environment](#)" examines how modern suburban communities, especially those in the wildland-urban interface (WUI), are increasingly vulnerable to wildfire-driven conflagrations due to factors such as drought, high winds, human-caused ignitions, dense combustible structures, and inadequate building codes. Historical urban fires, like the 1871 Great Chicago Fire, were mitigated through improved building practices and codes; however, similar vulnerabilities have reemerged in today's suburban areas, as evidenced by recent events like the Marshall Fire in Colorado and the Lahaina Fire in Hawaii, where over 1,000 structures were destroyed within hours. The report emphasizes the necessity of comprehensive community-level strategies—including ignition-resistant construction, elimination of combustible materials near homes, and coordinated planning—to prevent and mitigate the spread of such devastating fires.
- The [NIST Technical Note 2228](#), titled Wind-Driven Fire Spread to a Structure from Fences and Mulch, investigates how common landscaping elements like fences and mulch contribute to the spread of wildfires in wildland-urban interface

(WUI) areas. Through 187 controlled experiments, researchers found that combustible materials, especially when combined—such as wooden fences adjacent to mulch beds—significantly accelerate fire spread, with flames reaching nearby structures in as little as four minutes. The study emphasizes the need for homeowners to avoid placing combustible materials in close proximity and advocates for the adoption of fire-resistant landscaping practices to mitigate wildfire risks.

- The [NIST Technical Note 2205](#) introduces the Hazard Mitigation Methodology (HMM), a performance-based framework designed to reduce wildfire risk in Wildland-Urban Interface (WUI) communities by addressing vulnerabilities at the structure, parcel, and community levels. The methodology emphasizes the necessity of complete ember hardening for all structures, as partial measures do not proportionally reduce risk, and highlights the importance of managing combustible materials and structural layouts to prevent fire spread via embers and direct flame contact. By integrating strategies such as fuel reduction, structure hardening, and community-wide planning, HMM aims to enhance the resilience of WUI communities against increasingly severe wildfire threats.



[Click here](#) to watch a video of the Balch Springs Fire in Texas spread from low grass and then use connective fuels to move from one structure to another.

- The IBHS report [Wildland Fire Embers and Flames: Home Mitigations That Matter](#) emphasizes that protecting homes from wildfires requires a comprehensive, two-tiered approach: first, implementing foundational defenses against embers; second, adding measures to guard against direct flame exposure. Key recommendations include installing Class A fire-rated roofing, using noncombustible gutter covers, screening vents with fine metal mesh, maintaining a five-foot noncombustible perimeter around the home (known as Zone 0), and ensuring fences and decks near the structure are made of fire-

resistant materials. The report underscores that partial mitigation efforts are insufficient; only a fully integrated strategy addressing all vulnerable components can significantly reduce the risk of home ignition during wildfires.

- The IBHS report [Near-Building Noncombustible Zone](#) emphasizes the critical role of maintaining a 0–5 foot noncombustible zone around structures to mitigate wildfire risks. Through controlled experiments simulating ember exposure and radiant heat, the study found that combustible materials within this zone significantly increase the likelihood of ignition, especially at building corners where wind patterns can intensify heat exposure. Recommendations include removing flammable items such as wooden fences, mulch, and vegetation within this area and replacing them with noncombustible alternatives like gravel or concrete to enhance the building's resilience against wildfires.
- The IBHS report on the [2023 Lahaina Fire](#) identifies three primary factors contributing to the rapid spread of the conflagration: high structure density, the presence of combustible connective fuels (such as vegetation and vehicles), and the use of building materials that were insufficiently fire-resistant under extreme thermal conditions. The study emphasizes that effective mitigation requires a comprehensive, community-wide approach, including increasing the spacing between structures, removing combustible materials that can act as fire pathways, and constructing homes with materials resistant to both embers and direct flame exposure. The report also highlights the critical role of homes located at the edges of communities, particularly those adjacent to grasslands, noting that if these homes are built with fire-resistant materials and maintain adequate defensible space, they can serve as a crucial barrier against the spread of wildfires into more densely populated areas.
- [Fort McMurray Wildfire Investigative Report](#) (ICLR/FireSmart 2017): A post-fire investigation by the Institute for Catastrophic Loss Reduction into the 2016 Fort McMurray wildfire in Canada found that direct flames or radiant heat from the forest fire were not the main cause of home ignitions. Instead, wind-driven embers were identified as the primary cause of most early home ignitions as the fire entered neighborhoods, often igniting combustible materials immediately around homes. The study noted that homes which adhered to FireSmart guidelines – including maintaining a noncombustible 0–1.5 m (5 ft) zone around the structure – survived at significantly higher rates than those that did not, demonstrating that Zone 0 defensible space is highly effective in preventing home ignition. Home survival was not random; it depended on conditions in the home ignition zone, reinforcing that eliminating fuels right next to the house greatly improves survivability.
- Ember Accumulation Near Walls – [IBHS/UL Study \(Quarles et al. 2023\): A peer-reviewed study in International Journal of Wildland Fire](#) examined where wind-blown embers tend to accumulate around buildings using experiments at the IBHS Research Center. It found that ember accumulation was greatest right up against exterior walls, indicating the highest ignition vulnerability is immediately adjacent to the structure. Higher wind speeds delivered more embers to the

building and, critically, rough surfaces like wood mulch captured embers at the base of walls, whereas smoother noncombustible surfaces allowed embers to blow past – demonstrating that a noncombustible Zone 0 prevents embers from piling up and igniting next to the home

- [Australian Bushfire Case–Land Management Practices Associated with House Loss in Wildfires](#) (Gibbons et al. 2012): A rigorous statistical study of the devastating 2009 “Black Saturday” bushfires in Australia evaluated how fuel management around homes affected house loss. The logistic regression results showed the cover of trees and shrubs within 40 m of houses was the top predictor of home destruction, and all fuel-reduction measures were more effective the closer they were to the house. The authors conclude that focusing on “intensive fuel treatments close to property” (e.g. eliminating combustibles in the immediate 0–5 ft and near-yard area) will most effectively reduce wildfire impacts on homes, far more than distant vegetation management
- The [IBHS report](#) on the January 2025 Los Angeles County wildfires details how extreme wind conditions, with gusts exceeding 60 mph, rapidly transformed initial ignitions into widespread urban conflagrations, notably in Pacific Palisades and Altadena. The fires, fueled by dense housing, combustible landscaping, and inadequate defensible space, overwhelmed firefighting efforts, leading to the destruction of over 5,000 structures and eight fatalities. The report emphasizes the critical need for comprehensive mitigation strategies, including the elimination of combustible materials within five feet of structures (Zone 0), adherence to modern building codes, and community-wide planning to enhance resilience against future wildfires.
- The 2021 report [An Impact Analysis for the National Guide for Wildland-Urban Interface Fires](#), prepared by the Institute for Catastrophic Loss Reduction for the National Research Council of Canada, evaluates the potential benefits of implementing the National Guide for Wildland-Urban Interface (WUI) Fires. The analysis highlights that adopting the guide's recommendations—such as using fire-resistant building materials, creating defensible space around properties, and enhancing community planning—can significantly reduce the risk of wildfire-related damages and losses in WUI areas. The report underscores the importance of proactive mitigation strategies and coordinated efforts among stakeholders to enhance community resilience against wildfires.
- The 2023 Milliman report, [Town of Paradise California Resilience Challenge](#): Task 1 to Task 4, presents a comprehensive analysis of wildfire risk reduction strategies for the Town of Paradise, California, following the devastating 2018 Camp Fire. Conducted in collaboration with CoreLogic and supported by the Bay Area Council Foundation’s California Resilience Challenge, the study quantifies the effectiveness of various mitigation measures, including home hardening, zoning reforms, and the establishment of external buffers. The findings indicate that implementing these strategies could reduce wildfire-related losses by up to 75% and insurance premiums by up to 55%, offering a viable blueprint for enhancing resilience and affordability in wildland-urban interface communities.

- Alexandra Syphard's article about [The Role of Defensible Space for Residential Structural Protection During Wildfires](#). Some have suggested Ms. Syphard's research does not support Zone Zero. However, when we asked her, she replied that "Zone Zero requirements are one of the most important things residents can do to protect their property from wildfire." [Here is a letter](#) that Dr Syphard and Dr Gollner wrote to the CA Board of Forestry. Her letter explaining why Zone Zero is critical and is pasted here:

"I am sorry to learn that my work is being somewhat misrepresented in a way that could make residents more at risk to wildfire. The study in which I recommend that excessive defensible space may not be needed is specifically talking about those who want to far exceed the 100' minimum, or those who want to moonscape their property and thus invite excessive colonization by un-irrigated invasive annuals (a concern most relevant to southern CA). My study found significant benefits of defensible space, particularly the closer you are to the structure. It is my thought that the Zone Zero requirements are one of the most important things residents can do to protect their property from wildfire. Studies that show a relatively larger effect of construction materials should not be taken to mean that defensible space should not be done or that it will not have benefits. This is particularly the case for Zone Zero, but it is also important to maintain 100 feet of appropriate defensible space (i.e., according to Cal Fire guidelines) for firefighter safety and maneuverability. I would put less weight on the defensible space measurements in the 2019 paper because we did not measure defensible space ourselves. Please let me know if there is anything else I can do to help. Alexandra D. Syphard, PhD"

And here's a good digestible summary:

[Inconvenient truths about the fires burning in Los Angeles from two fire experts](#)

2. What, if any, plants are permitted in Zone Zero (the first 5 feet around your home)?

The plants allowed in Zone Zero are:

- Mature trees taller than your house with branches overhanging the roof at least 10-ft above the roof. Mature trees are less likely to ignite and pose an ignition risk to structures during a wildfire/ember storm. More fire prone species like Juniper, Monterey Pine, or Blue Gum Eucalyptus can be removed by the resident if desired to increase resiliency.
- Plants in pots are allowable if they are in areas that are not directly beneath, above, or adjacent to a window or eave; are kept in an unaffixed, non-combustible pot or container that is no larger than 5-gallon capacity; and set apart by 1.5 times the height of the plant or 12 inches, whichever is greater, from the structure and each other. These plants shall be no greater than 18 inches in height. Dead or dying material on, around and under the plants must be removed.

Many of these catastrophic wildfires follow periods of drought and are accompanied with extremely low humidity and hot winds. The combination of these factors will lead any plant, even fire resistive, native species to be ignitable during a wildfire. Further, most plants produce dead woody materials that are often not maintained and can cause

ignition. Pending California Board of Forestry regulations are very likely to **not** include exceptions for fire resistive plant species.

You can have [beautiful gardens](#) that adhere to Zone 0 guidelines.

See images below for just a couple examples:



Good use of gravel mulch and hardscape walkway in Zone 0



Colorful, low growing flower pots on rock mulch is a good design for Zone 0



Firesafe vegetation setback five feet (zone 0) with gravel path



3. Can I get financial support to help pay for Zone Zero work?

The Fire Department has already secured a \$1 million dollar grant, targeted toward the homes in the Grizzly Peak and Panoramic Hill Mitigation Areas, to help residents who are unable to remove vegetation within Zone 0. The city is also currently running the

Grizzly Peak Project, and can remove privacy hedges within 10 feet of the road on private property (and will extend the work further into the yard for hazardous species), and offers free plant replacement.

In addition, the City is working to secure additional sources of financing – ranging potentially from additional grants to tax credits and low-interest loans. City Council is lobbying the Legislature and Congress to enact several key bills, including AB888 (Calderon), AB389 (Willis), and the Firewall Act (Schiff), which, if enacted, would provide financial incentives and support for Zone Zero and Home Hardening.

4. Opportunities for Public Input and Engagement?

In August 2020 the State Legislature enacted AB-3074 to create an “ember-resistant-zone”. However, due to political and administrative issues, the formal rulemaking process necessary to implement the requirements has not yet been completed. Had the processes been completed, new houses would have had to comply by 2023 and existing homes by 2024. On February 6, 2025 Governor Newsom signed an [Executive Order “to further prepare for future urban firestorms, stepping up already nation-leading strategies.”](#) The order directs the State Board of Forestry to accelerate its work to adopt regulations known as “Zone 0.”

Given the clear science on Zone Zero and the devastation of the Los Angeles Fires, Berkeley Fire Chief David Sprague and his team moved forward with a local version in January 2025, known as EMBER - Effective Mitigations for Berkeley’s Ember Resilience.

The following public announcements, Council Meetings, Forums and Outreach about EMBER have taken place since that time:

- 1/11/2025: [Berkeleyside](#) / [Berkeley Scanner](#) OpEd
- 1/22/2025: Presentation at the [City’s Disaster Fire Safety Commission](#)
- 2/05/2025: Citywide outreach Surveys in [Berkeley Considers](#)
- 2/05/2025: [Berkeley Scanner](#) Article
- 2/05/2025: FireWise meeting
- 2/07/2027: Berkeleyside Article
- 2/10/2025: Information Session with Wildcat Canyon Neighbors
- 2/11/2025: [Special Council Meeting](#): EMBER Proposal – for feedback & next steps
- 2/24/2025 FireWise meeting
- 2/27/2025: [East Bay Wildfire Coalition Presentation](#)
- 3/10/2025: FireWise Meeting
- 3/05/2025: Information Session with Park Hills Community
- 3/20/2025: District 6 Community EMBER webinar
- 3/24/2025: [Public Safety Policy Committee](#)
- 3/26/2025: City of Berkeley [Community E-Mail & Web Message](#)
- 4/15/2025: [Berkeley Scanner](#) and numerous national publications
- 4/15/2025: Council Meeting: approve 1st reading of Fire Code Amendments Ordinance

We are holding two additional opportunities for community discussion on May 15 and May 27. City Council will meet on June 17th for the 2nd reading of the Ordinance. After the ordinance is approved, we will work with BFD to organize a wide variety of additional implementation workshops, neighborhood meetings, and individual homesite visits to help educate homeowners and provide additional guidance & support.

5. Broader environment impact from removing vegetation in Zone Zero (EIR?)

The environmental impact of a Wildland-Urban Interface (WUI) fire is tremendous. The National Institute for Health states that WUI fire emissions have disproportionately large impacts on global air quality and human health. Removing vegetation around a small area of a home to create a safe zone of defensible space against showering embers does not compare. This is especially true given the abundance of vegetation 5ft and beyond in the Berkeley Hills. Work within 30' (and up to 100') is categorically exempt from Environmental review if conducted for the purposes of wildfire risk reduction.

6. The City should FIRST focus on Eucalyptus Removal in Tilden Regional Park

Managing and thinning Eucalyptus groves is part of the solution, but it is not the solution. Why? Look at the Los Angeles fires and Lahaina fire. Both these fires burned in grass and shrubs but quickly spread to structures. Look at the [Balch Springs Fire video](#) from Texas – this fire spread in low grass. Fuel management beyond the immediate areas around structures accounts for just 20% of the ignition risk. Said another way, 80% of the risk of structural ignition is posed by the fuels within 30 feet of homes ([Brinkman et al. 2022](#)).

As a thought experiment, imagine if all Eucalyptus were removed, and native grasses and shrubs returned. Berkeley would still be a fire prone landscape with vegetative fuels that are capable of carrying fire quickly to the edge of the community and causing structural ignition.

7. The City should FIRST focus on PGE Undergrounding Power Lines

Yes, this should be part of the solution but it is not the solution. Similarly, to the wholesale removal of Eucalyptus, Berkeley is in a fire prone landscape. Fire ran through this land frequently pre-European settlement, pre-PGE. The most effective way to reduce the risk of structural ignition, no matter the source, is to implement defensible space, inclusive of Zone 0, and harden your home.

8. Enforcement Timeline, Violations and Fines are too Aggressive

The City and Fire Department have always taken an education first approach. This is demonstrated by its performance over the next three years and the extremely small number of citations issued when compared to total inspections and total violations discovered:

- 21,000 inspections completed
- 9,000 violations identified
- Fewer than 70 citations issued (0.8% of violations, 0.3% of inspections)

When EMBER is enacted the Fire Department is going to pivot all its resources to engage and support the Grizzly Peak and Panoramic Neighborhoods and employ the same education first approach. The understands that it is much more effective to build a coalition of the willing and uses citations only as a last resort.

The new Zone Zero would be effective January of 2026, however defensible space inspections wouldn't begin until May of 2026. This gives residents about a year from adoption (anticipated June 2025) to inspections (start May 2026) to create Zone Zero. Then, after inspections begin in May of 2026, the inspection cycle would provide another ten weeks before the process would result in citations.

The department has a general policy of citing at the lowest possible level when that becomes necessary. This starts at a \$100 citation for the first month (cumulative, not daily). Fines can increase sharply if required based on the severity of the violation if deemed prudent by the inspecting official, or if properties remain non-compliant. This has not yet occurred in our inspection process.

Big picture on enforcement: The Fire Department's goal is voluntary compliance, not penalization. Enforcement steps (citations, fines, abatement, etc.) are tools to ensure everyone follows the rules that keep our community safe. In public statements, fire officials have repeatedly emphasized that they intend to roll out these requirements with an emphasis on education, outreach, and phased compliance. Indeed, the City is phasing the Zone 0 requirement to start with two specific high-risk neighborhoods (the Panoramic Hill area and the Grizzly Peak/Wildcat Canyon interface) with a lead time for residents of almost a year. This shows a measured approach, not a "gotcha" approach. Homeowners will receive inspection reports identifying what needs correction, group and 1:1 coaching from the department and will have the opportunity to fix issues before any penalties. Fines or other enforcement actions only come if a homeowner persistently neglects to address the hazards. And even then, the fines are there because *an unchecked fire hazard at one property puts the whole neighborhood at risk*. It's comparable to health codes or building codes – if someone refuses to fix an imminent hazard, eventually authorities must step in for the greater good.

9. If I do all this work, will I keep my home insurance?

Thousands of policy holders in the Berkeley Hills have already been hit with substantial rate increases or notices of non-renewal. EMBER is aligned with regulations issued by the [California Department of Insurance](#) (CDI) and the Institute of Business and Home Safety (IBHS) [Wildfire Prepared Home Checklist](#). While conducting this work on and around your home does not guarantee insurance, or premium discounts, they are much more likely to occur when a home has adopted these protective measures. In many cases, this might be a larger reduction in one year's insurance than the cost of doing the vegetation work.

Note that [State Farm's website](#) lists discounts for wildfire mitigation on the community level and property level.

10. Do I have to remove my fence?

No, you will not be required to remove or replace any fence that runs parallel to structures.

Fences that connect to a structure must have only the first five feet removed and/or replaced with a non-combustible

Why? Fences are connective fuels that act like a wick and move fire from one structure to another. See the [Balch Springs video](#) here for a perfect example or the pictures below from the Camp Fire in California.



The best practice based on volumes of scientific research, observed fire behavior over decades and after-action reports is that any fence within 5-feet of a structure should be moved to beyond that zone or replaced with a non-combustible alternative. **However, this will not be required in EMBER.**

11. Does EMBER require that I replace my roof?

EMBER does not require replacing your roof. For those residents that still have a wood shake roof, we know that these are one of the biggest contributors of additional structural ignitions during a wildfire and thus we strongly encourage replacement with a Class-A Fire Resistant Roof. However, EMBER does not require this.

12. Does EMBER require that I replace my deck?

EMBER does not require that you remove or replace your deck. Decks are considered part of your home. The area under decks must be maintained free of vegetative and non-vegetative combustible material and a Zone 0 must be maintained around decks and stairs. Once a wooden deck reaches the end of its useful life, **it should be replaced** with fire resistant materials.

13. Does EMBER require that I remove trees in Zone Zero?

Trees can remain in Zone 0 as long as they are mature: This means they are taller than the structure, are maintained free of any dead and dying branches and that branches are maintained ten feet (10') above the roof. No new trees may be planted in Zone 0.

14. Will I have a list of contractors to work with? Will I get guidance about how to do all this work?

Yes, the Berkeley Fire Safe Council (BFSC) has a [list of reputable contractors](#) who can create Zone Zero and do home hardening work and they are working towards increasing the numbers of contractors. The Fire Department will provide educational workshops to the contractors on Zone Zero and Home Hardening but cannot recommend contractors directly to residents.

15. Does EMBER include mandates for Home Hardening, or is it just about Zone Zero?

EMBER does not require residents to perform home hardening – it is focused on Zone Zero, and just in the two most vulnerable areas in the Berkeley Hills at this time, Grizzly Peak Mitigation Area and Panoramic Hill Mitigation Area.

Home Hardening is not mandated, but it is highly recommended. When Zone 0 and home hardening are done together – the risk of ignition will also substantially decrease. This may qualify homeowners for [insurance and/or insurance discounts](#) – check with your broker.

16. Will Fire Protection Plan (FPP) be Required for All Parcels?

The requirement is being misrepresented in public comments and is a long standing existing language. A Fire Protection Plan in the context of fire codes is a formal document that analyzes fire hazards and specifies mitigation measures for a given site or project. It is commonly required for new developments or construction in Wildland-Urban Interface (WUI) areas under the California Fire Code and building code. For example, California Code (CBC Chapter 7A / CFC Chapter 49) allows jurisdictions to require a Fire Protection Plan for new buildings in Very High Fire Hazard Severity Zones to ensure the design accounts for defensible space, ignition-resistant materials, water supply for firefighting, etc. Many Bay Area cities have adopted similar ordinance language. This is not a Berkeley invention – it's a standard tool in WUI fire safety. What Berkeley's existing FPP language does is extend the use of FPPs to certain existing situations where they can be helpful. It does *not* mean every individual homeowner will be randomly ordered to write up a plan for their home. The Fire Department doesn't have the bandwidth or desire to demand thousands of separate Fire Protection Plan documents from each homeowner – nor is that necessary. Instead, the ordinance's FPP provision is intended for special cases. For instance, if a property is unusually large, complex, or poses particular challenges, the Fire Code Official can require a customized Fire Protection Plan to ensure compliance. This could apply to, say: a large estate in the hills with multiple structures and extensive vegetation, or a situation where an owner is proposing an alternative method of compliance and needs to document it in a plan. Essentially, it's a way to require a site-specific wildfire safety plan when the basic one-size-fits-all rules might not suffice.

17. Scientists Don't Support Zone 0

There is an incredible amount of cherry-picking and miss-information that is being used by opponents of EMBER to elevate positions that are convenient to them – but not scientifically validated. It's often difficult to determine what is science, and what is an opinion of a scientist; especially one with little to no experience in this field. Below is an email from one of the leading researchers on the issue, Dr. Michael J. Gollner, Ph.D., [University of California, Berkeley Fire Lab](#):

Thanks for sharing this. A lot of information below, hopefully you can use this in discussion with neighbors and other residents.

I haven't seen this letter, but I've been working in this field for 15 years and involved with what IBHS has been promoting to the committee, including organizing several letters of support, and know some committee members and the long history in this process. It's a little disturbing reading this letter as it reminds me of expert witness work - they'll selectively pick anything they can to promote their stance out of papers, ignoring

those points that don't support their views. They also completely tried to tear apart our new manuscript without actually understanding the issues. I ran into the same issues when testifying to Congress, this appears to be a very political interpretation of the literature.

First, it's important to understand the scientific role of defensible space and home hardening. Homes can be exposed to large radiant heating from the wildfire itself or neighboring structures burning, direct flame contact from small flames adjacent to the structure, and flying embers that land and ignite new fires. The concept of protecting structures is to create a defensible space around the home that reduces exposure from the FIRE (both radiant and direct flame contact) to the home, and to make the outside "shell" of the home itself resistant to EMBERS and small flames. Defensible space therefore must accomplish moving flammable materials that can result in flames away from the structure. Hardening incorporates finer mesh over vents to prevent ember intrusion as well as fire resistant materials (and construction methods) to prevent embers from igniting outside materials. The issue is that even small flames, 1 foot tall can penetrate building materials that otherwise are fire resistant if left long enough. Heat fluxes from small sustained flames can far exceed ignition properties of most otherwise fire-resistant materials, therefore there is a need to support hardening on a home by moving any possible flames back some distance, preventing another "pathway" to ignition. The 5-foot zone "0" helps accomplish this.

Defensible space guidelines aren't to create completely barren landscapes. Within 30 feet there is room for "islands" of vegetation and other materials, however the 5 feet within the home has been highlighted to be clear of any flammable materials to prevent the intrusion of sustained flames to structures. I know it's a broad stroke, saying to remove everything flammable, but to take an alternative path would be incredibly complicated and have a lot to do with what materials a structure is made with, what wind and direction it might come from, the location of neighbors, and more details than we can possibly specify and understand. Keeping this small area as a "safe zone" around the structure will help give any hardening applied a real chance to actually survive the onslaught and help prevent more destruction. Because many houses are located so close to one another your neighbor's house is also a potential source so protecting entire communities is critical.

It's hard to make a better visual than IBHS' full scale

demonstrations: <https://www.youtube.com/watch?v=AYvwogREEk4>

We've been burning houses (7 now) on structure to structure experiments and we're learning a lot. I do believe the 5-foot zone is an integral part of the solution.

Regarding the criticism of our study (under revision in Nature Comm), what we did is really incorporate the interplay between variables using a machine learning method. Most previous studies did not do this. It becomes apparent when we look at the end that you need BOTH defensible space and hardening to make a substantial difference in losses, but there is SOME reduction from either independently. Of course, home spacing is one of the most important, but we know this can't be changed. I think whoever wrote this letter has no idea what fire modeling is or what the different techniques used were doing, or purposefully avoided stating the facts. The moisture

conditions were set to match weather conditions input from NOAA weather data, which is standard fire modeling practice, and we don't use the fire modeling to influence the structure loss information, we use the fire modeling as an input of EXPOSURE (fire and embers), missing from all previous studies. Most previous studies also looked at 30-foot defensible space, not 5 feet. We had access to high resolution imagery and Lidar that allowed us to look closer at 5 feet. It's not perfect, you'd need pre-fire on the ground studies, but there is a strong and clear relationship between zone 0 and reduced destruction, especially combined with home hardening. That also makes physical sense, we expect zone 0 to be most influential in reducing those local exposures and making hardening more effective.

I know Alexandra Syphard and her stance on the trees blocking embers. There is no field or test evidence for that anywhere. There is compelling evidence from investigations that local fuels that are connected leading to a structure help drive the fire to the structure and lead to ignition. I think all scientists agree you need flammable materials out of the 5-foot zone, they are debating on what is "flammable" and that sort of depends on whether you are talking about ignition from embers, a small fire creeping up, or a massive flame from a neighbor's house that lights your bush on fire that then lights your house on fire.

Sorry there is a lot of information here, but you are welcome to share this with neighbors. I don't like how clear cut it has to be, but I understand how difficult any regulation in practice will be. A bush honestly is a bad idea - flammability, it's a lot of fuel if it dries out, litters, how is it maintained, etc. Mulch - we tested it, it is all pretty bad that close to a house. A little potted petunia, probably fine, but how to distinguish how large is not, or if the flower pot is flammable. Do we create a flower pot certification process? It's really hard. So, I support a straightforward plan that's going to lower risk in high risk areas.

Michael J. Gollner, Ph.D.

Associate Professor and Deb Faculty Fellow

Vice Chair for Graduate Studies

Department of Mechanical Engineering

University of California, Berkeley

<http://firelab.berkeley.edu>

EMBER ENDORSEMENT LETTERS

1. Sierra Club

2. League of Women Voters

3. Disaster and Fire Safety Commission

4. Berkeley FireSafe Council

5. Firewise Leaders



NORTHERN ALAMEDA COUNTY GROUP
ALAMEDA ALBANY BERKELEY EMERYVILLE OAKLAND PIEDMONT SAN LEANDRO

June 2nd, 2025

Mayor Adena Ishii and City Council
2180 Milvia Street,
Berkeley, California 94704

Dear Mayor and Council,

We are writing to express our strong support for the proposed EMBER (Effective Mitigations for Berkeley's Ember Resilience) ordinance to create defensible space around homes in Berkeley's high wildfire hazard zones.

As climate change intensifies, wildfire risk in the East Bay hills grows more severe. The devastation of recent California wildfires has made it clear that proactive, science-based measures are essential to protect lives, property, and the environment. The EMBER ordinance's requirement to maintain a five-foot non-combustible buffer—Zone 0—around structures is a best practice that significantly reduces the risk of home ignition from windblown embers, the leading cause of structure loss in wildfires.

This ordinance aligns with the Sierra Club's core mission to protect the environment and promote community resilience in the face of climate change. By reducing the likelihood of catastrophic fires, this policy also protects surrounding ecosystems from severe burns, air pollution, and long-term ecological damage.

We appreciate the City's efforts to secure grant funding to support homeowners with compliance. Equitable implementation is critical to ensure that wildfire safety measures protect all residents, regardless of income or property ownership status.

While we recognize concerns about potential impacts to biodiversity and landscaping and technical implementation, we believe these can be addressed through thoughtful implementation that prioritizes native, fire resistant plants outside of the immediate Zone 0 buffer.

We urge the City Council to adopt this ordinance as a vital step in safeguarding Berkeley's communities and natural areas from wildfire risk.

Thank you for your leadership on this important issue.

Maxwell Davis, Chair
Sierra Club Northern Alameda County Group



June 2, 2025

To: The Berkeley City Council

From: The League of Women Voters of Berkeley, Albany, Emeryville

Honored Council,

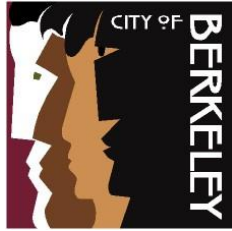
The League of Women Voters of Berkeley, Albany, Emeryville enthusiastically supports the Effective Mitigations for Berkeley's Ember Resilience (EMBER) Proposal that begins mandatory vegetation management in the City of Berkeley in response to AB 3074 passed into law in 2020. The League has been participating and discussing urban wildfire management in Berkeley through our Climate Team since 2019 when we partnered with the University of California at Berkeley in a neighborhood study. Our work has led us to the following conclusions:

- We are in a climate emergency and California's specific challenges are wildfire and drought.
- The need to adapt to the changing climate is urgent.
- Alameda County has one of the highest national FEMA risk scores, with a national score of almost 100% and a California score of almost 95%.
- Wildfire has undermined Berkeley's and California's ability to get and maintain property insurance, which is a threat to our state's economy.
- A catastrophic ember fire could burn much of the city, including flatland areas that house low-income and rent-controlled tenants who could be permanently displaced.
- The EMBER proposal is a well-designed four-stage plan that focuses first on mitigating risk in the most hazardous fire areas at the top of the North Hills and on Panoramic. It is a carefully considered plan in response to AB 3074.

Berkeley can be proud of the work of its fire department. With the EMBER plan, the city moves into a statewide role of creative leadership in response to the requirements of state law.

Thank you for supporting EMBER,

Kande Mosley Gandhi, *President, League of Women Voters Berkeley Albany Emeryville*



Office of the City Manager

DATE: May 28, 2025

To: Honorable Mayor and Members of the City Council

From: Disaster and Fire Safety Commission

Submitted by: Greg Murphy, Chair

Subject: MEMO: Support of Proposed EMBER Ordinance and Change to Building Codes Improving Fire Resilience

On January 22, 2025, the DFSC met and unanimously approved supporting the proposed ordinances presented to the council to improve fire resilience in the Berkeley Hills. The council unanimously approved the initial reading of these ordinances at a special meeting held on February 11, 2025.

The presentation to Council on Feb. 11 clearly showed the history and science that provided the rationale for the proposed ordinances. I will not add the content of the presentation to this memo, as the Fire Department's presentation was quite thorough and obviously compelling

To provide more opportunity to inform residents about the details of the ordinances and what new requirements will be enacted and the timeline for enforcement of the ordinance, workshops have been scheduled to present that information and to answer questions and concerns residents have prior to the 2nd reading of the ordinances which is scheduled for June 17, 2025.

The DFSC reiterates its support for these measures which will come before you on June 17th. Additionally, we support technical clarifications supporting effective mitigation and will continue to work with the BFD and COB to find ways and resources to help subsidize the costs to residents that may be incurred if the ordinances are approved.



<https://www.berkeleyfiresafecouncil.org/>

June 10, 2025

To: Mayor Ishii and City Council Members

cc: Greg Murphy, Susan Wengraf, Chief David Sprague, Assistant Chiefs Colin Arnold and Dave Winnacker

From: Berkeley FireSafe Council

Dear Mayor Ishii and Councilmembers Kesarwani, Taplin, Bartlett, Tregub, O'Keefe, Blackaby, Lunaparra and Humbert,

The Berkeley FireSafe Council (BFSC) would again like to express our strong support for the passage of the first phase of the EMBER program on June 17. Please consider our support twofold: first, as the position of your Fire Safe Council, whose sole mission is to make all of Berkeley safer from wildfire risk, and second, as the personal endorsements of the BFSC leaders whose names are on this letter.

After much research and discussion, BFSC has come to believe that **three** principal strategies will be needed to significantly reduce the risk of a catastrophic fire in Berkeley, also known as urban conflagration. These are:

1. Achieve widespread adoption of **defensible space** measures, including Zone Zero requirements, particularly in the high and very high fire hazard severity zones, as the State of California or the insurance industry may require, and as existing and future scientific studies indicate.
2. Achieve widespread adoption of **home hardening** measures, particularly including Class A roofs and covering all gutters, vents, and openings with fine mesh screening, especially in the high and very high fire hazard severity zones.
3. Achieve significant **hazardous fuel reduction**, including hazardous trees, both inside and east of the City, particularly in and downwind of fire pathways.

These strategies can also be seen as essential objectives, or end-states. All three are needed because none alone will significantly reduce the risk of a catastrophic wildfire.

The first strategy (**Defensible Space**) is the initial thrust of Berkeley's EMBER program. Widespread adoption will be achieved by changes to the Berkeley Fire Code

that should eventually be required of all property owners in the high and very high fire hazard severity zones, with significant help to residents from the City and community groups such as the Berkeley FireSafe Council and the Firewise communities in Berkeley. Your vote on June 17 is the beginning of this process.

The second strategy (**Home Hardening**) is not currently mandated by code except for new or remodeled homes. Therefore, for existing homes, widespread adoption will only be achieved through strong financial incentives or changes in the building code, together with educational and implementation support from the City and the above community groups. We have made a separate recommendation to you that a property tax credit, funded by a bond measure or grant from the State of California, would be the fastest and most effective way to achieve widespread adoption.

The third strategy (**Hazardous Fuel Reduction**) is being funded and implemented in varying degrees by public and private sector organizations, including the Berkeley FireSafe Council, the City, Lawrence Berkeley Lab, UC Berkeley, East Bay Municipal Utilities District, and the East Bay Regional Park District. BFSC has long advocated for greater urgency by all these organizations, first, to clean up the understories of eucalyptus groves, and then to remove these most hazardous trees. BFSC worked with the Disaster and Fire Safety Commission (DFSC) to develop its recommendation to you last year to allocate \$1 million of Measure FF funds to complete the cleanup of eucalyptus groves on private property, a program that BFSC had been doing for five years with volunteers. It is now time for the City to allocate \$2 to \$3 million in each of the next two years to remove all or most of the remaining blue gum eucalyptus trees on both City and private property in Berkeley. BFSC made this urgent recommendation to several of you to take advantage of Governor Newsom's recent Executive Order relaxing CEQA and other regulatory requirements for 2025 and 2026 (attached). We urge you to consider and adopt such a measure as soon as possible. **It is time to act.**

Our interactions with numerous residents and the Firewise communities has convinced us that EMBER is supported by the majority of the residents in the Berkeley Hills. The majority also want to harden their homes and to see the eucalyptus trees removed. Twenty-nine of 30 property owners gave BFSC consent to remove their eucalyptus trees last year. We urge you to act aggressively **on all three components** of the comprehensive strategy that is required to materially reduce Berkeley's wildfire risk.

Thank you for your efforts to make us safer from the significant risk we face.

Sincerely

Henry DeNero, President
Marcus von Engel, Vice President
Cynthia Chen, Treasurer
Benay Dara-Abrams, Secretary

Chris Cullander
Alec Dara-Abrams
Nancy Gillette
Andy Johnson
Annie Johnson
Kathleen Kelly
Brice McPherson
Nancy Rader
Bill Scott
Holly Singh

Attachment:

- March 19 Letter to Mayor Ishii and CMs Blackaby and O’Keeke



berkeleyfiresafecouncil.org

info@firesafeberkeley.org

March 19, 2025

To: Mayor Adina Ishii
Councilmember Brent Blackaby
Councilmember Shoshana O'Keefe

Cc: Fire Chief David Sprague
Assistant Chief Colin Arnold

RE: Governor Newsom's Executive Order

Dear Mayor Ishii and CMs Blackaby and O'Keefe,

It is our understanding that Governor Newsom's recent executive order waives CEQA requirements for jurisdictions such as the City of Berkeley to remove fuel, including live trees, that are considered by the jurisdiction to be a significant fire risk. It is also our understanding that the Berkeley Fire Department (BFD) is planning to send a letter to the State of California seeking authorization to remove vegetative fuel under the executive order. The executive order is apparently only for the calendar year 2025.

Given this development and the well-proven severe fire risk of blue gum eucalyptus and other hazardous trees in the City, we urge you to sponsor an emergency resolution to remove as many blue gum eucalyptus and other hazardous trees and shrubs as soon as possible under the executive order.

Doing this would require the use of unspent funds from Measure FF and/or "pulling forward" future funding. Our understanding is that there may be as much as \$9 million in unspent Measure FF funds that are either undesignated or are being held for future use. There is also as much as \$750,000 in unspent funds from the One-Time Eucalyptus Grove Clean Up program that could easily be repurposed for tree removal. Given the over \$10 million per year that the City receives from Measure FF, using significant funds for hazardous tree removal under the Governor's Executive Order should be possible.

The Berkeley FireSafe Council (BFSC) estimates that 85 blue gum eucalyptus remain on city property and that 850 remain on private property in Northeast Berkeley. There may also be one eucalyptus grove on private property near the top of Panoramic Way (although this grove may be on public land).

A significant percentage of these very hazardous trees could be removed with far less than \$5 million if the City acts quickly. The Department of Parks, Recreation & Waterfront and BFD have

already qualified several tree contractors who have been removing blue gum eucalyptus and other hazardous trees. We estimate that Parks removed as many of 30 blue gums in 2024, in Glendale La Loma and Remillard Parks and on city ROWs. By simply authorizing additional funds to this process under the Governor's executive order, the City could easily remove several hundred of the remaining trees before year end.

BFSC is applying for \$500,000 from PG&E in 2025 to remove as many as 190 blue gums from residential lots within the city. We do not expect to be awarded all of these funds. However, we have already received signed consents from 29 of the 34 property owners included in this grant application, and only one has declined. (The remaining four have not yet been contacted.) All of these property owners would grant consent to the City to remove their eucalyptus trees. We also know that four other large property owners who collectively own 430 eucalyptus would consent to have all or most of their eucalyptus trees removed. Thus, the City could quickly gain the consents and hire the tree contractors to remove a large percentage of the remaining eucalyptus trees within a very short time. Doing so would reduce or eliminate a threat that will otherwise take years to remove from the City, allowing the City and BFD to focus on other fire risks such as Zone Zero defensible space and home hardening. All of these elements are critically needed.

In relation to EMBER, although BFSC fully supports the proposed program, our research, investigation and ground level knowledge has convinced us that the Fire Zone 4 barrier will likely not block a wind-driven fire coming out of Tilden Park. This conclusion is based on the apparent "species agnostic" underlying data in the XyloPlan pathway modeling which does not account for the uniquely dangerous characteristics of the blue gum eucalyptus, and the estimated 1,500 tons of eucalyptus understory fuel in Tilden Park adjacent to the City that is not accounted for in the underlying data set. In addition to EMBER, the City needs to remove as many of the hazardous trees and heavy ground fuel deposits within the City as possible on an emergency basis. The East Bay Wildfire Coalition also needs to encourage the East Bay Regional Park District to clean up the eucalyptus understory and thin the forest in Tilden as quickly as possible. A wind-driven fire in Tilden will likely blow over or burn through Fire Zone 4.

If the City undertakes this emergency task, BFSC could conduct restoration work following the eucalyptus removals, within the limits of our volunteer program. This restoration work would require some funding from the City. For example, we restored eight properties in 2024 where 91 eucalyptus trees had been removed, for less than ten percent of the tree removal cost. This ratio may need adjustment at a larger scale where we might require professional contractors to supplement our volunteer program.

We urge you to consider this action on an emergency basis.

Sincerely,

Henry DeNero

President, Berkeley FireSafe Council

May 20, 2025

The Honorable Mayor and Council Members of the City of Berkeley
Berkeley City Council, 2180 Milvia Street Berkeley, CA 94704

Re.: Personal Endorsements for EMBER – Strengthening Berkeley's Wildfire Resilience

Dear Mayor Ishii and Council Members Kesarwani, Taplin, Bartlett, Tregub, O'Keefe, Blackaby, Lunaparra, and Humbert,

As individuals deeply committed to the wildfire safety of our community, and in our personal capacities, we, the leaders of the Berkeley Woods, Creston, Firebreakers, GLaM, Grizzlies, Grizzly Pack and Park Hills Firewise Communities (all seven certified Firewise Communities within the Grizzly Peak Mitigation Area), are writing to express our strong personal endorsements for the proposed **EMBER initiative**.

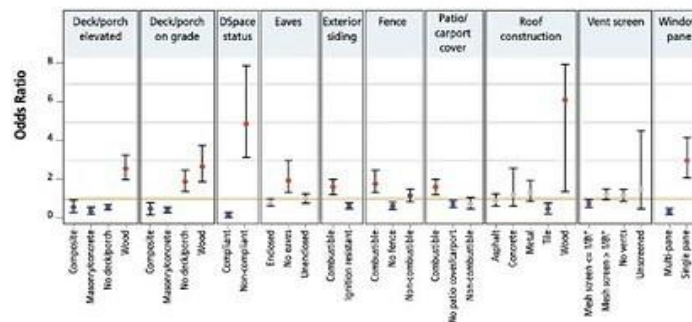
We have each dedicated considerable time and effort to understanding the wildfire science that supports required measures to prevent wildfire in our urban-wildland interface, and mitigating the significant wildfire risks that Berkeley faces. The recent history of wildfires in California underscores the urgency of such measures.

We are convinced that the EMBER initiative is the right way to address these challenges:

- **The science behind EMBER is evidence-based, persuasive, and compelling. It gathers strong consensus from both wildfire scientists and California firefighters.** As an example of such wildfire science, this article shows that the two factors most significant to the ignition of houses in the recent Paradise Fire (i.e. Camp Fire) are (a) a wood roof and (b) non compliant defensible space (i.e. zones 0, 1 and 2).

What houses survived?

Post Incident Analysis of the relative importance that individual findings had on the survival of a structure.



Institute for Catastrophic Loss Reduction – data from Camp Fire

Porter, K., Scawthorn, C., Sandink, D. (2021). An impact analysis for the National Guide for Wildland-Urban Interface Fires. Prepared for the National Research Council of Canada.

EMBER

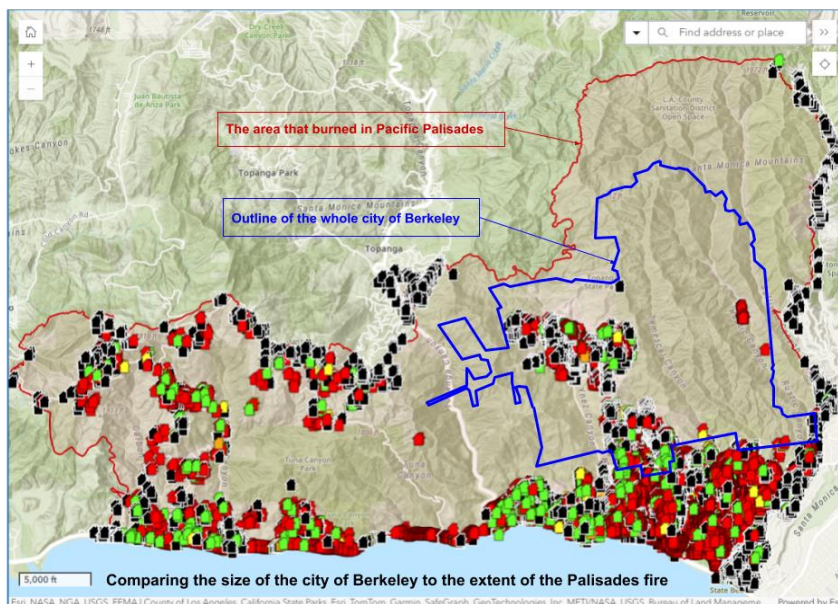
- Our knowledge of our own neighborhoods indicates to us that the cost of compliance in zone 0 is within the estimate of \$3-5K given by the Berkeley Fire Department for a majority of homeowners (although not all). There can be strong

emotional attachment to existing plants, particularly for long-time residents, or in small lots with sophisticated multi-layered landscaping, but we do not expect a significant impact to the amount of overall green vegetation in our neighborhoods due to compliance in zone 0, and the Northern Alameda County Chapter of the Sierra Club has endorsed EMBER.

- If our neighborhoods can quickly become 80-85% compliant with defensible space requirements in all zones, which cannot happen without EMBER, we believe that we have a chance to withstand a wildfire coming from Tilden Park in Extreme Fire Weather.
- Conversely, we believe that, until our neighborhoods are compliant, we are likely to see a wildfire during Extreme Fire Weather turn into an urban conflagration while going downhill, without certainty as to where it will stop.

We believe that time is of the essence: every fire season increases our collective danger.

The state has had zone 0 proposals in its hands for 5 years. If it had enacted regulations in 2021, what could that have meant for Altadena and Pacific Palisades? We, on the Berkeley Ridge, and possibly a large part of Berkeley, could be Pacific Palisades next fire season. The chart below shows the entire city of Berkeley falling within the footprint of the Palisades Fire.



We urge you to pass EMBER now, without any further waiting, and to allocate the necessary resources to it. There are always naysayers in every discussion of any public policy, but on the EMBER policy, we should stand tall, follow the science, and lay a trail for other California communities. This investment will not only enhance our city's physical resilience but also foster a more informed and prepared citizenry. We are

personally committed to contributing to the success of EMBER by continuing to advocate for its principles and encourage participation within our respective communities.

Thank you for your dedication to Berkeley and for considering our personal endorsement of this crucial initiative. We look forward to seeing EMBER successfully implemented for the benefit of all Berkeley residents.

Sincerely,

Heidi Hintz for Jennifer Braun

Carol Curtis

Ruth Ehrenkranz

Jim Hynes

Ever Leon

Leah Rosenthal

Michel Thouati

Home Hardening Mesh Program



The Home Hardening Mesh Program offers residents free metal mesh and gutter guards. Metal mesh and gutter guards can prevent embers from igniting homes, contributing to home hardening best practices. Providing home hardening assistance to residents contributes to overall wildfire resiliency in the Berkeley Hills. The Mesh Program is now available to all FireWise communities as well as residents of Panoramic Hill.

We don't provide on-site installations or property assessments for mesh requirements. For information about installation options or vent types, residents can visit <https://www.wildfiredefensemesh.com/bfd/berkeley-fd>.

The Mesh sizes we provide are as follows: Gable Vent/Off-Ridge Vent Mesh Size: 24" x 19" • Foundation Vent Mesh Size: 7.5" x 16" • Soffit Vent Screens Size: 22" x 3.5" • Gutter Guards Size: 5" x 4' • Deck Screening Size: 24", 38", 49"

To apply to receive free metal mesh and gutter guards, [click here](#).

For mesh measuring and installation information, please go to the [Wildfire Defense Mesh website](#).

For more information, please read our [factsheet](#).

EAST BAY REGIONAL PARKS DISTRICT (EBRPD) FIRE SERVICE UPDATE

Wildfire protection is one of the East Bay Regional Park District's top priorities. With our 24/7 dispatch center, we remain available to respond to emergencies at all hours. In addition, the Park District participates in year-round fuel reduction work that includes employing a professionally trained full-time and on-call fire department, prioritizing vegetation management, and maintaining specialized wildland firefighting equipment, which includes two helicopters capable of dropping water on wildfires. The Park District has five professionally trained fire captains, three lieutenants, and eight professionally trained firefighters, including additional on-call firefighters who are park staff with other primary occupations but are fully trained and available when needed, even after hours.

The Park District also monitors weather and fire conditions using four Remote Automatic Weather Stations (RAWS) in its parks, along with National Weather Service information, and deploys fire staff and equipment accordingly. The RAWS are part of a network of more than 10 throughout Alameda and Contra Costa counties that provide real-time fire weather information and help determine fire dangers and potential fire behavior. Staffing at Fire Station 1 in Tilden Regional Park is guided by the Park District's Fire Danger Operating Plan (FDOP). The Park District has never had a regular 24-hour schedule for its firefighters. However, overnight staffing occurs during Red Flag days or other extreme weather events, such as forecasted dry lightning strikes.

The Park District also implements special fire restrictions and rules in parks based on fire conditions, which include prohibiting open-fire barbecues, limiting public access, and temporarily closing parks. Additionally, the Park District has established mutual aid agreements with CAL FIRE and other local fire agencies, ensuring a quick fire response and bolstering available resources to effectively suppress wildfires.

Press Release

FOR IMMEDIATE RELEASE
Monday, May 19, 2025

Contact: Dave Mason, Public Information Supervisor
Phone: (510) 409-7509 | mediainquiries@ebparks.org

Park District Investing \$10.9 Million to Reduce Fire Fuels in the East Bay *\$8.3 Million in Grants; \$2.6 in District Matching Funds*

The East Bay Regional Park District is set to spend \$10.9 million over the next three years to reduce fire fuels at Anthony Chabot, Tilden, and Wildcat Canyon Regional Parks, Claremont Canyon Regional Preserve, and Carquinez Strait Regional Shoreline. The funding will help reduce wildfire risks by removing dead and dying trees and hazardous vegetation on over 600 acres. Dead trees burn hotter and faster and can cast embers long distances, igniting new fires.

These efforts are in addition to ongoing fuels reduction work districtwide, including large-scale projects at Anthony Chabot Regional Park (544 acres) and Tilden Regional Park (39 acres), a 16-person year-round fuels reduction crew, and annual goat, sheep, and cattle grazing. In 2024, the Park District's fuels reduction crew removed hazardous fire fuels on 104 acres in 11 parks. Additionally, more than 86,800 acres of parkland are grazed annually by cattle, sheep, or goats.

"The grant funding enhances our ability to protect the public and safeguard our natural landscapes," said Park District Interim Fire Chief Khari Helae. "Securing the funding is a testament to the Park District's efforts—from planning to permitting—to manage the detailed grant application process and its proven ability to carry out large-scale fuels reduction projects in support of the community."

The \$10.9 million for fuels reduction projects includes \$8.3 million in grants, with \$6.1 million coming from the Federal Emergency Management Agency (FEMA), \$2.1 million from the California State Coastal Conservancy, and \$100,000 from the U.S. Forest Service. FEMA funding was obtained in partnership with U.S. Sen. Alex Padilla, who secured \$1.5 million in the 2023 budget, and U.S. Rep. Eric Swalwell, who secured \$1.4 million in the 2024 budget.

An additional \$2.6 million comes from required Park District matching funds, which include general funds and voter-approved local revenue measures like Measure FF. These local revenue measures enhance the Park District's ability to qualify for and secure grant funding by providing required matching contributions.

"These projects are vital to reducing wildfire risks in the East Bay," said Park District General Manager Sabrina Landreth. "We thank FEMA, Sen. Alex Padilla, Rep. Eric Swalwell, the California State Coastal Conservancy, the U.S. Forest Service, and Park District voters for their support and for prioritizing wildfire mitigation in the East Bay."

For large scale vegetation management projects, the Park District utilizes a climate-friendly carbonizer to dispose of vegetation. The carbonizer burns organic matter at 1,300 degrees Fahrenheit with little oxygen, which produces very low emissions—especially compared to conventional disposal methods such as open pile burning or transporting debris long distances in diesel trucks. The resulting biochar is being used throughout the Park District to enhance soil health, improve water retention, and increase crop productivity, including at the District's Ardenwood Historic Farm in Fremont.

The Park District Board of Directors will consider authorizing \$1,883,261 in matching funds from Measure FF at their upcoming Board Meeting on Tuesday, May 20, 2025. Measure FF was passed in 2018 by voters in the communities of Alameda, Albany, Berkeley, El Cerrito, El Sobrante, Emeryville, Kensington, Oakland, Piedmont, Richmond, and San Pablo to provide funding to reduce fire risks, improve public access, and restore natural habitat. The Board of Directors previously authorized \$500,016 in matching funds in March 2023.

Source	Grant Amount	Matching Funds	Project Locations	Acres
FEMA Pre-Disaster Mitigation Grant Program (PDM)	\$1,500,000	\$500,016	Anthony Chabot	84
	\$1,379,072	\$465,020	Anthony Chabot	64
FEMA Hazard Mitigation Grant Program (HMGP)	\$3,218,820	\$1,067,941	Tilden & Claremont Canyon	325
State Coastal Conservancy (SCC)	\$2,075,000	\$500,000	Tilden, Anthony Chabot & Carquinez Strait Regional Shoreline	130
California Fire Safe Council Cooperative Fire Program of the U.S. Forest Service	\$100,000	\$100,300	Wildcat Canyon	58.63
TOTAL	\$8,272,892	\$2,633,277		661.63

Map: 2025 Grant Funding Allocations



The East Bay Regional Park District is the largest regional park system in the nation, comprising 73 parks, 55 miles of shoreline, and over 1,330 miles of trails for hiking, biking, horseback riding, and environmental education. The Park District receives an estimated 30 million visits annually throughout Alameda and Contra Costa counties in the San Francisco Bay Area.

###

**EXECUTIVE DEPARTMENT
STATE OF CALIFORNIA**

PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS in October 2015, Governor Brown proclaimed a State of Emergency to exist in California due to a vast tree die-off throughout the state, which increased the risk of wildfires; and

WHEREAS this tree die-off has continued to worsen forest conditions, creating extremely dangerous fire risk; and

WHEREAS in March 2019, I proclaimed a State of Emergency to exist in California due to catastrophic wildfire risks created by forest conditions, facilitating the completion of high-priority forest management projects through suspensions of various permitting and environmental review provisions; and

WHEREAS wildfires in California have grown in size, duration, and destructiveness because increasing whiplash between periods of extreme rain and extreme drought has caused accumulation of fuels in the State's forests, the majority of which are owned and managed by the federal government; and

WHEREAS several of the most costly fires have occurred in the Wildland Urban Interface, including most recently the January 2025 firestorms in Los Angeles County; and

WHEREAS there are millions of housing units in the Wildland Urban Interface, and the majority of these structures reside in high or very high fire hazard severity zones, and immediate action is needed to prevent similar wildfires in the imminent future; and

WHEREAS because of these conditions, the Board of Forestry and Fire Protection developed the California Vegetation Treatment Program (CalVTP) in 2019, to streamline environmental review of vegetation management projects through reliance on a programmatic environmental impact report covering 20 million acres of the State; and

WHEREAS 106 projects have been approved to date under CalVTP, including prescribed burns, mechanical treatment, manual treatment, herbicide application, and prescribed herbivory projects; and

WHEREAS even with the success of CalVTP, more is needed to expedite critical fuels reduction projects in more areas of the State, including those not yet covered by CalVTP, to protect the lives and property of Californians; and

WHEREAS certain statutory, regulatory, and administrative requirements, including, but not limited to, studies, publication periods, and season-specific surveys, significantly impede State and local agencies' ability to immediately permit and implement necessary projects to protect the lives and property of Californians; and

WHEREAS under the provisions of Government Code section 8558(b), I find that the circumstances of the catastrophic wildfire risks created by forest

conditions across the state, by reason of their magnitude, are beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of Government Code section 8558(b), I find that conditions of extreme peril to the safety of persons and property exist within the State of California due to these conditions; and

WHEREAS under the provision of Government Code section 8625, I find that local authorities lack the resources needed to cope with the emergency; and

WHEREAS under the provisions of Government Code section 8571, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay the mitigation of the effects of the catastrophic wildfire risks created by forest conditions across the state.

NOW, THEREFORE, I, GAVIN NEWSOM, Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes, including the California Emergency Services Act, and in particular, Government Code section 8625, **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist within the State of California due to these conditions.

IT IS HEREBY ORDERED THAT:

1. All agencies of the state government utilize and employ state personnel, equipment, and facilities for the performance of any and all activities consistent with the State Emergency Plan. Also, all residents are to obey the direction of emergency officials with regard to this emergency in order to protect their safety.
2. State statutes, rules, regulations, and requirements that fall within the jurisdiction of boards, departments, and offices within the California Environmental Protection Agency and the California Natural Resources Agency are hereby suspended to the extent necessary for expediting critical fuels reduction projects, as defined in Paragraph 4, are initiated this calendar year, and that the suspension is approved by the appropriate Agency secretary as provided in Paragraph 3, and subject to Paragraph 5. Laws suspended by this paragraph include, but are not limited to, the California Environmental Quality Act (Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division) and the California Coastal Act (Division 20 of the Public Resources Code, commencing with section 30000, and regulations adopted pursuant to that Division).
3. Individuals or entities who desire to conduct activities under the suspension of statutes, rules, regulations, and requirements specified in Paragraph 2 shall first request that the appropriate Agency Secretary, or the Secretary's designee, make a determination that the proposed activities are eligible to be conducted under the suspension. The Secretary of the California Environmental Protection Agency and the Secretary of the California Natural Resources Agency shall use sound discretion in applying this authority to ensure that the suspension serves

the purpose of accelerating critical fuels reduction projects, while at the same time protecting public health and the environment. Each Agency shall maintain on its website a list of all suspensions approved under this Paragraph.

4. Critical fuels reduction projects eligible for suspension of statutes, rules, regulations, and requirements specified in Paragraph 2, shall include as a primary objective at least one of the following activities:
 - a. Removal of hazardous, dead, and/or dying trees;
 - b. Removal of vegetation for the creation of strategic fuel breaks as identified by approved fire prevention plans, including without limitation CAL FIRE Unit Fire Plans or Community Wildfire Preparedness Plans;
 - c. Removal of vegetation for community defensible space;
 - d. Removal of vegetation along roadways, highways, and freeways for the creation of safer ingress and egress routes for the public and responders and to reduce roadside ignitions;
 - e. Removal of vegetation using cultural traditional ecological knowledge for cultural burning and/or prescribed fire treatments for fuels reduction; or
 - f. Maintenance of previously-established fuel breaks or fuels modification projects.
5. Any activities performed under the suspension of statutes, rules, regulations, and requirements specified in Paragraph 2 shall be in accordance with the State Environmental Protection Plan, or a comparable plan describing how such actions will balance expeditious fuels reduction and environmental protection.
6. The Board of Forestry and Fire Protection shall take immediate steps to update the California Vegetation Treatment Program Environmental Impact Report (CalVTP EIR), in consultation with the California Natural Resources Agency and others as appropriate, to increase CalVTP's efficiency and utilization, in order to continue promoting rapid environmental review for large wildfire risk reduction treatments. In addition to accessing expertise from all appropriate state agencies, this process should also include public workshops with practitioners to solicit feedback on experiences during implementation in the first five years of the CalVTP and suggested improvements.
7. As necessary to assist local governments and for the protection of public health and the environment, state agencies shall enter into contracts to arrange for the procurement of materials, goods, and services, including housing for hand crews and required pre-work environmental surveys, to quickly assist with the response to this emergency and to achieve the purposes of this Proclamation. Applicable provisions of the Government Code and the Public Contract Code, including but not limited to travel, advertising, and competitive bidding requirements, are suspended to the extent

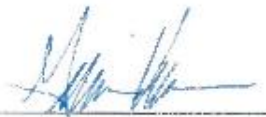
necessary to address the effects of this emergency and to carry out the purposes of this Proclamation.

8. The Secretary of the California Environmental Protection Agency and the Secretary of the California Natural Resources Agency shall confer with subject matter experts, including those within their respective Agencies, and provide to me, within 60 days, their consolidated recommendations for increasing the pace and scale of beneficial fire in California. These may include recommendations to ensure more consistency among local air pollution control districts and increasing allowable burn days.
9. The restrictions set forth in Penal Code section 396, which are automatically triggered upon proclamation of a state of emergency, are suspended, and no such restrictions are imposed, with respect to this State of Emergency.

I FURTHER DIRECT that as soon as hereafter possible, this Proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Proclamation.

This Proclamation is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

IN WITNESS WHEREOF I have
hereunto set my hand and caused
the Great Seal of the State of
California to be affixed this 1st day
of March 2025.



GAVIN NEWSOM
Governor of California



ATTEST:



SHIRLEY M. WEBER, PH. D.
Secretary of State