



October 21, 2022

Letter from the Chair

Dear Friends:

The HEF was formed in October 1992 in direct response to the need for a coordinated regional approach to wildland urban interface fires. This year our agencies reinforced the importance of HEF members' continued collaboration, albeit remotely due to on-going Covid-19 protocols.

In spite of a wet start to 2022, a dry winter left the Bay area facing regional impacts of drought. The year progressed with National Weather Service wind events, heat advisories, red flag, and air quality/smoke warnings. Public interest in wildfire prevention remained high, as indicated by funding support.

The region continued to experience widespread, sudden die-back and severe tree mortality. During 2022 agencies stepped up selective tree removal to respond to increased fire hazard. Local fire agencies encouraged residents and employees to prepare for potential evacuation by participating in local drills. Planning, regional standards and research introduced new best practices, development of a Regional Priority Plan, findings from research into structure survival, integrated wildfire forecasting, biomass utilization and countywide fine scale vegetation mapping.

Active inspection, compliance and abatement programs have improved public safety of both private homes and public lands within Berkeley, El Cerrito, Kensington, Moraga, Oakland and Orinda.

Hazardous fuel reduction projects continued in full force. The University of California, Berkeley completed Phase I of hazardous fuel reduction along the Upper Jordan Fire trail, and Moraga Orinda Fire District began the Tunnel East Bay Hills Fuel Break, both funded through the CAL FIRE California Climate Investments grant program. Members' additional fuel mitigation projects throughout the East Bay hills have expanded our system of strategic fuel reduction zones through use of goats, dedicated fuels crews, machinery, as well as prescribed fire. New grant funds and internal funding increased our capacity for projects.

The 2022 Annual Report serves to document positive changes our agencies have brought to the Oakland-Berkeley Hills region. This report highlights efforts of both Hills Emergency Forum and individual members during the past year. We recognize that our work is by no means completed.

On behalf of all the members of the Forum, I would like to thank the many individuals and organizations whose support and input have enabled us to advance our agenda of emergency preparedness.

Sincerely,

Dr. Michael T. Brandt, Deputy Lab Director for Operations
Chief Operating Officer Lawrence Berkeley National Lab
HEF Chair 2021-22

❖ City of Berkeley ❖ City of El Cerrito ❖ City of Oakland
❖ California Department of Forestry and Fire Protection ❖ East Bay Municipal Utility District
❖ East Bay Regional Park District ❖ Lawrence Berkeley National Laboratory ❖
❖ Moraga Orinda Fire District ❖ University of California Berkeley ❖
E-mail: hillsemergencyforum@comcast.net ❖ Web site: www.hillsemergencyforum.org

Hills Emergency Forum (HEF) 2022 Annual Report

2022 Highlights

In fulfillment of its primary mission, the Hills Emergency Forum (HEF) continues to provide a sustainable framework for interagency communication, joint planning and coordinated response to the needs of our member agencies' various constituents. The organization's goals were developed over the years and grouped into the four areas of Assessment, Mitigation, Preparedness and Response. These goals continue to serve as milestones for our collective efforts. However, many of these goals are now in a "maintenance" mode. The following 2022 Annual Report covers the period from October 15, 2021 through October 15, 2022

ASSESSMENT

California continues to experience longer wildfire seasons as a direct result of Climate Change. Extended dryness originating from January is expected to continue into the Spring with little perception leaving most of the state in moderate to extreme drought conditions prior to Summer. These continued dry conditions with above normal temperatures through Spring will leave fuel moisture levels lower than normal increasing the potential for wildland fire activity.

CAL FIRE 2022 Fire Season Outlook¹

Collaboration During Continued Drought and Wildfires

2022 continued with damaging wildfire activity in 6,739 incidents with 9 fatalities, and 880 structures damaged or destroyed over 365,895 acres burned as of October 10, 2022. Four of the top 20 largest California wildfires burned in July and August of 2021. The 1991 Tunnel Fire in the Oakland Berkeley Hills remains the 3rd top deadliest since records began in 1932.² On July 10th, an ignition in Knowland Park, Oakland, showcased the effectiveness of hazardous fuel reduction activities. The fire moved across Skyline Boulevard into Anthony Chabot Regional Park. The park had recently been grazed by goats, so the firefighters were able to contain the fire to just a few acres and keep it out of a nearby eucalyptus forest.



An ignition from Knowland Park in Oakland showcased the effectiveness of goat grazing in adjacent Anthony Chabot Regional Park. Firefighters were able to contain the damage to just a few acres.

At the start of the 2022 water year, some areas in California already received more precipitation in 3 months than they had in the prior 12 months, and the hope was that drought conditions would subside. However, a dry January and February, and near record warmth in March and April, resulted in less than two-thirds of typical snowpack, and low fuel moisture readings early in the Spring. On March 28 Governor Newsom issued an Executive Order calling for greater drought response. On April 26 EBMUD Board of Directors declared a Stage 2 Drought and mandated 10% water use reduction District-wide. In addition, National Weather Service issued "wind advisories" and "red flag warnings" several times throughout the year, starting in late January.

¹ Source: <https://www.fire.ca.gov/incidents/2022/>. Accessed 10/10/22. 2021 had 8,835 incidents, over 2,568,948 acres, 3 fatalities and 3,629 structures damaged or destroyed. Five-year average is 6,120 fires over 1,613,224 acres.

² Source: Top 20 Largest California Wildfires https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf Top 20 Deadliest California Wildfires https://www.fire.ca.gov/media/lbfd0m2f/top20_deadliest.pdf. Accessed 10/10/22.

Public interest in wildfire prevention remained high as indicated by the support for state and local funding. In November 2020, 74.19% of Berkeley residents approved Measure FF with a parcel tax for \$8.5 million for emergency response and preparedness. Followed by Contra Costa County residents supporting Measure X, and Orinda residents voting in Measure R. Other local residents continued to benefit from budget increases. In their 2021 two-year budget process, Oakland City Council provided an additional \$500,000 during fiscal year 2021-22 for hazardous fuel reduction. In April 2021, Governor Newsom and State Legislators provided an early budget action with an infusion of \$536 million that continued into 2022 to improve California's resilience to wildfire. Additional funds in the regular budget cycle increased to a total over \$1.5 billion. The State Budget also included a \$13.5 million direct allocation to the East Bay Regional Park District to address the sudden increase in tree mortality and to provide fire-fighting equipment.

HEF SLC member collaboration continued in 2022 with local and State law enforcement agencies. Over the 4th of July weekend the group collectively closed Grizzly Peak Boulevard from Claremont Avenue to Centennial Road to reduce the chance of wildfire ignition from illegal fireworks. The closure was coupled with roving patrols throughout the East Bay Hills with the result of no wildfires in the area. The HEF SLC members continued to work together to block vehicular access to the popular scenic look-out areas, as well as coordinate continued enforcement to reduce the potential for ignitions in strategic locations.

Close interagency coordination is also critical for evacuation orders to be successful. HEF member jurisdictions have their residents covered by the ZoneHaven community evacuation interface³ to facilitate evacuation coordination. AC Alert emergency messages and local Nixel alerts encourage residents to "find their zone." Berkeley, El Cerrito-Kensington, Moraga Orinda Fire District/ Lamorinda and Piedmont sponsored virtual or live evacuation drills during 2022; utilizing the Zonehaven platform and AC Alert or the Contra Costa County CWS (community warning system). These drills provided not only the opportunity for interdepartmental coordination, but also for the community to familiarize themselves with fire weather and fire evacuation messages, status of home evacuation zones, and to practice their household decision making. Lawrence Berkeley Lab also held a full-scale exercise in September focused on wildfire scenario with evacuation. During July 2022, City of Berkeley introduced a new outdoor warning system. The first five speaking sirens were installed to alert residents about all types of emergencies and providing hyperlocal evacuation messages. Berkeley's speaking sirens system join the Oakland and UC Berkeley alert & warning sirens heard throughout the East Bay that indicate residents should follow local emergency broadcast news stations.⁴

Planning, Regional Standards and Research

Planning and Regional Standards

The Association of Bay Area Governments provided a series of four workshops and seven resource guides focused on "Wildfires- How to preserve and protect housing."⁵ The Governor's Office of Planning and Research published two new technical advisories in 2022 to support wildfire hazard

³ <https://community.zonehaven.com/>. Accessed 10/10/22.

⁴ Siren Alerting and Warning Sytem. Testing of outdoor sirens first Wednesday of every month at noon. <http://www2.oaklandnet.com/oakcal/groups/fire/documents/webcontent/oak063278.pdf>. Accessed 10/10/22.

⁵ Association of Bay Area Governments (ABAG). <https://abag.ca.gov/technical-assistance/wildfires-how-preserve-protect-housing>. Accessed 10/10/22.

planning in the wildland urban interface.⁶ These resources provide important information for our local jurisdictions as they balance housing needs with wildfire safety. HEF Member planning departments continue to be challenged by development of Accessory Dwelling Units (ADUs) in high fire areas. The resources are especially useful as members update their Housing and Safety Elements, as well as Local Hazard Mitigation Plans or overlay zones.

The California Vegetation Treatment Program (CalVTP), completed in 2019⁷, allows CAL FIRE, along with other agency partners, to expand their vegetation treatment activities to treat up to approximately 250,000 acres per year, contributing to the target of 500,000 annual acres of treatment on non-federal lands as expressed in Executive Order B-52-18. During 2021, CAL FIRE offer training on how eligible project proponents can use the CalVTP to comply with CEQA, if they are proposing vegetation treatments consistent with the CalVTP Program EIR. The CalVTP defines the vegetation treatment activities and associated environmental protections to reduce the risk of loss of lives and property, reduce fire suppression costs, restore ecosystems, and protect natural resources as well as other assets at risk from wildfire. The CalVTP supports the use of prescribed burning, mechanical treatments, hand crews, herbicides, and prescribed herbivory as tools to reduce hazardous vegetation around communities in the Wildland-Urban Interface (WUI), to construct fuel breaks, and to restore healthy ecological fire regimes. In 2022 East Bay Regional Park District began the environmental planning process of tiering off the CalVTP with a project specific analysis to cover the areas experiencing sudden tree mortality, as well as those areas not already covered by environmental documents. EBRPD plans to have its CALVTP submitted for review in November this year.



The NatureCheck⁸ study, developed by the East Bay Stewardship Network, was published in April 2022. The data develop with five agency partners creates a baseline for measuring wildlife health in the East Bay.

In May 2022, the CAL FIRE Santa Clara Unit updated their 2022 Strategic Fire Plan with input from HEF members.⁹ City of Berkeley is developing a Community Wildfire Protection Plan and East Bay Regional Park is updating its Local Hazard Mitigation Plan.¹⁰ Both plans are expected to be completed early 2023.

Lawrence Berkeley National Laboratory completed their comprehensive Vegetation Management Guide for their grounds staff. Developed collaboratively by a multidisciplinary team, the Guide covers both fuel reduction treatments (fire hazard reduction and firewise structure ignition zones), environmental

⁶ Governor's Office of Planning and Research. Fire Hazard Planning Technical Advisory 2022 Update. https://opr.ca.gov/docs/20220817-Fire_Hazard_Planning_TA.pdf Wildland-Urban Interface Planning Guide: Principles and Best Practices for California Communities. August 2022. https://opr.ca.gov/docs/20220817-Complete_WUI_Planning_Guide.pdf. Accessed 10/10/22.

⁷ For more detail about the California VTP see <https://bof.fire.ca.gov/projects-and-programs/calvtp/>. Accessed 10/10/22.

⁸ East Bay Stewardship Network. NatureCheck <https://www.ebparks.org/natural-resources/naturecheck> Accessed 10/10/22.

⁹ Cal Fire Santa Clara Unit 2022 Strategic Fire Plan. <https://osfm.fire.ca.gov/media/hjndvue2/2022-santa-clara-contra-costa-alameda-west-stanislaus-west-sann-joaquin-unit-fire-plan.pdf>. Accessed 10/10/22

¹⁰ Berkeley CWPP <https://berkeleyca.gov/safety-health/disaster-preparedness/community-wildfire-protection-plan> East Bay Parks LHMP <https://www.ebparks.org/projects/fema-local-hazard-mitigation-plan>. Accessed 10/10/22.

(sustainability, erosion control, stormwater management) and worker safety concerns. The Guide reflects the history of team science and richness of expertise found at Berkeley Lab. Implementation of this new guide is on-going. An annual schedule of activities was developed and work based on this schedule was instituted.

During 2022 HEF SLC Members participated in the development of the Regional Priority Plan.¹¹ This regional plan focuses on protecting natural resources through wildfire mitigation planning and provides a conduit to funding from the State Natural Resources Agency. Eight strategies were identified as priorities including: equipment and personnel capacity building, funding and fundraising capacity building, broadening prescribed burn capacity, landowner fire education and outreach, fuel reduction project support, long term site management support, resource sharing, and post fire recovery preparation.

Every three years the California code cycle provides an opportunity to review and revise the California Building Standards, including the California Fire Code. During 2022, the State developed their recommendations for updates; issuing recommendations on July 1 with an effective date of January 1, 2023. In Contra Costa County, MOFD led a group of fire officials with the goal of developing a best practices model code for the local jurisdictions to consider when updating their local codes. Planning included a review of the various jurisdictions codes: where they are similar and where they differ. The model code was shared with agencies for local adoption in late 2022-23.

In 2001 the Federal Register published a list of communities at high risk from wildfire that neighbored federal lands. All of our HEF communities were listed as *Communities at Risk*. In 2018 and 2019, California State Legislature (SB901 + AB1823) introduced requirements to develop criteria for *Fire Risk Reduction Communities*. 2022 was the first year that local governments could apply to be evaluated to join the list showing that they use best practices for local fire planning. On the short list of 32 from around the state, four of our HEF agencies met the criteria: City of Berkeley, East Bay Regional Park District, East Bay Municipal Utilities District, and Moraga Orinda Fire District. Recognition as a Fire Risk Reduction Community will also bring benefits when seeking state grant funds. The next time agencies can apply to be added to the list is in 2024.

CAL FIRE's Fire Severity Zone Maps were first introduced in response to the Bates Bill (AB337) in the aftermath of the 1991 Tunnel Fire in the Berkeley-Oakland Hills. Updates were provided with the introduction of Chapter 7A building codes in 2007 and 2009. These maps have provided important information related to high fire areas in both the State Responsibility Area (SRA) and Local Responsibility Areas (LRA). The Cal Fire FHSZ viewer <https://egis.fire.ca.gov/FHSZ/> allows for a search by address for fire severity information. The 2022 update of the maps will be based on a new model. The latest technologies have been used in the mapping and include new factors now available such as: land use changes, recent fire history, new significant wind event data, as well as a model that is more spatially detailed.¹² CAL FIRE expects the SRA maps to be available late 2022 with the LRA maps to follow.

Research

Structure Survival Research. In 2022, the National Institute of Standards and Technology (NIST) Wildland Urban Interface Group released the first findings of its four-year structure survival research, in

¹¹ <https://alameda-and-contra-costa-county-regional-priority-plan-ccrcd.hub.arcgis.com/>. Accessed 10/10/22.

¹² <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/wildfire-preparedness/fire-hazard-severity-zones/>. Accessed 10/10/22.

collaboration with Cal FIRE and others¹³. HEF members participated in webinars on single family home survival in 2018 Camp Fire; WUI structure/ parcel/ community fire hazard mitigation methodology (HMM) as well as the WUI Fire Days 2022 to learn about the current research dedicated to protecting people and structures from WUI fires.

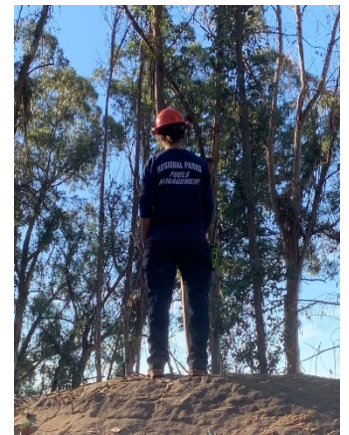
CA Fire Science Seminar Series continued offering webinars with monthly presentations from a wide variety of speakers and disciplines, which were then posted on YouTube.¹⁴ . In 2022, HEF members learned about structure damage and survival from the 2018 Camp fire, among other topics.

Wildfire Forecast and Threat Intelligence Integration Center (WFTIIC)¹⁵ In response to State legislation (SB209, Dodd 2019) a new Wildfire Forecast and Threat Intelligence Integration Center opened in August 2022. The California Governor’s Office of Emergency Services leads the center, partnered with the California Military Department, the California Public Utilities Commission, and the National Weather Service. The WFTIIC’s primary mission is to collect, assess, and analyze fire weather data, atmospheric conditions, and other threat indicators. The site is one-stop for fire weather products, real-time data on warnings, active incidents, forecasts, and threats impacting California. Content included in the hub comes from various sources, including but not limited to: CAL FIRE Active Incidents, NWS Fire Weather Dashboard, CEFA California Hourly Fire Danger, NOAA Rapid Refresh Smoke Forecast, Hot Dry Windy Index, and FuelCast. The *Daily Product* will provide wildfire forecast information, including wildfire risk potential, 7-day significant fire potential, and 7-day fuels and fire potential discussion.

Widespread Tree Mortality

In October 2020, the East Bay began to monitor widespread sudden tree die-back and increased tree mortality. As of July 2021, the East Bay Regional Park District tracked approximately 1,500 acres of tree die-off in regional parks alone. During 2021, researchers at UC Berkeley, with assistance from US Forest Service, Pacific Southwest Research Station and San Francisco Public Utilities Commission, investigated the cause of the die-back.¹⁶ Two fungi, *Diaporthe* and *Dothiorella* were consistently isolated from acacia showing recent dieback. They both start as endophytes, living inside trees without any obvious effect on tree health, then may become pathogens with the onset of predisposing stress factors (for example, drought). This work is preliminary and ongoing as land managers continue to address the increasing tree mortality throughout the region during 2022 and moving forward.

East Bay Regional Park District has implemented its Tree Die-back Mitigation Plan with work completed in Miller Knox Regional Park and Redwood Regional Parks. One of the larger Tree Die-back Mitigation Projects has begun the Anthony Chabot



¹³ <https://www.nist.gov/el/fire-research-division-73300/wildland-urban-interface-fire-73305> and <https://www.nist.gov/el/fire-research-division-73300/wildland-urban-interface-fire-73305/structure-separation-experiments>. Accessed 10/10/22.

¹⁴ <https://www.cafiresci.org/events-webinars-source/category/fire-sci-seminar2022>. Accessed 10/10/22.

¹⁵ <https://fireforecast.caloes.ca.gov/>. Accessed 10/10/22.

¹⁶ For results of the research see: *An investigation into the causes of recent widespread Acacia spp. mortality in the San Francisco Bay Area* – Matteo Garbelotto, UC Berkeley. <https://www.suddenoakdeath.org/wp-content/uploads/2021/04/Garbelotto.summary.AcaciaStudy.03.30.21.pdf> and [BayAreaTreeMortality.org](https://www.suddenoakdeath.org/bay-area-tree-mortality). Accessed 10/10/22.

Pilot Project, reducing fire fuels in 80 acres of dead and dying trees at Anthony Chabot Regional Park in Oakland. Traditionally, most of the wood debris would be disposed of by trucking it off-site. This pilot project will reduce the amount of carbon emitted by us by utilizing a new way to process the wood debris on-site using a Carbonator. The Carbonator uses an eco-friendly combustion process to convert biomass into a carbon-neutral resource and soil additive called biochar. Biochar is beneficial as a soil enhancer by storing carbon (carbon sequestration) and improving water retention (which increases nutrients and biodiversity in the soil).). EBRPD is hopeful that the project will help them understand better how they and surrounding agencies can utilize this technology for other projects in the future as they work towards reducing carbon emissions and hazardous fire fuels.

Sudden Oak Death also continues to be a concern in the region. The 2021 SOD Blitz results released in November indicated that throughout California the disease incidence is at a historical low in the 18 counties surveyed (including Alameda and Contra Costa). In the East Bay East 321 trees were surveyed with the estimated infection rate for 2021 was 4.2% (versus 7.8% in 2020). However, SOD is established and reaches the urban areas of the western part of the East Bay. Other noteworthy infestations are located from Richmond-Martinez to Lake Chabot, in the Orinda Moraga corridor, and Joaquin Miller Park, Oakland (which is experiencing a severe outbreak.).¹⁷

Early Ignition Detection

HEF SLC members continue to participate in development of early ignition detection in the region. The HEF area now has fifteen cameras that are linked with others statewide and managed by a consortium of three universities: the University of Nevada, Reno (Seismological Lab), University of California San Diego and University of Oregon.¹⁸ Two additional cameras in Moraga Fay Hill and overlooking Anthony Chabot join those already in Crow Canyon, downtown Oakland (Clorox) and Berkeley, on Grizzly Peak Lookout (2 cameras), Grizzly Peak KPFA, Moraga Alta Mesa, Mulholland Ridge, Oakland Coliseum, Rocky Ridge, Round Top, and Vollmer Peak (2 cameras), William Rust Summit. The cameras are part of the South & East Bay camera network.

Additional cameras in Alameda and Contra Costa counties include: Briones-Rancho de la Rosa, Briones Tabletop, Cummings Skyway, Evora Road, Fariview Alameda 1, Fariview Alameda 2, Garin Ridge 1, Highland Peak, Kregor Peak, Lafayette Dunsyre Drive, Lafayette Lucas Drive, Lafayette Highway 24, LPD Mobile (Crow Canyon), Moraga Alta Mesa, Mulholland Ridge, Mt Diablo, Mt Diablo west, Nichol Knob 1, Pinole Ridge, Rocky Ridge 1, SRVFD Station 31, Sunol Ridge, Town of Moraga, Wiedemann Hill, and Wildcat Canyon.

New Technology and Peer to Peer Sharing: Remote Equipment and Biomass Utilization

HEF SLC members continue to share information on new technology and equipment related to hazardous fuel removal. Several of the agencies currently utilize remote control mowers. During 2022, members had the opportunity to observe the remote control “green climber machine” and the air curtain burner in operation in Santa Clara thanks to demonstrations arranged through Cal Fire Santa Clara Unit. Various models of the “green climber machine” can be used for forestry operations cutting trees up to eight inches in diameter. Different cutting heads allow for mulching with rotating blades or shredding with fixed rotor. They are effective roadside and on up to 60% slopes. The air curtain burner

¹⁷ Sudden Oak Death results at https://nature.berkeley.edu/matteolab/?page_id=6406 see also <https://www.suddenoakdeath.org/>. Accessed 10/10/22.

¹⁸ For information on Alert Wildfire lab <http://www.alertwildfire.org>. For live feed see <http://www.alertwildfire.org/southeastbay/index.html>. Accessed 10/10/22.

is one of several technologies available for biomass utilization. Members look forward to seeing additional methods of biomass utilization as EBRPD begins their pilot project with the “carbonator.”

During 2022 HEF SLC members provided site tours to share information of upcoming and recently completed projects for other agencies in the region (Albany, Richmond, San Francisco and Santa Clara). Tours included EBRPD completed projects and the upcoming Anthony Chabot eucalyptus project, as well as the evacuation support projects completed by UC Berkeley along Centennial Drive and Claremont Avenue.

Countywide Fine Scale Vegetation Map and Landscape Database Project

Growing populations, global climate change, altered fire regimes, invasive/non-native plants and animals, habitat fragmentation, plant diseases and pathogens, noise, light, and air pollution, and other human and natural impacts threaten the health of the area’s natural and man-made resources. To effectively care for the ecosystems and infrastructure, citizens, landowners, politicians, managers, and government agencies must know the location and distribution of resources across the landscape, and they must monitor change over time. To fulfil these needs, five consortia have developed throughout the Bay Area to provide this critical information. Sonoma led the first Bay Area vegetation and landscape program. After the Sonoma County project was completed in 2017, a network of organizations that steward Mount Tamalpais in Marin County, decided to move forward with a similar project. Shortly after a consortium was able to fund and implement a parallel countywide effort in San Mateo. Primarily because of the usefulness of the Sonoma County data in understanding the behavior of the Sonoma County 2017 Complex wildfires, a fourth consortium expressed interest in a similar mapping project for Santa Cruz and Santa Clara Counties. The usefulness of the maps expanded with the Napa County Firewise Foundation project that used the fine scale vegetation map to create a 5-meter fuel model for Napa County. All of the map products of these efforts are accessible via a web site and are freely available.¹⁹



A consortium of interested agencies, including HEF members, expanded the process to Alameda and Contra Costa Counties. CAL FIRE’s California Climate Investments grant program selected to fund the initial Wildfire Risk Assessment Mapping. EBRPD, CAL FIRE and Kass Green and Associates will lead the two-county effort to create the Bay Area Wildfire Risk and Fine-scale Vegetation Maps. They plan on having the Wildfire Risk map by late 2022, followed by the Fine-scale Vegetation map by Fall 2024 once additional funding is secured. The data is envisioned as being used for wildfire planning and response, as well as for climate change adaptation, restoration planning, watershed and flood management, wildlife habitat management, open space prioritization, disease monitoring and cannabis mapping.

MITIGATION

Inspection, compliance and abatement programs

The cities of Berkeley, El Cerrito (including the unincorporated community of Kensington), Oakland and the Moraga Orinda Fire District all have active inspection, enforcement and abatement programs for vegetative fuel reduction on private properties.

¹⁹ Pacific Veg Map hosts the maps <https://pacificvegmap.org>. Accessed 10/10/22.

City of Berkeley. The last three years, Berkeley has removed nearly 300 hazardous trees mostly eucalyptus and Monterey Pine from city parks, paths, and street rights-of-way. Another roughly 40 trees have been trimmed or cut back. November of 2020 Berkeley voters approved Measure FF, a parcel tax that provides funding for wildfire hazard mitigation and prevention in addition to other Berkeley Fire Department (BFD) programs and projects. With the support of Measure FF funding the BFD initiated the start-up of its' Wildland Urban Interface Division (WUI Division) in July of 2021. The WUI Division has a dedicated Staff focused solely on citywide wildfire hazard mitigation and strengthening community wildfire resiliency. This includes significant expansion of the Defensible Space Inspection Program, the start-up of Firewise Communities, the development of a Community Wildfire Protection Plan (CWPP),²⁰ and expansion of the Safe Passages Evacuation Program. Berkeley has expanded its' Defensible Space Inspection Program to all of Fire Zones 2 & 3. This encompasses the entire Berkeley Local Agency Very High Fire Severity Zone. Dedicated inspectors from the WUI Division inspect 8,600 parcels on an annual basis. The Defensible Space Inspection Program is open year-round and each annual inspection cycle begins on May 1. New defensible space inspection software provides customized reports to property owners, including notice of defensible space code violations, a Home Hardening evaluation, and wildfire education resource links. Property owners can now clear violations with photo evidence on-line. The Department is also working to develop a comprehensive WUI work plan that will provide strategic guidance for related work for the next five years.

City of El Cerrito (also serving the community of Kensington) revamped their public outreach materials in the spring of 2020 to provide more user-friendly materials following the CAL FIRE Ready Set Go model.²¹ This information was reinforced with inspections of properties within very high fire hazard severity zones : El Cerrito (14,000 properties) and Kensington (3,500 properties). For those homes and vacant lots that were not in compliance, notices were sent to the property owner in April requiring compliance. El Cerrito staff also worked with the East Bay Sanitary to provide free green-waste disposal bags. Abatement followed for those parcels that continued to have hazardous fuels. In 2021, while all parcels were inspected, the focus was put on repeat offenders. Approximately \$100,000 was spent in abatement. The cost of abatement is added as a lien to the property through the Contra Costa County Assessor's office. To further strengthen the regional mitigation strategy, some of the hazardous fuel reduction on El Cerrito private properties was able to connect to the East Bay Regional Park District work in Wildcat Canyon Regional Park, creating a significant reduced fuel zone along the ridge.

City of Oakland began the season with 23,643 scheduled inspections of homes and vacant parcels in their very high fire hazard severity zone.²² OFD suppression had 20,210 initial inspections and the Vegetation Management Unit's (VMU) four full time inspectors completed the remaining 3,433. Follow up of non-compliant properties was done by the five newly hired fire inspectors. As of October 1st, 87.5% (23,491) of inspections have been marked compliant. All inspections should be wrapped up early November. Oakland continues see success with the ACELA system (adopted in 2019) that allows inspectors to enter information directly into the digital system and homeowners to set up an account and view the specific issues with their properties. In 2020, City of Oakland implemented a pilot program for the re-inspections of properties. Each time an inspector returns to a parcel, the owner is required to pay for that service, whether it is the second, third or fourth time. The pilot program

²⁰ Berkeley Community Wildfire Protection Plan (CWPP). <https://berkeleyca.gov/safety-health/disaster-preparedness/community-wildfire-protection-plan>. Accessed 10/10/22.

²¹ For more information about the El Cerrito vegetation management program see <https://www.el-cerrito.org/402/Vegetation-Management>. Accessed 10/10/22.

²² For more information about the Oakland inspection program see: <https://www.oaklandca.gov/services/wildfire-district-inspections>. Accessed 10/10/22.

extended an opportunity for parcel owners to mitigate within 45-day and self-report compliance (providing photographic evidence along with an invoice from a contractor). If the parcel owner demonstrated that the deficiency was remedied there was no need for the reinspection and associated \$409 fee (per inspection).

The Moraga Orinda Fire District (MOFD) conducts exterior hazard abatement inspections throughout the fire district. A focused approach is used by the Fire Prevention team to first inspect evacuation routes then target high hazard areas within the district. They also sponsor a free chipping program for residents within the Fire District. In 2020, the Fire Prevention team was expanded to include three full time fuels mitigation specialist who inspect and educate the public about fire code requirements and how to make their property safer. In 2021, MOFD began enforcing the changes made to the 2020 fire code, amendments include: a 2-foot noncombustible zone around all structures, fuel mitigation along fire apparatus access roads, under eave sprinklers, removal of Monterey pines and eucalyptus that are within 6 feet of a structure and removal of all bamboo and juniper within 10 feet of a fire apparatus access road by 2023. The Fire Code also streamlined the inspection process from notification through lien hearing. In May 2021, the District passed a citation ordinance to allow for the issuing of citations for violations of all portions of the fire code.

Hazardous fuel reduction projects

The El Cerrito / Kensington Fire Department (ECFD) continues to manage the fire fuel loads, fire trail and the fuel breaks within their 90 plus acres of city owned natural parkland (Hillside Natural Area) and the miles of urban interface with Wildcat and Tilden Regional Parks. This is achieved through multiple partnerships with CAL FIRE, Diablo Fire Safe Council, East Bay Regional Park District and their own community groups. Their fuel management efforts include: prescribed burns, mechanical methods (masticator and mower) and hand crews (weed eaters and chainsaw). The focus continues on dead and dying trees.

East Bay Municipal Utility District (EBMUD) continued their forest management hazardous fuel reduction projects, including: the ongoing removal of decadent pines on the eastern shore of San Pablo Reservoir, and the augmentation of fuel breaks in Orinda. Combined management tactics, including herded goats, mechanical mowing, hand labor, and pile burning, were used to reduce fuel loading and enhance native plant populations. Continued maintenance of previous fuel treatment areas using District staff, CAL Fire hand crews, volunteers and contractors to assist in the removal and reduction of noxious weeds and in the enhancement of the diverse and abundant native plant species growing throughout the fuel treatment area. EBMUD continued to remove dead Monterey pines from the 330-acre forest on the east side of San Pablo Reservoir. Fuel management activities included pile burning operations conducted by EBMUD rangers and CAL Fire hand crews. The District completed annual maintenance to provide ingress for wildfire suppression on over 150 miles of fire roads on watershed lands in Alameda and Contra Costa counties. EBMUD also assisted Moraga-Orinda Fire in the implementation of the new Tunnel East Bay Fuel Break.

East Bay Regional Park District (EBRPD) is committed to implement their 2010 Wildfire Hazard Reduction and Resource Management Plan and the accompanying CEQA document which covers hill and shoreline parklands from Richmond to Castro Valley.²³ In 2022 they implemented initial treatments on 1,185 acres in recommended treatment areas (RTAs) in Anthony Chabot Regional Park,

²³ For details on fuel management activities, treatment prescriptions and related natural resources stewardship and wildfire prevention, see https://www.ebparks.org/about/fire/fuels_management/default.htm <https://www.ebparks.org/natural-resources/wildfire-resilience> and https://www.ebparks.org/about/fire/wildfire_prevention.htm. Accessed 10/10/22.

Claremont Canyon, Redwood Regional Park, Sibley Regional Park, Wildcat Canyon, Miller Knox Regional Park, and Tilden Regional Park. Equipment and techniques used included: weed-eating, mechanical and hand removal of brush, tree thinning, and eucalyptus stump re-sprout control.

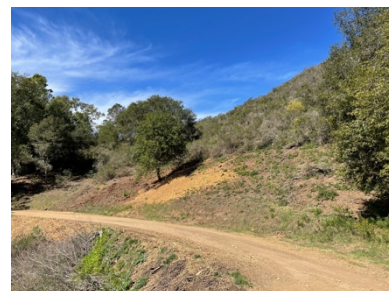
Lawrence Berkeley Lab (LBL) has completed all of the recommendations in its previous 10-year Wildland Fire Plan. LBL continues to maintain their property using goat herds and hand-labor to reduce annual fuel loads. This year they continued their use of goats with 400-700 goats on the lab for 4-5 weeks, and with additional resources directed to tree removal. Invasive eucalyptus and diseased/dead trees of other species were removed and chipped in conjunction with low-level limb maintenance and other surface fuel removal. LBL staff also is working with their Berkeley neighbors on a perimeter survey to better understand how they expose the adjacent residential properties and how the neighboring homes expose the Lab to fire spread. This has led to joint hazardous fuel reduction efforts that will benefit all.

MOFD Tunnel East Bay Hills Vegetation Reduction Project. In January 2022, the Moraga Orinda Fire District Board accepted a \$6.38 million CAL FIRE Fire Prevention grant for the Tunnel East Bay Hills shaded fuel break. The fuel break will extend the North Orinda Shaded Fuel Break, completed in 2019, to the east and south around the communities of Orinda and Moraga. East Bay Municipal Utility District, John Muir Land Trust, St Mary's College and Town of Moraga are all partners in the project that includes lands these organization manage.

The Oakland Vegetation Management Unit is responsible for inspecting City owned parcels, and managing fuel reduction in open space and parklands. Fuel breaks are treated and maintained through a variety of means within the City's approximate 1,300 acres of parklands and open space primarily in conjunction with their extensive goat grazing program. In the past year using 11 city lot clearing contracts, Oakland completed work on 82 city parcels and 40 miles of roadside, reduced the threat of fire. The hazardous fuel reduction enables firefighters to establish a safe anchor point when responding to wildland fire events. Oakland combined abatement practices of grazing and contractor hand crews have reduced fuels adjacent to its major neighborhood egress routes. In 2018, City Council approved 5-year goat grazing contract for \$2.6 million to continue the program. The following locations were grazed resulting in achieving the goal of ground fuels vegetation not exceeding 4 inches in height within 100 feet of established fuel breaks and access fire trails for Type III and Type VI apparatus.

- Sheffield Village
- Joaquin Miller Park
- Shepherd Canyon Park
- Kings Estates
- Grizzly Peak Open Space
- Dunsmuir Heights
- Castle Canyon Open Space
- Knowland Park
- Oak Knoll Naval Redevelopment

In March 2022, University of California, Berkeley (UCB) wrapped up the first phase of the 8 mile "Jordan Fire Trail." The 62-acre project will remove trees and shrubby fuels to support emergency evacuation. UCB also completed their annual defensible space work around the 15 buildings in the Hill Campus, as well as follow up maintenance on the Centennial Drive evacuation route project completed in 2020 and the "Claremont Canyon Evacuation Support Project" completed in 2022.



Upper Jordan Trail Evacuation route protection by selective thinning of forest.

Goats Reduce Hazardous Fuel Loads.

Goat herds continue to be an effective technique for vegetation management to reduce hazardous fuel loads. City of Oakland, East Bay Municipal Utility District, East Bay Regional Park District, and Lawrence Berkeley National Laboratory all have ongoing contracts with the various herds that work in the East Bay. During 2020, University of California, Berkeley, working with their Office of Laboratory

Animal Care, acquired a small herd of goats. In 2022, the herd was matched to small projects on the Hill Campus and at Russell Reserve. Oakland's goat grazing program cleared 880 acres of City lands from April to September. The EBRPD implemented its goat grazing program consisting of 837 acres within Ardenwood, Anthony Chabot Regional Park, Camp Arroyo, Claremont Canyon, Carquinez Strait, Redwood Regional Park, Sobrante Ridge Regional Park, Sibley Regional Park, Kennedy Grove Regional Park, Wildcat Canyon Regional Park, Miller Knox Regional Park, Lake Chabot Regional Park, Cull Canyon Regional Park, Las Trampas Regional Park, Bishop Ranch Regional Park, and Garin Regional Park.

Additional Fuels Reduction Coordinator and Fuels Crews

In August 2021, the EBRPD Board approved funding a third full-time fuels reduction coordinator to allow the District to continue to advance fuel vegetation management and the expansive tree die-off on regional parklands. This year, EBRPD also increased its staff capacity for fuel reduction with two additional Fuels Reduction Coordinators and expanded its 12-person fuels crew to a 15-person crew. EBRPD has increased its Fuels Management Department by 240% in the last five years.

Forest and Fire Recruitment Program (FFRP) supports formerly incarcerated individuals who are interested in professional fire and fuels reduction work. With a grant from CAL FIRE they will be expanding their southern California training, job coaching, employment connections to northern California. Their local partnerships will include University of California's Russell Reserve and other HEF member agencies lands for training locations.

Use of Prescribed Fire

Use of prescribed fire continues to expand throughout California. Several HEF members regularly use prescribed fire to manage vegetative fuel loads.

Moraga Orinda Fire District completed several prescribed fires and firefighter training during the end of 2022:

- January 13, 19, 2022 Pinehurst Road, Canyon.
- June 23, 2022 Campolindo Ridge (Rheem Blvd/ Redwood land), Moraga.
- June 24 Bear Ridge Road, Orinda.

These successful prescribed burns provided both hazardous fuel reduction and opportunities for fire fighter training.

East Bay Municipal Utility District, East Bay Regional Park District, El Cerrito and Moraga Orinda Fire District also conducted pile burns to process cut materials from their hazardous vegetation removal projects on San Pablo Reservoir, in Tilden Regional Park, Wildcat Canyon Regional Park, Claremont Canyon, Reinhardt Redwood Regional Park, Briones Regional Park, the Hillside Natural Area in El Cerrito and near Sleepy Hollow in Orinda.

Funding

Grant Funding

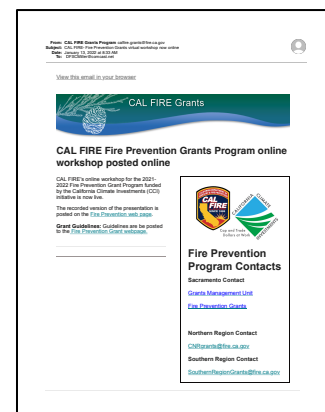
During 2021-22, HEF SLC member collaborated on applications to several grant programs. The California Climate Initiative provided grant programs in Forest Health and Fire Protection. Moraga Orinda Fire District was awarded \$6.38M from the Governor's "early action" fire prevention funding (more detail under Legislation and Policy of Interest) to develop the Tunnel East Bay Hills Fuel Break. City of Oakland Public Works Department also was awarded \$820,00 for the Skyline Boulevard Evacuation Route project to remove approximately 250 dead and dying or otherwise hazardous trees. Oakland anticipates completion of the seven-and-a-half-mile project between Shepherd Canyon and Keller Avenue by March 2024.



MOFD issued Public Service Announcements to notify residents of prescribed fire projects in 2022.

University of California, Berkeley continued to utilize the \$3.6 million of California Climate Initiative grant funds provided through CAL FIRE in 2018 for hazardous fuel reduction along evacuation routes, CEQA review and implementation of their Wildland Vegetative Fuel Management Plan. The UCB grant ends in March of 2025.

East Bay Regional Park District progresses with their FEMA and California Climate Initiative grants from the California Natural Resource Agency through the State Coastal Conservancy for forest health, demonstration projects, and community outreach. In 2022, they received a total of \$13.5M from the State budget: \$10M to address sudden tree die-back, increased tree mortality, and \$3.5M for new firefighting equipment. The State Coastal Conservancy awarded an additional \$1 million in funds for the Anthony Chabot Pilot Project. They also received \$773,929 to develop wildfire risk mapping (see the Countywide Fine Scale Vegetation Map and Landscape Database project).



Increased Internal Funding.

During 2021-22, a number of HEF member agencies dedicated internal funding increases and new programs related to wildfire hazard reduction. East Bay Regional Park District provided funding for a pilot project utilizing the carbonator to develop biochar. They will use the services of Earth Foundries²⁴ who received 2 grants to increase the use of mobile pyrolysis with Tigercat Carbonator and the develop the Bay Area biochar market.

The Facilities Services Department of UC Berkeley successfully received "Be Safe" internal funding to continue removal of aged pine trees on Tightwad Hill. They also were awarded funds to increase "student public safety officer" patrols of the hill area during red flag weather. City of Oakland provided additional \$500,000 funding to increase the pace of hazardous fuel reduction on city owned parcels. Kensington funded the multi-year re-building of Kensington Fire Station 65. The work on the station began on October 17, 2022 and will be finished in Spring 2024. The resulting seismically safe building will meeting Essential Services Facility requirements, increasing the fire station area 130%.

Public Supported Funding – bonds and parcel taxes

In November 2020, Berkeley residents voted for Measure FF to create a parcel tax generating \$12.7 million for emergency response and preparedness. In 2022, the funds were used for an enhanced vegetation management inspection program, development of a Community Wildfire Protection Plan (CWPP), the City's Safe Passages program focused on evacuation, and risk reduction in collaboration with adjacent agencies. Funding also will be used for emergency response and 911 upgrades. Additional ballot measures that included increased funding for wildfire related services were approved by the residents of Contra Costa County (Measure X) + City of Orinda (Measure R).

Legislation and policy of interest.

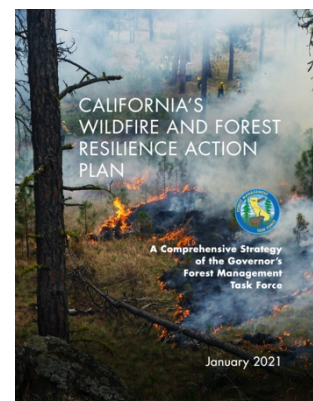
HEF SLC members received regular updates on 77 pieces of legislation related to wildfire during 2022. Updates included legislation on: local grant assistance, tax credits or bond measures; home hardening and defensible space; planning and development; public safety power shutoffs; biomass, environmental

²⁴ Earth Foundries, Inc. announces two 2022 CAL FIRE Workforce and Business development awards for healthy resilient forests. <https://www.earthfoundriesinc.com/news/> Access 10/10/22.

review, risk modeling and climate change; and miscellaneous topics. such as conditions of immunity related to prescribed burns.

The Governor's Wildfire & Forest Resilience Task Force continues to implement their comprehensive strategy from the "California's Wildfire and Forest Resilience Action Plan."²⁵ The plan identifies four goals that closely tie with the Governor's budget signed September 6, 2022. Highlights of the 2022 *Wildfire and Forest Resilience Expenditure Plan* include: \$472 million for forest health and fire prevention grants, \$70 million for prescribed fire and hand crews, \$40 million for the Regional Forest and Fire Capacity (RFFC) Program, 30 million for workforce development and \$25 million for assistance to small landowners. Several of the goals to reduce wildfire risk for vulnerable communities, improve the health of forests and wildlands and accelerate action to combat climate change also closely align with HEF member activities:

- Increase pace and scale of forest health projects (building a network of fuel breaks around vulnerable communities).
- Strengthen protection of communities (expanding home hardening, defensible space and preparedness planning to create wildfire adapted communities).
- Manage forests to achieve the state's economic and environmental goals.
- Drive innovation and measure progress.



RFFC grants support regional leadership to build local capacity and fund projects that create fire-adapted communities and landscapes by providing ecosystem health, community wildfire preparedness, and fire resilience. The grants funded with these Guidelines utilize the \$110 million of General Fund monies appropriated to the Department of Conservation for the RFFC Program.²⁶

The Community Wildfire Preparedness and Mitigation Division²⁷ was formed by the Office of the State Fire Marshal in response to AB9 (Wood, 2021). In April 2022, Chief Daniel Berlant was selected to serve as the division's first Deputy Director. The programs within the division allow CAL FIRE to continue to build local and regional capacity, as well as developing, prioritizing, and implementing strategies and projects that create wildfire prepared communities. The division is responsible for mapping fire hazard severity zones, providing land use planning assistance to local governments (including Safety Elements of General Plan, subdivision review for compliance with AB2911 (Friedman, 2018) and NFPA Firewise USA recognition), development of the Strategic Fire Plan for the State, wildfire preparedness with fuel reduction, fire prevention and public education year-round, building construction methods and codes, wildfire prevention grants, incident data and statistics and utility wildfire mitigation. Updated high fire hazard severity zone maps are expected later this year for SRA and early next year for LRA.

²⁵ California's Wildfire and Forest Resilience Action Plan adopted January 2021 outlined 99 key actions. See <https://wildfiretaskforce.org> for progress. Accessed 10/10/22

²⁶ Grant Guidelines released for the 2022 Regional Forest & Fire Capacity Program <https://wildfiretaskforce.org/grant-guidelines-released-for-the-2022-regional-forest-fire-capacity-program/>. Accessed 10/10/22.

²⁷ Community Wildfire Preparedness and Mitigation Division <https://osfm.fire.ca.gov/divisions/community-wildfire-preparedness-and-mitigation/>. Accessed 10/10/22

Safer from Wildfire. This year, State Insurance Commissioner Lara increased focus on availability and affordability of residential and business insurance. A wildfire mitigation partnership of state agencies developed the “Safer from Wildfire²⁸” program, a common insurance framework of mitigation actions for existing homes and businesses. Commissioner Lara also submitted his insurance pricing regulation to the California Office of Administrative Law for approval later this year. If approved the new state law would recognize and reward wildfire safety and mitigation efforts made by homeowners and businesses. The regulation is the first in the nation requiring insurance companies to provide discounts to consumers under the Safer from Wildfires framework. As of August 22, twenty-two insurance companies representing over 40% of the insurance marketplace offer discounts.

Zone 0. AB3074 (Friedman, 2020)²⁹ updated the requirements of defensible space with the introduction of an ember resistant zone located zero to five feet from structures, also called “Zone 0”. The Board of Forestry (BOF) is required to adopt regulations by January 1, 2023. Local ordinances may require additional distance than mandated by State law. At a May workshop, the BOF workgroup introduced recommendations in three categories “not recommended, allowable and educational approach” for items within Zone 0. The Board of Forestry plan to finalize their regulations at their November Board meeting. HEF members support the science of “Zone 0,” to reduce structure ignitions. They foresee difficulty in enforcing these new state minimum standards with homeowners in their jurisdictions.

PREPAREDNESS

Outreach and education

Red Flag Watches and Warnings

A Red Flag Warning means that critical fire weather conditions are either occurring now...or will shortly. A combination of strong winds...low relative humidity...and warm temperatures can contribute to extreme fire behavior. National Weather Service.

The East Bay Hills experienced numerous weather watches and warnings in 2022, beginning with an early wind event in January and continuing with excessive heat warnings throughout the year. The National Weather Service red flag announcements trigger HEF member fire agencies to add staffing, increase fire patrols, and pre-position equipment to enhance response effectiveness for potential fires. When weather conditions increase the risk of ignitions and uncontrolled wildfire, East Bay Regional Park District and East Bay Municipal Utility District both close trails and recreation areas, and increase park and watershed patrols to reduce the chance of ignitions, such as the closures over Labor Day this year. Oakland also closes their popular Joaquin Miller Park and restrict barbecues in any city park during red flag warnings. The most recent addition to the region’s



²⁸ Safer from Wildfires <https://www.insurance.ca.gov/01-consumers/200-wrr/saferfromwildfires.cfm> and <https://www.insurance.ca.gov/01-consumers/105-type/95-guides/03-res/Insurers-Currently-Offering-Discounts.cfm> Accessed 10/10/22.

²⁹ Text of AB3074 (Friedman, 2020) https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB3074, Board of Forestry <https://bof.fire.ca.gov/> and https://bof.fire.ca.gov/media/54f1flkr/wkshp-3-valachovic-presentation_ada.pdf. Accessed 10/10/22.

red flag protocols was the restriction of parking along Grizzly Peak Boulevard from 9PM to 6AM during these periods of critical fire weather.

The East Bay Regional Park District owns and maintains four Remote Automated Weather Stations (RAWS) within Alameda and Contra Costa counties. RAWS stations from other agencies, including ones maintained by the Oakland Fire Department, Cal Fire, and others, form a network providing essential real-time readings to aid in predicting high fire danger in the region. EBRPD and other agencies use this information to determine daily fire danger and impose restrictions such as restricting campfires, cooking fires, and equipment used in the wildland. EBRPD has updated the fuel models used in calculating fire danger. Adopting these newer fuel models will provide more accurate predictions and incorporate the most recent weather data to ensure they can keep the parks safe for their visitors, employees, and neighbors. Spot forecasts allow the local fire departments to request a forecast specifically for the conditions in their locale.

During high fire danger conditions, PG&E may pre-emptively turn off power to threatened areas. Public safety power shutoffs create a double threat - a potentially multi-day power outage combined with high fire risk. In a fire-prone area such as the Berkeley hills, it is critical to prepare for these events. Shutoffs may last as long as six days. Once the fire danger has passed, PG&E must inspect all power lines and electrical infrastructure before restoring power. If power goes out during a PSPS event, everyone needs to be prepared for an extended outage.

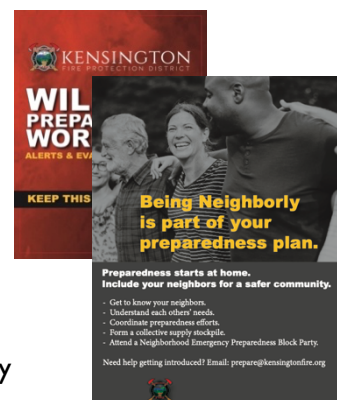
Firewise Communities

The National Fire Protection Agency (NFPA) program, Firewise Communities, has provided a framework for communities to develop and implement local solutions for wildfire preparedness. El Cerrito, Moraga, and Orinda all have recognized Firewise USA neighborhoods. In 2022, two new Firewise neighborhoods were formed in Berkeley (Acacia neighborhood) and Oakland (Klamath-Brunell neighborhood). Several of the other member agencies are interested in supporting development of similar programs in areas of high wildfire risk.

New public information materials

Member agencies continued to emphasize the critical role residents have in wildfire prevention. Public information materials related to wildfire preparation, public safety power shutoff (PSPS) events, defensible space, home hardening and evacuation are distributed by HEF members using websites, social media, remote and in-person presentations, including:

- Berkeley Fire Department's Office of Emergency Services hosted a series of home hardening for wildfire workshops presented by architect Sheryl Drinkwater. The Town Hall presentation³⁰ on May 19th provided an introduction to home hardening for wildfire, followed by vents and property clean up in July, decks and fences in September and windows and roofs in November.
- Kensington introduced a new wildfire preparedness workbook for residents to use as a starting point for emergency planning.³¹ Outreach also was provided through neighborhood emergency



³⁰ Berkeley Town Hall presentation May 19, 2022. <https://www.youtube.com/watch?v=-yLSovFcRIk>. Accessed 10/10/22.

³¹ Kensington Wildfire Preparedness workbook <https://www.kensingtonfire.org/wildfire-preparedness-workbook>, Accessed 10/10/22.

preparedness block parties. Neighborhood groups were encouraged to develop contact lists as well as register for CWS (Contra Costa County's Community Warning System). Topics and issues discussed varied by group but included: red flag warnings and related parking changes, vegetation removal, home hardening, undergrounding powerlines, home insurance cancellations, evacuation preparedness and pursuing Firewise Community recognition. In several of the neighborhoods the GMRS Radio Group is active and encouraged new members to get involved. Some groups have integrated adjacent Berkeley residents.

- East Bay Municipal Utility District released *FIRE FIGHT: Fuel Management in the Age of Climate Change* as a part of "Water Wednesdays" monthly webinars on 9/21/22 and included details on fuel management on both EBMUD and EBRPD lands.³²

Participation in regional coordination. A grass roots group promoting the formation of a regional wildfire prevention and vegetation management joint powers association was active throughout the year.³³ Several HEF members have been active in exploring options to improve regional coordination of wildfire prevention.

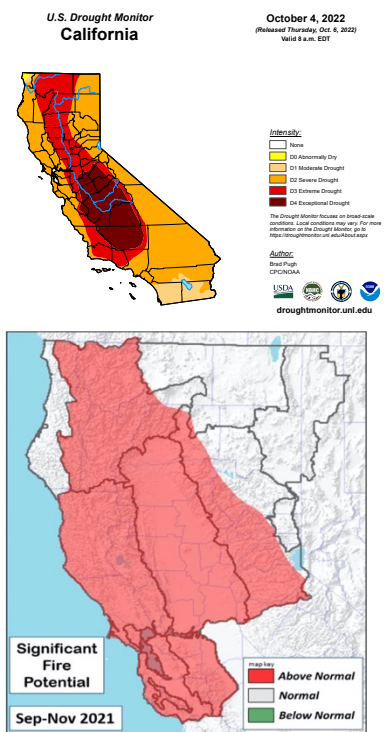
RESPONSE

2022 response activity

Throughout the year, HEF SLC members received regular updates on significant fire potential and drought conditions³⁴ to be able to respond to the heightened potential for wildfires. While the East Bay never exceeded D2 Severe Drought, much of the State was in D4 Exceptional Drought in early October. Fortunately, in spite of the dry fuels and high temperatures, most of the year experienced "normal significant fire potential," with a caution of increased initial attack expected during the dry breezy weather. During to September through November, the Predictive Services North Ops Monthly Outlook increased to "above normal" for the East Bay region, with expectation for it to return to "normal" in October through the end of the year.

The area managed by HEF members was benign in terms of wildfire, compared to the rest of the state. However, smoke advisories were issued for the Bay area from the "Oak Fire" west of Yosemite National Park (July 25, 2022), "Rum Creek Fire" in southwest Oregon (August 28-29, 2022) and "Mosquito Fire" in Placer and El Dorado Counties (Sept 9-10, 2022).

As of October 10th, the largest fire in Alameda and Contra Costa counties was the 120-acre "Scenic Fire" east of Crockett. Several times during the year, monsoonal moisture from the southwest region of the United States created concerns over dry lightning; increasing fire watches and warnings. There also



³²*FIRE FIGHT: Fuel Management in the Age of Climate Change* available as You Tube video <https://www.youtube.com/watch?v=RMOEBniYUxM>. Accessed 10/10/22.

³³ East Bay Hills Wildfire Prevention and Vegetation Management and Joint Powers Agency <https://eastbaywildfirejpa.org/> Accessed 10/10/22.

³⁴ North Ops Fire Forecast: https://gacc.nifc.gov/oncc/predictive/outlooks/Outlook_NOps.pdf accessed 10/10/22.

US Drought Monitor: <https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?CA>. Accessed 10/10/22.

were several local fires during 2022. Fortunately, these remained relatively small and several burned into previously treated areas with reduced fuel loads. Local fires included:

- Sheffield Village, Marlow Drive and Revere Avenue, Oakland, 2.5 acres, Saturday June 19, 2022.
- Augusta Drive, Moraga less than 1 acre, Tuesday June 21, 2022.
- Albany Hill, Cleveland Avenue below I-80 and Pierce Street, Albany. Arsonist set 2 fires Sunday June 26, 2022.
- Knowland Park / Anthony Chabot Regional Park, less than 1 acre. July 10, 2022.

Oakland Fire Department responded to four hundred, ninety-five (495) vegetation fires throughout the city this year and thirty-six (36) confirmed vegetation fires within the very high fire severity zone in 2022. Nineteen (19) of these incidents in the VHFSZ involved multiple OFD units and eleven (11) incidents of these involved three (3) or more Oakland Fire units. OFD worked in partnership with EBRPD, Cal Fire and ACFD on a couple of incidents in the mutual threat zone as well. The city-wide and regional collaboration with log placement and road closures along Grizzly Peak resulted in significantly fewer fires along that stretch of roadway this year.

In addition, the following wildfires of over 10 acres were recorded in the region³⁵

- *Willow Fire*. Willow Pass Court and Willow Pass Road near Bay Point, 28 acres, May 29, 2022.
- *Marsh Fire*. Marsh Creek Road and Walnut Boulevard (south of Brentwood), 159 acres, June 9, 2022
- *Canyon Fire*. Kilcare Road, Sunol, 71 acres June 23, 2022.
- *Scenic Fire*. Carquinez Scenic Drive and Canyon Lake Drive (east of Crockett), 120 acres, June 23, 2022.
- *Kirker Fire*. Kirker Pass Road and Black Diamond Trail (northeast of Clayton), 90 acres, June 24, 2022.
- *Flynn Fire*. Highway 580, North Flynn Road (east of Livermore), 121 acres. July 19, 2022.
- *Eden Fire*. Highway 58 and Schaefer Ranch Road, Dublin. 58 acres. August 15, 2022.

³⁵ CAL FIRE incidents in Alameda and Contra Costa County, map. <https://www.fire.ca.gov/incidents/2022/>
Accessed 10/10/22.