



October 19, 2020

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 has been challenging with public health and justice issues, as well as record wildfire activity. Our agencies reinforced the importance of HEF members' continued collaboration, albeit remotely in response to Covid-19.

Many of the forum's traditional activities were redesigned to respond to the pandemic. Our briefing of local media on how the hills fire agencies were preparing for the 2020 wildfire threats evolved into coordinated messaging on social media. The US Forest Service International Disaster Management Seminar was cancelled due to worldwide shutdown.

City of Berkeley and the Moraga Orinda Fire District led the way in the region with their evacuation planning and learning from community drills. Planning and research continue to develop new projects, early ignition detection, remote equipment, biomass utilization and building codes.

Active inspection, compliance and abatement programs, and local code updates 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 hazardous fuel reduction along the Centennial Drive evacuation route, 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, hand crews, machinery, as well as prescribed fire. New grant funds and internal funding increased our capacity for projects with dedicated fuels crews, a new goat herd and expanded use of prescribed fire.

The 2020 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,
Dee Williams-Ridley, City Manager
City of Berkeley
HEF Chair 2019-20

❖ 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 ❖
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Hills Emergency Forum (HEF) Annual Report 2020

2020 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.

ASSESSMENT

Impact of COVID -19

The novel COVID-19 pandemic affected the HEF in many ways. On March 16, 2020, orders from the health officers of the nine Bay Area counties directed all residents of Alameda and Contra Costa Counties to shelter-in-place and limit commercial activity to essential needs. Reopening and recovery has moved at the "speed of safety," with plans and indicators in continued flux.

In response to the pandemic, HEF members changed staffing and operations. Some reduced on-site crews to maintain critical operations (public safety, fire protection, water delivery, etc.). Everyone instigated new protocols: social distancing, face masks, personal protection equipment and health measures. The pandemic and accompanying shut-downs resulted in "a new normal" with redirected budgets, personnel and programs; park closures; university closures; and work at home adjustments.

For the Hills Emergency Forum Staff Liaison Committee (HEF SLC) modifications to the program approved at the October 16, 2019 HEF Annual Meeting included:

- Reduction of early public outreach on wildfire preparedness as media coverage focused on the pandemic. Increased use of social media to reach residents.
- Elimination of field tours and international training due to shelter-in-place orders.
- Delay of collaborative planning efforts as personnel were redirected to more immediate health concerns.

Moving forward, the actions approved by the Forum for 2020 will carry over into 2021.

Continued Collaboration

The Covid-19 pandemic did not reduce collaboration among HEF SLC members. Staff quickly pivoted to virtual meetings and strengthened remote communications to respond to unprecedented situations.

While wildfires are a natural part of California's landscape, the fire season in California and across the West is starting earlier and ending later each year. Climate change is considered a key driver of this trend. Warmer spring and summer temperatures, reduced snowpack, and earlier spring snowmelt create longer and more intense dry seasons that increase moisture stress on vegetation and make forests more susceptible to severe wildfire. The length of fire season is estimated to have increased by 75 days across the Sierras and seems to correspond with an increase in the extent of forest fires across the state.

CAL FIRE 2020 Fire Season¹



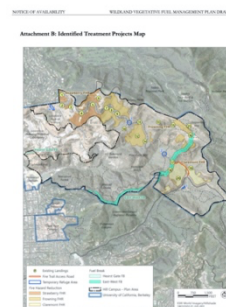
Source: Alameda County Health

¹ Source: <https://www.fire.ca.gov/incidents/2020/> accessed 9/18/20.

Planning and Research

Planning and California Environmental Quality Act (CEQA) review

On August 14, 2020, the University of California, Berkeley released a “Notice of Availability of a Draft Environmental Impact Report (EIR) and an online public session for the proposed Wildland Vegetative Fuel Management Plan.”² The Plan identifies two fuel break projects, four temporary refuge areas, and three fire hazard reduction treatments, totaling approximately 600 acres. The proposed work will expand partner agencies’ efforts to reduce wildfire hazards in the East Bay. The projects’ locations make them an important link in the chain of hazardous fuel reduction projects throughout the East Bay hills, protecting not only the campus, but also the residents of Berkeley and Oakland, East Bay Municipal Utility District’s critical San Pablo watershed, and East Bay Regional Park Districts’ environmentally sensitive parklands. The public comment period was closed on October 5, 2020.



Lawrence Berkeley National Laboratory has a comprehensive vegetation maintenance plan under development for their grounds staff. It will cover both fuel reduction treatments (fire hazard reduction and firewise structure ignition zones), environmental (sustainability and erosion) and worker safety concerns.

City of Oakland continues to develop their Vegetation Management Plan and Environmental Impact Report.³ The Vegetation Management (Plan) covers more than 1,400 acres of City property, plus approximately 300 miles of roadside. Vegetation management activities conducted on these lands currently include: goat grazing on nine sites covering approximately 1,300 acres, vegetation clearing along 16 roadways (58 miles), monitoring for vegetation clearance along approximately 300 miles of road within the High and Very High Fire Hazard Severity Zones (16.5 square miles), and brush clearance on critical City-owned properties (~332 acres). The Plan and EIR evaluate these and additional vegetation management practices to reduce fire hazard. The final EIR is expected winter of 2020, with certification scheduled for Spring 2021.

On December 30, 2019 the California Board of Foresters certified the California Vegetation Treatment Program (CalVTP) Environmental Impact Report (EIR)⁴. 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. The CalVTP EIR will allow 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 (EO) B-52-18. Cal Fire continues to work with the Office of Planning and Research to update the 2105 Fire Hazard Planning General Plan guide. In May 2020, the CAL FIRE Santa Clara Unit updated their 2020 Strategic Fire Plan with input from HEF members.⁵

² For more information on UC Berkeley Plan and EIR see <https://capitalstrategies.berkeley.edu/hill-campus>

³ For an updated timeline and draft EIR on the Oakland Vegetation Management Plan see <https://www.oaklandca.gov/projects/oakland-vegetation-management-plan>

⁴ For more detail about the California VTP see <https://bof.fire.ca.gov/projects-and-programs/calvtp/> and Fire Hazard Planning Guide https://opr.ca.gov/docs/Final_6.26.15.pdf

⁵ Current FHSZ maps can be viewed at <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

Coordinating with Pacific Gas and Electric (PG&E).

Public Safety Shut Offs (PSPS) during high wind events and red flag warnings have caused all HEF member agencies to change operations. During the PSPS in October 2019, agencies opened their emergency operation centers. Additional generators were put into operations to power critical facilities. Roving patrols responded to down powerlines and trees. UC Berkeley and Lawrence Berkeley Lab closed their facilities. EBMUD, EBRPD and City of Oakland closed their parks and recreation areas. Communication was a public safety issue, as many of the cell carriers and towers had no backup source of power. The providers that depended upon microcells were particularly vulnerable. Throughout 2020, HEF SLC members continued to coordinate with PG&E with pre-season cooperators meetings in May and June, and preparedness throughout the year for potential shutdown of facilities in case of the need to cut power during red flag warnings.

Research

Early Ignition Detection

HEF SLC members continue to participate in development of early ignition detection in the region. The HEF area now has five 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.⁶ The cameras on Vollmer Peak, in downtown Oakland and Berkeley, on Moraga Alta Mesa, and Round Top are part of the South & East bay camera network. Additional cameras in Alameda and Contra Costa counties (total 19) include: Briones-Rancho de la Rosa, Briones Tabletop, Cummings Skyway, Highland Peak, Kreger Peak, Lafayette Highway 24, Moraga Alta Mesa, Mt Diablo, Mt Diablo west, Nichol Knob I, SRVFD Station 31, Town of Moraga, Wiedemann Hill, and Wildcat Canyon.

New technology: 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 have utilized remote control mowers. The “green climbing machine” can be used to cut poison oak and otherwise un-penetrable brush fields. A remote-control grapple saw, with its 90-foot boom, allows for cutting and moving large trees.

UCB’s “Centennial Drive Evacuation Support Project” spotlights biomass utilization issues in the region. The project generated over 1,000 logs and trucks of wood chips. UCB requires all biomass remain on campus as part of their Zero Waste commitment. Most of the chips were used throughout the campus in landscape to reduce irrigation demand, and for weed and erosion control. A portion of the larger logs were used as roadside barriers along Grizzly Peak Boulevard, Centennial Drive and Claremont Avenue. However, the remaining biomass in the form additional large logs, needs to be responsibly processed. During 2020, UCB Facility Services researched air curtain burners and began the process of review and permits to utilize this technology.

Research with International Code Council WUI work group and Northern California Fire Prevention Officers

HEF SLC members regularly participate in regional and national organizations to provide input on research and code development. The International Code Council Wildland Urban Interface work group (ICC WUI) is looking at updates to WUI building codes, that inform state codes and local ordinances (e.g. California’s Uniform Building Code 7A and Residential Code 337). New considerations include requiring noncombustible materials within five feet of structures (ignition zone). HEF SLC continues to

⁶ For information on Alert Wildfire lab <http://www.alertwildfire.org/about.html>. For live feed see <http://www.alertwildfire.org/southeastbay/index.html>.

provide recommendations as many of the local ordinance exceed the current ICC WUI and California code recommendations.

Northern California Fire Prevention Officers (Nor Cal FPOs) announced in 2020 that they will be working with the Institute for Building and Home Safety (IBHS) to test vegetation. The group includes members from UC Berkeley, Cal Poly, Marin County Fire and North Tahoe. They plan full scale testing (heat output, ember production, flammability, etc.) and requested HEF SLC members provide input to develop a list of 10 species to test. Members recommended common plants such as: French broom, blue gum eucalyptus, juniper, coyote brush, pampas grass, acacia, palms, bamboo, redwood and buckwheat. The Nor Cal FPOs are also tracking the growing trend for insurance companies to request assessment and compliance letter from local jurisdictions before renewing policies.

MITIGATION

Inspection, compliance and abatement programs, and code updates

The cities of Berkeley, El Cerrito (including the unincorporated community of Kensington), Oakland and the Moraga Orinda Fire District all have active inspection programs for vegetative fuel reduction on private properties. 2020 also offered the opportunity to update local fire codes with the adoption of the updated California Fire Code. Every three years new editions of state codes are published reflecting changes in technology, fire safety techniques and the building industry. On January 1, 2020, the 2019 Fire Code became the minimum standard for the State of California. While adopting the 2019 Fire Code, several of the agencies added local requirements to their ordinances. Local requirements included measures that addressed: earlier exterior hazard compliance dates; requirements for the area immediately adjacent to structures (ignition zone); road clearance and widths, and fire sprinklers, among others.

City of Berkeley annually inspects a subset of their Local Agency Very High Fire Hazard Severity Zone (LAVHFHSZ) and investigates complaints throughout this zone. The LAVHFHSZ encompasses over 8,200 homes. During 2020 over 1,344 inspections were completed in an area designated as the Hazardous Fire Area, with approximately 81 properties requiring abatement of violations. Berkeley adopted the 2019 California Fire Code with local amendments (including vegetation management, ignition control and WUI management elements) which became effective on January 1, 2020. Berkeley continues to seek a collaborative path forward on issues such as an enhanced vegetation management inspection program, management of Accessory Dwelling Unit construction in WUI areas and risk reduction in collaboration with adjacent agencies along Grizzly Peak Boulevard.

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 model.⁷ 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. After an aggressive inspection push in 2019, El Cerrito Fire found that there was significantly more compliance during 2020. However, approximately \$100,000 was spent in abatement of properties in 2020. 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.

⁷ For more information about the El Cerrito vegetation management program see <https://www.el-cerrito.org/402/Vegetation-Management>

City of Oakland inspects over 25,000 homes and vacant parcels in their very high fire hazard severity zone.⁸ In 2020, City of Oakland redesigned their annual inspection notice to include the newly adopted codes (Chapters 3 and 49 of California Fire Code and Chapter 15 of Oakland Municipal Code). The first round of inspections in June was completed by engine companies. Follow up of non-compliant properties was done by the four inspectors and a supervising inspector in the Vegetation Management Unit of the Oakland Fire Prevention Bureau. In 2019, Oakland adopted the ACELA system that allowed 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 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) inspects homes in the very high fire severity zones of Orinda and Moraga. They also offer services such as a free chipping program. In 2020 they expanded their staff to three full time fire mitigation specialists. MOFD also was successful in updating their fire code amendments in adopting Ordinances No. 20-01 and No. 20-02⁹. These ordinances designated certain areas of the district as a Wildland Urban Interface Fire Area (reinforcing Ordinance 09-01). They also included requirements for the zone within two feet of structures: no combustible ground cover (including mulch and bark), one-foot air gap between ground and lower portion of bushes, removal of Eucalyptus and Pine within six feet of structures, removal of juniper and bamboo within ten feet of road by end of 2023. The ordinance streamlined the inspection process from notification through lien hearing. It also increased new road width and required fire sprinklers for remodels and additions to existing structures.

Partner agencies include City of Piedmont and Contra Costa County Fire District. In 2020, City of Piedmont updated their public information, following the CAL FIRE model, similar to El Cerrito. They also increased their inspections and updated their fire codes. Contra Costa County Fire District operates a similar exterior hazard abatement program.

Hazardous fuel reduction projects

in March 2020, University of California, Berkeley (UCB) completed the “Centennial Drive Evacuation Support Project.” The 33.3-acre project removed trees that could block evacuation or emergency egress along this critical connection from Grizzly Peak Boulevard downhill to the City of Berkeley road network. A similar project is set to begin in December 2020 for the 18 acres along Claremont Avenue. City of Oakland is collaborating on road closure during non-peak commute periods to facilitate the removal of trees. UCB continues to work with the UCB Forestry Club and the California Oak Initiative on their annual reforestation project on “Tightwad Hill” (above the football stadium) to replace aging pines with more fire safe oaks.



After fuel reduction on Centennial Drive. Evacuation route protection by selective thinning of forest.

East Bay Regional Park District (EBRPD) continues to implement their 2010 Wildfire Hazard Reduction and Resource Management Plan and the accompanying CEQA document which covers hill and shoreline

⁸ For more information about the Oakland inspection program see: <https://www.oaklandca.gov/services/wildfire-district-inspections>

⁹ For detail of Ordinances 20-01 and 20-02 see <https://www.mofd.org/our-district/fuels-mitigation-fire-prevention/ordinances-resolutions>. Ordinance 20-02 in effect as of July 20, 20, Ordinance 20-01 in effect as of October 1, 2020.

parklands from Richmond to Castro Valley.¹⁰ During 2020, initial treatments were implemented on 1,054 acres in recommended treatment areas (RTAs) in Anthony Chabot Regional Park, Claremont Canyon, Huckleberry Preserve, Redwood Regional Park, Sibley Regional Park, Wildcat Canyon, as well as in locations as a part of the Alameda whipsnake study. Planning is underway for initial treatments in additional RTAs in those parks, as well as Miller Knox Regional Park, and Tilden Regional Park. Equipment and techniques used included: weed-eating, mechanical and hand removal of brush, goat grazing, tree thinning and eucalyptus stump re-sprout control. During 2020 they expanded the use of remote equipment with a remote-control grapple saw. Maintenance continues on the projects completed in previous years in all of the parks located in the high fire areas. The work is an integral component of the Park District's Safe and Healthy Forests initiative for wildfire protection. This year, EBRPD also increased its staff capacity for fuel reduction with the addition of two fuels reduction coordinators and expanded their 5 person fuels crew to an 8-person crew.

East Bay Municipal Utility District (EBMUD) continued their forest management hazardous fuel reduction projects, including eucalyptus thinning along Grizzly Peak Boulevard, and removal of decadent pines on the eastern shore of San Pablo Reservoir. Combined management tactics, including herded goats, mechanical mowing, hand labor, and pile burning, were used to reduce fuel loading and enhance native plant populations. A volunteer group continues 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. With support from CAL FIRE/ California Department of Correction Conservation Crews, EBMUD completed fuel reduction activities on over 200 acres on the east side of San Pablo Reservoir. Fuel management activities included pile burning and tree removal by hand crews.

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).

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 increased their use of goats with 400-700 goats on the lab for 4-5 weeks, 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

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, Oakland has completed 60 abatement contracts. These abatement contracts, totaling 155 acres of City of Oakland owned undeveloped properties and 85 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's goat grazing program for 2020 concluded in late September with approximately 1100 acres of City lands grazed. 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

¹⁰ 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/about/stewardship/fuelsplan/> and https://www.ebparks.org/about/fire/wildfire_prevention.htm

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

New University of California, Berkeley Goat Herd.

Use of goat herds continues 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. The small herd was matched to small projects on the Hill Campus and at Russell Reserve.

Dedicated Fuels Crews.

In 2020, the EBRPD Board approved permanent funding for additional three positions in their fuels crew, bringing the staffing to an eight-person crew. This fuels crew does the physical work related to hazardous wildland fuel reduction identified in the District's Wildfire Hazard Reduction and Resources Management Plan including: use of chainsaws, weed-eaters, hand tools and other equipment, operation of chippers, planting to help restore sites, as well as fireline duties.



City of Berkeley approved one-time funding to develop a fuels crew and purchase equipment. Berkeley Fire Department worked with the City of Berkeley Program "Youth Works" to develop a crew. The plan was to focus on the "Safe Passages¹¹" program of city owned road rights-of-way and with the Berkeley Path wanderers on the City owned pedestrian pathways. The project was placed on hold when the Covid-19 shut down all but essential activities.

Use of Prescribed Fire

Use of prescribed fire continues to expand in California. SB901, signed by the Governor in 2018, included authorization for private burners as burn bosses. Early in the year Santa Clara Cal Fire Unit was planning for a prescribed burn training with the Bay Area Prescribe Fire (BARxF). BARxF is a collaborative group formed in 2018 to share resources, expertise, training and experience in pursuit of safely getting "good fire" back on the landscape. While their Spring 2020 training was postponed due to Covid-19, several HEF members continue to use prescribed fire to manage vegetative fuel loads.



in April, MOFD conducted a prescribed fire in Orinda Oaks Open Space.

Moraga Orinda Fire District completed three prescribed fires during 2020:

- in June at the John Muir Land Trust's "Painted Rock" property in Moraga,
- in March at Orinda Oaks Open Space, and

¹¹ For presentation to City Council on Safe Passages see

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwjAk_PMmYLsAhVHvj4KHb_eRDIQQFjABegQIAhAB&url=https%3A%2F%2Fwww.cityofberkeley.info%2FCouncil_6%2FElected_Officials_and_Collections%2F2019_Fire_Safety_Town_Hall_BFD.aspx&usg=AOvVaw3EDxtO2eOy0oHYPAoYCjIV

- in April with East Bay Municipal Utilities District on EBMUD land near Wildcat Canyon and Bear Creek Roads.

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

East Bay Municipal Utility District and East Bay Regional Park District also conducted pile burns to process cut materials from their hazardous vegetation removal projects on San Pablo Reservoir and Tilden Regional Park.

Funding

Grant Funding

During 2020, HEF SLC member collaborated on applications to several grant programs. The California Climate Initiative provided grant programs in Forest Health and Fire Protection. Unfortunately, none of the 2020 submittals from City of Berkeley, Oakland or Lawrence Berkeley Laboratory were selected for funding. University of California, Berkeley continues to utilize the 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 2021.

East Bay Regional Park District continues to expend grant funding from their FEMA grant. In 2020, they received a new California Climate Initiative grant from the California Natural Resource Agency through the State Coastal Conservancy for forest health, demonstration projects and community outreach. The District also received final funding for eucalyptus removal on the ridgeline in Tilden Park as a part of the North Orinda Shaded Fuel Break (one of the 35 emergency projects funded by the Governor in 2019).

Increased internal funding.

During 2019-2020, a number of HEF member agencies dedicated internal funding increases and new programs related to wildfire hazard reduction. East Bay Regional Park District provided permanent funding for an eight-person full time fuels crew. City of Berkeley also provided funding for a fuels crew, working with Youthworks. However, their crew was delayed due to COVID 19. (See page 7 for description of fuels crews). The Facilities Services Department of UC Berkeley successfully applied for “Be Safe” internal funding to remove aged pine trees on Tightwad Hill and signage throughout the hill area. City of Oakland provided additional funding to their outreach and educational program.

Legislation and policy of interest.

HEF SLC members received regular updates on 45 pieces of legislation related to wildfire during 2020. Updates included legislation on: local grant assistance, tax credits or bond measures; home hardening and defensible space; public safety power shutoffs; infrastructure investments; risk modeling and climate change; and miscellaneous topics. such as ability for inmates from hand crews to file with court to expunge their sentence.

HEF SLC members also engaged with Insurance Commissioner Ricardo Lara, who took an active role in the California Insurance Commissions outreach during 2020. In March, Commissioner Lara held roundtable meetings with stakeholders, including HEF SLC members, to discuss current issues related to non-renewals, premium increase, lack of available insurance and the FAIR plan coverage. There were a number of new laws enacted in 2019 related to wildfire and insurance including: SB 824-non-renewal protection in disaster areas, SB 89, AB1772, AB1800, SB240, SB508 and AB1816: fire hardening (AB 38), and model defensible space requirements (SB 190). Governor’s Newsom’s 2020 budget included \$100M for wildfire home hardening, \$750M for community hardening and forest health, and \$250M for community resilience – totaling \$1.1B overall. Also, in November 2019, changes to FAIR plan required greater transparency for wildfire risk score model, and for insurer to take into account community and individual mitigation and allow homeowners to appeal their risk score.

PREPAREDNESS

Outreach and education

In 2020 CAL FIRE introduced a new app to help residents prepare for wildfire. The web based *Ready for Wildfire* app enables homeowners to create a personalized wildfire readiness plan. After answering a series of questions, the homeowner receives a detailed report on actions they can take to improve their defensible space, harden their home and get ready for wildfire.

In February, HEF SLC staff shared a preliminary annotated bibliography of home hardening/ structure retrofit resources. A summary of local ordinances and catalogue of potential retrofit standards for consideration in future code cycles was also discussed. For example, Hillsborough's ordinance has a retrofit trigger requiring structure hardening upgrades during renovations.

HEF SLC members updated their outreach information to residents, including information related to inspections and defensible space. Oakland's Vegetation Management Unit received a \$15,000 grant for public education on vegetation management and evacuation/ emergency preparedness. This included an update website, postcard notification of an early season, as well as other outreach throughout the season.

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.

Red Flag Warning 907AM PDT Wed Sept 30, 2020

The East Bay Hills experienced numerous red flag watches and red flag warnings in 2020. The National Weather Service announcement triggers HEF member fire agencies to add staffing, increase fire patrols, and pre-position equipment to enhance response effectiveness for potential fires.

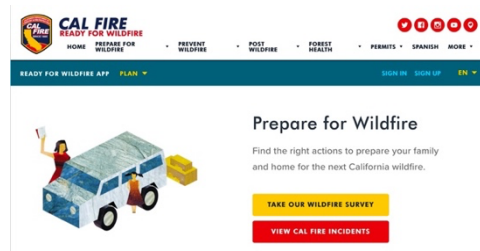
During August, September and October red flag warnings, East Bay Regional Park District and East Bay Municipal Utility District both closed their trails and recreation areas, and increased park and watershed patrols to reduce the chance of ignitions. The most recent addition to the region's red flag protocols was the restriction of parking along Grizzly Peak Boulevard from 9PM to 6AM and during these periods of critical fire weather.

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 Firewise USA neighborhoods active in 2020. Several of the other member agencies are interested in supporting development of similar programs in areas of high wildfire risk.

Wildfire Evacuation

In March 2020, HEF SLC member shared preliminary annotated bibliography on evacuation information from the Diablo Fire Safe Council (DFSC) *Good to Go!* program. Throughout 2020, DFSC with agency partners have been creating a new program: *Good to Go! How to get ready, stay informed, evacuate and return from wildfire*. DFSC working with the Sunol community, Alameda County Fire and Cal Fire Santa Clara Unit, have created a website www.goodtogowildfire.com, YouTube channel of videos, workbooks, and a community outreach campaign with e-mail, postcards, banners and presentations. The Sleepy Hollow neighborhood in Orinda has expanded their robust emergency evacuation program with funding



<https://www.readyforwildfire.org/more/ready-for-wildfire-app/>



for vegetation removal along key evacuation routes. Once the program is developed, it will be beta tested with Kensington and Hayward, then shared with all HEF members.

RESPONSE

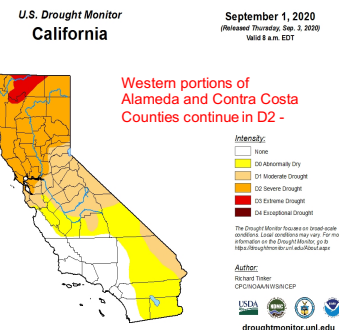
2020 response activity

Throughout the year, HEF SLC members received regular updates on significant fire potential and drought conditions¹² to be able to respond to the heightened potential for wildfires. For much of the year the fire potential was above normal, and the western portions of Alameda and Contra Costa Counties were under severe drought.

Local agencies showcased early response during the wind event on February 9, 2020. The strong, drying winds downed trees and powerlines; blocking access and response. Fortunately, there was no uncontrolled wildfire, limited structural damaged and no lives lost.

The wildfire year began in force early among HEF members. On July 5th, the Crews Fire ignited in rural Santa Clara County (Crews Road north of Gilroy). By July 13th the fire was contained, burning 5,513 acres.¹³ In contrast, also in July, a small fire near Lawrence Berkeley Lab and University of California, Berkeley highlighted the effectiveness of vegetation management. This fire ignited in an area of recent vegetation management and was able to be controlled rapidly.

Beginning in June, illegal firework activity was above the level of previous years. On the 4th of July, the City of Oakland, with cooperation of partner HEF members, Cal Trans and the California Highway Patrol, closed Grizzly Peak Boulevard to through traffic. This allowed members to patrol the area to monitor for potential ignitions. There were no ignitions, structure or loss of life in the HEF member jurisdictions on 4th of July. In September, at the height of extreme fire conditions, illegal fireworks continued. Community members raised concern and complaints in light of the on-going fires throughout California and the dry vegetative fuel conditions. HEF SLC members, led by City of Oakland, began installing signs along Grizzly Peak Boulevard to allow law enforcement to cite and remove illegal activity, restrict parking on red flag days and reduce the potential for ignitions in the area. The City of Berkeley Council passed an Emergency Situation on September 15, 2020 calling for coordinated “immediate measures to address fire safety and fire prevention at Grizzly Peak Blvd. Scenic Look-out Areas.¹⁴” The HEF SLC members worked together to block vehicular access to these popular scenic look-out areas, as well as coordinate continued enforcement to reduce the potential for ignitions in these critical locations.



Logs from the Centennial Drive Evacuation Support Project were used to block access to look out areas where an ignition could result in an uncontrolled wildfire.

¹² North Ops Fire Forecast: https://gacc.nifc.gov/oncc/predictive/outlooks/Outlook_NOps.pdf

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

¹³ Source: Cal Fire Incidents. <https://www.fire.ca.gov/incidents/2020/7/5/crews-fire/> accessed 9/18/20. CAL FIRE Santa Clara Unit is a HEF member.

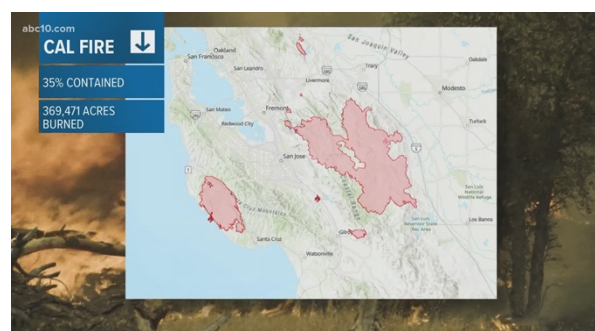
¹⁴ September 15, 2020 Consent Calendar, Resolution No. 69, 542-N.S. (Page 3 Annotated Agenda). https://www.cityofberkeley.info/Clerk/City_Council/City_Council_Agenda_Index.aspx#2020

At 4:00AM August 18th a rare lightning storm passed through the Bay Area, with thousands of lightning strikes igniting hundreds of fires. Several of the fires in the southern portion of Alameda County converged and spread south as the “SCU Lightning Complex” into Santa Clara County, San Joaquin County, Merced and Stanislaus County. Over thirty days later the fire had burned 396,624 acres with 222 structures destroyed, 26 structures damaged, 6 confirmed injuries (to date). By October 1st, the fire was contained.¹⁵ SCU Lightning Complex fire has become the third fire on the list of “Top 20 Largest California Wildfires” since records began in 1932.¹⁶ The 1991 Tunnel Fire that spawned the formation of the Hills Emergency Fire remains third on the list of “Top 20 Most Destructive California Wildfires.”

The large, fast moving fires have emphasized the importance of mass evacuation. This year HEF SLC members continued to reach out to their law enforcement partners to improve coordination among the agencies.



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Source: <https://www.abc10.com/article/news/local/wildfire/lnu-lightning->

¹⁵ Source: <https://www.fire.ca.gov/incidents/2020/8/18/scu-lightning-complex/> accessed 9/18/20.

¹⁶ Source: https://www.fire.ca.gov/media/11416/top20_acres.pdf and https://www.fire.ca.gov/media/11417/top20_destruction.pdf