



Mariposa County Fire Advisory Committee MEETING AGENDA SEPTEMBER 21, 2022

DATE: Wednesday SEPTEMBER 21, 2022

TIME: 9:30 AM

**LOCATION: Mariposa County Fire Department Head Quarters
4802 Highway 140 (Executive Meeting Room)
Mariposa, CA 95338**

Teleconference option available (see below for call in participation information)

Dial in- United States: +1 (786) 535-3211

Access Code: 135-062-653

Members of the public who wish to participate in the meeting are invited to do so by submitting written comments (instructions follow) or by joining the teleconference by:

MCFAC Advisory Committee written commenting processes are as follows

WRITTEN COMMENTS: Written comments may be submitted via U.S. Postal Service, email or may be dropped off at the Planning Department. In your written communication please note in the subject line: Which Advisory Committee you are commenting to and indicate which "PUBLIC COMMENT ITEM #" (insert the item number relevant to your comment) or "PUBLIC COMMENT NON-AGENDA ITEM" that you are commenting on.

1) Mail • Send written communication to:

Mariposa County Fire Department
PO Box 2039
Mariposa CA 95338

2) Email • Send an email to the mcfac@mariposacounty.org

3) Drop Off: • Written communication can be dropped off at:

No matter which of these formats you choose to use for written communication (Mail, Email or Drop Off) please know that in order to ensure distribution to the committee prior to their consideration of the agenda, and in order for your written comments to be placed into the record it must be received no later than 8:00 a.m. on the day of the meeting.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Fire Department at 209-966-4330.
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Mariposa County Fire Advisory Committee

MEETING AGENDA

SEPTEMBER 21, 2022

1. Roll Call

2. Approval of Minutes: August 17, 2022

3. Public comments

4. Discussion and Possible Action:

- a. Mcfac secretary position. Laura Norman retirement
- b. Recognize Dave Angelini resignation and Gary Colliver as replacement
- c. Update on MCFAC update to the Board and approved recommendations of bi-laws
- d. Title 3 fund discussion
- e. Fire Wise Communities discussion
- f. Mariposa County Fire Department Service Levels discussion
- g. Grant Coordinator Position update

5. Updates, Activity Reports and Future Items

- a. Members
- b. Any future agenda items

6. Adjourn

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in meeting, please contact the Fire Department at 209-966-4330

RESOLUTION NO. 2021-01

Mariposa County Fire Advisory Committee

A RESOLUTION OF THE MARIPOSA COUNTY FIRE ADVISORY COMMITTEE PROCLAIMING A LOCAL EMERGENCY, RATIFYING THE PROCLAMATION OF A STATE OF EMERGENCY BY THE GOVERNOR OF THE STATE OF CALIFORNIA ON MARCH 4, 2020 REGARDING AN OUTBREAK OF RESPIRATORY ILLNESS DUE TO A NOVEL CORONAVIRUS (A DISEASE NOW KNOWN AS COVID-19), AND AUTHORIZING REMOTE TELECONFERENCE MEETINGS OF THE LEGISLATIVE BODIES OF THE MARIPOSA COUNTY FIRE ADVISORY COMMITTEE FOR THE PERIOD SEPTEMBER 21, 2022 TO OCTOBER 19, 2022 PURSUANT TO BROWN ACT PROVISIONS.

WHEREAS, the Mariposa County Fire Advisory Committee is committed to preserving and nurturing public access and participation in meetings of the Planning Advisory Committee; and

WHEREAS, all meetings of the Mariposa County Fire Advisory Committee's legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the District's legislative bodies conduct their business; and

WHEREAS, the Brown Act, Government Code section 54953(e), makes provisions for remote teleconferencing participation in meetings by members of a legislative body, without compliance with the requirements of Government Code section 54953(b)(3), subject to the existence of certain conditions; and

WHEREAS, a required condition is that a state of emergency is declared by the Governor pursuant to Government Code section 8625, proclaiming the existence of conditions of disaster or of extreme peril to the safety of persons and property within the state caused by conditions as described in Government Code section 8558; and

WHEREAS, a proclamation is made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the jurisdictions that are within the District's boundaries, caused by natural, technological, or human-caused disasters; and

WHEREAS, it is further required that state or local officials have imposed or recommended measures to promote social distancing, or, the legislative body meeting in person would present imminent risks to the health and safety of attendees; and

WHEREAS, such conditions now exist, specifically, COVID-19 has spread and is continuing to spread at rates that threaten the capacity of the health care system and the health of the community, and

WHEREAS, in-person meetings that include members Mariposa County Fire Advisory Committee as well as members of the public would expose attendees to transmission of COVID-19 in ways that present imminent risks to health and safety; and

WHEREAS, the Mariposa County Fire Advisory Committee does hereby find that community transmission of COVID-19 has caused, and will continue to cause, conditions of peril to the safety of persons within the community that are likely to be beyond the control of services, personnel, equipment, and

facilities of the Fire Advisory Committee, and desires to proclaim a local emergency and ratify the proclamation of state of emergency by the Governor of the State of California; and

WHEREAS, as a consequence of the local emergency, the Mariposa County Fire Advisory Committee does hereby find that the Mariposa County Fire Advisory Committee shall conduct their meetings without compliance with paragraph (3) of subdivision (b) of Government Code section 54953, as authorized by subdivision (e) of section 54953, and that such legislative bodies shall comply with the requirements to provide the public with access to the meetings as prescribed in paragraph (2) of subdivision (e) of section 54953; and

WHEREAS, efforts are being made to ensure public access to the Mariposa County Fire Advisory Committee meetings, including providing public call-in numbers which are part of the meeting packet and public noticing materials.

NOW, THEREFORE, THE MARIPOSA COUNTY FIRE ADVISORY COMMITTEE DOES HEREBY RESOLVE AS FOLLOWS:

Section 1. Recitals. The Recitals set forth above are true and correct and are incorporated into this Resolution by this reference.

Section 2. Proclamation of Local Emergency. The Committee hereby proclaims that a local emergency now exists throughout the community, and that meeting in-person as a committee and with members of the public in attendance would present an imminent risk to the transmission of COVID-19.

Section 3. Ratification of Governor's Proclamation of a State of Emergency. The Committee hereby ratifies the Governor of the State of California's Proclamation of State of Emergency, effective as of its issuance date of March 4, 2020.

Section 4. Remote Teleconference Meetings. The County of Mariposa and legislative bodies of the Mariposa County Fire Advisory Committee are hereby authorized and directed to take all actions necessary to carry out the intent and purpose of this Resolution including, conducting open and public meetings in accordance with Government Code section 54953(e) and other applicable provisions of the Brown Act.

Section 5. Effective Date of Resolution. This Resolution shall take effect immediately upon its adoption and shall be effective until the earlier of (i) JUNE 15, 2022, or such time the Mariposa County Fire Advisory Committee adopts a subsequent resolution in accordance with Government Code section 54953(e)(3) to extend the time during which the Mariposa County Fire Advisory Committee may continue to teleconference without compliance with paragraph (3) of subdivision (b) of section 54953.

PASSED AND ADOPTED by the Mariposa County Fire Planning Advisory Committee this 21th day of SEPTEMBER 2022, by the following vote: —

AYES:

NOES:

ABSENT:

ABSTAIN:



Mariposa County Fire Advisory Committee

MEETING DRAFT MINUTES

DATE: Wednesday AUGUST 17, 2022
TIME: 9:30 AM
LOCATION: Go To Meeting/Call in – Conference Meeting (see below for participation information)
Host Location – Mariposa County Government Center
5100 Bullion Street, Mariposa, CA 95338
Lower Floor, Development Services

1. Roll Call: Steve Ward, Steve Engfer, Barbara Cone, Melinda Barrett, Dave Angelini, Hannah Harrison, Wes Smith, Mike Keyser, Ron Plummer SNF, Russ Marks, Tara Fouch-Moore, Deron Mills, Fadzayi Mashiri, Local Citizen Gary Colliver, Laura Norman, and Marshall Long.

Meeting called to order at 9:32.

2. Resolution: At the beginning of each meeting we will vote on whether we want to have an all in-person meeting or only teleconference. The public will have the option to call in for either format.

ACTION- Motion to meet by teleconference on this day. Approved.

3. Approval of Minutes: Minutes of May 18 and June 15, 2022

ACTION- Motion to approve May Minutes. Approved.

ACTION- Motion to approve June Minutes. Approved.

4. Public comments - none

5. Discussion and Possible Action:

- a. Discussion and potential recommendations to the BOS on MCFAC membership seat status, full voting seats v. Ex-Officio and quorum for the MCFAC. Recommendation by MCFAC for BOS meeting in September 2022.

Ward sent letters to agencies/entities asking if they want to be ex-officio or voting members of MCFAC. Letters went to both Forests, BLM, American Indian Council, YNP, PG&E, Caltrans, and Farm Bureau.

Ex-Officio responses: 2 USFS, BLM, YNP, PG&E, Caltrans, Farm Bureau, County Fire, 2

Supervisors

Voting members: American Indian Council, CAL FIRE, FSC, RCD, Planning Dept, Public Works, County OES, SWIFT, 2 public members, UCCE, and Sierra Tel

Quorum: 50% + 1 = 7 members

ACTION: Motion to move the item forward to request changes with BOS, County Fire staff put changes together as discussed, with voting and ex-officio memberships as described as an amendment to the current MCFAC membership resolution. Approved.

- b. County Committee Guidelines Policy Adhoc committee- request for MCFAC recommendation to the BOS on draft changes to the County's Resolution.

TABLED. Marshall has not gotten any answers from County Council yet. Discuss at Sept meeting.

- c. Discussion and possible action on applying for the Community Wildfire Defense Grant program. Who will take the lead on applying if decision is made to do so?

Grant: Federal funds giving priority to at-risk communities from drought and wildfire, low income, up to \$10M for projects outlined in the CWPP, no minimum.

Offers planning money for CWPP, could help develop community specific CWPPs, very good fit on eligibility, could supplement FEMA water tank grant, and a lot of other projects. Problem is having the time and resources to apply right now. RCD, FSC, SS Miwuk or AICMC, and County Govt are eligible.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Fire Department at 209-966-4330.



Mariposa County Fire Advisory Committee

MEETING DRAFT MINUTES

Missing opportunities due to bandwidth. Recommend adding people to be able to take advantage and make CWPP effective. Grant has 5 year timeframe. A hire could write grants to fund their own position for future. \$250,000 toward planning of CWPP could include a consultant to work with Planning Dept staff to implement smaller community CWPPs. Less labor commitment could be more appealing. Agree on one high priority project to accomplish. Ask for more County staff to work on these projects. County currently has an unfilled Grant Coordinator position. If County Fire wants a grant write there will be funding available in Oct/Nov and OES has Tuolumne County's templates. BOS seems open to a grant coordinator in County Fire. Application due Oct 7th, announce awards by end of 2022, with projects starting in 2023.

Adhoc: Steve Engfer, Melinda Barrett, Tara Fouch-Moore, Barbara Cone, Mike Keyser

d. Project updates or new grants filed for or received and any needed coordination.

Dave Angelini – moved to Nevada, no longer able to represent the County as a public member.

CAL FIRE – No project updates. There will be another round of Wildfire Protection Grants. We could clear a lot of county roads with \$10M with Defense Grant. If MMU applies it won't be specific to Mariposa County.

*FSC – nervous about timeline for Wildfire Prevention Grants. Need County contract to proceed. Stumpfield Fuel Break is completed. All other projects moving along. *Public Works directing people to FSC for Oak Fire tree removal. Brush & chip not available until winter of defensible space only.*

RCD – 3 new grants: 3rd Forest Health Grant from CAL FIRE for \$5M continue fuels reduction and biomass removal; Governor's Office of Planning & Research regional grant applied for by Tuolumne County to cover 5 Sierra counties; and California Assn of RCDs to provide technical assistance to private landowners, hopefully to help Oak Fire residents. Hire AmeriCorps or similar to do work for landowners. A new grant in cooperation with SS Miwuk for Monarch Butterfly Habitat Restoration to fund the Tribe's pollinator team.

Planning – FEMA Hazard Mitigation Grant submitted my Mikey Goralnik has been moving along for Midpines Strategic Fuel Reduction project. Mikey is looking for information. Please respond to him with your comments.

Public Works – Contractor doing roadside brushing on Colorado Rd going well. MPD has delivered 1.5M gallons of treated water, and as of this day 1.1M gallons of untreated water. The savings of having the Bootjack tanks was significant for Mariposa Pines and Ponderosa Basin.

UCCE – New Fire Advisor starts work on Monday. Will introduce her around County. Looking forward to getting projects going and taking advantage of Fire Prevention Grants.

AICMC – Through County grant they hired a Tribal Case Manager for Oak Fire resources. Surveying at Sarah Priest Allotment. Submitted pre-proposal to Sierra Nevada Conservancy to do full 160 acre allotment fuels reduction project. Trying to build in funding to do workforce development with the goal of having their own tribal conservation corps.

Sierra Tel – It is Laura's last meeting. Need to replace the Secretary. Appreciation to Laura for covering these duties.



Mariposa County Fire Advisory Committee

MEETING DRAFT MINUTES

SNF – Tied up with Washburn and Oak Fire clean up

County Fire – Reserve firefighters have been hired. 2 in training and 1 finishing labs to be cleared for hiring as an employee. Interviewing 9 applicants on Aug 22nd. Looking to hire a 4th. Doing a presentation on Tuesday to the BOS regarding staffing for the future. Still waiting on fuel reduction equipment that was ordered to come in; skid steer and masticator. Working with Supervisor Smallcombe to schedule dates for Firewise community discussions. Need to work on update for Pre-Fire Engineer position for our county. Hopefully a grant coordinated position that OES reported. Midpines 320 acres is in agreement between County and CAL FIRE to make it a training ground for tree dropping and fuel brushing. Title III funding projects have been approved by BOS for \$108,000.

6. Updates, Activity Reports and Future Items

- a. Members –
- b. Any future agenda items: None

7. Adjourn

Adjourned at 11:02 a.m.

Agenda Documents Download link: <https://www.mariposacounty.org/DocumentCenter/Index/2715>

- If you require a hard copy of the agenda please notify Cathy Garrett, County Fire Department: cgarrett@mariposacounty.org



PO BOX 1182 | Mariposa California 95338 | 209-966-7700 | www.mariposafiresafecouncil.org

Proposal for Use of SRS Title III Funds

The Mariposa County Fire Safe Council (FSC) would like to request a grant of SRS Title III funds in order to begin planning for a ladder fuel reduction project encompassing the entirety of the Lushmeadows Association parcels. Currently the Association has heavy fuel loading with high density housing, posing a logistical nightmare if fire gets established within the development. The ladder fuel removal project will also include removing dead, dying, and downed trees, as well the necessary CEQA environmental assessments.

The work to pre-plan this project is vitally necessary in order to submit a well understood and data driven grant application to Cal Fire. The FSC does not currently have the administrative funding source that allows for the extensive planning, coordination, survey mailers, follow up, and grant writing for a complex effort such as this.

Our request is for a grant of funds, not to exceed \$15,000.

Our intent is to use those funds to:

- Assess the acreage to be included in the project.
- Assess the fuel loading on the acreage.
- Coordinate with the Lushmeadows Association Board, Cal Fire, and County Fire to obtain perspectives and solidify best approaches.
- Attend Lushmeadows Association board meetings, and Association General Meetings, to discuss the developing plans and obtain input.
- Conduct outreach to parcel owners through on-line media.
- Conduct a survey mailing to all parcel owners that includes a SASE envelope to assess interest and intent to participate.
- Conduct door-to-door follow-up for non-responders.
- Conduct on-line searches for absentee parcel owners.
- Respond to inquiries.
- Assess and compile data, acreage, and solidify the approach.
- Obtain an estimate for the CEQA Environmental Assessment.
- Assess the cost of fuel removal and administration of the project.
- Write the grant application for the fall 2022 grant opportunity through Cal Fire's Fire Prevention funding.

The FSC asks the Mariposa County Board of Supervisors for their sincere consideration of this request.

Thank you,

Barbara Cone

Executive Director

Mariposa County Fire Safe Council

MARIPOSA TRAILS

BUILDING TRAILS AND COMMUNITY

March 28, 2022

Steven Ward
Division Chief
CAL FIRE Madera-Mariposa-Merced
Mariposa County Fire Department

Re: Request for Title III Funds for use in the 22_23 FY

Dear Mr. Ward,

Thank you for the invitation to submit a request for funds. Mariposa Trails is a front-line local resource that: (1) contributes to treatment of existing fuels; and (2) educates local residents and visitors, which align with actions of the Mariposa County CWPP. We look forward to partnering with the Mariposa County Fire Department and CAL FIRE in these endeavors.

Enclosed is our proposal for Title III Funds. Please note that in the spirit of community collaboration we are open to modification of the projects to more closely align with outcomes and products envisioned by the MCFAC.

Your consideration is greatly appreciated.

Sincerely,

Bill King

President/Executive Director



Tax ID No. 85-1241296

CONNECT WITH US

209.626.9898
mariposatrails@sti.net.com
P.O. Box 5008-139 Mariposa
CA 95338
www.mariposatrails.org

OUR MISSION

We provide trail access and promote its use for adventure, health, stewardship, education and community prosperity.

OUR BOARD

Bill King – President
Ursula Stock – Secretary
Beth Kellner – Treasurer

**“Mariposa Trails” request for Title III Funds for
Wildfire Prevention and Mitigation Activities Proposal**



Proposer: Mariposa Trails, in partnership with GrizzlyCorps, an entity of Americorps run by the State of California.

Objective: To contribute to the implementation of Action Items #6 and #16 of the “MARIPOSA COUNTY CWPP ACTION PLAN”

Request: \$6,000

**Other
Potential**

Grantors: Mariposa County Tourism Bureau. Sierra Nevada Conservancy.

Background

Mariposa Trails is a federally registered 501(c)3 charitable non-profit that works with public lands agencies to construct, maintain and promote approximately 35 miles of recreational trails in Mariposa County. Most of the trails are located in chaparral and oak woodland plant communities. Hence, much of our work involves fuel-reduction. Some of these trails exist near populated areas, for example Jerseydale and Mariposa Pines, or along the interface between Yosemite National Park and adjacent public forests. As such, Mariposa Trails is a local front-line resource that: (1) treats existing fuel loads; and (2) educates visitors. These attributes align with Action Items #6 and #16 of the “MARIPOSA COUNTY CWPP ACTION PLAN,” respectively.

Mariposa Trails has submitted an application to GrizzlyCorps to receive “professional services” support from September 2022 to July 2023. GrizzlyCorps is an AmeriCorps program that sends recent college graduates, referred to as “fellows,” into rural communities across California to promote fire and forest resilience, among other issues. Learn more at www.grizzlycorps.org

GrizzlyCorps is requesting a \$20,000 match. Mariposa Trails aims to offer \$4,000, and is looking for the balance to be provided by local Mariposa-based entities with shared interests and goals. Additionally, GrizzlyCorps is willing to consider housing and other contributions as in-kind donations toward the match. Are you aware of available local housing opportunities for our fellow?

Proposed Projects

If awarded the grant from GrizzlyCorps, the fellow assigned would work on the following projects:

Project 1: Trail-based Fuel Reduction Program

Description: The Fellow will be responsible for: (1) initiating discussions about shaded fuel-breaks along local trails with adjacent land owners, affected public agencies, non-profit groups, tribes and community groups; (2) identify a trail for a pilot project, (3) working collaboratively with our partner organizations, determine how funding, workforce and permits figure into project implementation; and, (4) garner commitments to implement the project. The desired project outcomes will be establishment of a practice by partners that supports such trail design, and the laying of ground-work for the successful implementation of “trail-based” shaded fuel breaks at some future date.

Request: \$3,000

Project 2: Fire Resilience Themed Trail Map

Description: The Fellow will be responsible for (1) seeking guidance from local public agencies, non-profit groups, tribes and community groups about the design and content of a trail map; (2) creating the online map and associated storyboards; and (3) pending availability of funds, the creation of a print version of the map. The map will increase the community’s capacity to inform local residents and tourists about local trails, along with messaging about the ecological role of fire in the environment, our responsibility to be “fire-wise,” and information about what to do in case of a fire, among other items.

Request: \$3,000

Project Information

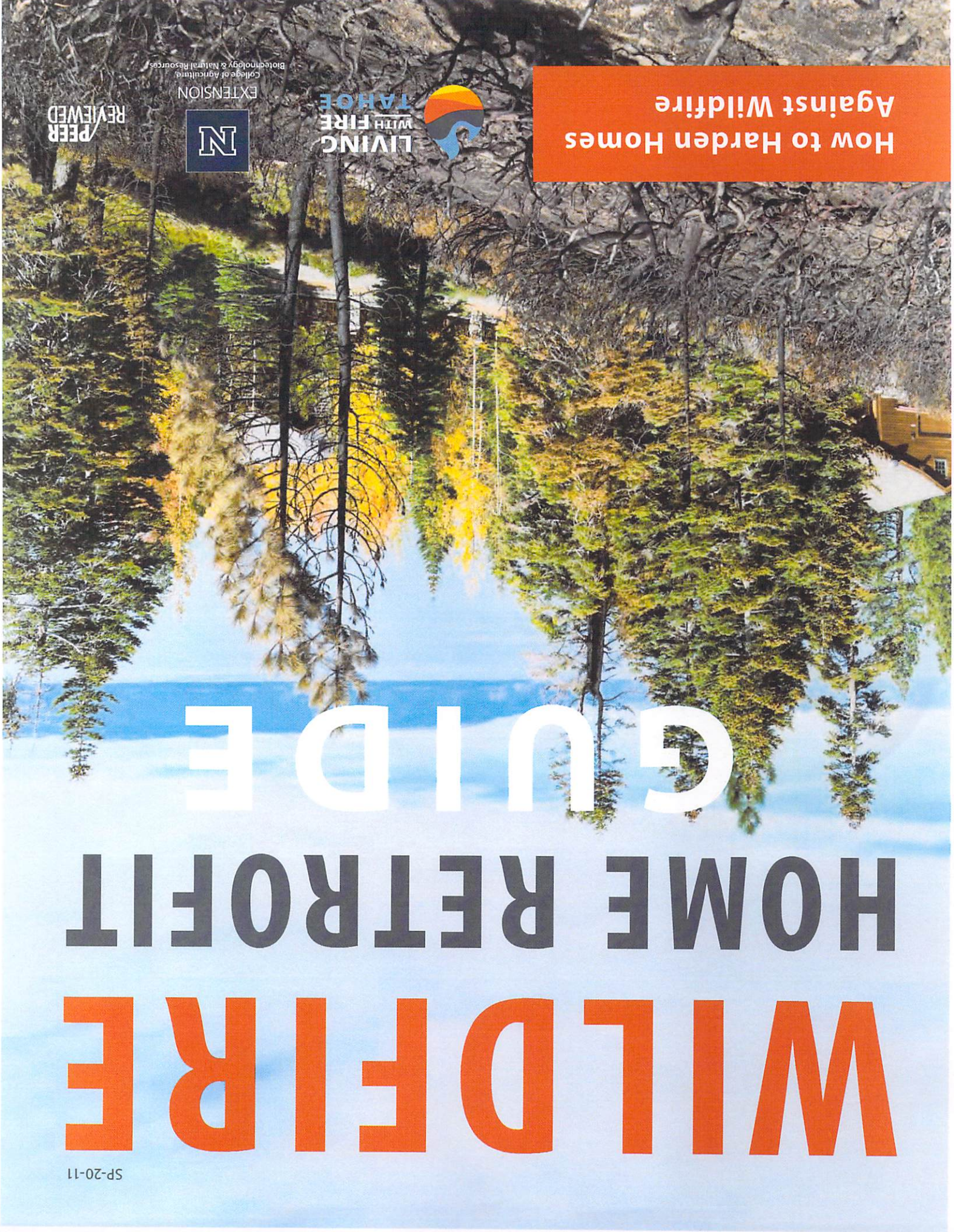
Project Name: Bootjack Fire Station Water Storage Project	
Implementing Organization	Mariposa County Resource Conservation District
Secondary Implementing Organization	
Proposed Start Date	4/30/2020
Proposed End Date	6/30/2023
Scope Of Work	Installation of a 165,000-gallon bolted steel on a 35'x35' level pad with adjacent 8'x8" shed on a 10'x10' concrete floor to shelter pumps and controls. Portable generator and fire hydrant adjacent to the shed to accommodate any power shut off. A 10-hp pump will replace existing well pump and plumbing will be upgraded to 2" diameter to increase flow to 35 gpm. Trenching for water and electrical lines will be designed from the well to tank.
Project Description	This project was originally adopted into the Yosemite-Mariposa IRWM Plan as Project 50. Based on input from CAL FIRE and Mariposa County Fire, the project was designed to accommodate the large number of out of the area fire fighters and water tenders in our highly fire-prone region by installing a new large water storage tank with fire hydrant that was visible and accessible from a major road. Sited on County-owned land along Highway 49, the main

[s://grants.water.ca.gov/\(S\(20dffl53qfn5mrbdpqpxdh0z\)\)/Agency/ProposalFullView.aspx](https://grants.water.ca.gov/(S(20dffl53qfn5mrbdpqpxdh0z))/Agency/ProposalFullView.aspx)

2/2019

Print Preview Proposal

	east-west artery in Mariposa County, and with an existing well, the Bootjack Fire Station provides an ideal, centrally-located location to Increase Water Storage, Enhance Regional Self-Reliance, and Prepare for Dry Periods by increasing water available to combat wildfires and reducing the amount of time firefighters currently have to travel to refill their water tenders. This project increases local water storage for firefighting by more than five times what is currently available and benefits multiple disadvantaged communities throughout the County. It will reduce turnaround time to refill water tenders and improve fire-fighting response capabilities, as well as reducing vehicle miles travelled and GHG emissions during a fire event. It also addresses the issue of out-of-town fire fighters who have difficulty navigating to storage on private lands, often on dirt roads and without hydrants. A consulting engineer will be selected that has experience in the installation of a water facility. The project will be publicly bid and awarded to the contractor providing the greatest value - which will include schedule, experience, and price. This ministerial project on County-owned land is within a public utility easement and is categorically exempt from CEQA. Building permits and any necessary setback variances will be prepared and filed by the Mariposa County Resource Conservation District as lead agency.
Project Objective	The objectives are to Increase Water Storage, Enhance Regional Self-Reliance, and Prepare for Dry Periods by increasing local water storage for firefighting purposes. Additional storage would reduce trips out of County when local supplies are exhausted, and shorten the time firefighters wait for filled water tenders to return to the fire lines. This project increases storage by 5 times over current levels and protects from the impacts of catastrophic wildfire driven by climate change.



How to Harden Homes Against Wildfire



LIVING
WITH FIRE
TAHOE



College of Agriculture,
Biotechnology & Natural Resources

EXTENSION

PEER
REVIEWED

WILDFIRE HOME RETROFIT GUIDE

SP-20-11

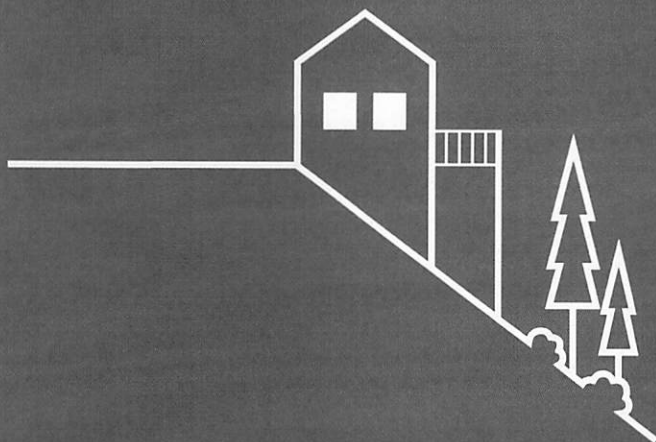
How to Use This Guide

This Guide includes specific recommendations for how to retrofit existing components of a home to withstand wildfire. Each section contains an explanation of how the component is vulnerable to wildfire and what can be done to improve that component. The illustrations throughout the Guide are intended to show best practices for reducing the vulnerability of a home to wildfire.

Inside This Guide

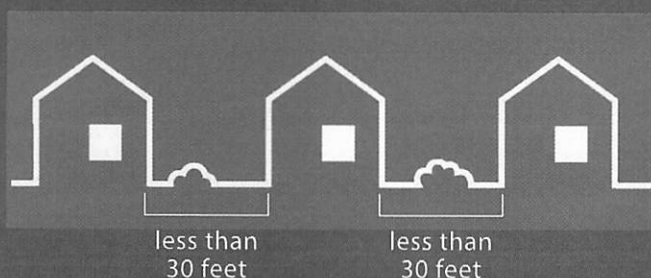
Defensible Space	p. 5	Siding	p. 10	Chimneys	p. 15
Roofs	p. 6	Skylights	p. 11	Fences	p. 16
Roof Edges	p. 7	Windows	p. 12	Glossary	p. 17
Rain Gutters	p. 8	Decks	p. 13	Online Resources	p. 18
Vents	p. 9	Garages	p. 14		

When using this Guide, think about the location and context of the home and how that influences vulnerability to wildfire:



Steep Slopes

When homes are located on steep slopes, decks commonly overhang the slope below, and this downslope area is often heavily vegetated. Prioritize defensible space actions so that flames from burning vegetation cannot reach the underside of the deck and ignite, with subsequent ignition of the home.



Dense Neighborhoods

Dense neighborhoods with homes close together have an increased risk of building to building ignition because of the radiated heat and potential flames that are generated if a neighbor's home burns. Prioritize actions to reduce the possibility of homes igniting each other. Intensify defensible space by thinning trees and shrubs between homes. Engage in neighborhood conversations to encourage all neighbors to take actions to reduce their own vulnerability to wildfire.

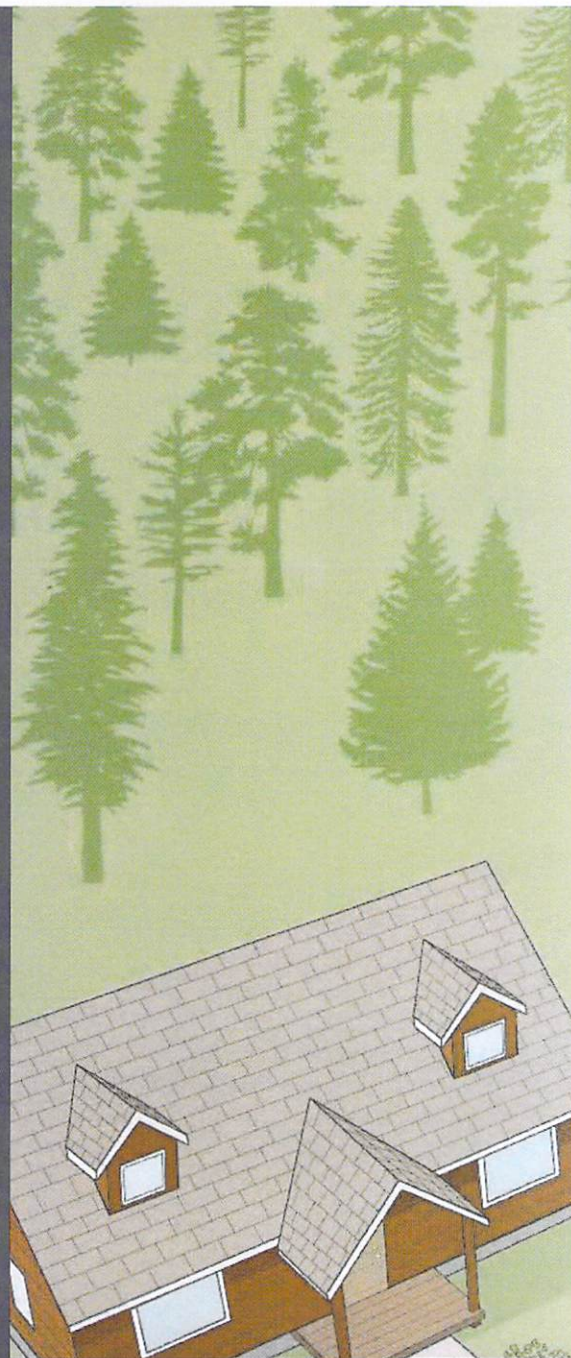


Large-Parcel Lots

When homes are on large parcel lots and neighboring homes are far apart, vegetation and other combustible materials on the property (e.g., wood pile, tool shed) can be a large factor in home ignition. Prioritize creating and maintaining defensible space, including the near-home noncombustible zone, and home-hardening techniques to reduce vulnerability from embers.

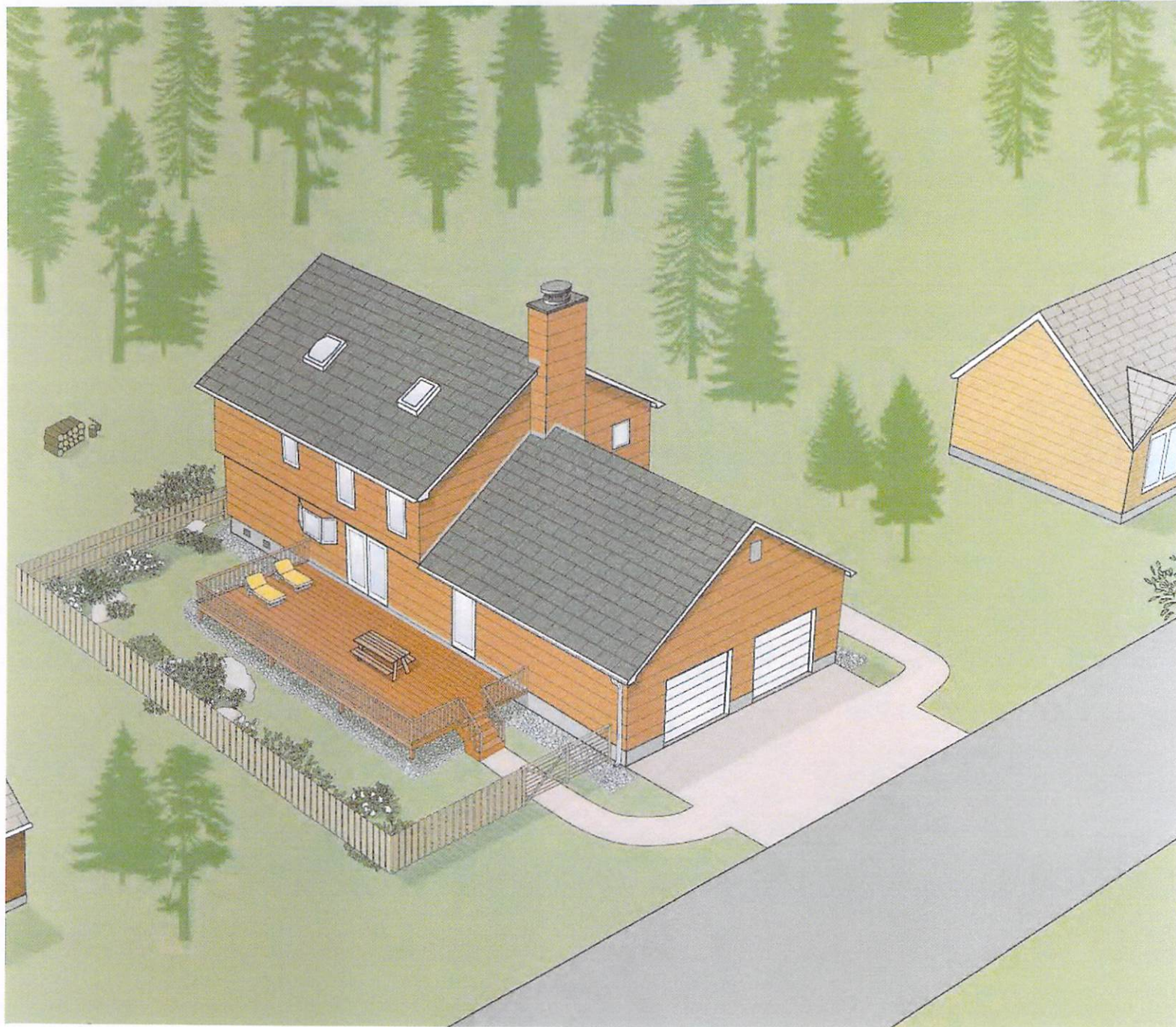
Living within the natural environment brings both serenity and responsibility.

Communities located in wildfire-prone areas need to take extra measures to live safely. There are many ways to prepare communities and properties for wildfire, including creating and maintaining adequate defensible space and hardening homes through altering or replacing the construction components. This guide will help residents and building professionals better understand how to prepare homes and communities for wildfire.



DURING A WILDFIRE, homes can be threatened by **1)** wind-blown embers, **2)** radiant heat, and **3)** direct flame contact.

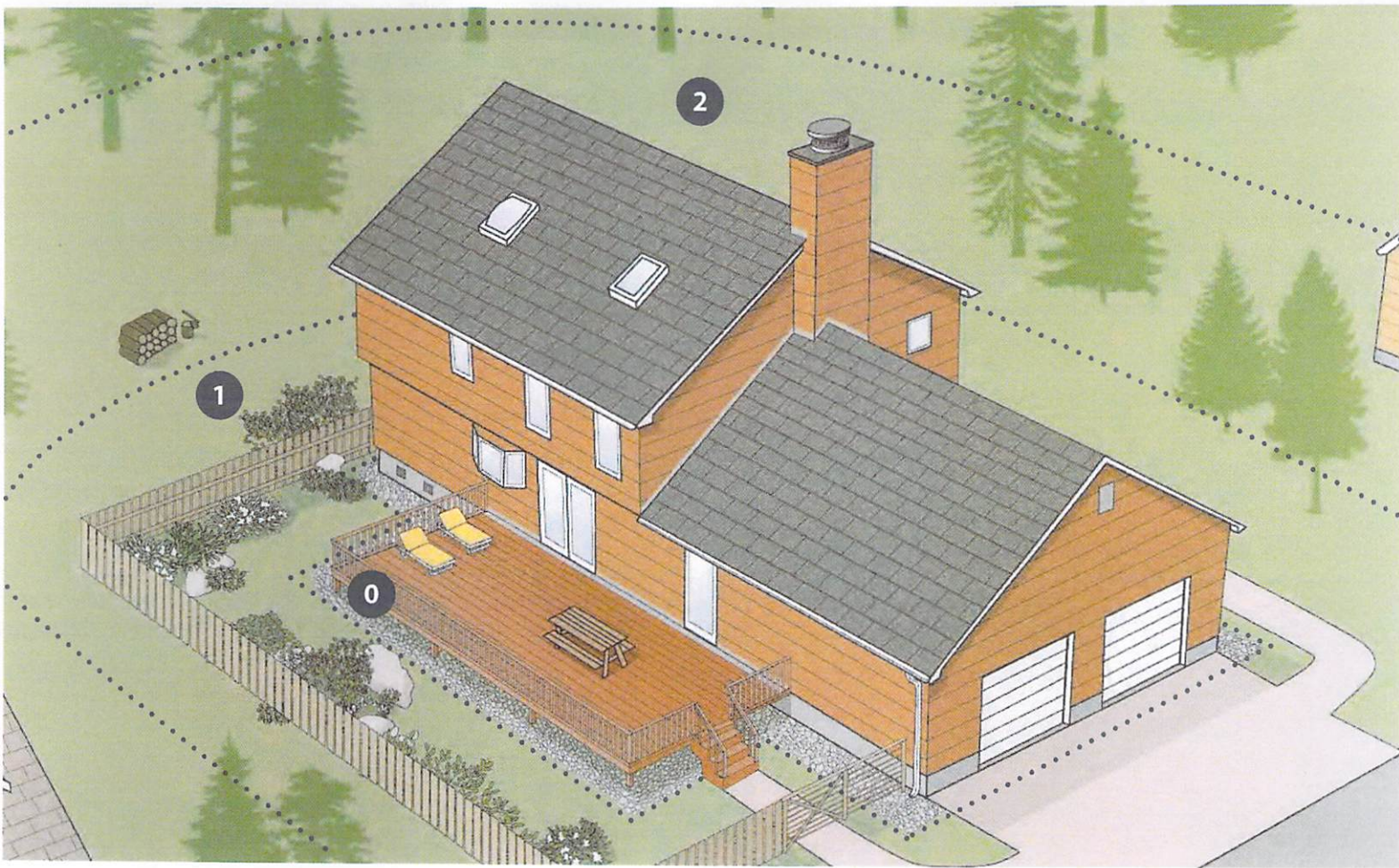
In wildfire events, 60-90% of home loss is due to embers. Embers can originate from an approaching wildfire or small parts of nearby burning vegetation and construction materials (e.g., a home, storage shed, wood pile). Embers are important because of what they can do directly (e.g., ignite materials in an attic after entering through a vent) and what they can do



indirectly (e.g., ignite a wood pile or storage shed located close to the home, resulting in radiant heat or direct flame contact to the side of the home). Reducing the vulnerability of homes to ember ignition will increase the chance of homes and neighborhoods surviving a wildfire.

The most effective way for homes to withstand wildfire is a “coupled approach” that considers the exterior

construction materials and how they are put together, as well as the surrounding vegetation and other near-home combustible materials. Selection, location and maintenance of vegetation and other combustible materials on a property can reduce the chance of a wildfire burning the home. This Guide provides information and recommendations for retrofitting an existing or newly constructed home with wildfire in mind.



↑ Protecting a home from wildfire requires continual defensible space actions in three zones around the property.

Contact local Extension offices for more information about defensible space recommendations specific to different regions.

Defensible Space

- 0 THE EMBER-RESISTANT ZONE (Zone 0) | 0–5 feet:** The zone within 5 feet of your home has many different names (e.g., the noncombustible zone, the immediate zone, the zero zone), but the objective is generally the same—to reduce the vulnerability of the home to embers by creating a zone of ember-resistant materials around the home. Gravel, a concrete or brick walkway, or another hardscape feature is commonly used to construct this zone. This ember-resistant zone should include the area under and around any attached deck. Be sure to keep this zone clean of any woodpiles, wood mulch, or flammable vegetation.
- 1 THE LEAN, CLEAN AND GREEN ZONE (Zone 1) | 5–30 feet:** The objective of this zone is to reduce the risk of fire spreading from surrounding vegetation to the home. Lean indicates that there is only a small amount of vegetation, if any, present. Vegetation should be grouped in discontinuous islands. Clean indicates that vegetative debris and dead materials are routinely removed. Green indicates that vegetation within this zone is kept green and well irrigated (if appropriate) during the fire season.
- 2 THE REDUCED FUEL ZONE (Zone 2) | 30–100 feet:** The objective of this zone is to reduce fire spread and restrict fire movement into the crowns of trees or shrubs. Remove dead plant material, lower tree branches and other ladder fuels (e.g., shrubs, lower branches, smaller trees). Locate outbuildings (e.g., for storage) at least 30 feet away from the home and create an ember-resistant zone around all outbuildings and propane tanks.

Roofs

Making a roof “fire-safe” is a big step in reducing the vulnerability of the home to wildfire. There are three fire ratings for roof coverings: Class A, Class B and Class C, with Class A providing the greatest fire protection. The roof rating designation provides information for the roof covering material and does not include where the roof meets other materials at the edge of the roof. A non-fire-retardant treated wood shake or shingle roof covering is unrated and is not desirable—these roof types have less than a Class C rating.

HOW TO REDUCE THE VULNERABILITY OF ROOFS

- ▶ Replace a wood shake or shingle roof with a Class A roof.
- ▶ Remove accumulated vegetative debris from the roof.
- ▶ If there is a space between the roofing materials and roof deck, make sure that the openings between the covering and the roof deck are blocked. Repair areas as needed.
- ▶ If the roof consists of Class B or C roofing materials, determine if the underlayment in the assembly provides Class A protection as indicated in manufacturer installation instructions. When viewed from the edge of the roof, these materials would either look like gypsum wallboard or overlapping 4-foot wide sections of an asphalt composition roof covering. Maintain the roof covering and replace with a Class A product when needed.

A CLASS A ROOFING

materials include asphalt fiberglass composition shingles, clay and cementitious tiles (both flat and barrel shaped), and some metal roofing materials.

B CLASS B ROOFING

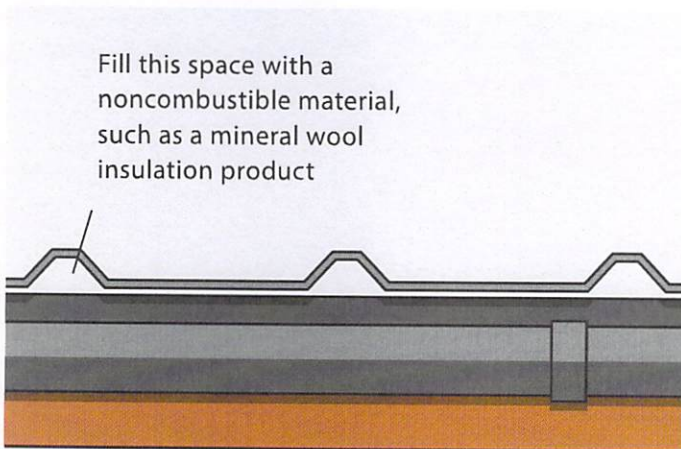
materials are most commonly exterior-rated, pressure-impregnated fire-retardant treated shake or shingle covering (not allowed for use in many jurisdictions).

C CLASS C ROOFING

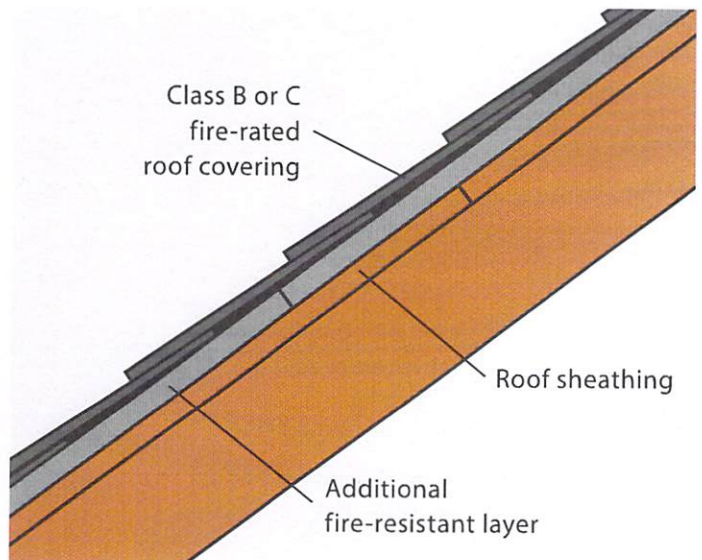
materials include recycled plastic, rubber and aluminum.

Class B and Class C roofing materials can have a Class A “by assembly” rating. In these cases, additional materials that enhance the fire resistance of the roof assembly (i.e., the roofing material plus other materials included in the roof assembly) must be installed. In these cases, be sure to follow the manufacturer’s instructions.

METAL ROOF



CLASS A “BY ASSEMBLY” FIRE-RATED ROOF COVERING



Roof Edges

There can be several areas where the roof meets another material, such as at a roof-to-wall intersection in a split-level home or a dormer on a roof. These intersections are vulnerable areas because wind-blown embers will gather at the same locations where vegetative debris has accumulated, igniting the debris. Building materials usually change at edge-of-roof locations. The adjacent materials should provide comparable protection to the roofing material.

HOW TO REDUCE THE VULNERABILITY OF ROOF EDGES

- ▶ Remove accumulated vegetative debris from roofs on a regular basis.
- ▶ Replace the combustible siding in roof-to-wall locations with a noncombustible option. Replacement of siding only in these locations will be less expensive than replacing all the home's siding. It may be possible to find a noncombustible siding pattern that is similar to the existing siding pattern.
- ▶ At a roof-to-siding location, use of metal flashing that extends up the siding at least 6-inches could also reduce the vulnerability of a combustible siding material. Install flashing so that water cannot get between flashing and siding.

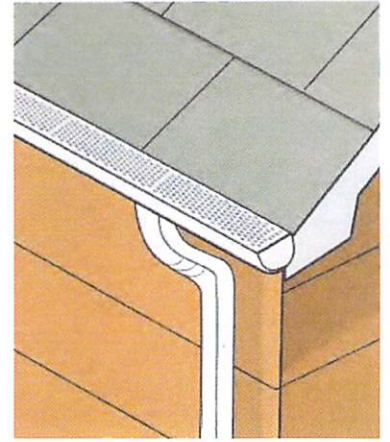


Rain Gutters

Roofs can be vulnerable at the roof edge where a gutter is attached. Debris in the gutter can ignite from embers, and flames can ignite other components at the roof edge (e.g., wood-based sheathing and fascia board).

HOW TO REDUCE THE VULNERABILITY OF RAIN GUTTERS

- ▶ Remove vegetative debris from gutters on a regular basis during fire season.
- ▶ Install a noncombustible and corrosion-resistant metal drip edge to provide protection for the combustible components (i.e., sheathing and fascia) at the edge of your roof.
- ▶ Use a noncombustible gutter cover to minimize accumulation of debris in the gutter. Some gutter covers result in accumulation of debris on the roof behind the gutter, so these will still require routine maintenance.

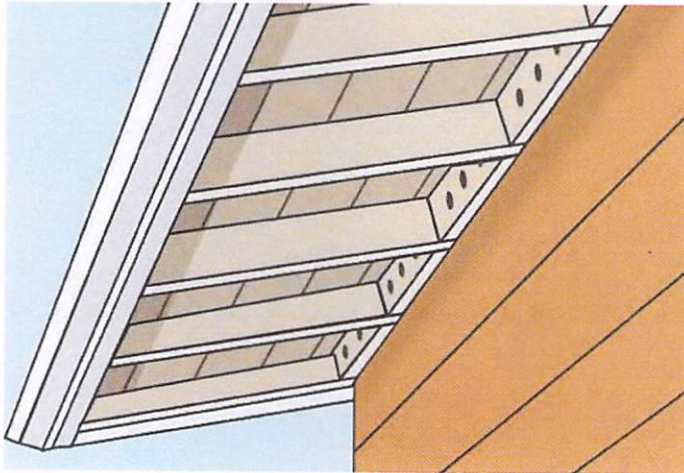


▲ Install and maintain a noncombustible gutter cover (as pictured above) to help minimize debris accumulation in gutters.

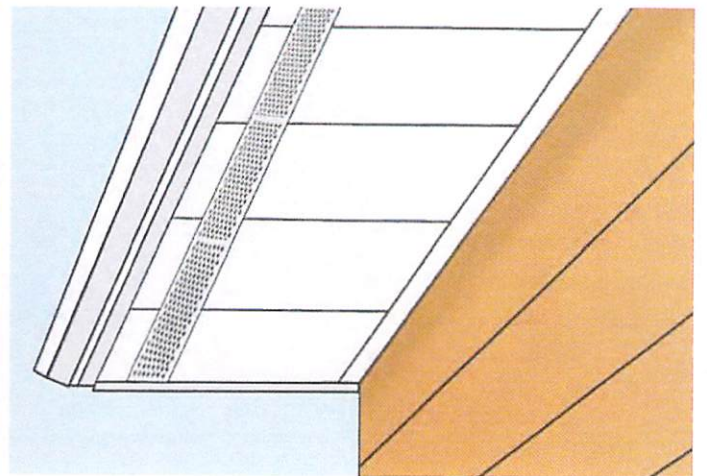
Eaves

The under-eave area provides a point of entry for flames if nearby vegetation or other materials are burning. There are two basic designs for under-eave construction: open-eave and soffited-eave (i.e., one that is boxed in). Open-eave designs are more vulnerable to flames—heat can build up in an area between the roof rafters allowing for more rapid fire spread laterally, which increases the likelihood that fire will find a location to enter the attic. Vents that are in the blocking between rafters in open-eave construction are more vulnerable to the entry of embers than vents in a soffited-eave.

OPEN EAVE



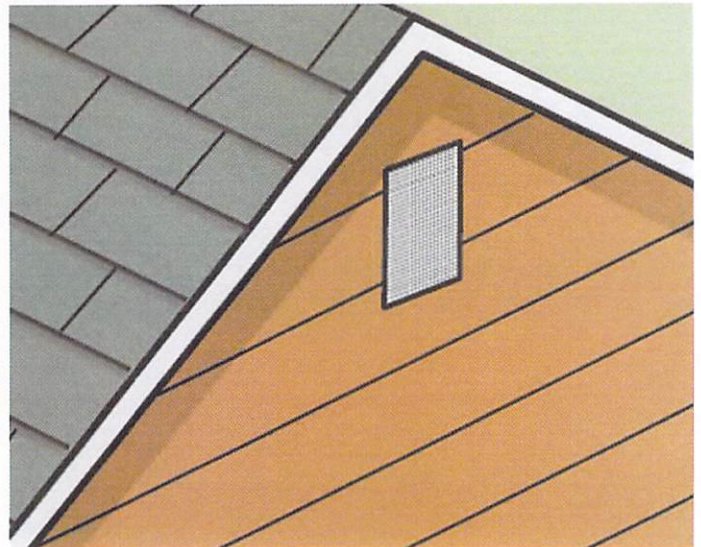
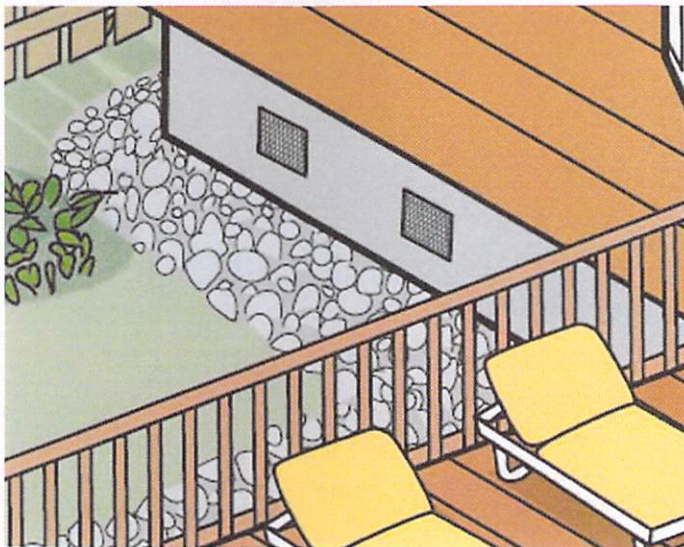
SOFFITED EAVE



HOW TO REDUCE THE VULNERABILITY OF EAVES

- ▶ Inspect open-eave areas for gaps where embers could lodge or pass through into the attic. All vents should be screened and all other gaps should be filled with durable caulk.
- ▶ Enclose under-eave area to create a soffited eave.

▲ Enclose open eaves to protect attic spaces from ember intrusion.



▲ Cover all vents with $\frac{1}{8}$ -inch mesh screening.

WHAT IS THE DIFFERENCE BETWEEN VENT SCREEN SIZES?

Small screens ($\frac{1}{16}$ -inch) can reduce both the size and number of embers that can pass through. Because the embers are smaller, they self-extinguish quickly after entering the attic and crawl space. While this screen size is ideal for resisting ember intrusion, it does require more maintenance because it gets easily clogged. Accumulated debris on vents can become a source of embers if not cleaned regularly. Air flow is also reduced with this size screen.

Mid-size screens ($\frac{1}{8}$ -inch) allow more, larger embers to enter the attic and crawl space, but these are still better than $\frac{1}{4}$ -inch screens. This size screen is a common choice because the maintenance is lower while still being relatively effective.

Large screens ($\frac{1}{4}$ -inch) allow many, larger embers to enter the attic and crawl space. It is recommended you replace or cover $\frac{1}{4}$ -inch screens with a smaller grain.

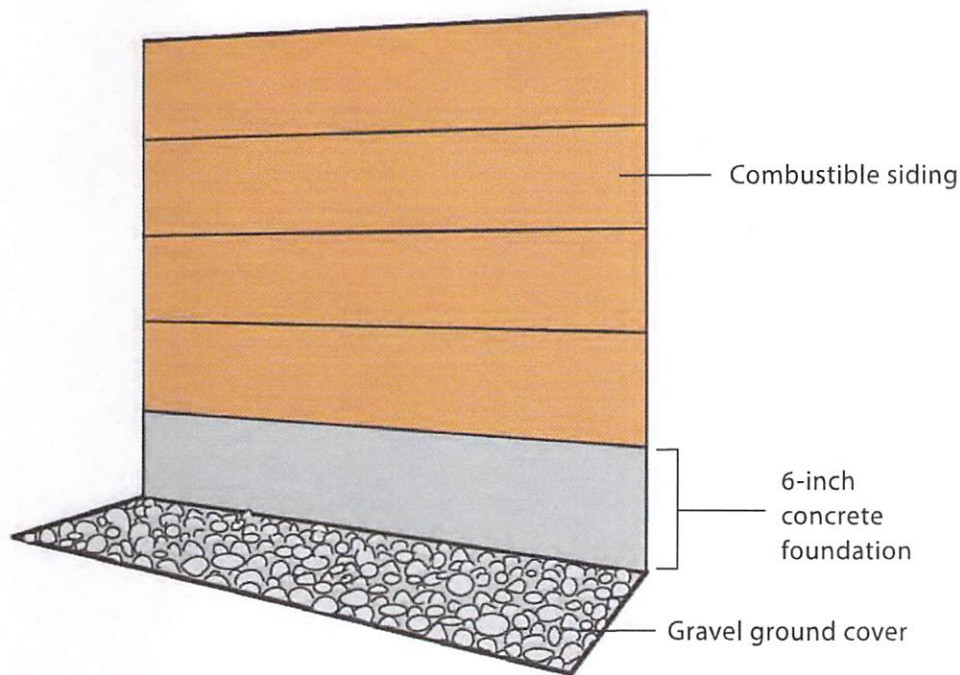
Vents

Attic and crawl space vents provide an entry point for embers. Vents should be covered by, at a minimum, $\frac{1}{8}$ -inch noncombustible corrosion-resistant metal mesh screening. Screening will not prevent the intrusion of all embers but will minimize their size. Finer mesh screening (e.g., $\frac{1}{16}$ -inch mesh) is more effective at keeping embers out of the home but requires more maintenance because it can become clogged with debris. Vents that meet the flame- and ember-resistant standard are listed on the California Office of the State Fire Marshal Building Materials Listing Program website. These types of vents are appropriate in areas where maintaining defensible space is difficult, combustible materials are closer to the home, or combustible siding is used.

HOW TO REDUCE THE VULNERABILITY OF ATTIC AND CRAWL SPACES

- ▶ Avoid storing combustible items (e.g., cardboard boxes, newspapers and magazines) near attic or crawl space vents.
- ▶ Inspect vents to make sure they are in good condition (i.e., screen is in good condition with no tears that would result in larger openings).
- ▶ If $\frac{1}{4}$ -inch mesh screening is present, replace or add, at a minimum, a $\frac{1}{8}$ -inch noncombustible corrosion resistant metal mesh screen.
- ▶ Consider replacing vents with a flame- and ember-resistant option.

Vent covers that are made ahead of time (i.e., before a wildfire is threatening) can be installed when wildfire is threatening the area. This strategy can be effective, but it does take time and should only be undertaken if ample time is given for evacuation. Preparation activities can be dangerous if evacuation is delayed.



Siding

If the siding ignites, a fire can: **1)** penetrate through the stud cavity into the home, **2)** spread up the side of the home and enter windows or other openings such as dryer vents, and **3)** spread into the attic at a gable-end vent or an under-eave area. Combustible siding can be ignited from direct-flame contact or radiant heat exposure. Ignition of siding from embers can occur, especially if embers ignite combustible materials close to the home (e.g., bark mulch or wood pile), and if siding extends all the way to the ground.

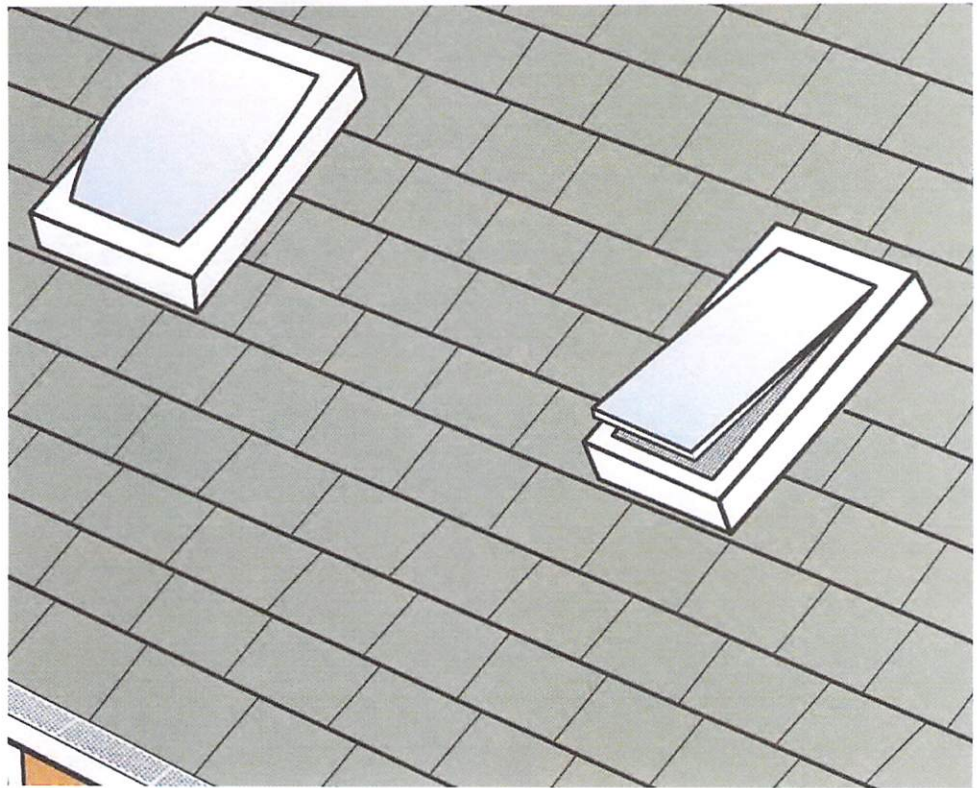
Combustible siding products are widely used, including solid wood, wood composite materials and plastic/vinyl products. Vinyl siding can deform and slough off when exposed to flames or radiant heat. Once this happens, underlying material (e.g., sheathing) becomes important for protection. More complicated lap joints in wood-based siding patterns (e.g., shiplap and tongue-and-groove) are more resistant to fire penetration at the lap joint. Plain bevel joints in wood siding are vulnerable to fire penetration. While fiber cement siding often uses a plain bevel lap joint, it is less vulnerable to fire penetration.

It is not recommended to use fire-retardant coatings, such as fire-retardant paint, to provide fire protection for combustible siding. Some state, county and local building codes do not allow these coatings. Recent research has demonstrated that their performance is degraded by exposure to the elements (e.g., snow, moisture, sun). Their effectiveness degrades more quickly than reported.

HOW TO REDUCE THE VULNERABILITY OF SIDING

- ▶ Use noncombustible siding (e.g., stucco, steel and fiber cement), especially when neighboring homes are within 30-feet of the home.
- ▶ Make sure to develop and maintain adequate defensible space, particularly within the ember-resistant zone, to minimize the chance that siding will ignite from embers at the ground level or direct-flame contact from nearby combustible materials.
- ▶ In smaller areas that are vulnerable, such as at a roof-to-wall area, replace siding with a noncombustible product.
- ▶ For new construction, use of a one-hour wall design, where an additional fire resistant layer is used in the wall assembly, can provide additional protection when a more vulnerable siding material is used.

Clear debris around →
skylights and make sure to
close before evacuating.



Skylights

Skylights can be a point for ember and flame entry if the cover fails, or if skylights are left open when a wildfire threatens. There are two basic kinds of skylights: domed-style made of plastic and flat-style made of glass. Flat-style, glass skylights have less risk than domed-style, plastic skylights that may melt and burn when exposed to heat from a wildfire. Typically, the glass in skylights consists of two layers, the outer being tempered glass and the inner being a safety glass, such as laminated glass.

Skylights on steeper sloped roofs can be vulnerable to radiant heat and flame contact exposures if nearby combustible materials ignite and burn. Skylights on low-slope (flatter) roofs are more prone to the accumulation of vegetative debris (especially flat-style skylights).

HOW TO REDUCE THE VULNERABILITY OF SKYLIGHTS

- ▶ Remove vegetative debris from the roof, including on and adjacent to skylights, on a regular basis.
- ▶ On sloped roofs, glass skylights are the best choice because of increased likelihood of exposure to radiant heat.
- ▶ If the skylight can open, close it when wildfire is threatening to prevent embers from entering the home. Consider adding a 1/16-inch noncombustible corrosion resistant-metal mesh screening to reduce ember intrusion into the home in case the skylight cannot be closed before evacuation.

Windows

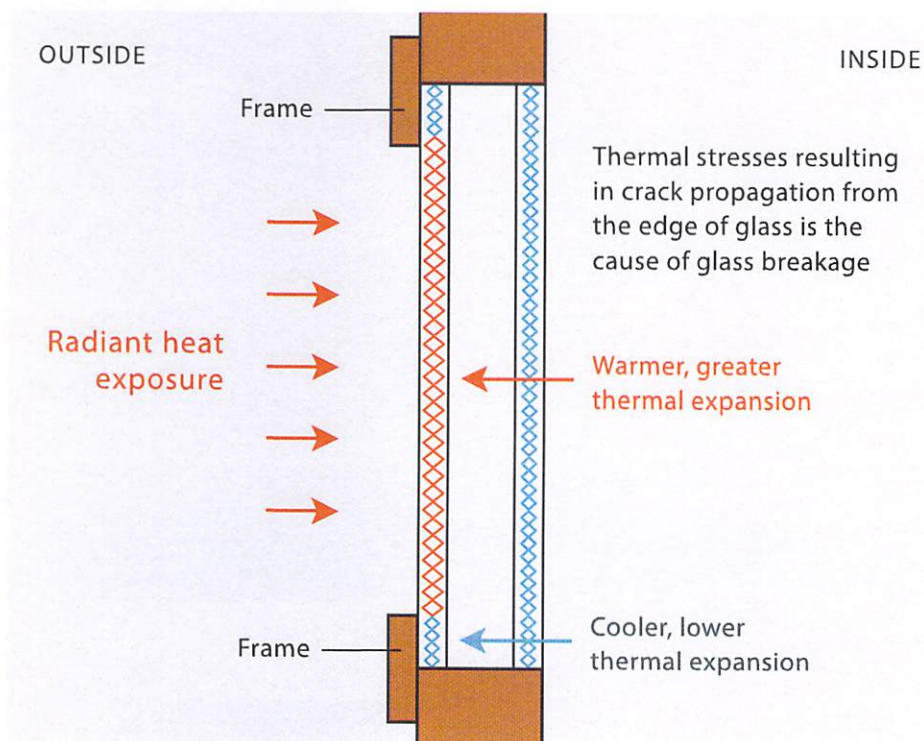
Windows can be a vulnerable component of a home if the framing material ignites or deforms, or if the glass breaks and falls out, both allowing embers or flames to enter the home. The most vulnerable part of a window is the glass. Glass breakage occurs when cracks, propagating from the outer edge inward, occur due to thermal stress that develops when a window is exposed to flames or radiant heat.

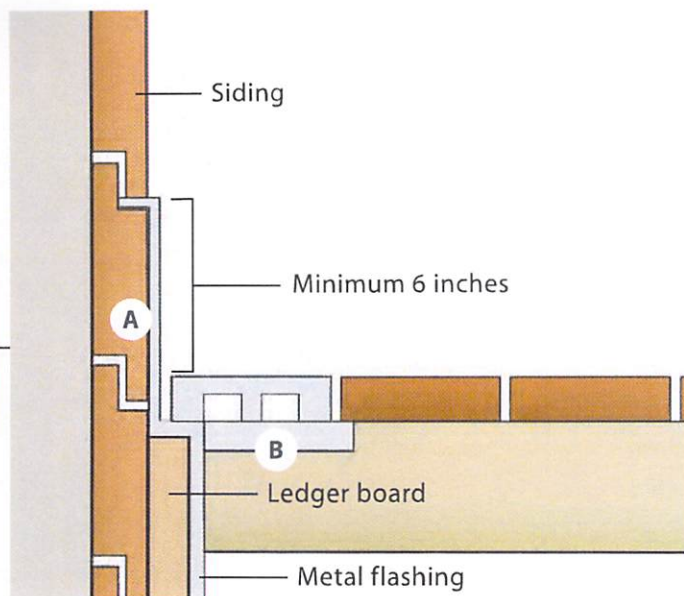
Tempered glass is three to four times more resistant to heat exposures than typical annealed glass and is therefore a better choice when selecting windows. Metal and plastic-clad fiberglass window screening will absorb radiant energy, providing additional protection against radiant heat exposure to the glass in your windows. Plastic-clad fiberglass screening will fail if flames contact it, reinforcing the need for an effective ember-resistant zone.

HOW TO REDUCE THE VULNERABILITY OF WINDOWS

- ▶ When replacing windows, choose multi-pane options containing tempered glass.
- ▶ If neighbors or outbuildings are within 30-feet of the home, consider installing deployable noncombustible shutters to provide additional protection.
- ▶ Install screens in all operable windows. Screens increase ember resistance by keeping embers out of the home and also decrease radiant heat exposure.
- ▶ Close windows when wildfire is threatening.

DUAL-PANE WINDOW





- A** *Install metal flashing between the ledger board and joists to protect the combustible siding material. The flashing should extend above and below the ledger board.*
- B** *Replace the deckboard next to the house with noncombustible material.*

Decks

If a deck attached to a home ignites, the home can be exposed to flames and/or radiant heat. What is stored underneath and on top of decks can also be an ignition source. Depending on the decking material, embers can also directly ignite deck boards. Decks that overhang a slope can be exposed to flames if trees and other vegetation downslope of the deck ignite, resulting in flames contacting the bottom of the deck.

Most commercially available deck boards are combustible. These include redwood, cedar and tropical hardwoods, such as ipe, and all plastic composite lumber decking products. Pressure impregnated fire retardant treated (FRT) wood deck boards are less vulnerable to flames and embers. Higher density hardwood decking and plastic composite decking are less vulnerable to ignition by embers compared to softwood decking (i.e., redwood and cedar). Although some metal deck boards are now available, noncombustible options are typically referred to as solid surface decks because they consist of lightweight concrete, possibly with an additional noncombustible walking surface such as flagstone. Use of noncombustible (i.e., steel) joists in conjunction with combustible deck boards will reduce the overall vulnerability of the deck.

HOW TO REDUCE THE VULNERABILITY OF DECKS

- ▶ Create an ember-resistant zone under the footprint of and around all decks. This action will reduce the likelihood of under-deck flame exposure.
- ▶ If a deck overhangs a slope, create and maintain an effective defensible space downslope of the deck to reduce the chance of flames reaching the underside of the deck.
- ▶ Apply metal flashing or foil-face bitumen tape on top of and a few inches down the side of the support joists. This is an effective strategy to minimize fire growth when a deck is ignited by embers, but would not help if the deck were ignited directly by flames under the deck. Using steel joists also reduces the vulnerability of the deck from both flames and embers.

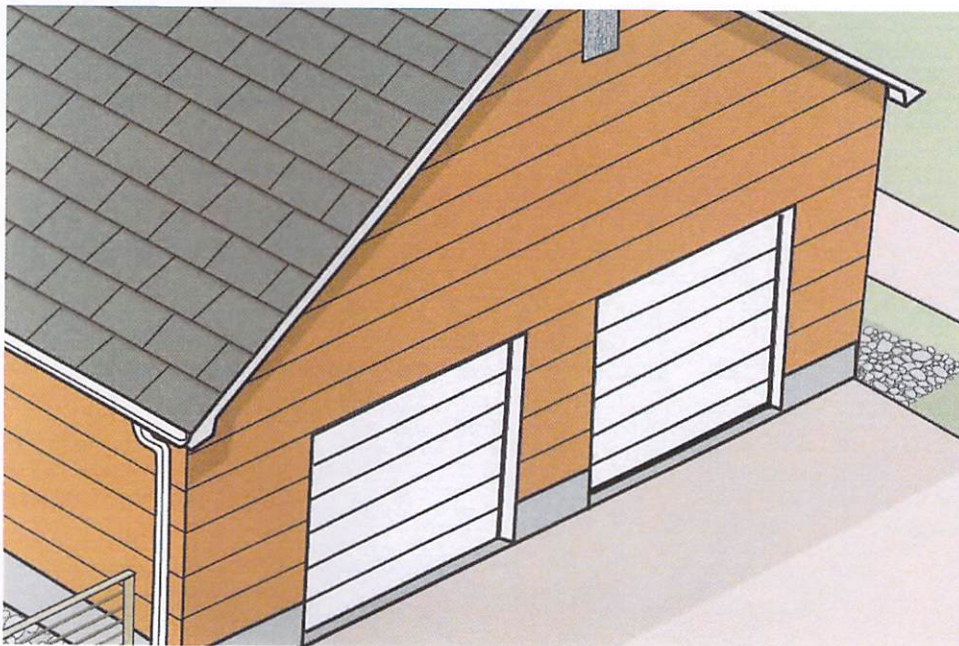
- ▶ For cedar and redwood decks, increase the size of the gap between deck boards to ¼ inch so that vegetative debris can fall through rather than accumulate on the deck. Be sure to routinely clear debris from under the deck.
- ▶ If a deck is made of combustible decking materials, replace the board closest to the home with a noncombustible material.
- ▶ In new deck construction, consider using noncombustible or higher density decking products.
- ▶ Move combustible cushions from deck furniture to inside and relocate combustible furniture (especially those with woven components that can trap embers) away from the house.

Garages

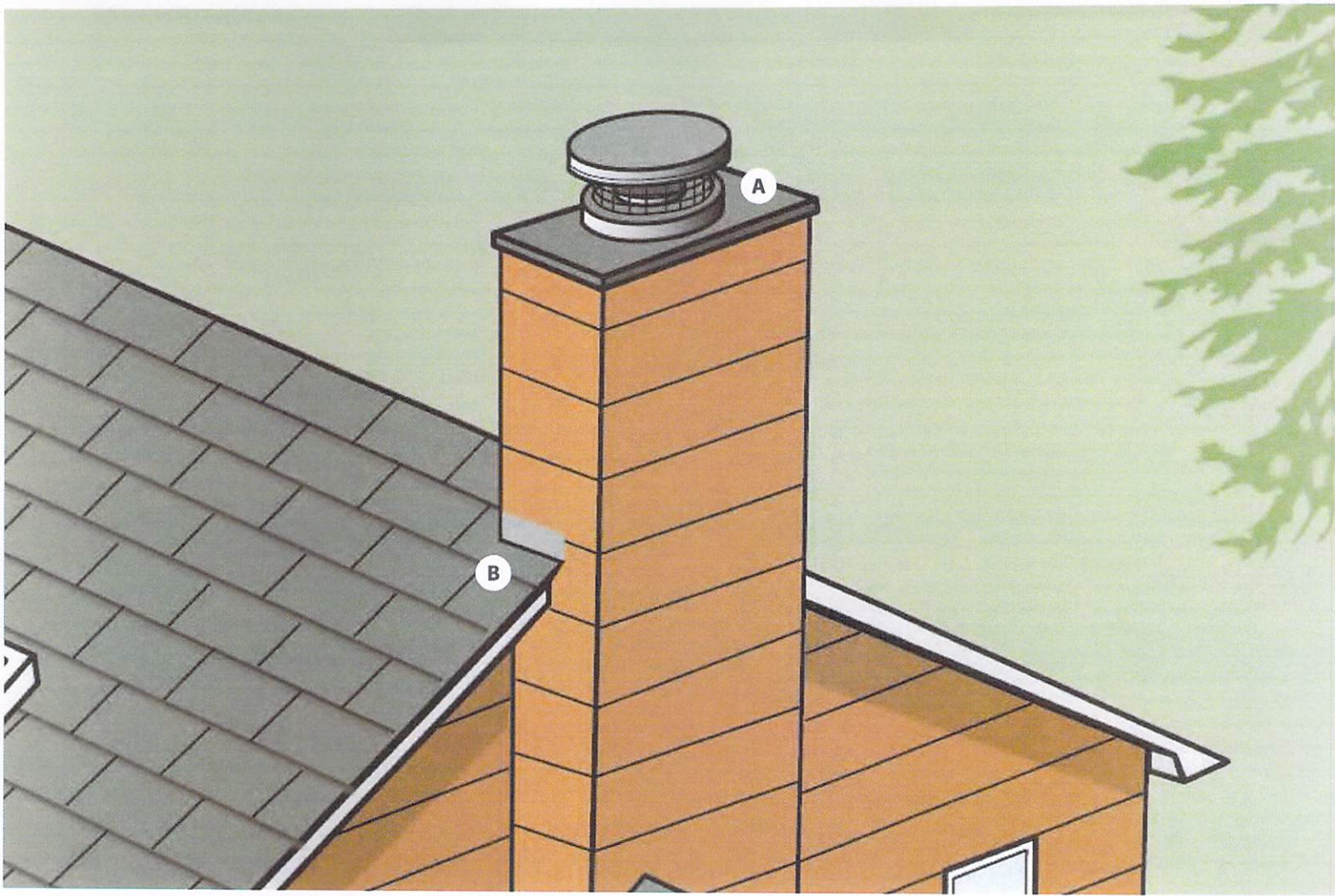
Garages, whether attached to the home or detached as a separate building, can threaten homes if the garage ignites. Since it is normal to store combustible materials in a garage, steps should be taken to reduce the ignitability of the garage because embers can easily enter under or around poorly sealed garage doors.

HOW TO REDUCE THE VULNERABILITY OF GARAGES

- ▶ Whether a garage is detached or attached, include it in defensible space planning and maintenance, including the ember-resistant zone.
- ▶ Make sure the space between the garage door and framing is well sealed to minimize the entry of embers into the garage.
- ▶ Garage windows, vents and other construction components should be treated the same as they would be if part of the home.
- ▶ Add a battery back-up to the garage door motor so that the garage can easily be opened or closed if power is out.
- ▶ Close garage doors when wildfire is threatening.



← *Make sure garage doors are well sealed and closed before evacuating.*



- A** Cover the stovepipe/ chimney with a metal screen (no smaller than $\frac{3}{8}$ -inch and no larger than $\frac{1}{2}$ -inch).
- B** Install metal flashing at the chimney-roof intersection.

Chimneys

Chimneys and stovepipes can be a vulnerable part of the home if not installed correctly and properly cleaned and maintained annually. Vegetative debris can accumulate on the roof adjacent to the chimney chase. This is another roof-to-wall connection that can be vulnerable to ignition by embers.

HOW TO REDUCE THE VULNERABILITY OF CHIMNEYS

- ▶ Use of metal step flashing at roof-to-siding intersection (flashing extending up the wall) can reduce the vulnerability to embers.
- ▶ Cover chimney and stovepipe outlets with a noncombustible screen. Use metal screen material with openings no smaller than $\frac{3}{8}$ -inch and no larger than $\frac{1}{2}$ -inch to minimize embers leaving the chimney.
- ▶ Close the fireplace flue during fire season when the chimney is not in use.

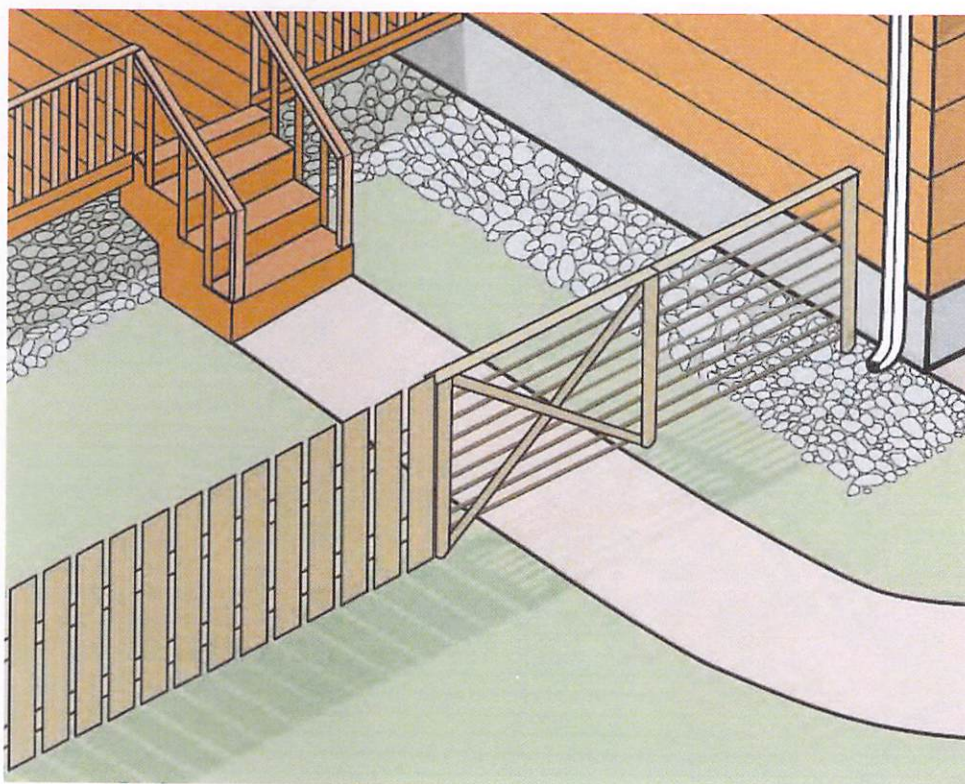
Fences

Combustible fencing can provide a direct path to a home if surrounding vegetation or embers ignite it. Best practice is to separate the fence from the house or upgrade the last 5-feet of the fence to a noncombustible material to reduce the chance of the fence from bringing fire to the home.

Privacy fences (planks all on one side of horizontal supports) are the most vulnerable to ignition because the horizontal to vertical intersection provides a ledge and backstop where embers can accumulate and ignite the fence. Good neighbor (planks alternating) and lattice are more porous, and therefore more difficult to ignite via ember exposure. Vinyl fences are not as vulnerable to embers, but can ignite through direct flame exposure if vegetative debris has accumulated at its base. As is the case with vinyl siding, vinyl fencing will be vulnerable to deformation from radiant heat exposure. All fences are more vulnerable when vegetative debris has accumulated at their base.

HOW TO REDUCE THE VULNERABILITY OF FENCES

- ▶ Replace the combustible portion of the fence near the home with a noncombustible section. The noncombustible section should be a minimum of 5-feet long.
- ▶ Remove vegetative debris that can accumulate at the base of the fence on a regular basis. Do not use fences as a trellis for plants because plants can create and trap ignitable vegetative debris.



← Rather than replacing the entire fence, replace the 5-feet closest to the home with a noncombustible option.

Glossary

BEVEL JOINT A type of lap joint, typically seen in horizontally applied siding. This lap joint, when used with a combustible siding product, is the most vulnerable to fire penetration.

CHIMNEY CHASE The area or structure around metal flue pipes. The chase is usually built with wood, metal or brick.

DORMER A part of a building that extends beyond the vertical plane of the roof. This extension also has a roof covering and typically incorporates a window on the exterior wall.

EMBER Also called firebrand. Burning (or glowing) particles of vegetation from tree branches, parts of shrubs or chaparral, or other combustible materials (e.g., construction materials) that ignite and burn during a wildfire and are carried in wind currents to locations beyond the wildfire front.

FIBER CEMENT A generic term for a siding product that is made using cement, wood fiber and other additives.

FINE-MESH SCREENING In the context of this document, $\frac{1}{16}$ -inch or finer screening that is used to cover vent openings and operable windows.

FOIL-FACE BITUMEN TAPE A flashing material whereby an aluminum foil material is part of a bitumen tape system.

GOOD-NEIGHBOR FENCE In the context of this document, this type of fence is one where the vertical planks alternate between the sides of the horizontal support members. A “good-neighbor” fence is usually compared to a “privacy” fence, where the vertical planks are all on the same side of the horizontal supports.

GYPSUM WALLBOARD A panelized product made from calcium sulfate dihydrate. These panels are commonly used for paneling on the interior of homes and buildings. A special type of gypsum wallboard can be used as a fire-resistant component in a one-hour wall assembly.

LADDER FUELS Low-lying branches and vegetation that can help carry flames from the surface into the canopy of trees or shrubs.

LAMINATED GLASS A type of safety glass that consists of two (or more) layers of annealed glass that are connected with adhesive interlayers.

LAP JOINT The type of overlap connection between boards or panels on the siding of a building.

METAL DRIP EDGE FLASHING Also called angle flashing, this material is typically used to protect the edge of the roof where the roof covering meets the exterior (vertical) framing.

MULTI-PANE WINDOW A term used to indicate multiple glass panes in a window. One pane of glass would be indicated by “single-pane.”

ONE-HOUR WALL CONSTRUCTION An assembly that provides enhanced resistance to the penetration of fire.

OPEN-EAVE A type of construction whereby roof rafters are exposed in the area where they extend beyond the exterior walls of the building. In this type of construction, wood members, typical nominal 2-inch thick lumber, are used to fill the space between roof rafters.

PLASTIC-CLAD FIBERGLASS SCREENING Commonly used window screening material. Typical screen size is $\frac{1}{16}$ -inch mesh.

PRESSURE-IMPREGNATED FIRE-RETARDANT TREATED A process whereby a fire-retardant chemical is injected into the material (e.g., wood) under a pressurized process. This process results in a deeper penetration of the chemical into the wood.

ROOF COVERING The part of the roof assembly visible from outside the building. Common roof covering materials include asphalt composition shingles, tile and metal.

SHEATHING The first covering of boards or of waterproof material on the outside wall of the house.

SHIPLAP A type of lap joint used for horizontal and vertical siding. Along with tongue-and-groove pattern, this pattern is a better choice when considering improved resistance to fire penetration.

SOFFITED-EAVE A type of construction where the area of the roof rafters that extend beyond the exterior wall of a building are enclosed, typically by attaching a panelized product that connects the edge of the roof to the exterior wall.

STUCCO A siding material usually consisting of a mixture of sand, Portland cement, lime, water and other additives.

TEMPERED GLASS A heat-treated glass that enhances resistance to heat exposures three to four times over that of regular (annealed) glass.

UNDERLAYMENT A panel or sheet material in the roof assembly, underlying the roof covering, that improves the fire rating of the covering.

VENT COVER A solid material used to temporarily cover a vent opening to prevent the entry of embers.

Online Resources

The following websites have resources and information on home-hardening, defensible space, and other tips to prepare for wildfire.

Living With Fire Program - www.livingwithfire.com

University of California Agriculture and Natural Resources - www.ucanr.edu/sites/fire

Insurance Institute for Home and Business Safety-Wildfire - www.ibhs.org

CAL FIRE Ready for Wildfire - www.readyforwildfire.org

Sustainable Defensible Space - www.defensiblespace.org

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Partner Logos



SP-20-11

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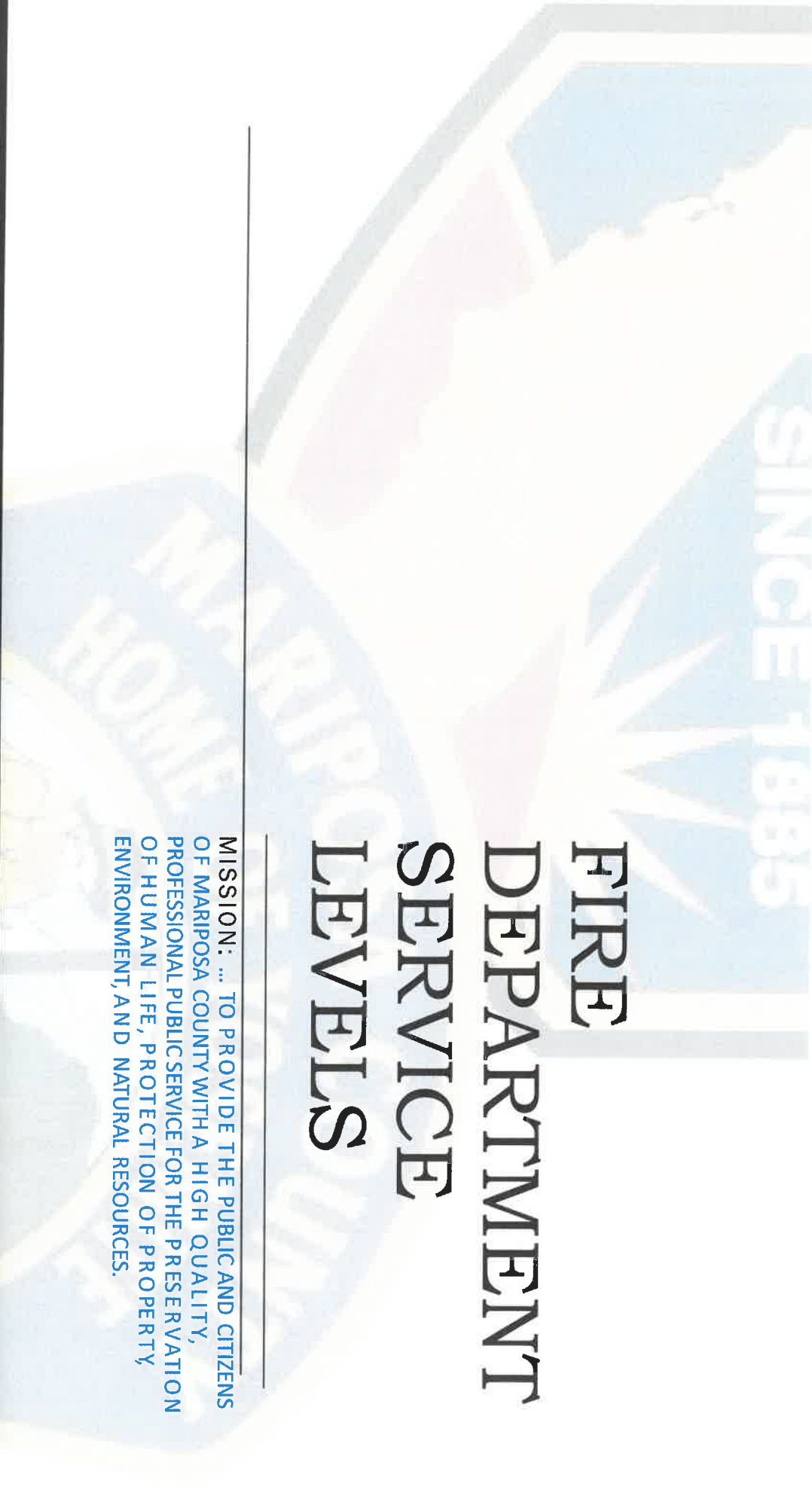
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University of Nevada, Reno; and the
U.S. Department of Agriculture



Photo Courtesy of California Tahoe Conservancy / Nick Spitznagel



FIRE DEPARTMENT SERVICE LEVELS

MISSION: ... TO PROVIDE THE PUBLIC AND CITIZENS OF MARIPOSA COUNTY WITH A HIGH QUALITY, PROFESSIONAL PUBLIC SERVICE FOR THE PRESERVATION OF HUMAN LIFE, PROTECTION OF PROPERTY, ENVIRONMENT, AND NATURAL RESOURCES.

This is a conversation starter about our fire department, not anything to do with recent wildland fires.

CAL FIRE incidents / County Fire incidents



CURRENT FIRE DEPARTMENT SERVICE LEVELS

9 OF 13 STATIONS WITH VOLUNTEERS ASSIGNED

31 EMERGENCY RESPONDERS (NOT COUNTING
TENAYA) WE DO HAVE 3-4 IN THE PIPELINE

16 DRIVER/OPERATOR (11 FOR WATER TENDER)

42% EQUIPMENT RESPONSE DURING 2021.

GREELEY HILL, CATHEY VALLEY, HUNTER
VALLEY, - NO VOLUNTEERS CONSIDER CLOSING
(MT. BULLION CLOSED)

AMADOR WITH CALFIRE 3 STATIONS -
COULTEVILLE, MARIPOSA, USONA TO PROVIDE
OFF SEASON RESPONSE

JUST HIRED 3 EXTRA HELP EMPLOYEES STARTED
ONBOARDING



Developments Approved coming into Mariposa County



CREEKSIDE TERRACE PROJECT - SELF HELP: 3 APARTMENT STYLE BUILDINGS, MULTI STORY- 42 UNITS (APPROVED AND CONSTRUCTED)

BROWN BEAR - 50 CABIN STYLE LODGING UNITS AND CONFERENCE CENTER BUILDING WITH SUPPORT AMENITIES (APPROVED NOT UNDER CONSTRUCTION)

WILDHAVEN- 80 GLAMPING UNITS WITH SUPPORT AMENITIES (APPROVED AND CONSTRUCTION MOVING FORWARD)

HYATT PLACE - (PREVIOUSLY HAMPTON INN) UP TO 105 HOTEL UNITS IN A UP TO 3 STORY STRUCTURE

MORE POTENTIAL DEVELOPMENTS (NOT APPROVED)

KOA AND TERRAMOR - PRE-APPLICATION FOR UP TO 400 RV UNITS AND 80-90 CONDITIONED GLAMPING UNITS. MIDPINES AREA (NOT APPROVED AT PRE-APPLICATION STEP ONLY).

MPUD NOW COUNTY'S RESPONSIBILITY FOR FIRE



Responsibilities for protection

- * HOTELS AND LODGING- 22 = 1540 ROOMS NOT COUNTING NEW DEVELOPMENT
- * SCHOOLS - 19 (13 PUBLIC AND 6 PRIVATE)
- * APARTMENTS- 8
- * MOBILE HOME PARK - 3
- * ASSISTED CARE FACILITY - 2
- * HOSPITAL W/CARE FACILITY
- * APPROXIMATELY 800 VACATION RENTALS
- * RESTAURANT OR FOOD ESTABLISHMENTS - 47
- * PLACES OF ASSEMBLY, PUBLIC INFORMATION, GATHERING - 54

Is it time to start staffing our Fire Department?

What staffing could look like

- County Staffing
- 40hrs week full time employees
- 24/7 full time employees
- CALFIRE Staffing
- 24/7

Comparison of service levels County Fire Schedule C employees 10hrs/7days

cost estimated based off Mariposa County Grade and Step on 1/13/22 page 29

- 40hr week employees (4)
- 10hr days/7 days a week
- Volunteer at night
- Utilize EH employees to fill vacant shifts/OT needs
- Immediate response capabilities
- Support volunteers, pre-plans, assist inspections, consistent work production

FF/Driver Operator(S)

\$37.41/hr \$6484/mo. \$77,812.80/yr

With benefit and operating costs to county per position \$124,019.20

4 positions = \$496,076.80/per station

\$31/hr \$5380/mo. \$64,563.20/yr

With benefit and operating costs to county per position \$103,144.80

4 positions = \$412,579.20/per station

****Would need to add a FC to C&C agreement
\$228,060**

Comparison of service levels County Fire Schedule C employees 24hr/7days

cost estimated based off Mariposa County Grade and Step on 1/13/22 page 29

- 24hr/7 day week employees (5)
- 10hr days/7 days a week
- Utilize EH employees to fill vacant shifts/OT needs (high turnover rate)
- Immediate response capabilities 24/7
- Support volunteers, pre-plans, assist inspections, consistent work production

FF/Driver Operator

\$37.41/hr \$6484/mo. \$77,812.80/yr

With benefit and operating costs to county per position \$124,019.20 + EDWC @ \$56.12/hr. 19hrs/wk. (72hr scheduled, 53 straight 19 OT)

4 positions = \$543,637.20/per station

\$31/hr \$5,380/mo. \$64,563.20/yr

With benefit and operating costs to county per position \$103,144.80 + EDWC @ \$46.50/hr. 19hrs/wk. (72hr scheduled, 53 straight 19 OT)

4 positions = \$450,983.52/per station

****Would need to add a FC to C&C agreement
\$228,060**

Comparison of service levels CALFIRE Schedule A 24hr/7day

cost estimated based off CALFIRE fiscal sheet for estimated costs

◦ 24hr/7day week employees (7)	
◦ Expand the C&C agreement to include 2 Fire Captains and 4 Engineers	2 - Fire Captain(s)
◦ Immediate response capabilities 24/7	5 - Fire Apparatus Engineers
◦ No dealing with personnel issues, on-boarding, vacancies, ect. State employees not County	Add \$499,620 for two more Captains
◦ Trained through CALFIRE Training Center, various amounts of experience.	Add \$1,052,053 for five Engineers
◦ Support volunteers, pre-plans, assist inspections, consistent work production	Total + \$1,551,673
	Agreement total would go to
	\$2,583,675.00 (admin rate being increased to 16%)

Possibilities of funding



* Impact fees for new development

Future equipment such as aerial trucks, rescues with specialized equipment to support commercial fires. Future Fire Stations or remodel from volunteer to staffing capabilities.



* Fire Service Fee applied to our rental room properties: 1540 rooms + vacation rentals (800) provides opportunity to staff fire department without creating a significant hardship on General Funds and community tax base.



* Raise TOT or ask for a Study to determine appropriate level of sales tax if that made sense.



* Combination

What Fire Service Level does our County want?



No change – continue to recruit as much as possible lean on Extra Help and CALFIRE



Look into staffing select station(s) 10-hour days/7 days a week with county personnel working under CALFIRE command and control



Look into staffing select station(s) 24-hour day/7 days a week with county personnel working under CALFIRE command and control



Look into staffing select station(s) with CALFIRE personnel



Combination of options above.

■ Discussion / Recommendations

- Are we in need of improved fire service level?
- Do you like the options for staffing presented here?
 - My recommendation is ultimately staffing with CALFIRE personnel best options to alleviate dealing with HR issues, union negotiations, training, turnover, staffing issues, ect.
- Starting point, county employees 10 hr days/ 7 days a week under CAL FIRE Command and Control is a great option and can be started quickly.
- Are you good with presenting these options to the public?
 - Public meetings regarding fire protection service levels?
- Hire a company to do a study to justify need for staffing and options to fund the Fire Department?
- What else would you be interested in knowing to help make decisions regarding fire department service levels?

Questions, comments, direction?