

**FIREWISE
COMMUNITIES/USA[®]
RECOGNITION PROGRAM
ASSESSMENT REPORT**

Prepared for Shelter Cove,
Humboldt County, California



Prepared by the Resort
Improvement District No. 1
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Shelter Cove Firewise Communities/USA Assessment

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Introduction

The Firewise Communities/USA program is designed to provide an effective management approach for preserving wildland living aesthetics. The program can be tailored for adoption by any community and/or neighborhood association that is committed to ensuring its citizens maximum protection from wildland fire. The following community assessment is intended as a resource to be used by the Shelter Cove residents for creating a wildfire safety action plan. The plan developed from the information in this assessment should be implemented in a collaborative manner, and updated and modified as needed.

The following participants assisted with data-gathering to be used as a basis for completing the community assessment.

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Definition of the Home Ignition Zone

Shelter Cove is located in a wildfire environment. Wildfires will happen--exclusion is not a choice. The variables in a fire scenario are when the fire will occur, and where. This assessment addresses the wildfire-related characteristics of Shelter Cove. It examines the area's exposure to wildfire as it relates to ignition potential. The assessment does not focus on specific homes, but examines the community as a whole.

A house burns because of its interrelationship with everything in its surrounding home ignition zone---the house and its immediate surroundings. To avoid a home ignition, a homeowner must eliminate the wildfire's potential relationship with his/her house. This can be accomplished by interrupting the natural path a fire takes. Changing a fire's path by clearing a home ignition zone is an easy-to-accomplish task that can result in avoiding home loss. To accomplish this, flammable items such as dead vegetation must be removed from the area immediately around the structure to prevent flames from contacting it. Also, reducing the volume of live vegetation will affect the intensity of the wildfire as it enters the home ignition zone.

Included in this assessment are actual observations made in Shelter Cove. The assessment addresses the ease with which home ignitions can occur under severe wildfire conditions and how these ignitions might be avoided within the home ignition zones of affected residents. Shelter Cove residents can reduce their risk of home destruction during a wildfire by taking actions within their home ignition zones. This zone principally determines the potential for home ignitions during a wildland fire; it includes a house and its immediate surroundings within 100 to 150 feet.

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The result of the assessment identified that wildfire behavior will be dominated by the residential characteristics of this area. The good news is that by addressing community vulnerabilities, residents will be able to substantially reduce their exposure to loss. Relatively small investments of time and effort prior to a wildfire will reap great rewards in wildfire safety.

Description of the Severe Case Wildland Fire Characteristics That Could Threaten The Shelter Cove Area

Fire intensity and spread rate depend on the fuel type and condition (live/dead), the weather conditions prior to and during ignition, and the topography. Generally the following relationships hold between the fire behavior and the fuel, weather and topography.

- Fine fuels like dry grasses ignite more easily and spread faster with higher intensities than coarser fuels such as dead wood. For a given fuel, the more there is and the more continuous it is, the faster the fire spreads and the higher the intensities. Fine fuels take a shorter time to burn out than coarser fuels.
- The weather conditions affect the moisture content of the dead and live vegetative fuels. Dead fine fuel moisture content is highly dependent on the relative humidity and the degree of sun exposure. The lower the relative humidity and the greater the sun exposure, the lower will be the fuel moisture content. Lower fuel moistures produce higher spread rates and fire intensities.
- Wind speed significantly influences the rate of fire spread and fire intensity. The higher the wind speed, the greater the spread rate and intensity.
- Topography influences fire behavior principally by the steepness of the slope. However, the configuration of the terrain such as narrow draws, saddles and so forth can influence fire spread and intensity. In general, the steeper the slope, the higher the uphill fire spread and intensity.

Shelter Cove Fire Danger Assessment

Studying previous Shelter Cove fire history it is anticipated the most devastating fires would emanate from the north-east driven by strong winds fueled by large expanses of very dense brush vegetation. The steep narrow slopes of the community make fires very unpredictable, fast moving and hard to fight. The inhabited north section of Shelter Cove would be most vulnerable to a fast moving fire and has been identified previously by Cal Fire as an area where structures could not be saved given the fuels build-up and the isolation of the area.

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Local conditions that contribute to high wildfire risk are Shelter Cove's remoteness, its rugged topography, being located adjacent to and surrounded by heavy fueled public lands and being susceptible to strong onshore and offshore winds. The ignition risk is high due to large seasonal influxes of visiting tourists and dry lightning strikes which are common in the summertime. The combination of these high hazard conditions have resulted in the community experiencing some of the most severe wildfires that have occurred within Humboldt County. The Humboldt County Hazard Mitigation Plan documents wildfire as the top ranking hazard facing the community of Shelter Cove. The probability of occurrence is high with a wildfire event likely to occur within 25 years.

Fires emanating from Shelter Cove beaches caused by fireworks and campfires can ignite adjacent vegetation and be driven by strong breezes, quickly spreading up steep brush covered hillsides toward densely inhabited lands. Vegetation overgrowth alongside and over roads in Shelter Cove serve as a conduit for a wildfire to spread. Roads could act as a fuel break and fire crew's staging areas if they are cleared of vegetation.

Site Description

Formed in 1965, Shelter Cove (40.0278° N, 124.0733° W) is a small unincorporated residential resort community located in Humboldt County on the Lost Coast. The nearest town of Redway is located 22 miles west over a paved two-lane mountainous road. Shelter Cove is bordered by the Bureau of Land Management's 63,000 acre King Range National Conservation Area to the north and the Sinkiyone Wilderness State Park to the south. The Shelter Cove sub-division spreads over 2,640 acres from gently sloping, low lying marine terrace up onto ridges as high as 2000 feet and is classic wildland urban interface (WUI or I-Zone) territory. According to the 2010 US census Shelter Cove's resident population is 693. The Shelter Cove Volunteer Fire Department serves the community with limited resources and has mutual aid agreements with surrounding volunteer fire departments along with agreements with BLM and Cal Fire.

Fir forests and oak woodlands are the predominant vegetation types in the immediate area, with 46 percent presently in fir forests and 20 percent of the area in oak woodlands. Ceanothus and Manzanita brush cover large areas of steep terrain to the north and east within Shelter Cove where previous fire action has cleared the tree canopy. Natural prairie grassland is concentrated to the north east of Shelter Cove, mainly on private property around Ettersberg, Honeydew and Petrolia but prairie soils occur throughout, mostly on ridge tops. The relatively dry climate to the north-east of Shelter Cove is due to the orographic blocking of summer fog moisture from moving inland by the King Range.

Cal Fire operates a station in Honeydew and both Cal Fire and BLM operate seasonal fire stations in the Whitethorn area. Even with these stations Cal Fire and BLM fire crews experience long initial attack times. When there is a wildfire in adjacent public lands, agencies which battle these fires come back to Shelter Cove to fill their tanker trucks, hooking up to the closest fire hydrant, this is treated drinking water and is of limited supply.

Assessment Process

The community assessment of Shelter Cove occurred on March 18, 2014. During that time, the assessment team studied the challenges posed by fuel types, housing sites and materials, and other considerations that relate to mitigation of a large-scale wildfire event. The purposes of the assessment were to identify common strengths enjoyed by residents of Shelter Cove, as well as, identifying conditions that should be modified to increase the area's level of wildfire readiness. The assessment team visited several residences within the development to conduct on-site investigations and studied the entire area for an overall sense of practical solutions.

Important Considerations

The Firewise Communities/USA program seeks to create a sustainable balance that will allow communities to live safely while maintaining environmental harmony in a WUI setting. Homeowners already balance their decisions about fire protection measures against their desire for certain flammable components on their properties. It is important for them to understand the implications of the choices they are making. These choices directly relate to the ignitability of their home ignition zones during a wildfire.

Thinning of the high-fuel areas is recommended to improve both forest health and ecological sustainability. The reduction of the volume of vegetation will have two benefits. Not only will it mitigate the fire hazard, it can be accomplished in a way that will reflect an interest in maintaining a healthy ecosystem during periods of extended drought.

Even with home ignition zones potentially providing fire protection, a wildfire in Shelter Cove will create a significant volume of firebrands. To lower the ignition potential of homes, residents should inspect their roofs and the ground immediately adjacent to their homes for fine fuels, and remove them regularly. Fine fuels include leaves and needles, grasses and other dry vegetation.

Man-made items should also be removed from the immediate vicinity of the houses. Defensible space is the area between a house and an oncoming wildfire where the vegetation has been modified to reduce the threat and effectively provide a barrier to protect the house. Defensible space is simply a homeowner's properly maintained yard. A recommended defensible space distance can be from 30 – 100 feet, depending on slope and existing vegetation.

Observations and Recommendations

- Shelter Cove has only one road in and one road out. Access will be difficult if not impossible in a fire emergency and could easily lead to people getting isolated.

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Many roads are no longer acting as a canopy fuel break with trees located in county right-of-ways growing together forming a crowning fire hazard.



- There is a very large buildup of fuel throughout the Shelter Cove sub-division and the steep terrain could support wildfire that is very resistant to control.



Photo courtesy of Bill Eastwood, SHFSC

- Many homes are isolated and are located on dead end roads or are on winding roads that could easily be cut off by a wildfire.

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- Heavily fueled areas will be a major source of fire bands and embers.



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- Overlapping home ignition zones:
Well maintained home ignition zones are bordered by unmaintained properties as shown below.



Shelter Cove Firewise Communities/USA Assessment

- Many homes exhibit not very well maintained home ignition zones including presence of brush, dry grass, debris, flammable building materials, flammable material in gutters. Below are examples of flammable building materials.



Successful Firewise Modifications

When adequately prepared, a house can likely withstand a wildfire without the intervention of the fire service. Further, a house and its surrounding community can be both Firewise and compatible with the area's ecosystem. The Firewise Communities/USA program is designed to enable communities to achieve a high level of protection against WUI fire loss even as a sustainable ecosystem balance is maintained.

A homeowner/community must focus attention on the home ignition zone and eliminate the fire's potential relationship with the house. This can be accomplished by disconnecting the house from high and/or low-intensity fire that could occur around it. The following photographs were taken in Shelter Cove and are examples of good Firewise practices. These homes will be showcased as such at the Firewise event planned in June, 2014

Taking the following steps will help Shelter Cove become a safer community:

- Take precautions to ensure that high intensity fire remains at least 100 feet away from homes. Continue working to eliminate low intensity fire from coming into contact with structures by creating and maintaining a "fire free zone" – allowing no fire to burn within a minimum of 10 feet of homes.



A good example of a home that followed Firewise guidelines.

- Continue working with the BLM to promote thinning and fuel reduction on other Federal lands surrounding Shelter Cove.
- Encourage private owners of land surrounding Shelter Cove to manage the adjacent lands to reduce fuel loads, ladder fuels and forest overcrowding.
- Within the subdivision, thin tree stands where feasible. In the younger stands this can be done over time, in phases, thinning as needed to keep crowns from touching. Many roadside thickets have been retained as visual screens and these should be thinned to promote the health of the most dominant, vigorous trees, encourage growth and development of low flammability native shrubs, or be removed altogether. Over time these thickets suppress growth on their lower branches by shading, causing the “screen” to rise vertically and become less functional.
- Monitor the mature Douglas Fir, Tan Oak and Madrone for bark beetle and virus attacks, particularly during droughts or if adjacent property is experiencing a bark beetle infestation. Quick action can usually avert a disaster of widespread mortality.
- Continue to promote the good work already done by some landowners. Others may need more time to adjust to the concept of cutting trees. Help them to see the benefits – lower

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fuel loading, healthier trees, more biodiversity, higher visual quality of the parcel and neighborhood.

- Maintain good clearance along the roads, particularly Shelter Cove Road and the evacuation route from the north east section of the Cove, including Telegraph Creek Road. Thinning of the tree stands outside of the right-of-way will improve overall forest health and visual quality.
- Continue to educate the community to take action.

COMMUNITY PARTNERSHIP

By adopting the Firewise Communities/USA© program, and continuing the great work the community has already accomplished, residents can create a balance that will allow them to safely co-exist with wildfire while maintaining the natural forest setting the residents desire. Most people have chosen to live in Shelter Cove in part because of the quality of the environment, climate, wildlife and aesthetic appeal. It is important for the residents to understand the implications of the choices they are making regarding fire safety. These choices, such as home siting, building materials selection, landscaping and proper maintenance of the home, directly relate to the ignitability of their home and surrounding environment during a wildfire event.

Next Steps

After reviewing the contents of this assessment and its recommendations, the Shelter Cove Firewise Committee in cooperation with the Shelter Cove Fire Department will determine whether or not it wishes to continue seeking Firewise Communities/USA recognition. The Firewise Communities/USA representative will contact the Firewise Board representative by March 31st, 2014 to receive its decision.

If the site assessment and recommendations are accepted and recognition will be sought, the Shelter Cove Firewise Committee will create agreed-upon, area-specific solutions to the Firewise recommendations and create an action plan in cooperation with the Shelter Cove Fire Department.

Assuming the assessment area seeks to achieve national Firewise Communities/USA recognition status, it will integrate the following standards into its plan of action:

- Sponsor a local Firewise board, task force, committee, commission or department that maintains the Firewise Community program and status.
- Enlist a WUI specialist to complete an assessment and create a plan from which it identifies agreed-upon, achievable local solutions.
- Invest a minimum of \$2.00 annually per capita in its Firewise Communities/USA program. (Work done by municipal employees or volunteers, using municipal or

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- other equipment, can be included, as can state/federal grants dedicated to that purpose.)
- Observe a Firewise Communities/USA Day each spring that is dedicated to a local Firewise project.
 - Submit an annual report to Firewise Communities/USA. This report documents continuing participation in the program.

Shelter Cove residents are reminded to be conscious of keeping high-intensity fire more than 100 feet from their homes. It is important for them to avoid fire contact with their structures. This includes firebrands. The assessment team recommends the establishment of a 'fire free zone', allowing no fire to burn within ten feet of a house by removing fuels located there. It is a bad idea for fire to touch a house during a wildfire. Remember that, while wildfire cannot be eliminated from a property, it can be reduced in intensity.

Homeowners are reminded that street signs, addresses, road widths and fire hydrants do not keep a house from igniting. Proper attention to their home ignition zones does. They should identify the things that will ignite their homes and address those.

Weather is, of course, of great concern during wildfire season. At such time as fire weather is severe, homeowners should remember not to leave flammable items outside. This includes rattan doormats, flammable patio furniture, firewood stacked next to the house, or other flammables.

Remember, a prepared community is a safer community.