

BRIDGEVILLE

COMMUNITY ASSESSMENT



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 Bridgeville 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.

Data collection for this assessment took place in December of 2010. Those involved in data gathering were as follows:

- Jean-Louis Carmona, Van Duzen Watershed Fire Safe Council;
- Ben Fleek, Bridgeville Volunteer Fire Company;
- Lynne Reardon, Bridgeville Community Center;
- Cybelle Immitt, Humboldt County Community Development Service (CDS) and the Humboldt County FSC;
- Mark Rodgers, Cal Fire;
- Nancy Curran, Six Rivers National Forest

Cybelle Immitt completed the “Assessing Wildfire Hazards in the Home Ignition Zone” training provided by the National Fire Protection Association (NFPA) and Firewise.

DEFINITION OF THE HOME IGNITION ZONE

Bridgeville 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 Bridgeville. 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 observations made while visiting Bridgeville. 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. Bridgeville residents can reduce their risk of 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.

The result of the assessment is 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 will reap great rewards in wildfire safety.

DESCRIPTION OF THE SEVERE CASE WILDLAND FIRE CHARACTERISTICS THAT COULD THREATEN THE 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 ignite more easily and spread faster with higher intensities than coarser fuels. 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.

The Bridgeville area is characterized by mixed conifer and oak woodlands with large areas of open grasslands. The topography is dominated by steep river canyons. Wildfires in our area would rush up the grassy hillsides with amazing speed, igniting the underbrush and lower branches of forest trees. The trees would then ignite and cause crown fires which would then spread to neighboring woodlands. The steep, narrow

canyons would cause a "chimney effect" which would increase the speed and intensity of a wildfire. Conditions in this area are similar to the conditions several years ago in neighboring Trinity County when multiple summertime lightning strikes caused numerous wildfires that strained the capacity of firefighting services and created smoke-filled air pollution in the Bridgeville area. The community's vulnerability to damage from wildfire is high because of the presence of many risk factors. Steep slopes that are known to spread fire rapidly are present in many neighborhoods. Summer weather is consistently hot and dry and high winds blowing up and down the river valley are a common occurrence.

SITE DESCRIPTION

The Bridgeville Firesafe Community extends from Swain's Flat on its western border to McClellan Mountain Road on its eastern boundary and ranchlands hug the community on the north and south. The area contains the town of Bridgeville near its center. State Highway 36 runs the length of this community with an east west orientation. Alderpoint Road leads out of the community to the South toward the town of Blocksburg and Kneeland Road heads north out of Bridgeville toward the town of Kneeland. The population of the area is approximately 800.



Site of Bridgeville School and Community Center

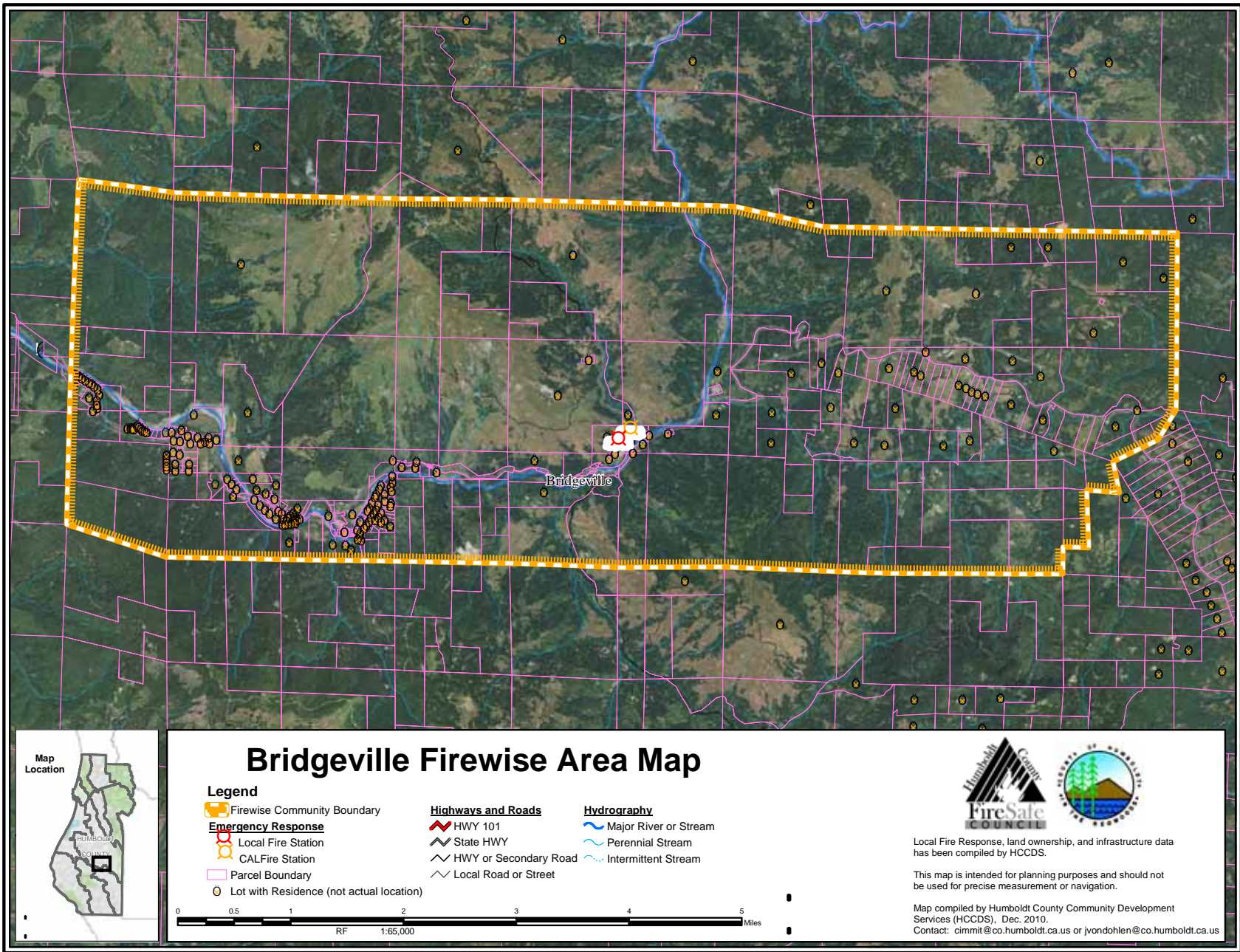
Highway 36 is a widely known and popular scenic route. During the summer months, traffic more than triples and grass fires started by vehicles present a major threat. The area consists of steep terrain and open or closed mixed conifer forest. Many homes are located on unpaved rural access roads with thick vegetation. Many homes have huge accumulations of underbrush grown up around them. These areas have been inhabited for over 100 years, and some structures are old wood-shingled homes.

Bridgeville area residents encompass a wide variety of ownerships ranging from standard house lots, 40- to 100-acre parcels, ranches with 1,000 acres or more, to small trailer parks. Also located in Bridgeville are the Bridgeville Elementary School, Head Start preschool, Bridgeville Community Center, Bridgeville post office, Bridgeville Baptist Church, Pacific Bell substation, Pacific Gas & Electric substation, a CalTrans maintenance station, and a set of high transmission power lines.



Near Bridgeville, there is also a Cal Fire Station that is staffed during the fire season and a vehicle storage barn which serves as the fire apparatus garage for the local volunteer fire company. The Bridgeville Volunteer Fire Company is relatively new and is staffed by all volunteers. The Fire Company is supported by financial contributions from local residents, grants, donations from neighboring fire departments and a phenomenal amount of volunteer energy and time on the part of its members.

The following page contains a map illustrating the firewise Community area.



ASSESSMENT PROCESS

The Assessment Team visited the town of Bridgeville and neighboring micro-communities on December 2, 2010. The Team met at the Bridgeville Community Center and made an assessment plan for the day by reviewing Firewise guidance materials, maps of the area, and discussing known issues. The assessment area was identified on a map and the Team conducted a drive-through, stopping to take photographs and discuss particular areas. Homes were examined with special attention given to types of building materials (particularly roofing) and amount of flammable vegetation and other materials within the home ignition zone. Access roads and water sources were closely evaluated. Previous fuel reduction projects were re-examined for re-growth, and future projects were discussed.

The Assessment Team then spent time reviewing information about the history and fire environment of the area. Details and photographs were gathered to illustrate observations and craft recommendations for reducing the community's vulnerability to damage from wildfire. The assessment was then compiled and the Team prepared to present the findings to the Bridgeville Firewise Board/Van Duzen Watershed Fire Safe Council.

Preparing for the Community Assessment Day



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 wildland urban interface (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.

1 - Addresses Difficult to Find:



Narrow, unmarked roads are common



Homemade address signs work well, but they are not widely used. This road has over a dozen residences but only two address signs.

In this community, many access roads to residences are unmarked, unpaved roads, often with narrow passages caused by overgrowth of vegetation. Many residences do not have their addresses posted. Seventy percent of the fire company's response area is wildland, agriculture, undeveloped properties, and open space. A few actions that might begin to address this issue are the following:

- Obtain funding to purchase address signs for residents and educate the community about the importance of signage.
- Additional posting of street names is needed.
- Create more detailed maps of the local area.
- Assist the Fire Company with the development of a “Run Book” (a series of local maps with road names, addresses and information relevant to emergency response in a format that can be carried in a fire truck and used to navigate).

2 - Limited Access to Water:



This tank contains approx two thirds of all the stored water available to Bridgeville. This is not enough to supply water to support anticipated fire suppression needs.

Firefighting requires huge quantities of water. There are no fire hydrants in the community. In this community, residences' water supplies are water tanks on or near their premises. These tanks are often 3,000 gallon or less and the tanks are not always equipped with the rated hoses and attachments required by firefighters. A few actions that might begin to address this issue are the following:

- Obtain funding for purchase of community water tanks and fittings.
- Encourage homeowners to invest in larger or additional water tanks and/or obtain the proper hoses and fittings for firefighting.
- Clearly mark water sources for firefighters with blue reflectors.

3 - Vehicle Caused Fires:

The most common fire incidences experienced in this community are caused by vehicle fires or accidents on Highway 36. Most of the calls to which the Bridgeville Volunteer Fire Company responds are vehicle fires. These vehicle fires are caused by hot mufflers or catalytic converters on vehicles parked over grasses by the side of the road, vandals torching abandoned vehicles on the roadside, or vehicles hitting the side of a bank or rolling down a ravine. Unfortunately, these are common occurrences on this highway. For the past three years (2007-2009), there has been an annual average of 3 vehicle fires, 13.3 vehicle accidents, and 3.6 vegetation fires. A few actions that might begin to address this issue are the following:

- Signage at hazardous road spots (education).
- Improved response capabilities.
- Quicker towing of abandoned vehicles.
- Education targeted at likely vandals that aims to increase their understanding of the consequences to the community from their actions.



It is not uncommon to see burned out vehicles along side the road. Vehicles that were left unattended for even a short length of time near Highway 36 have been vandalized and set ablaze.

In addition to the above issues, the community experiences weather conditions that enhance the potential for a fire to spread. For example, the area is experiencing frequent afternoon winds and reduced humidity levels as a result of climate change. In addition, the area's topography consists of steep wooded slopes with thick underbrush that provides fuel for a fire to spread.

OBSERVATIONS AND RECOMMENDATIONS



Several fires have started in the community from power lines. It will be important to monitor power line corridors and recommend needed maintenance to the responsible agency.



Vacant buildings present an easy target for human-caused fires. Community organizations can reach out to absentee land owners and encourage them to maintain vacant structures and their surroundings.

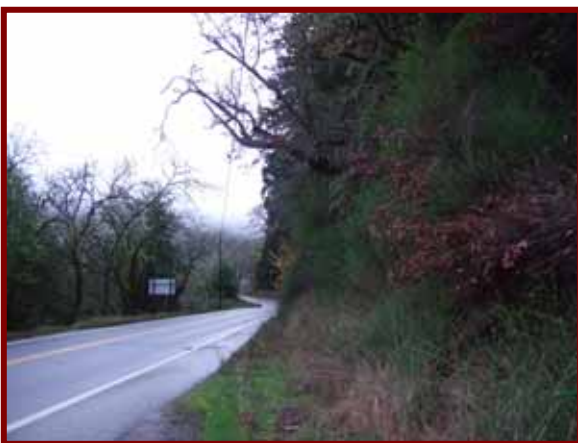




Poorly addressed and maintained mailboxes are common. The FSC and fire company will continue to educate residents about the importance of clearly posting addresses to facilitate quick emergency response.



The vehicle storage barn for the local fire company engine is inadequate. The community needs a proper fire house, but there is currently no revenue source to support construction. As the fire company continues to grow and works to establish itself as a fire protection district, revenue will be sought to build an adequate fire house.



Highway 36 runs through the middle of the Firewise community area and poses an ignition risk for wildfires. Measures must be taken to reduce fuels along this corridor and fire-safe neighboring home ignition zones.



Narrow driveways bordered by dense flammable vegetation are common and can hinder safe evacuation during a wildfire. The FSC will continue to secure funding to support vegetation management along these roads. Maintaining safe access can also be supported by the collaborative efforts of road associations.



Many homes have large amounts of dense vegetation growing in the home ignition zone and flammable items in direct contact with the structure. Ladder fuels should be removed to prevent fire from moving up into the crowns of trees or onto the house and its attachments. Flammable items such as firewood piles, fences, gates, and wood lattice in contact with the structure can lead the fire to the rest of the home. These materials should be removed from the immediate vicinity of structures.



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 photographs on the following pages were taken in the Bridgeville Community and are examples of good Firewise practices.

Since its founding in 2004, the Van Duzen Watershed Fire Safe Council has completed a fuel break around and in Bridgeville, 100-ft defensible space for 70 homes, and over 15 miles of roadside clearance throughout the area.

The Van Duzen Watershed FSC is also involved in implementing the County F.L.A.S.H program (Fire-adapted Landscapes And Safe Homes). This program will share the cost of reducing hazardous vegetation around homes and along access roads with property owners. Each participant receives a site visit and recommendations about how to make their property less vulnerable to wildfire. Once the recommended work is completed, the property owner is reimbursed part of the cost, up to \$2,000. A free home risk assessment is provided as part of this program.

Home ignition zone modifications completed and encouraged by the Bridgeville Community include the following:

- Firewise landscaping
- Use of fire-resistant native vegetation
- Firewise construction materials
- Fire-free space surrounding the structure
- Use of stone and/or other non-flammable building components for walkways and driveways
- Thinned dense vegetation within the home ignition zone and along access routes



Although there are homes in the community that need attention, there are also many well maintained homes with firewise landscaping, fire resistant roofing and siding, gutters free of flammable debris, and closed in porches such as the one shown here.

The following photographs showcase some of the work described above:



Before



After



Before



After



Community work day – Clearing flammable vegetation near vacant buildings in the town of Bridgeville

Upper Little Larrabee Road Bridgeville CA.



Before



After



CHIPPER USE ON
LITTLE LARAABEE
CREEK RD.
THE CHIPS ARE
MULCHED BACK
ONTO THE FOREST
FLOOR.



Bridgeville CA.



Before



After

Over the years the Van Duzen Watershed FSC has also taken many opportunities to provide educational materials at Bridgeville community events and showcase their work to interested residents. The community has participated in local workshops designed to gather data for the Humboldt County Community Wildfire Protection Plan (CWPP). Much of the data collected will also be used to inform the process of developing a local CWPP.



NEXT STEPS

After reviewing the contents of this assessment and its recommendations, the Bridgeville Firewise Board in cooperation with the Bridgeville Volunteer Fire Company 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 December 20, 2010 to receive its decision.

If the site assessment and recommendations are accepted and recognition will be sought, the Bridgeville Firewise Board will create agreed-upon, area-specific solutions to the Firewise recommendations and create an action plan in cooperation with the Bridgeville Volunteer Fire Company.

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 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.

Bridgeville community 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, while they are helpful, street signs, easily visible 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.

Firewise Bridgeville Key Contacts:

Contact information for participants involved in the development, review, and editing of this community assessment.

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