

Humboldt County Community Wildfire Protection Plan

IV.9. Kneeland-Maple Creek Planning Unit Action Plan

IV.9.1. Kneeland-Maple Creek Planning Unit Description

The Kneeland-Maple Creek *Planning Unit* encompasses 123,233 acres situated in the geographic center of Humboldt County. The Unit lies east of Eureka and the Headwaters Forest Reserve, west of Six Rivers National Forest, with the City of Blue Lake located to the north, and Highway 36 to the south. Kneeland Road, Greenwood Heights Drive, and Fickle Hill Road are the primary transportation routes within this Unit, although Maple Creek and Butler Roads are important routes as well. The Mad River is the central waterway, entering the Unit from the southwest and flowing north towards Arcata, where it meets the Pacific Ocean. Other water bodies include: Maple Creek in the northern Unit area, Lawrence Creek in the southwestern portion, and the North Fork of Yager Creek in the southern region.

All residences in this Unit exist within the *wildland-urban interface* (WUI). Kneeland and Maple Creek comprise the main communities in this Unit, however, residential properties are also scattered throughout the entire region. The majority of these rural homesteads and neighborhoods are located near Maple Creek, along Kneeland Road, and densely clustered along Greenwood Heights Drive. A small but dense neighborhood also exists along Tim Mullen Road, which branches off of Kneeland Road., en route to Bridgeville. Private land is the dominant ownership pattern; the Unit largely contains residential parcels, a few tracts of ranchland, and industrially owned timberlands to the north and south. A few parcels of Bureau of Land Management (BLM) land are distributed throughout the area, and a large section of the eastern portion of the Unit falls within Six Rivers National Forest territory. A map of this planning unit can be viewed in Figure IV.9-1. Kneeland-Maple Creek Unit: CWPP Unit Map.

IV.9.2. Kneeland-Maple Creek Community Process Summary

An open-house community workshop was held on June 4, 2012 at Kneeland Elementary School for the purpose of gathering local information and garnering public input regarding various factors contributing to the extent of wildfire risk and/or preparedness among the communities in this Unit, and to provide information about the countywide *community wildfire protection plan* (CWPP) update process. Target communities were Kneeland and Maple Creek, but only Kneeland residents were present at the meeting. Although the meeting was lightly attended, some key players participated. Among them were the Fire Chief of Kneeland Volunteer Fire Department, as well as active volunteer firefighters, and one retired volunteer firefighter. The principal of Kneeland School was also in attendance. A group exercise, which involved maps of the Planning Unit area, invited those present to help identify and pinpoint on the map where particular *fire hazards* exist, the location of *protection resources*, such as fire water drafting sites, as well as values and *assets at risk* within the community that could be threatened by wildfire.

Participants were also asked to review pre-existing information illustrated on the maps which had been added by community members during similar workshops that took place during the initial planning process in 2006. This workshop and mapping exercise also facilitated discussion among community members about potential actions that could be taken to reduce fire risk in their community. Through discussion and collaborative processes, participants identified major hazard areas and compiled lists of project proposals for enhancing their community's fire preparedness.

The community-identified fire hazards, protection resources, and values and assets at risk discussed throughout the following sections of this Planning Unit Action Plan reflect information generated by these community workshop mapping exercises, as well as information resulting from direct outreach to local fire departments and residents.

The project proposals resulting from community member discussions are contained in section IV.9.8. Community-Identified Projects in this Planning Unit Action Plan.

Humboldt County Community Wildfire Protection Plan

IV.9.3. Kneeland-Maple Creek Wildfire Environment

The majority (65%) of the Kneeland-Maple Creek Planning Unit is zoned “Very High *Fire Hazard Severity*,” with 35% of the Unit area, particularly in the southern region of the Unit, zoned “High Fire Hazard Severity,” as determined by the California Department of Forestry and Fire Protection (CAL FIRE).¹ The terrain in this Unit is mostly mountainous, with steep canyons and elevations ranging from. The Unit is characterized by warm summers with periodic rainfall and cool, wet winters. Most of the Unit area is heavily forested, with *stand compositions* including Douglas fir, redwoods, oak varieties, willows, big leaf maple, and white and red alders.

Traditionally, fire was an integral part of the *ecosystems* in this region. Forest management by indigenous tribes often included low-intensity, intentional burns that helped enhance forest ecosystems and prevent the accumulation of high *fuel loads*. Some of the early agricultural settlers in the late 1800s used intentional burning to clear and maintain grasslands for pasture animals. A heavy *fire suppression* campaign beginning in the 1930s has allowed the accumulation of dense, flammable vegetation in forest *understories*, which acts as *fuel* and increases the risk of high-intensity wildfires. Forest ecosystems, accustomed to low-intensity fires that would burn off *brush* and newer starts in the understory, become threatened by overcrowded forests and accumulated fuels. Intense timber harvests during the 20th century further exacerbated damages to forest ecosystem health. The extent that the *landscape* has been altered as a result of fire suppression is reflected in the *condition class* of the Unit area. Condition class describes the degree of departure from the historical *natural fire regime*. Where the condition class indicates that fire has been absent for an unnaturally long time, the hazard and potential damages are high to both the environment and human developments in the area. Approximately 49% of the Kneeland-Maple Creek Planning Unit is condition class 3, meaning the fire regime is significantly altered from the historical range; and approximately 20% of the area is condition class 2, or moderately altered from the historical range.

Despite its high fire hazard rating, recent fire events have been limited to a few blazes and contained to a small range. Major fires between the years 2000-2010 included only the Kneeland Fire in 2009, which burned 26 acres, and the Iaquia Fire in October 2009, which burned 170 acres.

Humans are the most likely *ignition source* for fires in this Planning Unit. Vehicle accidents, poorly maintained burn piles and campfires, equipment use, and incendiary burning are all potential causes. There has been a recurring problem of stolen or abandoned vehicles being torched in areas along Kneeland Road during the time school graduations happen, which often correlates with the beginning of *fire season*. Lightning and downed power lines are other potential ignition sources within this Unit.

Homes in this Planning Unit exist within the WUI, which increases the likelihood that *wildland fires* will become *structural fires*, and vice versa. *Dead plant matter* and vegetation with low *moisture levels* within 100-150 feet of homesteads pose some of the greatest threats to *structural ignitability*. Of particular concern are houses with needles and leaves accumulating on rooftops or in rain gutters. Houses with wooden rooftops and siding add to this risk, as do the presence of wooden decks, particularly those with dead plant matter accumulated beneath them. Although residential properties tend to be located on more gentle terrain, some homes are surrounded by steep slopes that can limit their defensible space and put structures in the line of up-hill spreading wildfires. Figure IV.9-2 found at the end of this Unit Action Plan illustrates risks and hazards identified by community members at public workshops and can be used as a key to access detailed descriptions of community-identified fire planning features on the Humboldt County Web GIS Portal, “Fire Planning” section: <http://gis.co.humboldt.ca.us/>.

¹CAL FIRE. (2007). *Fire Resources Assessment Program (FRAP)*. [Map showing Fire Hazard Severity Zone ratings within various geographic areas, mapped by county]. Fire Hazard Severity Zones Map. Retrieved from <http://frap.cdf.ca.gov/>

Humboldt County Community Wildfire Protection Plan

Kneeland Road, Greenwood Heights Drive, Fickle Hill Road, and Maple Creek Road, are the primary *ingress and egress* routes, with a few smaller roads connecting residences and neighborhoods to the main roads. The main roads are somewhat interconnected, though remote, and all of them are windy and narrow in parts. The narrowness of these roads could create serious complications for emergency vehicle response trying to gain access during simultaneous home evacuations. Overgrowth of vegetation along roads and driveway and inadequate vehicle *turn around spaces* could create problems as well. Poor or complete lack of *signage* at roads and intersections pose potential problems for emergency ingress and egress. The potential for landslides could also inhibit access throughout the Unit.

Communities in this Planning Unit are not served by any community service districts, so residents obtain water through other means, such as drawing from nearby creeks and holding tanks. A number of water tanks located throughout the community are available for *fire protection water*. Community members identified four 2,500-3,000 gallon tanks, a 15,000 gallon tank, a 20,000 gallon tank, and a 30,000 gallon tank that could be made available for use by firefighters. Fire protection water may also be drawn from the following sites:

- A ½-acre pond – helicopter accessible
- Barry Road pond “B” – helicopter accessible
- A 1/4-acre pond - helicopter accessible
- Barry Road pond “C” – helicopter accessible

The map in Figure IV.9-2 at the end of this Unit Action Plan illustrates these *drafting sites* as well as other community-identified wildfire *protection resources*. The map can be used as a key to access detailed descriptions of community-identified fire planning features on the Humboldt County Web GIS Portal, “Fire Planning” section: <http://gis.co.humboldt.ca.us/>.

IV.9.4. Kneeland-Maple Creek Values and Assets at Risk

Assets at risk can be defined as those things that are important to quality of life that can be threatened with destruction or loss from wildfire. These may include community assets such as homes and businesses, as well as environmental values such as wildlife habitat, natural resources, and air quality, along with any other important attribute that individual communities rely on for their well being. Loss or damage to community assets as a result of wildfire can have short- or long-term impacts of varying severity, depending on the asset. Short-term loss caused by a wildfire can include the destruction of residences, commercial assets, timber, wildlife habitat, scenic vistas, and *watersheds*. Long-term effects may include displaced persons, smaller timber harvests, reduced access to affected recreational areas, and destruction of cultural, ecological, and economic resources, and community infrastructure.

Assets at risk in this Planning Unit mainly include residential homes and neighborhood areas, as well as infrastructure components such as communication towers, power lines, and *access roads*. Many residents in these communities possess large farm animals and these, along with their associated structures, such as barns and stables, are considered assets at risk as well.

The map in Figure IV.9-2 found at the end of this Unit Action Plan illustrates values and assets at risk to wildfire identified by community members at public workshops. The map can be used as a key to access detailed descriptions of community-identified fire planning features on the Humboldt County Web GIS² Portal, “Fire Planning” section: <http://gis.co.humboldt.ca.us/>. Some of the community-identified assets at risk within this Unit include:

- Kneeland School
- CDF Station/Airport/Heliport/rare
- Maple Creek School/Fire Station
- Maple Creek swimming

² Geographic Information Systems (GIS).

Humboldt County Community Wildfire Protection Plan

- plant species
- Greenwood Heights/old Post Office building
- hole/recreation
- Blue Slide Church Camp

Environmentally significant assets at risk within this Planning Unit include the Iaqua Buttes, a *viewshed* with great ecological importance to the community, as well as timber resources located between Old Arcata Road and Fickle Hill Road.

IV.9.5. Kneeland-Maple Creek Community Preparedness

No local *fire safe councils* (FSC) exist in this Planning Unit and none of the communities has yet achieved national *Firewise*® recognition. However, during the community outreach process, there was notable interest expressed among several Kneeland residents in the possibility of forming a local FSC and pursuing *Firewise*® recognition for their community.

IV.9.6. Kneeland-Maple Creek Wildfire Protection Capabilities

Community fire protection within the Unit is provided by the Kneeland *Fire Protection District* (KFPD), which was established in 1990 and is served by the Kneeland *Volunteer Fire Department* (KVFD). The KVFD serves approximately 42 square miles; the out of district *response area* consists of buffer zones surrounding Freshwater, Maple Creek, Butler Valley Road, Fickle Hill Road, Bridgeville, and Showers Pass.³ The KVFD has eight volunteer firefighters who provide fire protection and medical services to these communities. Their *apparatuses* include: one 800 gallon type-1 engine, one 300 gallon type-4 quick attack engine, and one 2,200 gallon *water tender*.⁴ The KVFD can be reached by calling (707) 442-3252, or by visiting their website at: www.kneelandfire.org.

CAL FIRE is responsible for responding to wildland fires in the Unit. However, the KFPD has formal *mutual aid agreements* with CAL FIRE, Humboldt Fire District and Arcata Fire Protection Districts for giving and receiving additional assistance. Due to the remoteness of the area, the KVFD is often the first to respond to wildfires; however, volunteers' equipment and training experience limits their ability to contain large wildfires. In these instances, volunteer firefighters prioritize the protection of lives and structures while doing what they can to address the fire until assistance from CAL FIRE arrives.

The volunteer fire department in Maple Creek recently had to close due to insufficient funding. Now the community relies on seasonal wildfire response from CAL FIRE and the *goodwill service* of fire protection resources in neighboring communities, such as the Kneeland and Blue Lake.

Many communities in this Unit have various needs associated with improving the availability of emergency water for wildfire protection. Many existing water sources are in need of maintenance, protection, or improvements. There is also a need to make the location of existing water sources more apparent to firefighters with visible markers, and for community members to ensure that their water sources are properly outfitted for firefighting equipment. The KFPD is also in the process of building a new fire station which will also serve as the Kneeland Community Center. There is always a need for additional funding to support this endeavor.

³ Kneeland Fire Protection District. (2011). *About Us*. Retrieved from <http://www.kneelandfire.org/about-us.html>

⁴County of Humboldt, Natural Resources Planning. (2012). *Humboldt County Fire Chiefs Association Annual Report, 2010*. Humboldt County Fire Safe Council. Retrieved from http://www.co.humboldt.ca.us/natural-resources/fire_safe_council/fireserviceannualreport.aspx

Humboldt County Community Wildfire Protection Plan

IV.9.7. Kneeland-Maple Creek Evacuation

Evacuation from the Kneeland-Maple Creek Planning Unit will travel northwest along either Kneeland Road, Greenwood Heights drive, or Fickle Hill Road towards Arcata, or it will travel south along Kneeland Road towards Bridgeville, depending on law enforcement recommendations based on *fire behavior*, wind pattern, traffic, and ingress of emergency vehicles. There are a number of smaller roads connecting residences and neighborhoods to these primary transportation routes. Barry, Paddock, and Tim Mullen Roads connect several neighborhoods to Kneeland Road, while Mountain View Road provides an alternative route south from Kneeland Road. Butler Valley Road is necessary for connecting Maple Creek to the main roads leading west, while Maple Creek Road provides northern access to Blue Lake, approximately nine miles away. Powerline Road could potentially enable eastern access, with assistance and permission from the U.S. Forest Service.

Evacuation impediments may include: landslides, fallen trees, downed power lines, overgrown vegetation, poorly marked streets and intersections, and narrow roads with few turnouts that could cause difficulty for evacuation and emergency response vehicles operating simultaneously.

During wildfire events that have the potential to threaten personal safety, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire. The determination for the location of these sites is normally made by Humboldt County Emergency Operations Center Incident Commander in cooperation with an *Incident Management Team*. The Humboldt County Sheriffs and Emergency Officials will use mass communication and door-to-door methods to inform residents about the threat and where residents should go to take shelter.

If a catastrophic event occurs, residents may not be able to reach designated evacuation sites. In such cases, residents may need to make decisions on their own about seeking shelter where they can survive the passage of the wildfire until they can reach an evacuation site. It can be very difficult to determine the right thing to do as the fire approaches. Before a wildfire threatens, community members should talk to their local fire department about evacuation procedures in their neighborhood.

See section V.2.3 in Part V. Fire-Safe Communities for more information on preparing for safe evacuation and evacuation planning for pets and livestock. Also see section II.3.5 Evacuation Routes and Vulnerability in Part II. Risk Assessment for information about evacuation procedures and challenges in Humboldt County.

IV.9.8. Kneeland-Maple Creek Community Identified Potential Projects

The following list and matrix includes community identified proposed projects based on input from the community processes discussed above. A detailed description of each heading in the matrix can be found in Appendix G: Descriptive Characteristics for Community Identified Projects Matrix. These projects are illustrated on the community-identified projects map found at the end of this Unit Action Plan (Figure IV.9-3). Projects include those carried over from the 2006 fire-planning process and those identified and refined during the 2012 CWPP update process. This information can also be viewed on the fire planning GIS Portal. The GIS Portal allows users to search for and view specific fire planning features by location or to zoom into a desired area from an aerial view. To access the Portal, go to: <http://gis.co.humboldt.ca.us/> and choose "Fire Planning" from the list of mapping applications. The data collected through this Planning process are included in the GIS layers within the Portal.

No vegetation *treatments* recommended in this plan will be carried out without the consent and involvement of the property owner and all applicable local, state and federal regulations must be observed.

Non-geographic community identified proposed projects based on community workshop notes:

Humboldt County Community Wildfire Protection Plan

- Improve signage—home addresses and road names.
- Build a Fire House/Community Center for Kneeland.
- Start a local Fire Safe Council or Firewise® Board.
- Hold a “Firewise® Recognition Workshop”; conjoin Firewise® Day with community’s annual music festival.
- Conduct a *Fuel Reduction AND Slash* Collection weekend event; inquire into Humboldt Redwood Company as a possible funding source.
- Translate the fire department’s hand-written maps of area into a more sophisticated, bound and laminated map book for emergency responders.
- Implement the *Blue Dot Program*; collaborate with and educate community members regarding this.

Humboldt County Community Wildfire Protection Plan

LOCATION		Treatment/Project Information Eel Fire Planning Unit							
Number Corresponds with location on map	Community, Structure, or Area (Value at Risk)	Description	Status	Year	Type	Acres	Veg Type	Maintenance (actual or proposed)	Funding source (actual or proposed)
BAY028	Kneeland Rd & Butler Valley Rd	Water tanks at Kneeland Rd & Butler Valley Rd; 20-30k gal	Action Need	2010	Other - Water				grant - fire dept.
BAY029	Upper Jacoby Creek	Upper Jacoby Creek: water tank network	Action Need	2012	Other - Water				grant - fire dept.
BAY032	Fickle Hill Road	Fickle Hill shaded fuelbreak	Treat-Med	2012	Landscape				grant- landowner- Assn.
KNE043	Community of Kneeland	Tim Mullen Rd/Foss Rd shaded fuelbreak	Treat-High		Roadside Clearance				grant - landowner
KNE044	Community of Kneeland	ID shaded fuelbreak in upper Freshwater area and fuel reduction	Treat-High		Landscape				grant- landowner- Assn.
KNE047	Greenwood Heights Drive	Greenwood Heights Dr./Freshwater Rd: maintain defensible spaces, maintain buffers near roads and between grass and tree lines, and improve access clearance.	Treat-Med	2012	Defensible Space and Roadside Clearance and Other - Access				grant- landowner- Assn.

Humboldt County Community Wildfire Protection Plan

LOCATION		Treatment/Project Information Eel Fire Planning Unit							
Number Corresponds with location on map	Community, Structure, or Area (Value at Risk)	Description	Status	Year	Type	Acres	Veg Type	Maintenance (actual or proposed)	Funding source (actual or proposed)
KNE056	Barry and Tim Mullen's Road, Kneeland	Clear brush and mow grass along roads (buffers), people's driveways, homes			Defensible Space and Roadside Clearance				
PAC001	Northern boundary Humboldt Redwood company lands; Freshwater-Kneeland area	WUI; possible shaded fuelbreak	Treat-Med		Landscape				grant-landowner-Assn.
PAC002	04N 01E SEC's 21,22,26,25 & 04N 02E SEC 19	Fire Suppression Ridges on Humboldt Redwood Company Property; some natural break; targeted for additional treatment	Treat-Med		Landscape				grant-landowner-Assn.

Humboldt County Community Wildfire Protection Plan

IV.9.9. Kneeland-Maple Creek Action Plan

The following items are the initial priorities for community action for the Kneeland-Maple Creek Planning Unit as recommended by this Humboldt County CWPP (not listed in order of priority). In an ideal world, everything recommended here would be implemented. However, it must be understood that implementation will be subject to the availability of funds and other resources and the willingness/ability of community members and Plan Partners to take action. This Action Plan can be cited in grant applications to leverage needed implementation funds and used to guide and inspire action.

Enhancing Fire Protection

- **Sustainable Fire Departments:** Community members within this Planning Unit should support their local fire department⁵ through activities such as volunteering as firefighters or auxiliary members, making donations, supporting fundraisers, writing grants, and/or helping with administrative tasks. With community support, local fire departments can continue to provide a wide variety of vital emergency services.
 - Complete construction of the new Kneeland Fire Hall and Community Center.
 - Explore potential options for providing local fire protection to the community of Maple Creek. This may include expanding the Kneeland Fire Protection district Boundary to include the community of Maple Creek. This Plan recommends that voter approval of a special tax or assessment accompany any expansion so that the fire service is financially supported.
- **Signage:** To aid emergency responders, residents and road associations should improve road and address signage throughout their communities. Make signs larger and reflective to increase visibility and install road and address signs where they are missing. Less noticeable but more sentimental address signs may remain but it is important to also post reflective signs with lettering at least three inches in height.
- **Firefighting Water:** Increase the availability of water for fire protection by making water access locations known to fire departments and investing in more community water tanks. Neighborhood and road associations and/or Firewise® communities work with local fire departments to develop a “Blue Dot” program, which identifies the location of firefighting water sources by marking them with a blue reflective dot. This program also ensures that tanks and water systems are outfitted with fittings compatible with firefighting equipment. Begin by identifying where such a program is most needed. Focus initial efforts in the following neighborhood areas:
 - Kneeland Road
 - Butler Valley Road
 - Upper Jacoby Creek Road

Creating Fire Safe Communities

- **Firewise® Communities:** Pursue participation in the Firewise Communities/USA® Recognition Program for the community of Kneeland within the Kneeland Fire Protection District boundaries. Focus particular attention on neighborhoods located along dead-end roads. Actively implement and maintain the Firewise® action plan on an annual schedule.

Preparing for Emergencies

- **Community Emergency Response Teams:** Organize a *Community Emergency Response Teams* (CERT) training session for residents interested in improving the community’s emergency preparedness. These training opportunities equip community members with basic disaster response skills for dealing with a variety of emergency situations. Such skills become extremely valuable in situations where professional responders cannot act immediately. CERT participants gain experience implementing collaborative problem solving and develop a greater sense of community cohesion. It is particularly important to build

⁵ All local fire departments within this unit are listed above with their contact information in the “Wildfire Protection Capabilities” section.

Humboldt County Community Wildfire Protection Plan

this community capacity because Kneeland has the potential for being cut off from larger community centers during an extreme wildfire or earthquake event.

Reducing Wildfire Fuels (Flammable Vegetation)

- **Defensible Space:** All residents in this Planning Unit live within the WUI and are at risk to wildfire; therefore, residents should manage the flammable vegetation within their *home ignition zone*. Maintaining *defensible space* through vegetation treatments should be a routine and ongoing practice for all homes and landscapes. Community *Chipper Days* can facilitate this process by helping landowners get rid of slash and brush piles so that they do not become an additional hazard. Begin by identifying where defensible space is most needed within the planning unit. The following priority areas were identified at community meetings and are recommended for treatment in this plan:
 - Greenwood Heights Drive
 - Barry Road
 - Tim Mullens Road
- **Roadside Clearance:** Manage roadside vegetation in order to improve and maintain access for emergency vehicles and ensure safe evacuation. Consider working with the California Conservation Corps or County Public Works Roads Division. Focus initial efforts along the following roads:
 - Tim Mullens Road
 - Foss Road
 - Shaded fuelbreak where needed on upper Fickle Hill Road.
 - Shaded fuelbreak in upper Freshwater area, along Kneeland Road.
- **Landscape Fuels Reduction:** Construct *shaded fuelbreaks* as buffers between residential areas and wildlands to slow the progress of wildfires. This allows firefighters a higher probability of successfully protecting communities from wildfire damage. These buffers may also protect the wildlands from the spread of fires originating within communities. The following areas are recommended for priority treatment in this plan:
 - Vegetation treatment on fire suppression ridges.
 - Shaded fuelbreak near northern Humboldt Redwood Lumber Company boundary, near Freshwater and Kneeland Road.