

Humboldt County Community Wildfire Protection Plan

IV.6. Redwood Creek Planning Unit Action Plan

IV.6.1. Redwood Creek Planning Unit Description

The Redwood Creek *Planning Unit* encompasses 190,070 acres situated in the northern heart of Humboldt County; the Unit lies south of Redwood National Park and the Hoopa and Yurok Indian Reservations, east of Blue Lake, and west of Willow Creek. Highway 299 is the main transportation route through the area and winds across the middle of the Unit in an east-to-west direction. This Planning Unit encompasses a substantial part of the Redwood Creek *watershed*, from its headwaters to the southern Redwood National Park boundary. Redwood Creek flows across the eastern side of the Unit in a northerly direction towards Orick, where it meets the Pacific Ocean. Other major waterways include the North Fork of the Mad River in the western area, and Canon creek in the southwestern area.

This Planning Unit is sparsely populated and lacks any designated towns or cities. Three prominent neighborhood groupings are identifiable though: the Redwood Creek community, clustered in the northern portion of the Unit along Stover Road; the Titlow Hill community, which is dispersed throughout the eastern portion of the Unit on Titlow Hill Road, just south of Highway 299; and the Chezem Road community, west of Titlow Hill Rd. Numerous outlying inholdings are also scattered throughout the Unit, branching off of Highway 299 and the smaller roads throughout the southern region of the Unit, such as Bald Mountain Road and Snow Camp Road.

Private land is the dominant ownership pattern in this Planning Unit, with the majority of land owned and managed by Green Diamond Resource Company. Barnum Timber Company and Eel River Saw Mills are also industrial timber proprietors with considerable land ownership in the northern Unit area. Rural residential parcels cluster along Highway 299, particularly in the Titlow Hill Rd. area, and smatterings of inholdings exist throughout the western portion, south of Korbel as well. A few parcels of Bureau of Land Management (BLM) land lie west of the Hoopa Indian Reservation, and a small part of the southeastern Unit area includes Six Rivers National Forest territory, which is managed by the U.S. Forest Service. Primary land uses are timber and livestock production. A map of this Planning Unit can be viewed in Figure IV.6-1. Redwood Creek Unit: CWPP Unit Map.

IV.6.2. Redwood Creek Community Process Summary

A community workshop was held on May 12, 2012 at the Green Point 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. A luncheon fundraiser for the school followed the workshop. Approximately 20 community members were in attendance; main discussion points centered on 1) the area's lack of a local fire protection service, 2) identifying ways to improve access for emergency response vehicles, and 3) making available water sources visible for firefighters and ensuring that water sources are equipped with the proper fittings for fire engines. 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. These workshop processes also provided an opportunity for participating community members to ask questions and provide information based on their local knowledge.

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

Humboldt County Community Wildfire Protection Plan

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.6.8. Community-Identified Projects in this Planning Unit Action Plan.

IV.6.3. Redwood Creek Wildfire Environment

The majority (68%) of the Redwood Creek Planning Unit, particularly the eastern half, is zoned "Very High *Fire Hazard Severity*," while 38% of the Unit, including most of the western half and some of the more populated areas on the eastern side (such as Titlow Hill) are zoned "High *Fire Hazard Severity*," as determined by the California Department of Forestry and Fire Protection (CAL FIRE).¹ The Unit consists of mostly mountainous, forested terrain comprised of "relatively steep, unstable hillslopes, very steep inner gorge slopes along much of the mainstem, and some *tributaries*, and narrow valley bottoms,"² with elevations ranging from 1,100 to about 5,300 feet.

The Unit is characterized by a Mediterranean climate, with mild, wet winters and warm, dry summers. Local vegetation in the Unit is dominated by coniferous forests, containing coastal redwoods and Douglas fir, as well as several hardwood species, including bigleaf maple, red alder, tanbark oak, madrone and bay. Grassland prairies and oak woodlands are also commonly featured on south- and west-facing slopes and ridgetops.³

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 fuel. 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 44% of the Redwood Creek Planning Unit is condition class 3, meaning the fire regime is significantly altered from the historical range; and approximately 25% of the area is condition class 2, or moderately altered from the historical range.

1 CAL 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/>

2 Dyett & Bhatia. (2002, September). Redwood Creek Watershed. (p.81.)

3 Dyett & Bhatia. (2002, September). Redwood Creek Watershed. (p.82.)

Humboldt County Community Wildfire Protection Plan

Possible *ignition sources* include human-related causes, such as arson, poorly maintained campfires or brush piles, smoking, equipment use, and vehicles or vehicular accidents. Lightning and downed power lines are other potential fire starters. Other factors that are likely to have a future impact on fire risk within this Unit include: large fuel increases resulting from the spread of *Sudden Oak Death*, which has already been detected in areas of the watershed and climate change, which is likely to extend the dry season when fire risk is greatest.

All residences in this Planning Unit exist within the *wildland-urban interface* (WUI), where *wildland fires* can easily 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 sidings add to this risk, as do the presence of wooden decks, particularly those with dead plant matter accumulated beneath them. Many homes in this Unit are surrounded by steep slopes that can limit their defensible areas and put structures in the line of up-hill spreading wildfires.

Figure IV.6-2 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/>. Notable hazards identified by community members include:

- Long dead-end roads with only one way in and one way out.
- Slash buildup resulting from timber harvest activities adjacent to residential properties.
- Significant unpermitted constriction that is not in compliance with Humboldt County Fire Safe Regulations, particularly in Titlow Hill neighborhoods.

Highway 299 is the central *ingress and egress* route, with numerous smaller roads connecting residences and neighborhoods to it. Poor or complete lack of *signage* at roads and intersections pose potential problems for ingress and egress. Most of the residences in this Unit are remote and many are only accessible via narrow, steep, roads, some of which have no alternative exit route. The narrowness of these smaller roads leading to remote residences could create serious complications for emergency vehicle response trying to gain access during simultaneous home evacuations. Routes may also be overgrown with vegetation, and many properties have inadequate *turn around spaces*. The potential for landslides in the area could also inhibit access.

No municipal water sources service the neighborhoods within this Planning Unit. Rather, residents obtain water through other means, such as drawing from nearby creeks and holding tanks. *Fire protection water* may also be *drafted* from the following locations:

- Chezem Rd. --creek access (Chezem Flat)
- Green Diamond water hole access
- Creek Pool at bridge on Bair Rd.
- Mill Creek Bar (Green Diamond)

The map in Figure IV.6-2 found 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.6.4. Redwood 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

Humboldt County Community Wildfire Protection Plan

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.

The majority of *assets at risk* in this Planning Unit are residential homes, neighborhood areas, and ranchlands, as well as infrastructure components such as *access roads/evacuation routes* and a transfer station. Timberland resources are also valuable assets at risk to loss from wildfire. Environmentally significant assets at risk include *stands* of old growth redwoods at Stover Ranch and on BLM land. The *habitat* provided by the Redwood Creek watershed is also a significant environmental asset, which includes at least 33 species of wildlife that are identified as species of special concern (*species threatened, endangered or sensitive* to human activities), five of which are fish species.⁴

The map in Figure IV.6-2 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 GIS⁵ Portal, “Fire Planning” section: <http://gis.co.humboldt.ca.us/>. Some of the community-identified assets at risk within this Unit include:

- Green Point School
- Camp Anderson -- historical site
- Redwood Creek Camp/Adventist Cookson Ranch
- Chezen Flat RV Sites
- Korbel Mill – Green Diamond mill site, nursery, log deck, offices
- Barnum Ranch House "Bair House" Stage Coach Stop

IV.6.5. Redwood Creek Community Preparedness

No local *fire safe council* (FSC) exists in this Planning Unit and none of the communities has achieved national *Firewise Communities/USA®* recognition. However, during the community outreach process the Redwood Valley community expressed interest in forming a local FSC. The Green Point Elementary Scholl does provide some emergency preparedness information to students and their families and would serve as an effective focal point for communitywide emergency preparedness efforts and activities. Currently, efforts to educate community members about fire safety within this Unit are provided by the Willow Creek and Humboldt County FSCs; these efforts have been limited thus far.

IV.6.6. Redwood Creek Wildfire Protection Capabilities

No local fire protection services exist for this Planning Unit. CAL FIRE is the entity primarily responsible for providing emergency response in this area. However, responders must travel all the way from Trinidad, which takes about 55 minutes. Additionally, these communities rely on the “*goodwill service*” of Blue Lake and Willow Creek *Volunteer Fire Departments*. Blue Lake and Willow Creek fire resources will usually respond to emergency calls outside of their

⁴ Dyett & Bhatia. (2002, September). Redwood Creek Watershed. *Humboldt 2025 General Plan Update: Natural Resources and Hazards; Vol. 2: Detailed Watershed Characteristics and Regulatory Framework Analysis*.(p.82) Retrieved from <http://www.co.humboldt.ca.us/gpu/documentsbackground.aspx>.

⁵ Geographic Information Systems (GIS).

Humboldt County Community Wildfire Protection Plan

designated districts, so long as their services are not required within their immediate districts at the time. In addition, the towns of Blue Lake and Willow Creek are far enough away from the neighborhoods within this Unit that *response times* can take as long as 30 minutes or more for emergency services to reach the incident site.

The lack of any local fire protection entity within this Planning Unit, whose communities and residences are remote and embedded within the WUI, is a high priority concern. The likely potential for lengthy response times from out-of-the-area fire protection and emergency services should be acknowledged by the communities within this Unit and a strong emphasis should be placed on proactive, preventative measures, such as maintaining *defensible space* and knowledge about which community members have experience or training in first aid and medical response.

IV.6.7. Redwood Creek Evacuation

Evacuation from the Redwood Creek Planning Unit will travel either east or west along Highway 299, depending on law enforcement recommendations based on *fire behavior*, wind pattern, traffic, and ingress of emergency vehicles. There are numerous smaller roads connecting residences and neighborhoods to Highway 299. Adequate ingress and egress along these roads is vital to the majority of the community that may need to access the main highway *evacuation route* and for firefighters who will be using the same roads to access wildfires burning in up-slope areas.

For residents located along Stover Rd, an alternative evacuation route may be accessed via Bair Rd., leading northeast toward Hoopa. Residents living along Snow Camp, Ward, and Barr Roads could access Bald Mountain Road as an alternative route, west towards Korbel. Titlow Hill residents would most likely require permission and assistance from the United States Forest Service (USFS) to utilize alternative evacuation route USFS6N08 Rd. into Six Rivers National Forest territory, with access to Highway 299 and Willow Creek.

Evacuation impediments may include: landslides, fallen trees, downed power lines, overgrown vegetation, poorly marked streets and intersections, and *one-way-in, one-way-out roads* that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked.

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.

Humboldt County Community Wildfire Protection Plan

IV.6.8. Redwood Creek Community Identified 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.6-3). 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:

- Start a local fire department or collaborate with Blue Lake Fire Department to expand their service area. Possibly get surplus equipment from other fire departments in the area.
- Develop a community Phone Tree list; compile a list of contacts to call in case of emergency or when help is needed from (or in) other areas. As another form of emergency communication train a few community members to use the HAM Radios that are currently housed at the school.
- Improve signage throughout the community. Make home addresses and road signs more visible and add mile markers along main roads.
- Encourage evacuation planning and talk to property owners about supplying keys to locked gates on private properties in case emergency access is needed.
- Hold a “Living on Shaky Ground” course.

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)
FIE042	Community of Fieldbrook	Sawdust Trail - Shaded Fuelbreak	Treat-Med		Roadside Clearance				grant- landowner- Assn.
RWV042	Bair Road	Bair Rd Bridge to Hwy 299 Shaded Fuelbreak	Treat-Med		Roadside Clearance				grant- landowner- Assn.
RWV043	Stover Rd	Stover Rd. (from school to end) Shaded Fuelbreak	Treat-Med		Roadside Clearance				grant- landowner- Assn.
RWV044	Beaver Flat @ Stover Rd	Beaver Flat brush clearing & helicopter landing zone	Treat-Med		Landscape	15.45			grant- landowner- Assn.
RWV046	Redwood Creek before Lacks Creek	Summer Dam; Redwood Creek before Lacks Creek	Action Need	2010	Other - Water				grant- landowner- Assn.
RWV047	Stover Rd. @ Beaver Flat	Water Storage @ Beaver Flat	Action Need	2010	Other - Water				grant- landowner- Assn.
RWV053									

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)
RWV054	Road off Hwy 299 across from Bald Mtn Rd	Shaded understory, clearing as needed	Treat-Med	2012	Roadside clearance				grant- landowner- Assn.
WCK139	Upper Redwood Valley Ranch Road Community	Understory clearing and road improvements for access along Upper Redwood Valley Ranch Rd.	Treat-Med	2010	Roadside Clearance				grant- landowner- Assn.
WCK153	Hwy 299 west	Hwy 299 fuel Reduction - WC	Treat-Med	2011	Roadside Clearance				grant- landowner- Assn.
WCK221	Old Three Creeks Rd.	Old Three Creeks Rd. Clearance - Roadside Brushing/ Shaded Fuelbreak	Treat-Med		Roadside Clearance	40.29			grant- landowner- Assn.
WCK222	Titlow Hill Neighborhood	Titlow Hill Neighborhood: Encourage landowners to make Defensible Space	Treat-High	2010	Defensible Space				grant- landowner- Assn.

Humboldt County Community Wildfire Protection Plan

IV.6.9. Redwood Creek Action Plan

The following items are the initial priorities for community action for the Redwood 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

- **Adequate Fire Protection:** Explore potential options for providing local fire protection to the communities within this Planning Unit. Community members should join in discussions pertaining to the possible expansion of the Blue Lake Fire Protection District boundaries and advocate for the inclusion of these communities in that expansion. If that is not feasible, consider developing a local fire brigade or department.
- **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. Focus initial efforts in the following priorities:
 - Post address signs at the bottom of long driveways branching off of the main roads.
 - Install mile markers along Stover Road and Titlow Hill Road.
- **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 nearby fire departments and CAL FIRE 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 area:
 - Titlow Hill Road
 - Stover Road
 - Develop a firefighting water source on Stover Road at Beaver Flat

Creating Fire Safe Communities

- **Firewise® Communities:** Pursue participation in the Firewise Communities/USA® Recognition Program with neighborhood groups in developed areas adjacent to the wildland, particularly where there are many residences located along dead-end roads. Actively implement and maintain the Firewise® action plan on an annual schedule. Focus initial efforts in the following area:
 - Stover Road residents in coordination with Green Point Elementary School
- **Community Collaboration and Communication:** Develop a Phone Tree List containing contact information for residents within the Planning Unit, as well as contacts outside of the area. This contact list can be used to spread and share information throughout the community and request help in emergency situations.

Humboldt County Community Wildfire Protection Plan

- **Fire Safe Regulation Compliance:** Property owners should coordinate with the Humboldt County Planning and Building Department to achieve compliance with County codes and regulations.

Preparing Communities 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.

Promoting Fire Safe Education

- Conduct public education and outreach efforts regarding strategies for fire safety, maintaining defensible space, and evacuation planning. Send out informational material in mailers throughout the communities. Consider involving Boy Scouts and Girl Scouts of America in outreach efforts. Focus initial educational efforts on the following priority:
 - Evacuation Preparedness
 - Reducing hazards in the *Home Ignition Zone*
 - Effective communication while calling 911; particularly in relation to explaining the incident location.

Reducing Wildfire Fuels (Flammable Vegetation)

- **Defensible Space:** Those residents living in areas within this Planning Unit that are at risk to wildfire 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:
 - Neighborhoods along Titlow Hill Road.
 - Neighborhoods along Stover 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:
 - Sawdust Trail
 - Bair Road, bridge to Highway 299
 - Stover Road
 - Upper Redwood Valley Ranch Road
 - Old Tree Creeks 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:
 - Brush clearing and creation of a helicopter landing area on Stover Road at Beaver Flat.

Humboldt County Community Wildfire Protection Plan

- Create a buffer between Green Diamond and Barnum Timber lands and adjacent residential properties to protect both the community and the resource lands.