



# Strategic Fire Plan

## Humboldt-Del-Norte Unit

### 2016



Tanker 96 flying to an initial attack fire

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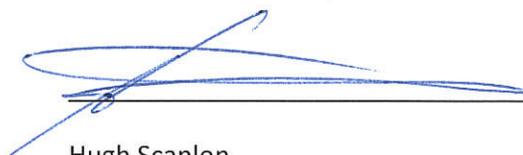
**UNIT STRATEGIC FIRE PLAN AMENDMENTS**

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*Unit Strategic Fire Plan developed for Humboldt - Del Norte Unit:*

This Plan was collaboratively developed with interested parties; Federal, State, Local, and County agencies within the Unit have been consulted and are listed in the plan. It identifies and prioritizes pre-fire and post-fire management strategies and tactics meant to reduce the loss of values at risk within the Unit and is intended for use as a planning and assessment tool only. It is the responsibility of those implementing the projects to ensure that all environmental compliance and permitting processes are met as necessary.

***SIGNATURE PAGE***

 \_\_\_\_\_ 31 May 2016

Hugh Scanlon, Date

Unit Chief, Humboldt-Del Norte Unit

 \_\_\_\_\_ 31 May 2016

Chris Ramey, Date

Pre-Fire Engineer, Humboldt-Del Norte Unit

## ***EXECUTIVE SUMMARY***

The Humboldt-Del Norte Unit Fire Plan is a living document. It is intended to be updated annually when the Unit progresses with State and Unit priorities. These goals are written in the Strategic Fire Plan for California.

The California Department of Forestry and Fire Protection (CAL FIRE) Humboldt-Del Norte Unit (HUU) is located along the California coastline and includes Humboldt, Del Norte, and portions of Trinity counties. The Unit extends north to south approximately 180 miles and inland approximately 50 miles. This encompasses 1,928,267 acres of state responsibility lands and 1,927,410 of direct protection area. Approximately 70% of these lands are zoned for timber production and another 10% are recreation areas. Watersheds within the Unit include the Smith, Klamath, Mad, Trinity, Van Duzen, Mattole and Eel Rivers. Humboldt and Del Norte counties are home to not only the world's tallest living trees, but also the largest remaining stands of old growth coast redwood. Many of these stands are protected in parks and recreational areas. The livelihood of these counties is dependent on the resources the land itself has to offer both in the form of timber production and recreation.

Federal cooperator responsibility areas account for 1.3 million acres in the HUU. These cooperators include; the Six Rivers National Forest, Rogue – Siskiyou National Forest, Klamath National Forest, Redwood National Park, and the Bureau of Land Management. The Bureau of Indian Affairs supports twelve tribal agencies within the Unit. The Hoopa tribe provides fire protection on its reservation and has significant fire activity during the summer months.

The HUU Strategic Fire Plan is developed by the Planning Battalion through a collaborative process that includes: CAL FIRE field battalions, fire prevention, administration staff, county and local Fire Safe Councils, and cooperating agencies. The Unit Chief provides direction on how the Unit endeavors to meet the key goals of the Strategic Fire Plan for California. The field and administrative battalions provide localized and program plans towards meeting those objectives. Implementation is directed by the field battalion chiefs and camp chiefs for daily operations.

## **SECTION I: UNIT OVERVIEW**

### **UNIT DESCRIPTION**

#### Unit General Priorities

With local government and community collaboration, the Unit's general goals will be to enhance the protection of lives, property and natural resources from wildland fire. This will also improve environmental resilience to wildland fire. Community protection includes promoting the safety of the public and emergency responders, as well as protection of property and other improvements.

#### Location

The CAL FIRE Humboldt-Del Norte Unit is the most northern unit along the California coastline. The Unit extends north to south approximately 180 miles and inland approximately 50 miles. This encompasses 1,928,267 acres of state responsibility lands and 1,927,410 of direct protection area. The Unit includes Redwood National Park, United States Forest Service (USFS) Six Rivers National Forest and the Bureau of Land Management's Headwaters Forest and Kings Range, eleven State Parks, and 20 county parks and beaches. There are also twelve tribal agencies residing within the unit including the Hoopa, which provides wildland fire protection on their reservation. The Yurok, Wiyot, Karuk and Tolowa are some of the other tribes that have lands, for which CAL FIRE provides wildland fire protection under contract with the Bureau of Indian Affairs.

#### Vegetation and Fuels

The Fire Plan analysis of fuels has been completed for the Humboldt-Del Norte Unit. The Unit is predominately mixed conifer forest (NFDRS Fuel model G) or Fire Behavior Fuel Model 10. This vegetation type consists of coast redwood, Douglas-fir, spruce with intermingled hardwoods including madrone and tanoak. A key component within this fuel type is the large amount of down and dead woody fuel. This vegetation type occurs in three Fire Danger Rating Zones. The coastal strip consists of coast redwood, Douglas-fir and spruce. This is a closed canopy forest with a thick, lush understory of brush. The biomass in this fuel type is equal to or greater than a rainforest and often times is referred to as a temperate rainforest. The second zone occurs inland where the Douglas-fir dominates and resides with hardwoods. This results in a more open canopy with a sparser understory. The third zone occurs in the most southeastern portions of the unit, where the fuel is that of a typical Oak Woodland. The understory is open and consists of grass and brush (chaparral).

The following set of photographs depict a cross section of the vegetation types within the Humboldt-Del Norte Unit.



Redwood Forest



### Fire Hazard Severity Zones (FHSZ)

As a component of the adoption of WUI building code standards in November 2007, CAL FIRE undertook a major effort to reclassify the Fire Hazard Severity Zones (FHSZ) statewide for State Responsibility Area (SRA) and Local Responsibility Area (LRA) lands. The FHSZ areas are classified primarily as High and Very High FHSZs. Some areas of Moderate FHSZ are located near the coast. For LRA, the local entities have accepted CAL FIRE's classification of those areas. There are no LRA zones in the Unit that are classified as Very High FHSZ. Federally owned and managed lands were not formally classified.

### Topography and Weather

The Humboldt-Del Norte Unit is a coastal region with varying topography, which is primarily mountainous. Elevations range from sea level to 4100 feet. Slopes range from moderate to very steep with 80-90% occurring regularly.

A Fire Danger Operating Plan (FDOP) has been developed in the HUU. A fire danger operating plan documents the establishment and management of the local Unit fire weather system and incorporates fire danger modeling into local Unit fire management decisions. Fire danger operating plans include but are not limited to responsible parties (e.g. station maintenance, data entry); fire danger rating areas (e.g. location, development criteria); NFDRS thresholds and breakpoints (e.g. staffing levels, adjective ratings, preparedness levels, and indexes used for each); operational procedures; and Fire Danger Pocket Cards. The current HUU weather station being used as a severity station for the Unit is the Eel River Remote Automated Weather Station (RAWS) because of its location provides an accurate depiction of the area. In addition the unit has thirty years of historic data for this site. We have used this RAWS as our severity station for the past several years in our FDOP.

Three major synoptic weather systems are associated with large fires in the Humboldt-Del Norte Unit. They are the Pacific High (post-frontal), the Great Basin High and the Subtropical High Aloft pattern. These patterns can be expected to occur 50-55 days in the summer months, with the greatest number of days occurring in July, August, or September.

The National Weather Service provides all daily fire weather forecasting for HUU from their Eureka office. All fire weather forecasts are available at the Eureka office main web page: <http://www.wrh.noaa.gov/Eureka>.

### Fire History

In order to fully understand the goal of the fire management plan, it is important to recognize the area's fire history. Fire has long been a part of Humboldt and Del Norte counties. During the pre-settlement period (before 1875) the Native American people commonly used fire as a tool to manipulate their environment. They used fire for a variety of reasons. It helped drive out rodents and insects, kept the forest understory open, which made for easier travel and hunting. Additionally, it enhanced the forbs and grasses used in basket weaving. During the settlement period (1875-1897) European settlers used fire for maintenance and enlarging the pasturelands and as a land clearing method. Major land activities during the post settlement period (1898-1940) were livestock grazing, farming, debarking of the tanoak for tannin production and logging of Douglas-fir and coast redwood. Logging was clearly a dominant activity during this time period. Hundreds of small mills existed up and down the coastline; often the mills would have their own railroad for the transportation of the logs as well. In this time of unrefined mechanized equipment, the logging operations were simplified as much as possible. Logged areas were burned to assist with the removal of the logs and reduce the logging debris left behind. These fires were left to burn with minimal control efforts. The same can be said for area ranchers who commonly set fire to their land in order to maintain fields and prairies for cattle grazing.

Studies have been conducted on the fire frequency in the Coast Redwood region. The fire frequency varies greatly between the Northern and Southern portions of the unit. The studies reflected the Northern portion of the unit on a 50-100 year fire cycle. However the Southern portion of the unit is on a 12-50 year Fire cycle. Reviews of area newspapers and various studies at Humboldt State University indicate that there was a significant fire history from the late 1800's through early 1950's. Between 1880 and 1952 there were 24 "fire seasons". During this time period the fire interval was 3.3 years. Some of these fires resulted in entire towns being burned, such as the 1908 fire that destroyed the community of Luffenholtz. People were left homeless, local mills and railroad tracks all perished from these large severe fires. The Civilian Conservation Corps began work in the Humboldt – Del Norte area in the mid-1930s, developing an improved local firefighting infrastructure. After 1945, the severity and number of fires began to decline significantly with the return of World War II soldiers. As these soldiers returned, a more active fire suppression program was implemented. In 1973, the California Forest Practice Act changed the manner in which state timberlands lands were managed, which led to the curtailing and changing of logging activities, including the use of fire.

## UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Humboldt –Del Norte Unit is composed of eleven fire stations, three camps, one air attack base, and one helitack base. CAL FIRE HUU maintains 14 frontline engines, with three engines in reserve, two dozers, 15 inmate crews, one helicopter, one air attack, and one air tanker for fire suppression efforts. There are approximately 100 permanent fire suppression personnel, 15 resource management personnel, and 10 clerical personnel to staff these efforts. Additionally the Unit hires approximately 90 limited term and seasonal personnel to supplement permanent staff during the fire season.

All Unit aircraft provide rapid initial attack and are especially valuable in the county's remote areas where steep terrain and narrow, winding roads greatly increase ground response times. In such situations, aircraft are often at scene and applying water or retardant before engines and dozers arrive, cooling the fire and giving ground resources the ability to achieve initial attack success. Aircraft also provide "eyes in the sky" for those on the ground, noting spot fires and giving other direction from their vantage point.

The Fortuna Inter-Agency Command Center is co-located with Six Rivers National Forest Dispatch and is staffed 24 hours 7 days a week. The Command Center receives 911 calls for the CAL FIRE Humboldt-Del Norte Unit, as well as for 34 volunteer fire departments, Arcata Fire Department, Redwood National Park, and Bureau of Land Management's Kings Range National Conservation Area. The CAL FIRE portion of the Command Center dispatches all vegetation fires, structure fires, medical, and traffic accidents in Humboldt County, with the exception of Humboldt Bay Fire (City of Eureka) and the City of Fortuna. The Command Center staffing consists of one Battalion Chief, four Fire Captains, and two Communications Operators. All of the staff members are certified as Emergency Medical Dispatchers (EMD), which provides the 911 callers with medical advice over the phone until help arrives. Due to the rural locations of most of the communities in the County it's critical to provide emergency instructions as soon as possible to increase the patients survival rate. In Del Norte County, the Command Center dispatches for SRA fires and Del Norte County Sheriff's department dispatches the ambulance and Volunteer Fire Departments. CAL FIRE is also the central ordering point for the medical helicopters in Humboldt and Del Norte Counties.

The Humboldt-Del Norte Unit has the potential for large catastrophic fires; especially in the southern and eastern portions of the Unit. As the area becomes more popular because of its scenic beauty, relatively low property cost, low cost of living, etc., the fire risk will continue to grow; especially for those who reside in remote areas. Most of the fire stations in the Unit are positioned near population centers, providing fast initial attack. However, many portions of the Unit are rural and require extended response times and a heavy reliance on local volunteer departments during the initial attack phase of wildland fires.

CAL FIRES's 2010 Strategic Fire Plan vision is to strive for:

“A natural environment that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships”.

Board of Forestry and Fire Protection designates in the California Fire Plan that CAL FIRE will strive to contain 95% of all unwanted fire at 10 acres or less. This is consistent with CAL FIRE's Fire Protection Objective as stated in the Fire Operations Handbook, policy 7001.2.

Humboldt County has an extraordinarily strong and effective mutual aid system. Humboldt County has 38 Volunteer and paid departments that respond to emergencies 365 days a year. During fire season CAL FIRE responds with the Local fire departments to vegetation fires, structure fires, medical aids, traffic accidents, and other all-risk emergencies. All of these agencies are quick to assist each other within Mutual Aid zones, even outside their response areas. On wildfires, CAL FIRE and local firefighters, paid and volunteer, work side by side as a team. In addition the local fire departments and CAL FIRE work frequently with the local ambulance services, US COAST GUARD and CALSTAR/REACH on calls requiring ground or air medical transport. Monthly trainings are held in each Battalion to ensure all agencies are familiar with each other, not only on a personnel level but also with policies and procedures.

Del Norte County is the northernmost county on the California coast. It is bounded on the north by Oregon, on the east by Siskiyou County, on the south by Humboldt County, and on the west by the Pacific Ocean. The total area of Del Norte County is 683,500 acres, of which 192,357 acres are privately owned and 489,697 acres are publicly owned. It is a mountainous region characterized by steep, inaccessible topography with vast forest resources (primarily redwood and Douglas fir) with two dominant rivers, the Klamath and Smith River. The climate of Del Norte County varies, depending on elevation and proximity to the ocean, but is described as being a Mediterranean climate with mild temperatures, wet winters, and dry summers. Fog is often present in the coastal parts of the county, while inland areas experience warmer temperatures and less fog.

In Del Norte County there are five Fire Protection Districts:

- Klamath Fire Protection District
- Crescent City Fire Protection District
- Fort Dick Fire Protection District
- Smith River Fire Protection District
- Gasquet Fire Protection District

There are also several governmental fire agencies in the County:

- US Forest Service
- Redwood National and State Parks
- Pelican Bay State Prison

Private lands that are not within one of these districts are: Big Flat, Rock Creek, and Sun Star. These communities have no official structural fire protection service. CAL FIRE provides wildland fire protection services to these communities and will respond to all other emergencies. However, due to the long response times, responses for emergency medical services and structure fires are ineffective for public safety.

A list of Humboldt and Del Norte County’s local fire agencies follows. Insurance Service Office (ISO) ratings are assigned to localities by the insurance industry according to their fire suppression capabilities, available water supply, and other factors, with a rating of 1 indicating the best possible situation. Homeowners’ fire insurance costs are calculated in part according to these ratings.

Local Fire Organizations and County Agencies Providing Service in the Humboldt-Del Norte Unit

Humboldt and Del Norte County Fire Organizations	Battalion 1	Battalion 2	Battalion 3	Battalion 4	Battalion 5
<b>Paid City Departments Volunteer and Protection Districts</b>	-Palo Verde -Alderpoint -Garberville -Redway -Shelter Cove -Whale Gulch -Whitethorn -Telegraph Ridge -Briceland	-Rio Dell -Petrolia -Mattole -Myers Flat -Redcrest -Weott -Scotia -Fruitland -Salmon Crk -Miranda -Philippsville -Honeydew	-Ferndale -Carlota -Fortuna Bridgeville -Loleta -Kneeland -Humboldt Bay Fire	-Arcata -Willow Crk -Blue Lake -Fieldbrook -Samoa -Orleans -Westhaven -Orick -Trinidad	-Crescent City Fire & Rescue -Fort Dick -Smith River -Klamath -Yurok -Gasquet

Below is a link to the Humboldt County Fire Chiefs Association. The majority of the departments in Humboldt County are associated with a special district, such as fire protection district and community service districts. The districts are supported by revenue from a combination of taxes, fees, and fundraising.

<http://www.humboldt.gov/Archive.aspx?ADID=880>

**SECTION II: COLLABORATION**

This plan is a compilation of efforts from various groups and agencies throughout the Unit to address the mitigation of the hazardous fuel loading within the Unit and around the communities at risk within it. The plan addresses the priorities put forth by the Unit based on the key issues gathered from cooperators: 1) assets at risk 2) level of service 3) fuels 4) fire weather and 5) fire history.

**COMMUNITY / AGENCIES / FIRE SAFE COUNCILS**

Organizations involved in the development of the Unit Strategic Fire Plan are included in the following table. Their organization and title are indicated below: The demographics of the area lend itself to many stakeholder groups with a wide array of needs.

Plan Development Team:

<b>Organization</b>	<b>Representative</b>
Humboldt County FSC	(Specialist Planner)
Del Norte County FSC	(President)
Trinity County FSC	(President)
Southern Humboldt FSC	(President)
Fruitland Ridge FSC	(President)
Lower Mattole FSC	(President)
Orleans / Somes Bar FSC	(President)
Van Duzen Watershed FSC	(Director)
Willow Creek FSC	(President)
Humboldt Redwood State Parks	(Park Ecologist)
Six Rivers National Forest	(Fire Prevention Officer)
UC Cooperative Extension	(County Director Forest advisor)
Humboldt County Planning	(GIS Specialist)

Six Rivers National Forest	(Fire Planner GIS Specialist)
Green Diamond Resources	(Timberland Manager)
Bureau of Land Management	(Fuels Officer)
Mattole Restoration Council	(Manager)
Bridgeville Community Center	(Executive Administrator)
Six Rivers USFS Mad River District	(Fuels Planner)
Karuk Tribe Dept of Natural Resources	(Eco-Cultural Restoration Specialist)
Smith River National Recreational Area	(Fuels Planner)
Humboldt County Fire Chiefs Assoc.	(President)
Northern CA Prescribed Fire Council	(Chair)
USDA Natural Resource Conservation Service	(Forester)

### **SECTION III: VALUES**

Population dynamics in California has resulted in rapid development in the outlying fringe of metropolitan areas and in rural areas with attractive recreational and aesthetic amenities, especially forests. This demographic change is increasing the size of the wildland-urban interface (WUI), defined as the area where structures and other human development meet or intermingle with undeveloped wildland. The WUI is where wildfire could pose the biggest risk to human lives and structures. The expansion of the WUI in recent decades has significant implications for wildfire management and impact. The WUI creates an environment in which fire can move readily between structures and vegetation fuels

WUI is composed of both intermix and interface communities. Intermix communities are places where housing and vegetation intermingle. In intermix, wildland vegetation is continuous, more than 50 percent vegetation, in areas with more than 1 house per 40 acres. Interface communities are areas with housing in the vicinity of contiguous vegetation. Interface areas have more than 1 house per 40 acres, have less than 50 percent vegetation, and are within 1.5 miles of an area that is more than 75 percent vegetated.

The California Fire Alliance (2001) defined “vicinity” as all areas within 1.5 miles of wildland vegetation, roughly the maximum distance that firebrands can be carried from a wildland fire to the roof of a house. It captures the idea that even those homes not sited within the forest are at risk of being burned in wildland fire. With the use of the above definitions as a foundation, the communities in and around these WUI areas become “Communities at Risk”.

### **COMMUNITIES**

These high risk communities identified within the wildland-urban interface, the area where homes and wildlands intermix, were published in the Federal Register in 2001. At the request of Congress, the Federal Register notice only listed those communities neighboring federal lands. The list represents the collaborative work of the 50 states and five federal agencies using a standardized process, whereby states were asked to submit all communities within their borders that met the criteria of a structure at high risk from wildfire.

With California's extensive urban Wildland-Urban Interface situation, the list of communities extends beyond just those adjacent to Federal lands. The California State Forester (CAL FIRE Director) has the responsibility for managing the list.

The following list includes “Communities at Risk” within the Humboldt-Del Norte Unit. The federal register includes most, but not all the potentially threatened areas.

<b>Community</b>	<b>Federal Register</b>	<b>Community</b>	<b>Federal Register</b>
Alderpoint	No	Fort Dick	No
Alton	No	Fortuna	No
Arcata	No	French Hill	Yes
Bayside	No	Freshwater	No
Bayview	No	Friday/Morton Ranch	No
Beatrice	No	Fruitland	No
Benbow	No	Garberville	No
Berry Glen	Yes	Gasquet	Yes
Big Flat	Yes	Gray Ranch	Yes
Big Lagoon	Yes	Hawkins Bar	Yes
Big Lagoon Rancheria	Yes	Hiouchi	Yes
Blocksburg	No	Holmes	No
Blue Lake	Yes	Honeydew	Yes
Blue Lake Rancheria	Yes	Hoopa Valley Indian Reservation	Yes
Bracut	No	Humboldt Hill	No
Briceland	No	Hydesville	No
Bridgeville	Yes	Kettenpom Valley	Yes
Carlotta	No	Klamath	Yes
Cobb Ridge	Yes	Klamath Glenn	No
Crannell	No	Kneeland	No
Cutten	No	Korbel	Yes
Douglas Park	Yes	Kuhn Ranch/Ammon	Yes
Essex	No	Lado Del Rio	Yes
Ettersburg	Yes	Mad River	Yes
Eureka	No	Major Moore's	Yes
Fickle Hill	Yes	Maple Creek	No
Fieldbrook	No		
Flying AA Ranch	Yes		

<b>Community</b>	<b>Federal Register</b>	<b>Community</b>	<b>Federal Register</b>
McKinleyville	No	Shivley	No
Miranda	No	Smith River	No
Myers Flat	No	Sportshaven	Yes
Myrtle town	No	Stafford	No
Oden Flat	Yes	Suzy Q Ranch	Yes
Orick	Yes	Trinidad	Yes
Orleans	Yes	Trinidad Rancheria	Yes
Patrick Creek	Yes	Upper Mad River	Yes
Patricks Point	No	Van Duzen	Yes
Pepperwood	No	Weitchpec	Yes
Petrolia	Yes	Weott	No
Phillipsville	No	Westhaven- Moonstone	Yes
Pine Hills	Yes	Whitethorn (Thorn)	Yes
Pine Mountain	No	Willow Creek	Yes
Pioneer Tract	Yes	Yurok Indian Reservation	No
Redcrest	No	Zenia	Yes
Redway	No		
Requa	No		
Rio Dell	No		
Riverside Park/Swains Flat	No		
Rock Creek	Yes		
Rohnerville	No		
Ruth	Yes		
Ruth Lake East	Yes		
Ruth Lake West	Yes		
Salyer	Yes		
Scotia	No		
Shelter Cove	Yes		

## **SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES**

### **FIRE PREVENTION**

Unit prevention efforts include fair exhibits, community fire safe day exhibitions, burn and 4290 permit procedures, fire patrols, news media releases, public service announcements, structure and dooryard premise inspections, and an active board member on the Humboldt County Fire Safe Council. The Units goals are to reduce ignitions/fires through Education, Information, Planning, and Enforcement. By increasing awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction projects, Fire Prevention and fire safe building standards. Fire prevention programs are coordinated to the greatest extent possible with fire safe councils and local fire departments. While implementing these goals the Units objective is to see the ignitions of fires reduced in the Unit.

### **ENGINEERING & STRUCTURE IGNITABILITY**

The Humboldt-Del Norte Unit contains many communities that are threatened with potential loss of life and property due to wildfires. During the few decades the amount of homes built in the Wildland Urban Interface (WUI) areas have greatly increased. The California Building Commission adopted the Wildland-Urban Interface (WUI) codes in late 2005. The majority of the new requirements took effect in 2008 and has been updated in the 2010 California Building code. These measures are intended to reduce the spread of fire to and from structures, helping to save lives, minimize property loss, and protect the environment. These codes include provisions for ignition resistant construction standards in the wildland urban interface. The updated fire hazard severity zones will be used by building officials to determine appropriate construction materials for new buildings in the wildland urban interface. The updated zones will also be used by property owners to comply with natural hazards disclosure requirements at time of property sale. It is likely that the fire hazard severity zones will be used by local government as they update the safety element of general plans. The new building standard for the Fire Hazard Severity Zones will be enforced by the Building Official as projects go through the plan checking process. Below is the link for State Fire Marshalls website, which has more in depth information on the building code requirements and approved construction materials.

<http://osfm.fire.ca.gov/codedevelopment/wildfireprotectionbuildingconstruction.php>

Other measures have been in effect for many years. Public Resources Code (PRC) 4290 (and its' equivalent local ordinances) provide standards for roads, emergency water supply, vegetation treatment setbacks, and addressing signage. In Humboldt County, these standards are embodied in the county's Fire Safe Ordinance. PRC 4291 provides standards for vegetative clearance – requiring a 30-foot lean and 100-foot green zone. The Unit also maintains Roadside Public education signs and Fire Danger Rating Signs throughout the Unit. CAL FIRE provides numerous brochures and guides on minimum defensible space standards.

Del Norte County, along with the guidance and assistance of the Humboldt-Del Norte Unit is currently in the process of developing and adopting new building standards for Fire Hazard Severity Zones. Along with the (FHSZ) regulations and building standards, Del Norte County will also be adopting California Public Resources Code 4290 and 4291. The county has written the regulations into the county planning codes, which have been approved by Del Norte County legal team. These adoptions and ordinances, pending approval of the State Board of Forestry July 2016 will be enforced by the county appointed building official.

## **INFORMATION AND EDUCATION**

CAL FIRE HUU Fire Safety Education Programs come in the form of school programs, fair exhibits, roadside public fire information signs, posters, flyers, Smokey bear fire danger roadside signs, and thousands of other printed materials, radio and television spots, community meetings, one-on-one contacts with wildland homeowners under the LE 100 inspections, and in recent years, the internet. This information and education is provided to people of all ages.

Smokey Bear, Sparky the Fire Dog, and Pluggie the fire hydrant are utilized at events throughout the County with the goals of teaching fire safety at home and in the forest. Smokey, Sparky, and Pluggie are used in both the classroom setting and at public events, such as the Humboldt County Fair. While Smokey and Sparky are used primarily for teaching young individuals, the HUU prevention staff also provided other informational and educational materials to teachers and Fire safe councils geared specifically to educators.

### Public Resources Code 4290 & 4291

Fire Fighter personnel, working under the direction of the Fire Prevention Bureau, conduct compliance monitoring inspections of defensible space clearance requirements around buildings & structures on SRA lands. Concurrent with Fire Prevention inspections, Forest Practice personnel also conduct compliance inspections of projects which are exempt from Timber Harvesting Plan preparation, if applicable. Examples of such projects include fire hazard exemptions and/or less than three-acre timberland conversions which involve fuel treatment. CAL FIRE also reviews and comments on fire safe standard application for discretionary projects in county planning.

## **PRE-PLANS**

### LIGHTNING COMPLEX AREA (LCA)

The Fortuna Inter-agency Emergency Command Center (referred to as the ECC within this document) identifies the need to implement this plan based on current and expected lightning events. The impact upon this communication center during a lightning event with multiple simultaneous incidents can be immense. This plan was developed to handle the multiple incidents that can occur within a very short time frame, for example, in 2015 there were as many as 75 lightning caused fires on one day within HUU's jurisdictional boundaries. HUU has also experienced major fires burning simultaneously. This plan has been developed to manage our resources in a safe, efficient manner when the Command Center cannot handle the complexity of the situation.

### PLAN DEVELOPMENT

The LCA plan was developed to standardize the procedures used by HUU during a multiple incident occurrence. The plan is designed to handle multiple incidents as a result of lightning or other large scale events. It does not include fire operational procedures; for example, a lightning fire that develops beyond initial attack suppression efforts will be removed from the lightning complex area and treated as a separate incident (assuming that sufficient resources and personnel are available to manage the fire).

### ACTIVATION OF THE PLAN

Activation may occur when one or more of the following conditions exist, keeping in mind there could be outside influences or local conditions that will call for plan activation. The ECC will notify all field units by a radio broadcast of activation of LCA plan when:

1. Widespread incidents occur: i.e. lightning, earthquake, flood, terrorism, tsunami, etc.
2. Significant lightning forecasted for HUU Direct Protection Areas (DPA).
3. Down strikes occur on HUU DPA.

Additionally, each Unit Battalion maintains a LCA kit. Each kit includes but is not limited to a copy of the LCA Plan, Maps and other items important to the successful implementation of the plan. Other battalion specific Pre Plans are maintained at the battalion level for first in response.

### Mutual Threat Zones (MTZ)

CAL FIRE has three Mutual Threat Zones identified in the Unit. One is along the LRA/SRA boundaries with the City of Trinidad. Another is located along the City of Arcata boundaries. The memoranda-of-understanding regarding these two areas allows for automatic response by either the local entity or CAL FIRE to an incident within 1.0 miles of the LRA/SRA boundary. Costs for those responses may be billed to the responsible agency in accordance with mutual aid procedures. These MOUs have greatly reduced the cost to these local agencies, which formerly had Local Wildland Agreements with CAL FIRE. These Mutual Threat Zone MOUs are reviewed annually by the participants. The third zone is along the Oregon / California border. CAL FIRE and the Oregon Department of Forestry maintain an Annual Operating Fire Protection Plan with the express purpose of establishing operating procedures within the MTZ.

## **VEGETATION MANAGEMENT**

The Vegetation Management Program (VMP) is a cost-sharing program utilizing prescribed fire and mechanical means, for addressing wildland fire fuel hazards and other resource management issues on State Responsibility Area (SRA) lands. The use of prescribed fire mimics natural processes, restores fire to its historic role in wildland ecosystems, and provides significant fire hazard reduction benefits that enhance public and firefighter safety.

VMP allows private landowners to enter into a contract with CAL FIRE to use prescribed fire to accomplish a combination of fire protection and resource management goals. The projects which fit within HUU's priority areas (e.g., those identified through the Fire Plan) and are considered to be of most value to the unit are those that will be completed.

CAL FIRE administers several state and federal forestry assistance programs with the goal of reducing wildland fuel loads and improving the health and productivity of private forest lands. California's Forest Improvement Program (CFIP) and other federal programs that CAL FIRE administers, offer cost-share opportunities to assist individual landowners with land management planning, conservation practices to enhance wildlife habitat, and practices to enhance the productivity of the land. The Department also delivers the Forest Stewardship Program which combines funds from state and federal sources to assist communities with multiple-ownership watershed and community issues related to pre-fire fuels treatment, forest health, erosion control, and fisheries issues.

### CAL FIRE Chipper Program

Humboldt-Del Norte Unit augments funding for all 10 fire safe councils through grant support review and matching funds through staff time, chipper use, fire crews, engines and dozers. These resources are channeled mostly through letters of commitment in the grant application process and range from \$9,000 – \$60,000 depending on the type of grant application.

### Prescribed Fire Program (VMP)

Prescribed fire can be an effective tool for fuels reduction, in addition to providing other positive results in managing the landscape. These projects may be small in scale, from landowner conducted individual burns through our LE-5 and LE-7 burning permit process to large burns conducted by CAL FIRE under the Vegetation Management Program. Managed timberlands realize fuel reduction when piles are burned or a treatment unit is broadcast burned. CAL FIRE is also an active cooperator with other public agencies such as State Parks – providing equipment, crews, and other resources to assist with their burns. Training burns are also conducted, which may produce a fuels reduction side benefit. Treating areas under CAL FIRE’s VMP places the liability for the burn onto the State, under a cost-share contract. These projects are often “targets of opportunity” since it takes a landowner willing to enter an agreement with the State, a project that realizes adequate public benefit, and is feasible to conduct without significant impact to the environment or communities. Lists of projects that are current, under development, and recently conducted and may be renewed are included in Appendix A. The goal is to have at least one VMP project in each of the five field battalions. Burn windows are usually limited to September and October, so approved projects may not be completed within the 3-year contract period. Private landowners, local fire agencies, and fire safe councils also conduct burn operations.

From May 1<sup>st</sup> until the end of the declared fire season, a CAL FIRE permit is required for burning. Outside of that period, burns may be conducted without a CAL FIRE permit, so our knowledge of those projects is often limited. The North Coast Unified Air Quality Management District requires a smoke management project permit at all times during the year. CAL FIRE coordinates with the AQMD for small pile “dooryard” permits – consolidated into a single document issued by the AQMD. Larger burns are not coordinated between the agencies unless CAL FIRE is conducting the burn.

Burning programs are also conducted on public lands by our federal cooperators. Redwood National Park has an active program that often uses CAL FIRE resources. Humboldt Redwood State Park and Prarie Creek State Park also utilize HUU resources to execute their burns. The BLM burns are usually coordinated with CAL FIRE since most BLM areas are within the State’s

Direct Protection Area by agreement. The US Forest Service – Six Rivers National Forest also has an active fuels treatment program.

VMP projects have been successfully executed in recent years with other projects under current review. These projects provide many benefits including but not limited to unit personnel training, range and forage improvement, habitat maintenance for flora and fauna, and strategic treatment of hazardous vegetative fire fuels that will result in decreased fire behavior in the event of a wild fire affecting the area of a recent burn.



England VMP Broadcast Burn Fall 2013, below is what the Landowner wrote in a thank you letter

*"Another great benefit for control burns, I wanted to thank you all again for your professional production of the fire training program we were recipients of. We feel our tax dollars were well spent and much appreciated. Our hope is this program will be available to the public in the future to help preserve and maintain our grasslands in this proper manner. Thank you, Sincerely the Englands"*

The Humboldt-Del Norte Unit also strives to support and promote programs and projects that focus efforts on the below vision and central goals of the California Strategic Fire Plan. This support is a manifest of the above mentioned goals as well as supporting local fire safe councils in an effort to obtain grant funding for projects that meet the objectives of the California Strategic Fire Plan.

## California Strategic Fire Plan

### VISION

A natural environment that is more resilient and man-made assets which are more resistant to the occurrence and effects of wildland fire through local, state, federal and private partnerships.

The central goals that are critical to reducing and preventing the impacts of fire revolve around both suppression efforts and fire prevention efforts. Major components are; Improve availability of information on hazard and risk assessment; Promote the concept of land use planning as it relates to fire risk and individual landowner objectives and responsibilities; Support and participate in the collaborative development and implementation of wildland fire protection plans and other local, county and regional plans that address fire protection; Increase awareness, knowledge and actions implemented by individuals and communities to reduce human loss and property damage from wildland fires, such as defensible space and other fuels reduction activities, fire prevention and fire safe building standards; Develop a method to integrate fire and fuels management practices with landowner priorities and multiple jurisdictional efforts within local, state and federal responsibility areas; Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes; Address post-fire responsibilities for natural resource recovery, including watershed protection, reforestation and ecosystem restoration.

## **PRE FIRE PLANNING**

### Environmental Review

The California Environmental Quality Act (CEQA) requires public agencies to consider actions on projects that may directly or indirectly result in a physical change in the environment. CAL FIRE provides resource management and fire safe comments on proposed discretionary projects routed through the county/city planning process and from the State Clearinghouse. Where projects cannot meet fire safe standards, CAL FIRE provides expert analysis on proposed project alternatives. For discretionary projects where CAL FIRE funds, approves, permits, facilitates or carries out a project as lead agency, it is obligated to ensure that the appropriate steps are taken in complying with CEQA by preparing an environmental review. The Planning Battalion manages the Unit's environmental review program.

### Fire Safe Council / Firewise Support

The Planning Battalion provides staff support for local and county-wide Fire Safe Councils within the Unit. They attend meetings, develop materials, and fill an expert role on fire safe

practices. The Unit has provided chipper support and other in-kind match value to local councils seeking grant funding. CAL FIRE, in the role of the State Forester, reviews and is a signatory to local Community Wildfire Protection Plans.

#### Fuels Treatment and Grant Management

Fuels treatment projects conducted by CAL FIRE staff are monitored by the Planning Battalion. The three conservation camps manage their own projects and sponsors. However, projects involving Sudden Oak Death, grants to CAL FIRE, and SRA Fire Prevention Fee(FPF) funding are administered by the Planning Battalion to ensure consistent reporting. CAL FIRE also reviews grant applications for local fire departments, fire safe councils, and Firewise communities.

#### Geographic Information Systems Support / Mapping

Map development using GIS is provided by the Planning Battalion. This includes incident support, response maps, jurisdictional information, demographic analysis, and numerous other mapping products that can be generated. Unit level CAL FIRE digital data sets are developed and maintained by the HUU Pre-Fire Engineer.

#### Historical Fire Perimeters

Historic fire perimeters provide a mechanism for estimating current fuel conditions within burned areas, providing a starting point for field validation. Fire perimeter data is used during major fires to display where fires have taken place in order to take advantage of reduced fuels and previous control lines. Data is submitted annually to CAL FIRE's Fire and Resource Assessment Program (FRAP) and is available for download by the public in GIS format.

<http://frap.fire.ca.gov/>

#### Cal MAPPER

Cal MAPPER is a forest improvement and fuel reduction project activity tracking database. This effort has been organized to bring the Department's records from various fuels reduction and forest improvement programs into a common database. Cal MAPPER is an acronym and stand for CAL FIRE Management Activity Project Planning and Event Reporter. It contains GIS and tabular information. The goal is to improve project tracking and fiscal reporting, and to support emergency response, planning, and assessment.

The Pre-Fire Engineer and Vegetation Management Forester is responsible for collecting all data from CAL FIRE programs and its cooperators, entering it into Cal MAPPER and submitting it to Sacramento quarterly.

**Pre Fire Projects for the Humboldt - DelNorte Unit though 2015:**

<u>PROJECT NAME</u>	<u>PROJECT STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>
2015 Klamath River Prescribed Fire TREX	Complete	FirePlan	375.05
Almquist CFIP	Active	CFIP	405.08
Bear Buttes SFB	Planned	FirePlan	35.82
Big Bend VMP	Complete in Maintenance	VMP	75.00
Big Foot FB	Planned	FirePlan	9.54
Big Lagoon Water Tank FB	Planned	FirePlan	3.12
Cathay Road Shaded Fuel Break	Complete in Maintenance	FirePlan	18.54
Cutten SFB	Complete in Maintenance	FirePlan	15.06
Dowd Road Shaded Fuel Break	Active	FirePlan	134.84
England VMP	Complete in Maintenance	VMP	44.85
Field Brook Railroad Grade	Planned	FirePlan	49.78
Fortuna Flood Prot.	Complete in Maintenance	FirePlan	42.98
Hiouchi Lower Divide Fuel Break	Active	FirePlan	142.08
Hiouchi Upper Fuel Break	Planned	FirePlan	167.22
Jay Smith SOD	Complete in Maintenance	VMP	48.62
Klamath Flood Prot.	Complete in Maintenance	FirePlan	19.01
Lost Ranch Shaded Fuel Break	Complete in Maintenance	FirePlan	300.52
Mattole Road Shaded Fuel Break	Complete in Maintenance	FirePlan	86.67
NPS Bald Hills	Active	FirePlan	166.33
Prosper Ridge Fuel Break Prairie Restoration	Complete in Maintenance	FirePlan	154.48
RWSP Praire Maint	Complete in Maintenance	FirePlan	222.50
RWSP-Boyces Prairie	Complete in Maintenance	VMP	121.81
RWSP-Sinkyone VMP	Complete in Maintenance	FirePlan	74.72
Redwood Valley Sudden Oak Death	Complete in Maintenance	FirePlan	76.15
Riverside Park SFB	Complete in Maintenance	FirePlan	21.52
Roadside Fire Prevention Signs	Complete in Maintenance	Prevention	1.10
Shelter Cove Ridd	Active	FirePlan	361.56
Shively Road SFB	Active	FirePlan	55.45
Sunny Brae Shaded Fuel Break	Complete in Maintenance	FirePlan	11.81
Tom Moore CFIP	Active	CFIP	165.01
Trinidad Hwy 101 Ignition Reduction	Complete in Maintenance	FirePlan	73.95
Wagner Land Co CFIP	Active	CFIP	59.86
Willow Creek SFB	Active	FirePlan	0.00

The Unit Fire Plan recognizes the extensive collaborative efforts of CAL FIRE representatives with local Fire Safe Councils, Community Wildfire Protection Plans, and Firewise Community Assessments for their identification of action items or projects that, when completed, offer significant fire prevention benefits to State Responsibility Areas and provide alignment with the Unit's fire prevention strategy. These projects will be considered part of the Units Fire Plan and may be submitted to CNR for consideration if they meet the Fire Prevention/SRA Fee Fund criteria.

## **SECTION V: PRE- FIRE MANAGEMENT TACTICS**

### ***DIVISION / BATTALION / PROGRAM PLANS***

CAL FIRE's Humboldt-Del Norte Unit is divided into five field battalions, Prevention, Planning, Aviation, Emergency Command Center, and Training Battalions. Each field battalion works closely with the Planning Battalion to assure fuel reduction projects and other projects within the battalion are coordinated. Each field battalion is involved in VMP projects and decisions that are located within their areas. Field battalions also participate in local fire safe council activities and CWPP development in conjunction with the pre-fire planning battalion.

#### **HUU Battalion 1** (Battalion Map located within Appendix E: Maps)

Humboldt-Del Norte Unit Battalion 1 is located in the Southern end of the Humboldt-Del Norte Unit. The Battalion is comprised of state, federal and local firefighting resources. Battalion 1 borders the USFS Six Rivers National Forest to the East and North, the Mendicino National Forest to the southeast, the CAL FIRE Mendicino Unit to the south and the CAL FIRE Shasta Trinity Unit to the east. Within the Direct Protection Area (DPA), there is a mixture of private property, National Forest, BLM, and State land.

#### Battalion Resources:

Fire Protection within the Battalion is largely made up of volunteer Fire Departments and seasonal staffing within CAL FIRE, as well as Eel River Camp. The volunteer Fire Departments include Telegraph Ridge Fire Protection District, Shelter Cove Fire, Whitethorn Fire Protection District, Garberville Fire Protection District, and Redway Fire Protection District the newly formed Briceland Fire Protection District, Alderpoint Volunteers, Whale Gulch Volunteers, Palo Verde Volunteers and Southern Humboldt Technical Rescue.

#### CAL FIRE Facilities

There are three seasonal Fire Stations in Battalion 1. Garberville Station houses two type III schedule B engines and a Battalion Chief, Whitethorn (Thorn) Station houses one type III schedule B engine and Alderpoint Station houses one type III schedule B engine. Battalion 1 also has Eel River Conservation Camp located within the Battalion. Pratt Mountain Lookout and communications tower is located within the Battalion.

## Districts and Municipality

There are four Fire Protection Districts with in the Battalion; Garberville, Redway and Shelter Cove and Briceland. These Fire Districts are all located in the SRA.

## Wildland and Urban Interface:

Battalion 1 is largely comprised of private timberland with Barnum Timber being the largest industrial land holder. There are several small communities with mostly residential structures spread out in the SRA. The town of Garberville is the largest town in the Battalion with several commercial properties as well a few hundred residential structures all in the urban interface.

Battalion 1 is an epicenter for a robust cannabis cultivation region that has been thriving for decades. Large, commercial sized, semi-permanent, greenhouses can be found spotting the landscape throughout the Battalion with an ever increasing density. Parcel size on which cannabis operations are found range in size from 1 acre to thousands of acres. Cannabis growers have been attracted to the area because it is remote with right combination of wet/dry weather that provides bountiful marijuana crops. Fire ignitions caused as a result of cannabis cultivation has not been specifically tracked within the HUU. However, there has been a perceptible increase in fire ignitions as a result of cannabis related activities. The HUU is preparing to better track these ignitions to further identify, then treat the fire cause problem related to increasing cannabis cultivation. HUU field staff attempt to work with public within the Battalion to not only prevent fires but to gain their trust so that fire suppression is more easily achieved when fires occur. Unpermitted grow operations become problematic during fire suppression efforts because of the general disregard to State Fire Safe Regulations and adopted county ordinances that are meant to assist emergency response personnel and protect the public in times of emergency. Locked gates, new roads, signage, ingress/egress, water access, water restrictions, and armed grow site attendants, are some of the issues that HUU staff must contend with during emergency response in the Battalion.

## Fuels-Weather-Topography:

Most of Battalion 1 is comprised of coast redwood, Douglas-fir, various hardwood species and mixed brush. The east side of the battalion is more of a Douglas- fir oak woodland fuel type, depending on the exposure.

Under normal summer high pressure, the fire activity will diminish after dark. The normal wind pattern is a northeast to southwest in offshore dry wind patterns, and there are many occasions when a significant up river wind develops in the afternoon in the South Fork and Main Stem Eel River canyons and sundowner winds down the west slope of Kings Range in the western portion of the battalion. Battalion 1 is located in the Coast mountain range. The

majority of the Battalion has been shaped over millions of years by marine uplift and seismic activity. The Battalion lies between Pacific Ocean to the west and the main stem of the Eel River to the east. The Eel and Mattole River drainages run through the east and west of the Battalion with very steep and narrow canyons.

The southern area has varying characteristics of a conifer forest. Along Hwy 101 (and some distance to either side) to the county line, is a very typical redwood forest. The western edge of this area has more open conifer stands with intermingled hardwoods and a grass/brush understory.

The southern interior area of Battalion 1 is more typical of the Sierra front country fuel type. It features more open stands of fir as well as areas of a typical oak woodland community. The understory is grass and brush (ceanothus). This area escapes the fog belt and is much warmer and drier.

#### Fuels Reduction / Battalion Projects and Priorities:

There are three active fire safe councils within Battalion 1; The Humboldt County Fire safe Council, Lower Mattole Fire Safe Council and the Southern Humboldt Fire Safe Council. The Southern Humboldt Fire Safe Council covers the Eel River and the southern part of Humboldt County through the communities of Whitethorn, Briceland, Garberville and Shelter Cove. Lower Mattole Fire Safe Council covers the eastern portions of Wilder Ridge Road towards Etnersburg. The Humboldt County Fire Safe Council covers both Mattole and Eel River drainages.

Battalion 1 personnel have been completing LE-100 inspections in most areas of the battalion. The Southern Humboldt Fire Safe Council has successfully completed several shaded fuel breaks in and around the community of Shelter Cove and the Kings Range. Fuel reduction projects are a priority within the Battalion and Eel River Conservation Camp as well as Unit sponsored chippers are used in accomplishing these fuel reduction programs and efforts. Other emergency pre-plans, consisting of roads, addresses, and assets at risk within Battalion 1, have been established, and are monitored for changes annually. Public education programs and roadside signs are maintained for public education and notification. The Battalion prioritizes all fuel reduction projects within the Battalion that decrease impacts from wildfire. Project prioritization occurs and is adapted premised on life, property, and the environment.

The Eel River RAWS and Alderpoint RAWS, weather stations are also located within Battalion 1.

## **Battalion 2** (Battalion Map located within Appendix E: Maps)

Battalion 2 is located in the Southern Division of the Humboldt / Del Norte Unit. The Battalion is comprised of a two engine station in Weott (Weott Station), a one engine station in Honeydew (Mattole Station) and Grasshopper Lookout. High Rock Conservation Camp is located within the battalion. Current peak staffing includes 1 Battalion Chief, 4 Fire Captains, 3 Fire Apparatus Engineers and 14 Firefighter I's.

### Battalion Resources:

Fire Protection within the Battalion is largely made up of volunteer Fire Departments and seasonal staffing of CAL FIRE, as well as High Rock Conservation Camp. The volunteer Fire Departments include Petrolia VFD, Honeydew VFD, Myers Flat VFD, Redcrest VFD, Fruitland Ridge VFD, and Salmon Creek VFD.

### CAL FIRE Facilities

There are two Fire Stations in Battalion 2. Weott FFS houses two type III engines and a Battalion Chief. Weott FFS is open year round. Mattole FFS is seasonal and houses one type III engine when it is open during peak preparedness. Also located within the Battalion is High Rock Conservation Camp and Grasshopper Lookout and communications tower.

### Districts and Municipality

There are seven fire protection districts within Battalion 2. They are the areas of Petrolia, Honeydew, Myers Flat, Redcrest, Fruitland Ridge, and Salmon Creek Fire Protection Districts. These FPDs are all located within the SRA.

### Wildland and Urban Interface:

Battalion 2 is largely comprised of private timberland with Humboldt Redwood Company being the largest industrial land holder. Much of the California Redwoods State Park is located within the battalion boundary. There are several municipalities and small communities with mostly residential structures spread out in the SRA. Weott is the largest municipality in the Battalion with several commercial properties as well residential structures, some of which are located in the urban interface. Other small communities located within the Battalion have residential structures located in the urban interface.

Battalion 2 has a robust cannabis cultivation industry that has been thriving for decades. Large, commercial sized, semi-permanent, greenhouses can be found spotting the landscape throughout the Battalion with an ever increasing density. Parcel size on which cannabis operations are found range in size from 1 acre to thousands of acres. Cannabis growers have

been attracted to the area because it is remote with right combination of wet/dry weather that provides bountiful marijuana crops. Fire ignitions caused as a result of cannabis cultivation has not been specifically tracked within the HUU. However, there has been a perceptible increase in fire ignitions as a result of cannabis related activities. The HUU is preparing to better track these ignitions to further identify, then treat the fire cause problem related to increasing cannabis cultivation. HUU field staff attempt to work with public within the Battalion to not only prevent fires but to gain their trust so that fire suppression is more easily achieved when fires occur. Unpermitted grow operations become problematic during fire suppression efforts because of the general disregard to State Fire Safe Regulations and adopted county ordinances that are meant to assist emergency response personnel and protect the public in times of emergency. Locked gates, new roads, signage, ingress/egress, water access, water restrictions, and armed grow site attendants, are some of the issues that HUU staff must contend with during emergency response in the Battalion.

#### Geographical Aspects:

The Weott Battalion encompasses approximately 300,000 acres of primarily timber with some grass and brush component. Land use includes timber production, recreation, ranching, and cannabis cultivation.

#### Fuels, Weather and Topography:

Steep, rugged terrain describes much of Battalion 2, which includes the most remote and undeveloped portion of the California Coast, the “Lost Coast”. Fuels include high value mixed conifer tree species such as redwood and Douglas-fir. Some higher elevation areas of the battalion have a mixed oak woodland component with grass and mixed brush. Hardwoods including madrone and tanoak can be found on drier upper slopes and ridges. Timber slash can be found in active and once active harvest areas. Grazing land can be found in the Petrolia area and much of the Mattole Valley. There is an encroachment of Douglas Fir on some prairies. California State Parks has monitored the encroachment within Humboldt Redwoods State Park and has implemented an ongoing plan to reclaim the prairies through controlled burn operations. Heavy deposits of driftwood can be found at times along the coastline of the battalion. Major water features in the battalion include the Eel and Mattole Rivers. Marine air influence can produce strong and shifting winds.

#### Fuels Reduction/ Battalion Projects and Priorities:

Battalion 2 personnel have been completing LE-100 inspections in most areas of the battalion. The Lower Mattole Fire Safe Council has successfully completed several shaded fuel breaks in and around the community of Petrolia and Honeydew and in some areas of the Kings Range.

Unit owned chippers are used in accomplishing these fuel reduction programs and efforts. Other emergency pre-plans, consisting of roads, addresses, and assets at risk within Battalion 2, have been established, and are monitored for changes annually. Public education programs and roadside signs are maintained for public education and notification. The battalion prioritizes all fuel reduction projects within the Battalion that decrease impacts from wildfire. Battalion priorities for fire prevention include; LE 100 inspections with engine company personnel ; K-3<sup>rd</sup> Team Teaching at local area schools; Campfire programs at Humboldt Redwoods State Park and Camp Grant; attend local Fire Safe Council Meetings; community outreach “Ready, Set, Go” Plan; meet with cooperators to preplan for wildfire and other emergencies; engine company presence at local events (Avenue of the Giants Marathon etc.); meet and maintain communications with Humboldt Redwoods Company representatives; assist California State Parks with planned prescribed burns in Humboldt Redwoods State Park; work with VMP Coordinator to identify new fuel reduction projects.

### **HUU Battalion 3** (Battalion Map located within Appendix E: Maps)

Humboldt-Del Norte Unit Battalion 3 is located in the central portion of the Humboldt-Del Norte Unit. The Battalion is comprised of state, federal, and local firefighting resources. Battalion 3 borders the United States Forest Service Six Rivers National Forest and the CAL FIRE Shasta-Trinity Unit to the east. The Direct Protection Area of Battalion 3 consists of a mixture of private property, National Forest, Bureau of Land Management, and State land. The Bureau of Land Management Headwaters Reserve is located within the battalion and is one of the largest old growth redwood preserves in the unit outside of state park and national park lands.

#### Battalion Resources:

Fire protection in the Battalion is largely made up of paid local government, volunteer fire departments, and CAL FIRE seasonal staffing. The paid fire departments include Humboldt Bay Fire and Fortuna Fire with a paid Fire Chief. The volunteer fire departments include Rio Dell Fire Protection District, Fortuna Fire Protection District, Ferndale Fire Protection District, Loleta Fire Protection District, Carlotta Fire, Kneeland Fire Protection District, and Bridgeville Fire Protection District. The Humboldt Redwood Company and Green Diamond Resource Company are industrial timberland companies that have resources available to assist CAL FIRE in fire suppression.

#### CAL FIRE Facilities

There are two Fire Stations in Battalion 3. Fortuna Station houses one type III engine and a Battalion Chief. Bridgeville Station houses one seasonal type III engine. The Rohnerville Air Attack Base and Mount Pierce communications tower is located within the Battalion.

#### Districts and Municipality

There are eight Fire Protection Districts in the Battalion; they are the communities of Rio Dell, Fortuna, Ferndale, Loleta and Humboldt Bay, a portion of Kneeland and Bridgeville Fire Protection district. Carlotta Community Services district provide funding for Carlotta fire protection. Each of these Fire Districts has portions of SRA in their districts.

#### Wildland and Urban Interface:

Battalion 3 is largely comprised of private timberland with Humboldt Redwood Company and Green Diamond Resource Company being the largest industrial land holders. There are several municipalities and small communities with mostly residential structures spread out in the SRA. Eureka is the largest municipality in the Battalion with several commercial properties as well residential structures, some of which are located in the urban interface. Other small

communities located within the Battalion have residential structures located in the urban interface.

Battalion 3 is not without significant cannabis cultivation in the eastern portions of the Battalion. Cannabis growers have been attracted to the area because it is remote with right combination of wet/dry weather that provides ideal growing conditions. Fire ignitions caused as a result of cannabis cultivation has not been specifically tracked within the HUU. However, there has been a perceptible increase in fire ignitions as a result of cannabis related activities. Unpermitted grow operations become problematic during fire suppression efforts because of the general disregard to State Fire Safe Regulations and adopted county ordinances that are meant to assist emergency response personnel and protect the public in times of emergency. Locked gates, new roads, signage, ingress/egress, water access, water restrictions, and armed grow site attendants, are some of the issues that HUU staff must contend with during emergency response in the Battalion.

#### Fuels-Weather-Topography:

Most of Battalion 3 is comprised of coast redwood and Douglas-fir and mixed brush and agricultural land. The east side of the battalion is more of a Douglas fir/oak woodland fuel type, depending on the exposure. Under normal summer high pressure, the fire activity will diminish after dark. The normal wind pattern is a west to southwest push during the afternoon, and there are many occasions when we will have a significant up river wind in the afternoon in the Eel River canyon and Van Duzen River portion of the Battalion. The majority of the Battalion has been shaped over millions of years by marine uplift and seismic activity. The Battalion lies between Pacific Ocean to the west and the coast mountain range to the east. The Van Duzen and Elk River drainages run through the central and northern portion of the Battalion and the Mad River runs along the eastern edge of the Battalion with very steep and narrow canyons.

The interior area of the Battalion is more typical of the Sierra mixed conifer fuel type. It features more open stands of Douglas-fir as well as areas of oak woodland. The understory is grass and brush (*ceanothus*). This area escapes the fog belt and is much warmer and drier.

The coastal strip area of the Battalion is a true redwood forest with the biomass equal to or greater than a rainforest. This area sees a significant amount of rainfall in addition to being in a fog belt for a good portion of the summer months.

#### Fuels Reduction / Battalion Projects and Priorities:

The Humboldt County Fire safe Council and the Van Duzen River Fire Safe Council covers the central part of Humboldt County including the communities of Carlotta, Bridgeville and Blocksburg. The Humboldt County Fire Safe Council is active in both the Lower Eel River and Elk

River Drainages. The Van Duzen Fire Safe Council is active and has successfully obtained fuel reduction grant opportunities in the past.

Battalion 3 personnel have been completing LE-100 inspections in most areas of the battalion over the past year. The Van Duzen Fire Safe Council has successfully completed several shaded fuel breaks in and around the community Bridgeville and Blocksburg and along the Van Duzen River corridor. Battalion 3 monitors changes in the battalion in order to update emergency pre-plans on an annual basis. These pre-plans are essential part of maintaining knowledge of roads, addresses, and community assets at risk. Public education programs and roadside signs are maintained for public use. The Battalion prioritizes fuel reduction projects and affords the improved asset protection within the wildland urban interface areas of the Battalion.

## **HUU Battalion 4** (Battalion Map located within Appendix E: Maps)

Battalion 4 is located in the Northern portion of Humboldt County. The Battalion is comprised of state, federal and local firefighting resources. Battalion 4 borders the USFS Six Rivers National Forest to the East and the CAL FIRE Shasta-Trinity and Siskiyou Units to the east. Within the Battalion 4 Direct Protection Area (DPA), there is a mixture of private property, National Forest, BLM, and State land. The Redwood National Park is also located within the Battalion and is a large old growth redwood preserve. The State and National Park area is also home to the largest Roosevelt Elk population within the State of California.

### Battalion Resources:

Fire Protection within the Battalion is largely made up of paid local government and volunteer Fire Departments and seasonal staffing within Cal Fire. Arcata Fire operates with paid engine companies and utilizes volunteers to assist with large emergencies. Blue Lake Fire is a volunteer department but maintains a paid Fire Chief. The volunteer departments include Kneeland Fire Protection District, Fieldbrook Fire Protection District, Trinidad Volunteers, Westhaven Volunteers, Willow Creek Volunteers, Salyer Volunteers, Hawkins Bar Volunteers, Orick Volunteers. The Green Diamond and Humboldt Redwood industrial timberland companies also have resources available to assist CAL FIRE in Fire suppression activity.

### CAL FIRE Facilities

There are two seasonal Schedule B Stations and Kneeland Helitack Base in Battalion 4. Trinidad Station houses 2 Type III schedule B engines and a Battalion Chief. Elk Camp Station houses 1 Type III schedule B engine. The Battalion also has an Amador contract for the County Service Area 4.

### Districts and Municipality

There are seven Fire Protection Districts with in the Battalion; they are the communities of Kneeland Fire Protection District, Arcata Fire Protection District, Blue Lake Fire Protection District, Fieldbrook Fire Protection District, Willow Creek Fire Protection District, Orick Fire Protection District. Orleans Somes Bar Community Services District provides funding for Orleans fire protection. Each of these Fire Districts has portions of their districts that are SRA. County Amador (County Service Area 4) district is also located within Battalion 4.

### Wildland and Urban Interface:

Battalion 4 is largely comprised of private timberland with Green Diamond Resource Company being largest industrial timber land owners. There are several municipalities and small communities with mostly residential structures spread out in the SRA. The cities of Arcata,

Mckinleyville, and Trinidad are the largest cities in the Battalion with several commercial properties and residential structures, some of which are located in the urban interface. Other small communities located within the Battalion have many residential structures located mostly in the urban interface.

Cannabis cultivation is prevalent in the more remote portions of the Battalion. Large, commercial sized, semi-permanent, greenhouses can be found spotting the landscape throughout the Redwood Creek watershed extending east toward the Willow Creek area. There has been a perceptible increase in fire ignitions as a result of cannabis related activities. The HUU is preparing to better track these ignitions to further identify, then treat the fire cause problem related to increasing cannabis cultivation. HUU field staff attempt to work with public within the Battalion to not only prevent fires but to gain their trust so that fire suppression is more easily achieved when fires occur. Unpermitted grow operations become problematic during fire suppression efforts because of the general disregard to State Fire Safe Regulations and adopted county ordinances that are meant to assist emergency response personnel and protect the public in times of emergency. Locked gates, new roads, signage, ingress/egress, water access, water restrictions, and armed grow site attendants, are some of the issues that HUU staff must contend with during emergency response in the Battalion.

#### Fuels-Weather-Topography:

Most of Battalion 4 is comprised of coast redwood, Douglas-fir and mixed brush. The east side of the battalion is more of a Douglas-fir oak woodland fuel type, depending on the exposure. Under normal summer high pressure, the fire activity will diminish after dark. The normal wind pattern is a west to southwest push during the afternoon, and there are many occasions we will get a significant up river wind in afternoon up in the Redwood Creek and Klamath River canyons. Battalion 4 is located in the coast mountain range. The majority of the Battalion has been shaped over millions of years by marine uplift and seismic activity. The Battalion lies between Pacific Ocean to the west and the coast mountain range to the east. The Redwood Creek and Klamath River and Trinity River drainages run through the central and eastern portion of the Battalion and the Mad River runs along the southwestern edge of the Battalion all with very steep and narrow canyons.

The interior area of the Battalion is more typical of the Sierra front country fuel type. It features more open stands of fir as well as areas of a typical oak woodland community. The understory is grass and brush (*ceanothus*). This area escapes the fog belt and is much warmer and drier.

The coastal strip area of the Battalion is a true redwood forest with the biomass equal to or greater than a rainforest. This area sees a significant amount of rainfall in addition to being in a fog belt for a good portion of the summer months.

### Fuels Reduction / Battalion Projects and Priorities:

There are three active fire safe councils within Battalion 4; the Humboldt County Fire safe Council, Willow Creek Fire Safe Council, and the Mid-Klamath Watershed Fire Safe Council. The Humboldt County Fire Safe Council covers both the Redwood Creek and Mad River Drainages. Firewise Communities within the battalion include Willow Creek, Orleans, and Jacoby Creek. The Willow Creek and Mid-Klamath Watershed Fire Safe Councils are active and have been successful in obtaining fuel reduction grant opportunities.

Battalion 4 personnel have been completing LE-100 inspections in most areas of the battalion. The Willow Creek and Orleans Somes Bar Fire Safe Council have successfully completed several shaded fuel breaks in and around the communities of Willow Creek and Orleans. Annual monitoring of changes within the Battalion occurs in order to update emergency pre-plans. These pre-plans are essential part of maintaining knowledge of roads, addresses, and community assets at risk. Public education programs and roadside signs are maintained for public use. The Battalion prioritizes fuel reduction projects and affords the improved asset protection within the wildland urban interface areas of the Battalion.

## **HUU Battalion 5** (Battalion Map located within Appendix E: Maps)

### Battalion Overview:

Humboldt-Del Norte's Unit Battalion 5 is located at the northern end of the Humboldt-Del Norte Unit and encompasses all of Del Norte County. The Battalion is comprised of state, federal and local firefighting resources. Battalion 5 borders the USFS Six Rivers National Forest to the east, the Siskiyou/Rogue National Forest to the north at the Oregon State line, with the Pacific Ocean as its most western boundary. Within the Battalion 5 Direct Protection Area (DPA), there is a mixture of private property, National Forest, National and State Park land, and Tribal land.

### Battalion Resources:

Fire Protection within the Battalion is largely made up of the volunteer Fire Departments and seasonal staffing within CAL FIRE, as well as Alder Conservation Camp. There are five fire districts and one municipal fire department that make up the volunteer force. Additionally, National Parks maintains a wildland type III engine seasonally. The California Department of Corrections and Rehabilitation staffs a 24/7 type II engine at Pelican Bay State Prison available for local response.

### CAL FIRE Facilities

There are two seasonal Fire Stations, one lookout, and Alder Conservation Camp located in Battalion 5. Assigned to Crescent City Station is one type III engine, a Battalion Chief, a Forester I, and Fire Captain Specialist. Assigned to Klamath Station is one type III engine and closes. Red Mountain lookout is staffed seasonally.

### Districts and Municipality

There are five Fire Protection Districts within the Battalion; they are the communities of Klamath, Crescent City District, Fort Dick, Smith River, and Gasquet. Each of these fire departments has a portion of their district that is in SRA. The Crescent City Fire Department is the only municipal district within the battalion.

### Wildland and Urban Interface:

Battalion 5 is largely comprised of private timberland, with Green Diamond Resource Company being the largest industrial land holder. State and National Parks are also large land owners in the battalion. There are several small communities with mostly residential structures spread out in the SRA. Crescent City is the largest town in the Battalion with several commercial properties as well a few hundred residential structures in the urban interface. The

communities of Gasquet, Smith River, Hiouchi, Fort Dick, and Klamath all have various levels of structural density in the Interface.

#### Fuels-Weather-Topography:

Most of Battalion 5 is comprised of dense timber including coast redwood, Douglas-Fir, sitka spruce, and red alder combined with various heavy-mixed brush understory species. Additionally, State Parks owns property that includes thousands of acres of grass. The normal wind pattern is a west to southwest push during the afternoon. The coastal strip of the Battalion is often shrouded in a fog blanket most of the summer due to the high temperatures inland. However, 10-15 miles inland it is common to reach triple digit temperatures. Battalion 5 is located in the Coast mountain range. The majority of the Battalion has been shaped over millions of years by marine uplift and seismic activity. The Battalion lies between Pacific Ocean to the west and the Oregon border to the north. The Smith and Klamath River drainages run east and west of the Battalion with very steep and narrow canyons.

#### Battalion Fire History:

Battalion 5 and Del Norte County have had significant fire history of both lightning and human-caused fires. The majority of the fires occur at the end of the summer season and the early part of fall. This trend is due to the heavy fuel loading and the associated seasonal drying finally peaking. Additionally, the weather pattern changes result in increasing burning conditions.

#### Fuels Reduction / Battalion Projects and Priorities:

This plan identifies and prioritizes areas of hazardous fuel reduction treatments and recommends the type and methods of treatments that will be used by the Humboldt-Del Norte Unit to protect one or more of the Communities at Risk and their essential infrastructure within the Unit boundaries. This includes some efforts of local cooperators and their accomplishments. Shaded fuel breaks and defensible space projects are strategically considered.

#### Fire Safe Council / Battalion 5 Support Functions

There is one active Fire Safe Council within Battalion 5. The Del Norte County Fire Safe Council covers the entire county including the communities of Gasquet, Smith River, Fort Dick, Crescent City, Hiouchi and Klamath. The Del Norte County Fire Safe Council covers both the Smith and Klamath River drainages.

Battalion 5 personnel have been completing LE-100 inspections in most areas of the Battalion for at least 10 years. The Del Norte Fire Safe Council has successfully completed several shaded fuel breaks in and around the community of Gasquet and Hiouchi. Public education programs

are provided annually to each of the schools in the county. Also, the Battalion staff participates in the County EOC, Area Operational meetings and disaster drills.

## **Battalion 7 Training Bureau**

### Battalion Overview

The Humboldt-Del-Norte Training Bureau is responsible for the delivery and documentation of training for all permanent and seasonal personnel, coordination and facilitation of courses, implementation of the unit-wide training plan, enrolling personnel in courses identified in their approved training requests, maintaining update-to-date electronic and paper training records for all employees, and managing the Unit Emergency Response Directory (ERD)/ICS Qualifications.

The HUU Training Bureau provides training that is economical, effective, and consistent with the needs of the public, the State of California, the Department, the County of Humboldt, and the employee and ensures that all federal, state and local training mandates, laws and regulations and department policies are followed as they pertain to training.

Collateral duties of the HUU Training Officer include the DMV employer pull notice program, Unit Substance Abuse Coordinator, Unit RPP/Fit Test Coordinator, participation in the Humboldt County Fire Instructors' Association, and purchase of annual required postings.

## Battalion 8 - Aviation

The CAL FIRE Humboldt-Del Norte Unit (HUU) Aviation Program consists of the Rohnerville Air Attack Base which was established in 1964 and the Kneeland Helitack Base which was established in 1982. The HUU Aviation Program serves the people of Humboldt and Del Norte Counties. The Mendocino, Trinity, Siskiyou Counties, and Six Rivers, Shasta Trinity, Klamath and Mendocino National Forests are also served by the Aviation Program as they are in their direct Initial Attack zone of influence. These aircraft and personnel also serve all of the citizens in of California when emergencies arise throughout the state protecting 31 million acres of state and privately owned wildland properties.

Rohnerville Air Attack Base



The Rohnerville Air Attack Base is located on the outskirts of Fortuna at the south end of the Rohnerville Airport (FOT). The base has two firefighting aircraft assigned from June 1<sup>st</sup> thru October 15<sup>th</sup>. The aircraft assigned are an OV-10 Bronco, Air Attack 120 and the Grumman S-2T Air Tanker, Tanker 96. The OV-10 is utilized as an aerial platform to transport an Air Tactical Group Supervisor (Battalion Chief and Fire Captain) whose duties are to safely supervise and direct firefighting aircraft on emergency incidents. The S-2T carries 1200 gallons of fire retardant which is dropped from the aircraft to help ground crews by slowing and extinguish the advancing fire spread.

Kneeland Helitack Base



The Kneeland Helitack Base is situated next to the Kneeland Airport 12 miles east of Eureka. All Cal Fire helicopters in the state are Bell UH-1H “Super Huey”. When dispatched the helicopter has a call sign of Copter 102. The primary use of the Copter is for initial attack to suppress new wildland fires. During fire season Copter 102 is staffed with one pilot, two Fire Captains, and five Firefighters. The Copter is also used for medical and rescue emergencies.



The use of these aircraft on emergency incidents allows for a quick response to areas that can take hours for ground resources to make access due to rural and remote areas that they cover state wide. Additionally these aircraft play an extremely important role in wildland fire suppression, providing quick initial attack and supporting CAL FIRE’s goal to keep 95% of California wildland fires to 10 acres or less.

CAL FIRE and the Humboldt-Del Norte Unit’s Aviation Program have a positive financial contribution to the Counties and local businesses. The County and Rohnerville Airport directly benefit with landing and fuel flow fees that can range from 15 to 30 thousand dollars a year. The associated expenses that are incurred by the bases are numerous for their continuous operation. Local businesses and vendors are utilized for services and supplies.

In summary, the CAL FIRE Humboldt-Del Norte Unit’s Aviation Program has benefited from its positive relationship with Humboldt County, the Department of Public Works and the use of the airports in Humboldt and Del Norte Counties. CAL FIRE will continue to utilize the bases at both the Rohnerville and Kneeland Airports to support the Departments mission.

## **Battalion 20 - Prevention Bureau**

The primary focus of the Humboldt - Del Norte Unit (HUU) fire prevention bureau is to fulfill the CAL FIRE mission by enforcing state forest and fire laws, conduct origin and cause investigations, case development, civil cost collection, fire prevention inspections and engineering, public education and outreach, media relations, and utilization of Volunteers in Prevention (VIP's).

The HUU fire prevention bureau is staffed by one Battalion Chief (BC), two Fire Captain Specialist (FCS), and one Fire Prevention Specialist (FPS). The BC and FCS positions are the designated primary law enforcement positions within the unit. Employees assigned in the BC and FCS positions have received law enforcement training designated by the California Commission on Peace Officer Standards and Training and are qualified as peace officers. This peace officer authority is derived from the California Public Resources Code and California Penal Code, Section 830.2. In addition to maintaining law enforcement qualifications the fire prevention bureau BC and FCS personnel receive advanced training and skills in case development, surveillance operations, law enforcement interviewing, explosives and post blast investigations, crime scene reconstruction and evidence collection, along with wildland, structure, and vehicle fire investigation processes and methodologies.



**Origin and Cause Investigation**

**Incendiary Device- Cigarette Matchbook**

The fire prevention BC and FCS staff are utilized year round for unit assignments, supporting the statewide fire prevention and law enforcement mission. These assignments include providing assistance to local government agencies during investigations of arson and fire fatality incidents.

### **Interagency Investigation**

The FPS position coordinates public education and outreach programs, conducts juvenile fire setter evaluations, coordinates the unit VIP program, and serves as the unit Public Information Officer.

In addition to activities performed by the unit fire prevention bureau HUU utilizes both fire control and resource management staff to support the fire prevention mission. This support consist of engine companies performing defensible space inspections and education programs, fire control and resource management personnel qualified as peace officers conducting enforcement actions and investigations, resource management staff conducting fire safety inspections at timber harvest operations, public officer personnel qualified as investigators conducting origin and cause investigations, resource management and administrative personnel serving as public information officers, and engine company personnel conducting preliminary origin and cause investigations.

HUU maintains a contingent of seven peace officers and six public officers. HUU fire prevention bureau staff participates with and supports interagency entities such as the Humboldt County Fire/Arson Investigation Unit, Humboldt County Fire Prevention Officers Group, Law Enforcement Chiefs of Humboldt County, Law Enforcement Training Managers of Humboldt County, and the Del Norte County Law Enforcement Chiefs.

HUU resource management and fire control peace officers participated in multiple site inspections as part of an environmental task force lead by the Humboldt District Attorney Office. These site inspections often resulted in forest practice violation citations and arrests. HUU fire prevention peace officers assisted in these operations by providing officer safety and scene security.

HUU fire prevention officers assisted local law enforcement agencies with non-fire incidents. These assists included the investigation a bomb threat of a local community college, a manhunt for a suspect of multiple homicides, and various misdemeanor and felony incidents. With limited local law enforcement resources within both Humboldt and Del Norte County, HUU law enforcement officers are often requested to assist federal, state, and local agencies.



**Tactical Patrol Operations**

HUU fire prevention officers conduct field training for new officers who complete the CAL FIRE Regular Basic Law Enforcement Training Program, as designated by the California Commission on Peace Officers Standards and Training. This field training involves a full time commitment of twenty-four weeks of a full-time (40+ hours) training schedule.

## **CAL FIRE Conservation Camps**

### Eel River Conservation Camp #31

Eel River Camp is located in the southern portion of the Unit just west of Redway. They have five crews normally staffed during the week that go out to various projects in the unit. Eel River Camp works with Humboldt County Roads Department to mitigate road hazards and make improvements to traffic safety. Projects include hazardous fuels reduction, shaded fuel breaks, improving emergency evacuation road access. Eel River Crews also spend 1000s of hours of project work in the Community of Shelter Cover working on hazardous fuels reduction along the main road to the community. These projects are funded through the Community of Shelter Cove and Hazardous Fuels Reduction Grants.



Eel River Crew working on Fuel Break on Usal Road in Battalion 1

### High Rock Conservation Camp #32

High Rock Camp is located centrally in the Unit just off the east side of Hwy 101 near the community of Redcrest. High Rock Camp staffs five crews during the week that are available for fire assignment and project work. When not assigned to fires or other emergencies, the crews work on various projects for Humboldt County, CA Dept of Parks and Recreation, BLM, CA Dept of Fish and Wildlife, local area schools and other local public organizations. During the past year the crews have focused their projects on shaded fuel breaks throughout the county, hazardous fuels reduction projects in the Weott, Honeydew, and Mattole areas.

### Alder Conservation Camp #20

Alder Camp is the northern most camp in the Unit located to the west of the community of Klamath. Alder Camp staffs five crews during the week that are available for fires, emergencies, and projects throughout the unit. Alder Camp works closely with National Park Service, local Fire Safe Councils, Bureau of Indian Affairs as well as many other local government and state agencies. Some of their main projects over the during the last year include Redwood National

Parks fuel breaks in the Bald Hills area, fuel breaks along Iron Gate road funded by the Yurok Tribe, State Parks hazardous fuels reduction project in the area of Little River State Beach to the North end of the unit.



Hiouchi Community Fuel Break located above the community. When Fuel break is complete it will provide protection to the community of Hiouchi from a catastrophic wildland fire approaching from the North and North East



Alder Camp Crew working covering piles after cutting down understory fuels

## Resource Management Program

### Forest Practice Program

The unit has 15 foresters and one associate state archeologist whose primary duties include reviewing commercial timber operations on non-federal lands. The unit conducts over 1,000 forest practice inspections a year. During these inspections Resource Management staff inspects legal and potentially illegal timber operations for conformance with forest and fire laws. It is the Department's policy to pursue vigorously the prompt and positive enforcement of the Forest Practice Act, the forest practice rules, related laws and regulations, and environmental protection measures applying to timber operations on the non-federally owned lands of the state. This enforcement policy is directed primarily at preventing and deterring forest practice violations, and secondarily at prompt and adequate correction of violations when they occur.

Timber Harvesting Plans (THPs) are submitted to CAL FIRE for all commercial forest harvesting operations on nonfederal timberlands. Registered professional foresters must prepare plans, and licensed timber operators must carry out operations. Interagency review teams review the THPs to determine compliance with rules. Landowners are required to replant after harvesting, if necessary, to meet prescribed stocking standards. A Timberland Conversion Permit is required from the Director of CDF to convert timberland to non-timber growing uses.

PRC Section 4526 defines timberland as nonfederal land "available for, and capable of, growing a crop of trees of any commercial species used to produce lumber and other forest products."

Unless specifically exempted by law, all timber operations must comply with the following:

1. Obtaining a timber operator license.
2. Having an approved harvesting plan or submitting an exemption from the THP.
3. Meeting the appropriate stocking requirements.
4. Obtaining a conversion permit if a change to non-timber growing land use is intended.
5. Complying with all other applicable requirements

The Forest Practice Program strives to maintain the maximum sustained production of high-quality timber products and water quality while protecting areas of recreation, watershed, wildlife, range, and fisheries. The program encourages the aesthetic enjoyment of wildland and the retention of good-quality timberland in timber growing, harvesting, and compatible forest related uses. In addition, the program informs each timber owner and each operator before he/she harvests a timber of the fire risks and hazards directly associated with timber

operations, particularly emphasizing fire hazard reduction requirements, and all applicable fire laws.

### Forest Landowner Assistance

The unit administers state and federal forestry assistance programs with the goal of reducing wildland fuel loads and improving the health and productivity of private forest lands.

California's Forest Improvement Program (CFIP) offers cost-share opportunities to assist individual landowners with land management planning, conservation practices to enhance wildlife habitat, and practices to enhance the productivity of the land. The unit also coordinates with Sacramento staff to deliver the Forest Stewardship Program which combines funds from state and federal sources to assist communities with multiple-ownership watershed and community issues related to prefire fuels treatment, forest health, erosion control, and fisheries issues.

Unit foresters work closely with small landowners to fund and review forest management plans. These plans outline timberland owner's goals and objectives. They also provide valuable information related to property history, forest conditions, road system, access and security, soils, water resources, fish and wildlife, fire prevention practices, smoke management, and potential forest improvement projects. Many of the forest improvement projects directly relate to fire prevention by identifying road improvement projects, existing and potential water sources, fire infrastructure improvements, and vegetation treatment projects.

## **Unit Desired Future Conditions**

Each field battalion has areas where wildland fire could threaten important assets to the communities. Our goal is to increase public awareness of these conditions in hopes of spurring stakeholder interest to taking a more active role in improving defensible space. For many areas we hope to reduce the fire hazard through fuel reduction and increase public and firefighter safety, by helping improve the means of ingress / egress.

Additionally we hope to improve or maintain the many ecosystems that surround us in order to maintain the quality of life for the residents of Humboldt, Del Norte, and Trinity counties. This would include cultural burning to help maintain the Native American culture.

## **Area Accomplishments**

The County and HUU CAL FIRE staff has been successful in the CWPP update process. Cal Fire staff along with the Humboldt County Planning Department staff work together in the development and approval of the County's Master Fire Protection Plan (MFPP). The MFPP is a major part of the overall operating plan for the county. The Humboldt County Master Fire Protection Plan serves as the Community Wildfire Protection Plan (CWPP) for Humboldt County, California. CWPPs were created through the Healthy Forests Restoration Act (HFRA). As defined by the HFRA, the requirements for a CWPP are a collaborative process, prioritization of fuel reduction projects, and treatment of structural ignitability.

## **Sudden Oak Death Areas**

Scattered throughout the Unit are areas of Sudden Oak Death infestation. These areas become priorities for fuel treatment to check expansion of the disease, and reduce fuels buildup. Research conducted by UC Cooperative Extension, in cooperation with CAL FIRE and other private landowners, has examined fuel loading and predicted fire behavior in SOD affected stands. These areas produce greater fire control challenges due to higher rates of spread, greater flame lengths, and greater potential for failure of standing trees. Where SOD is expanding in newly found locations, the primary strategy is isolating the infection site with a 300 foot buffer – removing standing tanoak and California bay. This can check the advance of *Phytophthora ramorum*, the pathogen that causes SOD. Other infected areas can become a priority for fuels treatment along roads and near communities, as SOD appears to produce 100 percent mortality in tanoak.

## APPENDIX A: PRE- FIRE PROJECTS

Projects have been identified through local community meetings along with Fire Safe Council members, state, local, and federal fire agencies. The project information has been mapped and made available in the Humboldt County Community Wildfire Protection Plan as well as local area CWPP's. This data is available online in appendix G of the Humboldt County Community Wildfire Protection Plan. As an example, the following is partial table of community identified fuel reduction projects for the Orleans area:

Table G-2 Orleans Community-Identified Risks and Hazards

Map ID #	Feature Description	Feature Subtype
ORL36	Central Orleans	ignition hazard
ORL22	GO Road	ignition hazard
ORL23	Hwy 169	ignition hazard
ORL78	Hwy 169	ignition hazard
ORL21	Hwy 96	ignition hazard
ORL24	Hyw 169 Memaw Creek to Yurok Fire Station	ignition hazard
ORL27	Hyw 169, lower Cappell	ignition hazard
ORL26	Lower Nantucket Road	ignition hazard
ORL72	McKinnon Hill Road (slash)	ignition hazard
ORL29	Mouth Of Camp Creek	ignition hazard
ORL33	Perch Creek/Red Cap Road Area	ignition hazard
ORL34	Sandy Bar	ignition hazard
ORL32	South Orleans	ignition hazard
ORL31	Thunder Mtn/ Madrone Lane	ignition hazard
ORL35	Upper Prairie Lake Road	ignition hazard
ORL28	limited access to 4wd roads (Wautec area)	impedance

Table G-3 Orleans Community-Identified Projects

Map ID #	Project Priority	Project Description	Completed Project?	Project Category
ORL66	1	Mouth Of Camp Creek including Gold Dredge Road (and other areas that were previously burned)		Other Fuel Rx
Non map feature	2	Owl Mine Road Fuel Break		Fuel Break
Non map feature	3	Orleans Mt. Repeater (install)		Communication
Non map feature	4	Map and Maintain tanker fill sites (private lands)		Water
Non map feature	5	Perch Creek Watershed private and public land (municipal water source) protect watershed resources		Other Fuel Rx, Water
Non map feature	6	Redcap Road fuel break on public and private land		Fuel Break
ORL68		Bacon Flat Road Shaded Fuelbreak		Fuel Break
No Map Data		BLM fuels reduction grant <i>Community Fire Risk Reduction Project</i> (19.98 acres treated)	Completed	Other Fuel Rx
No Map Data		BLM fuels reduction grant <i>Orleans Valley Wildfire Risk Reduction Project</i> (22.15 acres treated)	Completed	Other Fuel Rx
No Map Data		BLM grant fuel reduction project <i>Fire Safe Planning and Implementation Grant</i> (19.72 acres treated)	Completed	Other Fuel Rx
No Map		BLM grant fuels reduction <i>Orleans Community</i>	Completed	Other Fuel Rx

G-3

These community identified projects are acting as reference for future CAL FIRE HUU priority projects. Other areas have had past treatment and may be considered for future activity. Some projects occur with CAL FIRE assistance – through the conservation camp program providing crews to sponsoring agencies like CAL TRANS, BLM, City of Arcata, and State Parks.

Humboldt-Del Norte Pre-Fire Project list:

<u>PROJECT NAME</u>	<u>PROJECT STATUS</u>	<u>TYPE</u>	<u>TREATMENT FOOTPRINT ACRES</u>
<b>2015 Klamath River Prescribed Fire TREX</b>	Complete	FirePlan	<b>375.05</b>
<b>Almquist CFIP</b>	Active	CFIP	<b>405.08</b>
<b>Bear Buttes SFB</b>	Planned	FirePlan	<b>35.82</b>
<b>Big Bend VMP</b>	Complete in Maintenance	VMP	<b>75.00</b>
<b>Big Foot FB</b>	Planned	FirePlan	<b>9.54</b>
<b>Big Lagoon Water Tank FB</b>	Planned	FirePlan	<b>3.12</b>
<b>Cathey Road Shaded Fuel Break</b>	Complete in Maintenance	FirePlan	<b>18.54</b>
<b>Cutten SFB</b>	Complete in Maintenance	FirePlan	<b>15.06</b>
<b>Dowd Road Shaded Fuel Break</b>	Active	FirePlan	<b>134.84</b>
<b>England VMP</b>	Complete in Maintenance	VMP	<b>44.85</b>
<b>Field Brook Railroad Grade</b>	Planned	FirePlan	<b>49.78</b>
<b>Fortuna Flood Prot.</b>	Complete in Maintenance	FirePlan	<b>42.98</b>
<b>Hiouchi Lower Divide Fuel Break</b>	Active	FirePlan	<b>142.08</b>
<b>Hiouchi Upper Fuel Break</b>	Planned	FirePlan	<b>167.22</b>
<b>Jay Smith SOD</b>	Complete in Maintenance	VMP	<b>48.62</b>
<b>Klamath Flood Prot.</b>	Complete in Maintenance	FirePlan	<b>19.01</b>
<b>Lost Ranch Shaded Fuel Break</b>	Complete in Maintenance	FirePlan	<b>300.52</b>
<b>Mattole Road Shaded Fuel Break</b>	Complete in Maintenance	FirePlan	<b>86.67</b>
<b>NPS Bald Hills</b>	Active	FirePlan	<b>166.33</b>
<b>Prosper Ridge Fuel Break Prairie Restoration</b>	Complete in Maintenance	FirePlan	<b>154.48</b>
<b>RWSP Praire Maint</b>	Complete in Maintenance	FirePlan	<b>222.50</b>
<b>RWSP-Boyes Prairie</b>	Complete in Maintenance	VMP	<b>121.81</b>
<b>RWSP-Sinkyone VMP</b>	Complete in Maintenance	FirePlan	<b>74.72</b>
<b>Redwood Valley Sudden Oak Death</b>	Complete in Maintenance	FirePlan	<b>76.15</b>
<b>Riverside Park SFB</b>	Complete in Maintenance	FirePlan	<b>21.52</b>
<b>Roadside Fire Prevention Signs</b>	Complete in Maintenance	Prevention	<b>1.10</b>
<b>Shelter Cove Ridd</b>	Active	FirePlan	<b>361.56</b>
<b>Shively Road SFB</b>	Active	FirePlan	<b>55.45</b>
<b>Sunny Brae Shaded Fuel Break</b>	Complete in Maintenance	FirePlan	<b>11.81</b>
<b>Tom Moore CFIP</b>	Active	CFIP	<b>165.01</b>
<b>Trinidad Hwy 101 Ignition Reduction</b>	Complete in Maintenance	FirePlan	<b>73.95</b>
<b>Wagner Land Co CFIP</b>	Active	CFIP	<b>59.86</b>
<b>Willow Creek SFB</b>	Active	FirePlan	<b>0.00</b>

## **APPENDIX B: UNIT GOALS AND OBJECTIVES**

HUU pre fire planning goals are to increase the amount of Firewise Communities in the Humboldt - Del Norte Unit. In 2015 two new Firewise Communities were established, Hydesville and Kneeland. This collaborative effort has been accomplished through the hard work and dedication of local Fire Safe Councils and through the collaborative effort of Humboldt County and CAL FIRE HUU.

Members of the community have been able to realize the benefits of their Firewise involvement in several ways. First and foremost has been the greater awareness of wildfire issues and prevention made possible through an ongoing educational campaign. When it comes to protecting communities from wildfire, there are many players who have a stake in making sure that people, homes, property and the surrounding land are kept safe. When these parties can come together and act collectively, the results can be astounding and inspiring.

As stated by Keith Worley, a forester, arborist and land development consultant “Basically, we’re no different than people who live in flood, earthquake or hurricane zones where these natural hazards pose a threat to homes. Becoming Firewise is also about protecting the environment around us.”

The national Firewise Communities program is a multi-agency effort designed to reach beyond the fire service by involving homeowners, community leaders, planners, developers, and others in the effort to protect people, property, and natural resources from the risk of wildland fire - before a fire starts.

**VISION:** Wildland fires can occur in areas of residential development without the occurrence of disastrous loss.

**MISSION:** To promote community-wide responsibility in the use of technology, policy and practices that minimize the loss of life and property to wildland fire independent of firefighting efforts.

The Firewise Communities approach emphasizes community responsibility for planning in the design of a safe community as well as effective emergency response, and individual responsibility for safer home construction and design, landscaping, and maintenance. The national Firewise Communities program is intended to serve as a resource for agencies, tribes, organizations, fire departments, and communities across the U.S. who are working toward a common goal: reduce loss of lives, property, and resources to wildland fire by building and maintaining communities in a way that is compatible with our natural surroundings.

## Member Agencies

The Firewise Communities program is part of the National Wildland/Urban Interface Fire Program, which is directed by the National Wildfire Coordinating Group's (NWCG) Wildland/Urban Interface Working Team (WUIWT), a consortium of wildland fire organizations and federal agencies responsible for wildland fire management in the United States. The WUIWT includes:

- USDA Forest Service
- USDI Bureau of Indian Affairs
- USDI Bureau of Land Management
- USDI Fish & Wildlife Service
- USDI National Park Service
- Federal Emergency Management Agency
- US Fire Administration
- International Association of Fire Chiefs
- State forestry organizations
- National Association of State Fire Marshals
- National Emergency Management Association
- National Fire Protection Association

## **APPENDIX C: COMMUNITY WILDFIRE PROTECTION PLANS:**

### Humboldt County

The Humboldt County Wild Fire Protection Plan (CWPP) focus is on improving the countywide fuels reduction and fire safe planning strategy through a coordinated update and refinement of the Humboldt County CWPP and local CWPPs.

The mission of the Humboldt County Fire Safe Council (FSC) is to:

Serve as a forum for the implementation of the measures outlined in the Master Fire Protection Plan (MFPP), share fire-safety information, assess fire risk, promote community fire-safe planning and coordination, link fire-prevention programs, and support the fire service and local fire safe councils.

The Humboldt County Board of Supervisors formed the ad-hoc advisory FSC in 2002 to guide the development of a countywide Fire Plan and assist with its implementation. With the guidance of the FSC, the County of Humboldt prepared the "Humboldt County Master Fire Protection Plan", the County's equivalent to a Community Wildfire Protection Plan .

The fire plan was completed and approved by the Board of Supervisors in 2006 and has been used as a framework for fire coordination, prevention, and protection throughout the county. The Community Development Services Department managed the Fire Plan preparation with assistance from local consultants, Planwest Partners and ForEverGreen Forestry. In 2013, the FSC coordinated with local Fire Safe Councils and produced an update to the CWPP . The Council also serves as a forum for community organizations and representatives to share fire-safety information, assess fire risk, set fire protection priorities, and develop policies for integration into the County General Plan. Other areas of Humboldt County have completed Community Wildland Protection plans:

- Lower Mattole Fire Plan for the Lower Mattole Fire Safe Council
- Upper Mattole Fire Plan for the Southern Humboldt Fire Safe Council
- Willow Creek CWPP for the Willow Creek Fire Safe Council
- Orleans Somes Bar CWPP for the Orlean Somes Bar Fire Safe Council

## Del Norte County

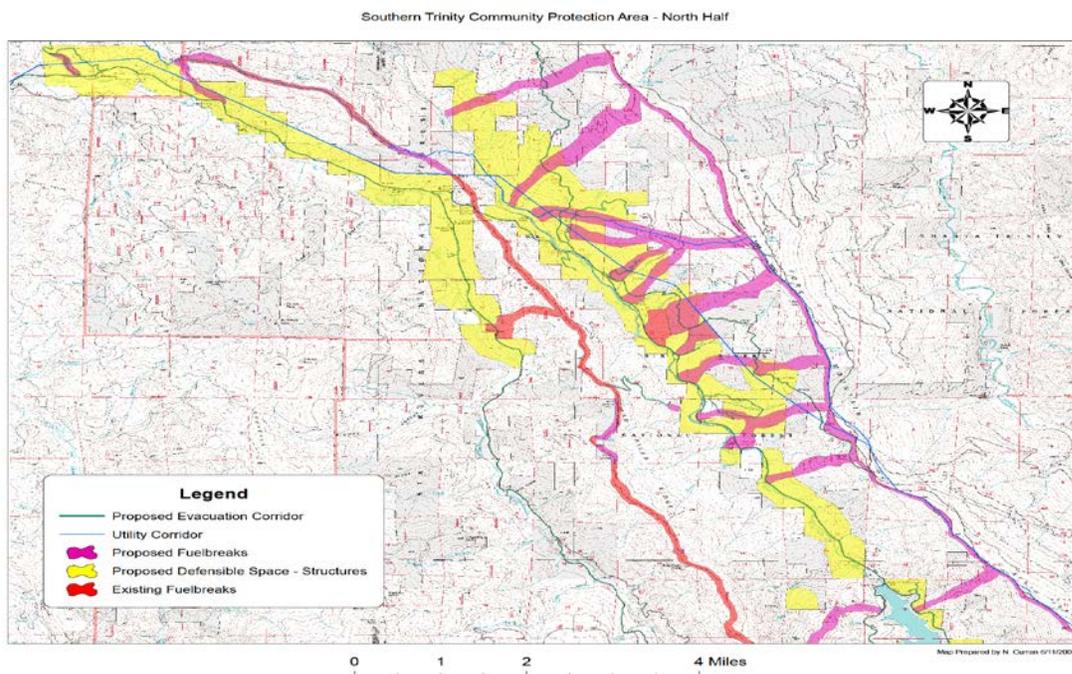
The Del Norte County Fire Safe Council in cooperation with the Del Norte County Board of Supervisors adopted a Community Wildfire Protection Plan in 2005. No update has been produced since then, however, it the goal of the HUU to work with the Del Norte County FSC to produce an update.

<http://www.forevergreenforestry.com/documents/DelNorteFireSafePlan9-05lo.pdf>

## Trinity County

The Trinity County Fire Safe Council has been holding monthly meetings addressing the Various projects, and plan processes that they are involved in. Currently Trinity County is in the process of being reviewed and updating the CWPP. HUU staff has attended regularly in an advisory role. The link below will allow review of the Trinity County CWPP approved in 2005.

[http://www.tcrd.net/pdf/TC\\_Wildfire\\_Protection\\_Plan.pdf](http://www.tcrd.net/pdf/TC_Wildfire_Protection_Plan.pdf)



The above map depicts identified projects in the southern Trinity County area.

## Willow Creek

The "Community Wildfire Protection Plan for the Greater Willow Creek Area" was accomplished by the Council in January 2011, funded by a grant from the USDA Forest Service through the California Fire Safe Council Grants Clearinghouse.

Willow Creek is the first community in Humboldt County to be recognized by the national Firewise organization as a Firewise Community. The Willow Creek Fire Safe Council board of directors serves as the Firewise Communities board for Willow Creek.

MISSION STATEMENT -- The mission of the Willow Creek Fire Safe Council is to reduce wildfire risk and increase survivability by implementing fuels reduction projects and encouraging residents of the Willow Creek area to make their homes, neighborhoods and community's fire safe.

<http://www.willowcreekfsc.org/cwpp.html>

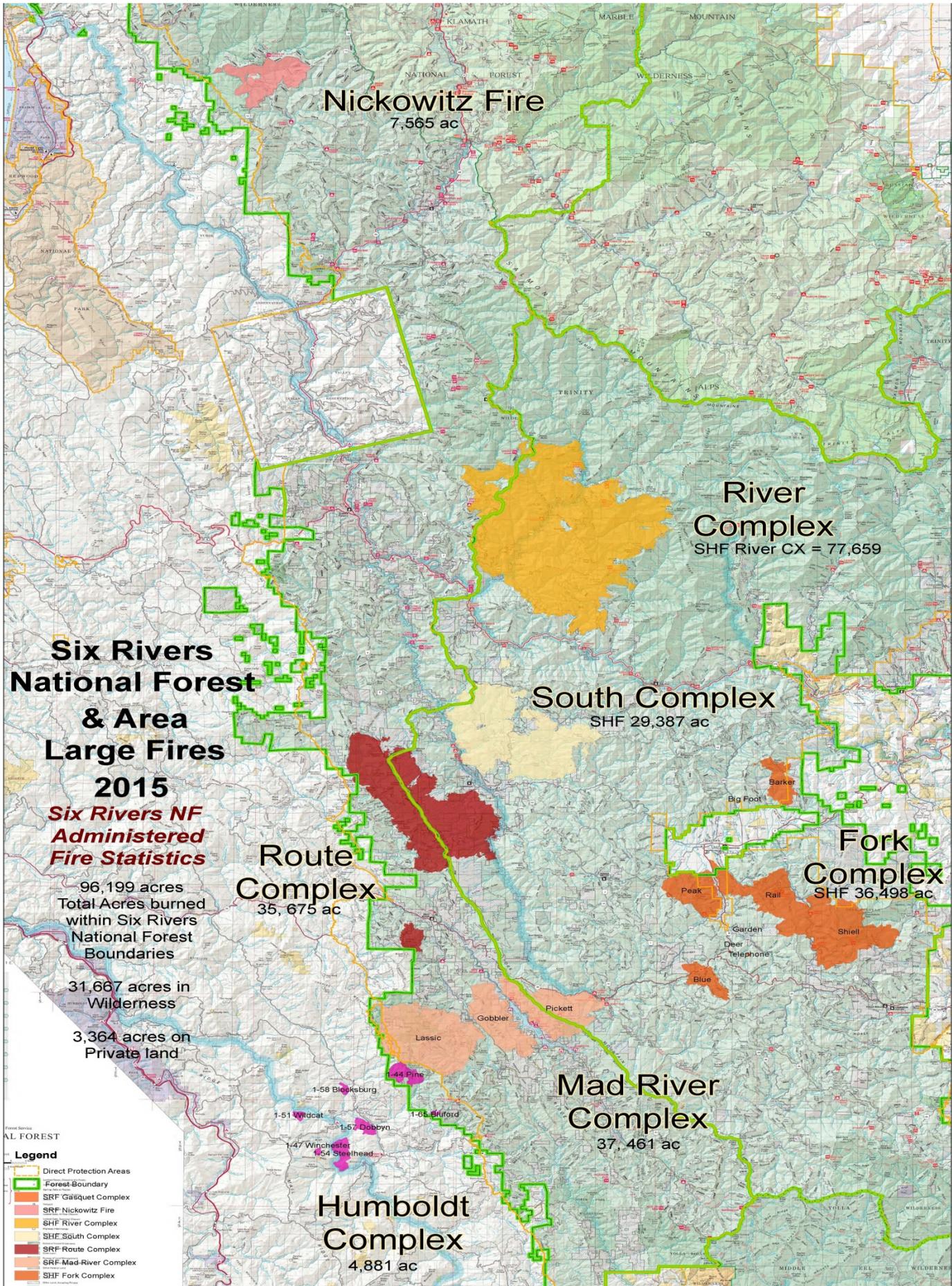
## **APPENDIX D: ANNUAL FIRE SEASON REPORT**

2015 HUU saw a significant increase in wildland arson incidents with the Yurok Indian Reservation and surrounding lands within the CAL FIRE Direct Protection Area (DPA). Majority of this activity occurred over a two week period and resulted in seventy-four wildland fires ranging in size from small spots to 160 acres. Arson activity continued throughout the summer months into the fall with an eventual decrease in the number of incidents. Therefore, Battalion 4 and Battalion 5 have the highest numbers of ignitions caused by arson. The HUU Prevention Bureau is developing strategies to address this problem with a variety of prevention techniques.

On August 1<sup>st</sup>, 2015 a thunder storm with lightning moved through the Southern Humboldt Battalions and caused approximately 70+ lightning fires. HUU immediately moved into the Lightning Complex Area (LCA) plan, moved firefighting equipment in the area and worked with volunteer fire departments, the public, and other cooperators to identify and extinguish most of the fires within the first operational period. The majority of the fires were contained to less than 1 acre each. However, 7 fires continued to grow and the incident moved into extended attack and was named the Humboldt Complex. Due to unprecedented fire activity in other parts of the Northern Region, an incident management team was unavailable to assume command of the complex and the HUU managed the fire with Unit personnel. HUU personnel were faced with the tremendous challenge of controlling a large, complex wildland fire. In the end, HUU rose to the challenge and was able to provide a high level of service to the public and contain the 7 fires to a total of 4881 acres.

As the Humboldt Complex was in the demobilization phase of the fire, the Horse Fire ignited in the Bureau of Land Management's King Range National Conservation Area. Initial attack resources determined that the fire had potential for a major incident and the decision to activate a CAL FIRE incident management team was made. CAL FIRE Incident Management Team #5 was deployed; however, great efforts were made in the early stages of the Horse Fire to hold the final fire perimeter to 146 acres.

The HUU neighboring federal cooperators endured a lightning fire siege as well. The Six Rivers National Forest (SRF) and the Shasta-Trinity National Forest (SHF) managed several large fires, each fire with a dedicated Incident Management Team (IMT). The HUU worked closely with the The SRF, SHF, and federal IMTs to determine fire responsibility and implement measures to ensure adequate contingency efforts were being made as the fires progressed toward HUU Direct Protection Areas (DPA). The SRF has provided the following map to show the location and acreage of the large fires of 2015.



**2015 Large Fires (greater than 10 acres)**

Fire Name	Acres
Bald	27
Queen (8 fires)	160
Humboldt Complex (7 fires)	4881
Buck	16
Horse	146
Total	5230

**Fires within the Humboldt Complex**

70+ Lightning fires contained to less than 1 acre	
Pine	1774
Bluford	202
Blocksburg	284
Dobbyn	787
Steelhead	1404
Winchester	147
Wildcat	283
Total acres	4881

**Queen 8 fires, Arson**

Fire 1	47
Fire 2	10
Fire 3	9
Fire 4	22
Fire 5	1
Fire 6	7
Fire 7	26
Fire 8	37
Total acres	160

2015 HUU fire prevention and law enforcement activities:

- \* Defensible Space Inspections (LE-100) = 2,667
- \* Public Education Contact Hours = 2,182
- \* Arrest – State Responsibility Area Fire Incidents = 1
- \* Arrest – Forest Practice Violations = 2
- \* Arrest – Assist to other agencies = 9
- \* Citations (Public Resources Code, Penal Code, Health and Safety Code, California Vehicle Code) = 11

Fire suppression activities have a major influence on fire size and initial attack success. The 2008 to 2015 fire season information is summarized below.

Year	IA Success %	Fires <10 acres	Ignitions	Large Fires	Wildland engines staffed	Peak Staffing	Copter / Air Attack	Burn suspension
2008	95	146	154	8	5/22 - 11/09	6/14 - 11/3	6/19 - 10/27	6/23 - 10/14
2009	90	111	124	13	6/01 - 10/30	7/2 - 10/09	6/15 - 10/16	7/01 - 10/14
2010	99	111	112	1	5/31 - 11/01	6-28 - 9/19	6/15 - 10/15	8/02 - 9/27
2011	98	93	95	2	6/13 - 10/24	7/4 - 10/15	7/01 - 10/15	7/28 - 10/03
2012	98	91	93	2	5/20 - 12/31	7/4 - 10/15	7/01 - 10/14	7/16 - 10/22
2013	98	252	256	4	5/28 - 12/31	6/17 - 10/14	5/12 - 10/17	7/01 - 9/23
2014	98	215	220	5	5/26 - 12/17	6/01 - 10/21	7/16 - 10/17	6/22 - 10/14
2015	96	343	358	15	1/15 - 12/16	5/15 - 11/15	5/08 - 11/30	6/29 - 10/29

Initial attack success, ignition, and fire size data was derived from the FRAP ignitions database. It is based upon data extracted from the CAIRS (2008 to present) fire reporting systems, as well as the Computer Aided Dispatch (CAD) system for location data. Staffing dates were derived from station logs.

**Civil Cost Recovery:**

Payments received in 2015 for 2014 incidents: \$550.00

The unit collected \$550 for past incidents which are currently assigned to court ordered restitution. HUU cases for 2015 were referred to Northern Region Civil Cost Recovery (CCR). All of our 2015 CCR incidents are region level cases.

**Aviation Statistics:**

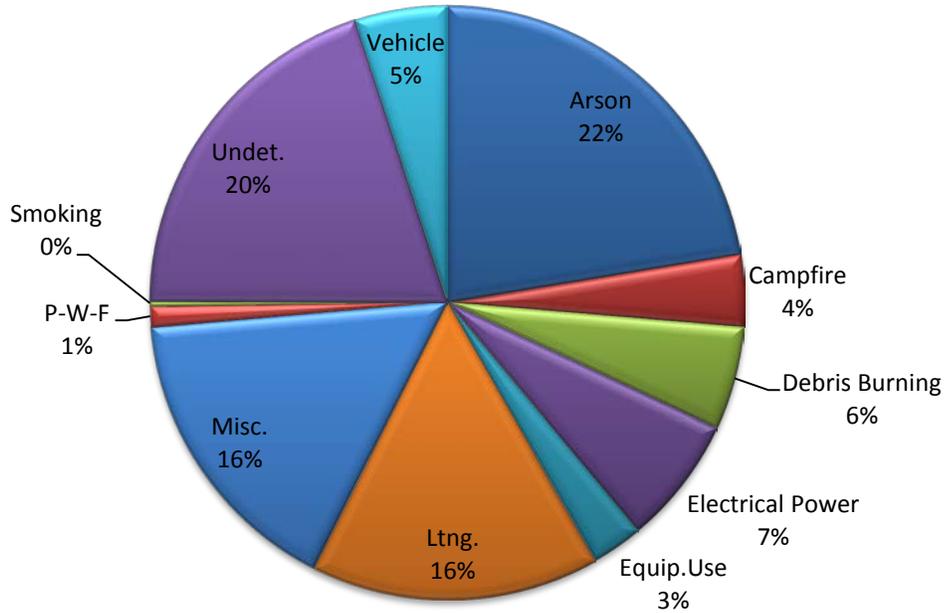
Kneeland Helitack Base-

- Helicopter 102 incident responses 119
- Helicopter 102 flight hours: 350
- Spare aircraft flight time: 20
- Combined total flight hours: 370
- Gallons of water dropped on incidents: 269,740 (963 drops)
- Helitender 102 support miles driven: 14,043

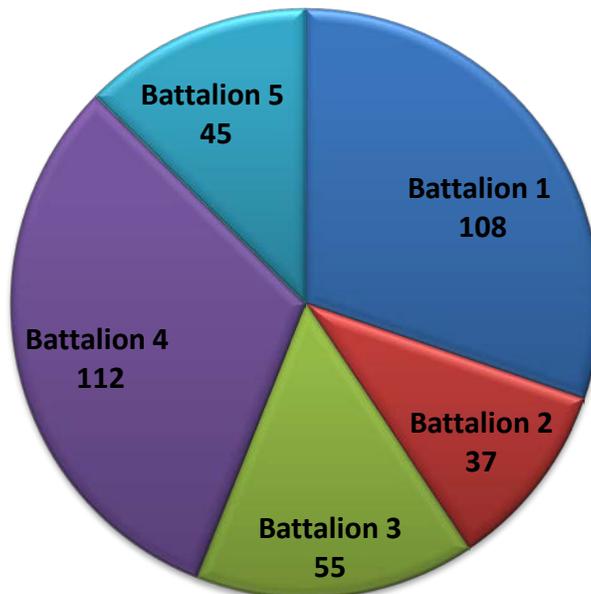
Rohnerville Air Attack Base-

- Air Attack 120 flight hours on incidents: 242
- Tanker 96 flight hours on incidents: 160
- Flight hours from spare aircraft: 200
- Combined total flight hours flown: 602
- Gallons of Retardant delivered from RAAB: 398,845
- Loads of retardant that left RAAB on the S-2T 398

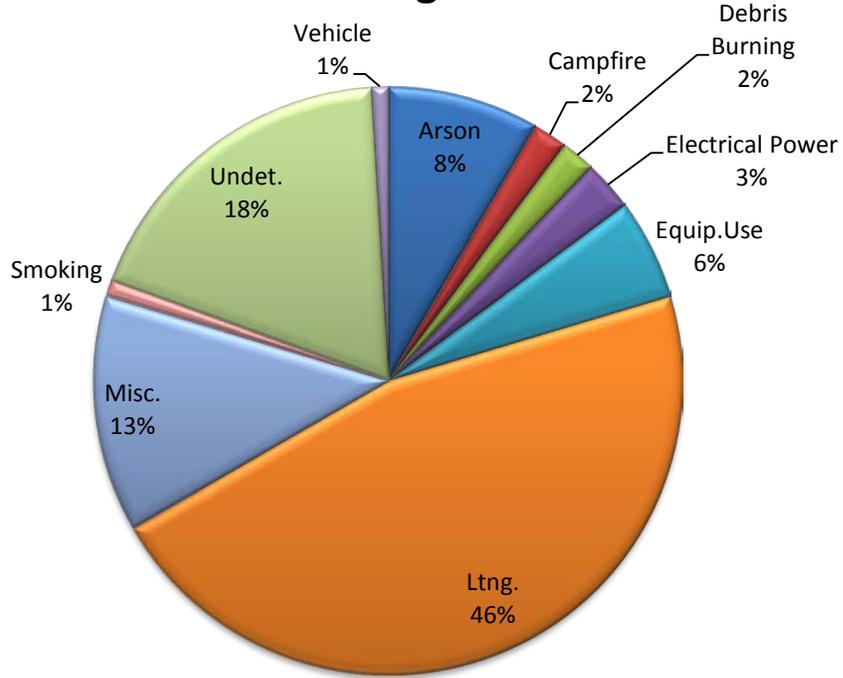
## 2015 HUU Ignitions by Cause



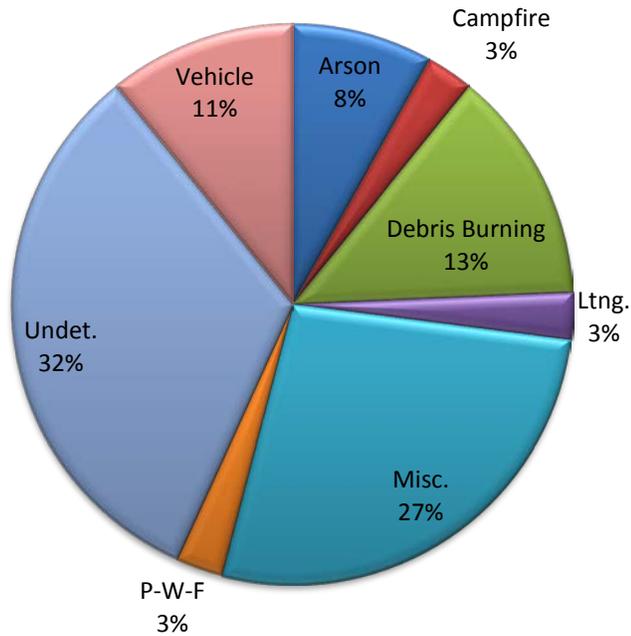
## HUU Fire Ignitions by Battalion



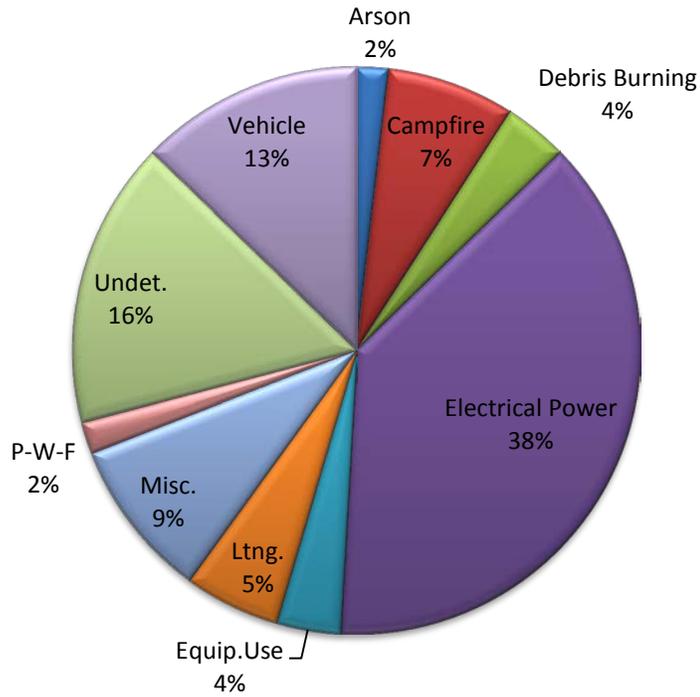
### Battalion 1 Fire Ignition Cause



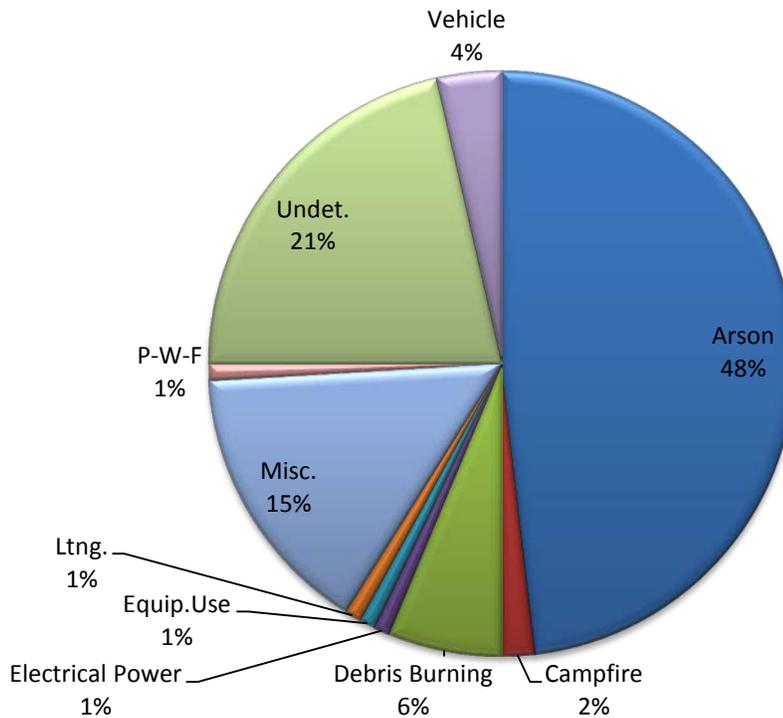
### Battalion 2 Fire Ignition Cause



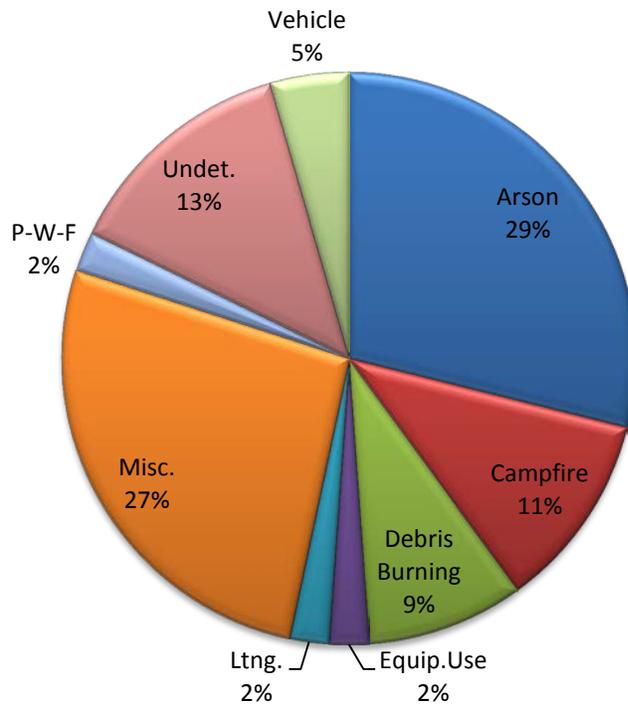
### Battalion 3 Fire Ignition Cause



### Battalion 4 Fire Ignition Cause

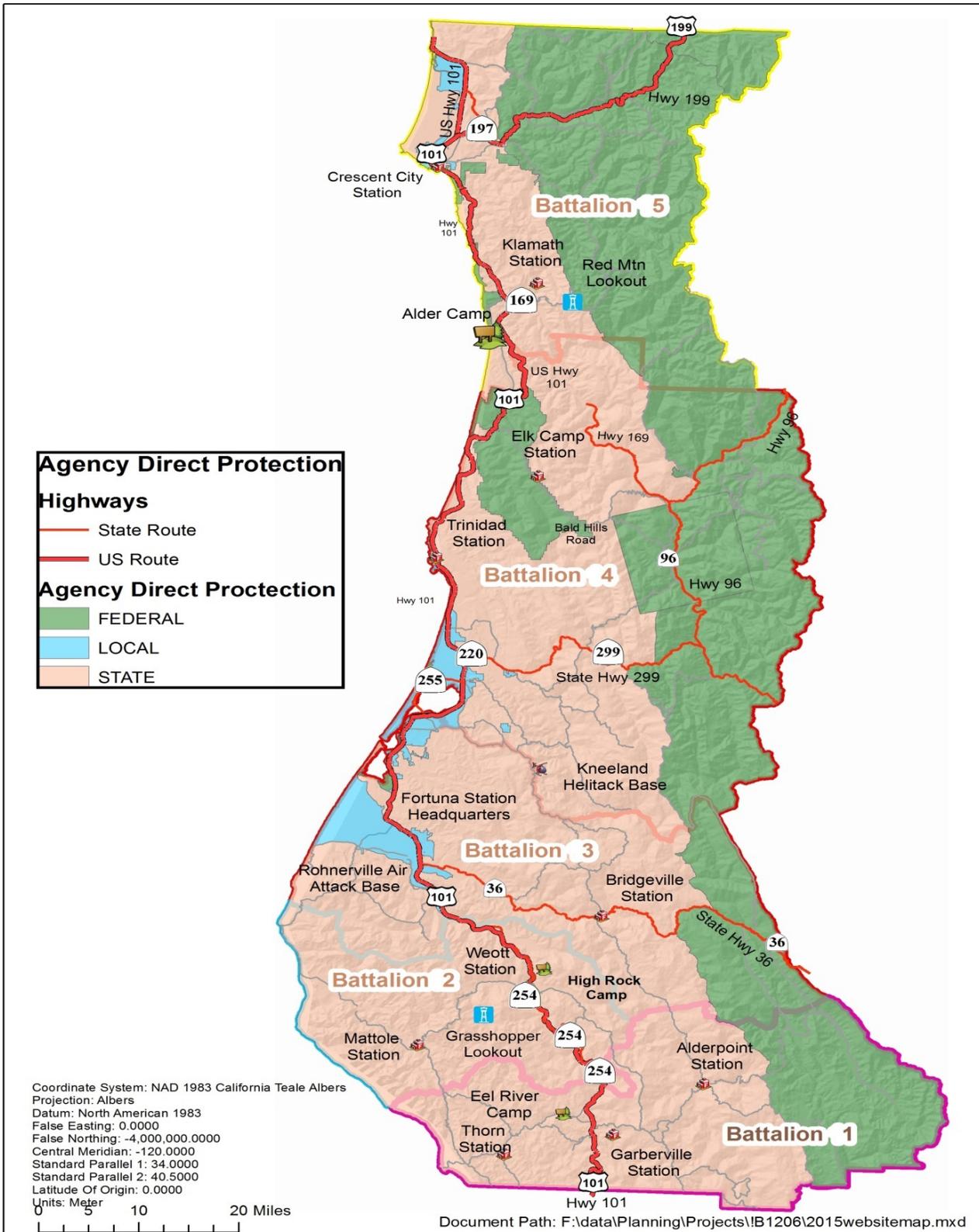


## Battalion 5 Fire Ignition Cause



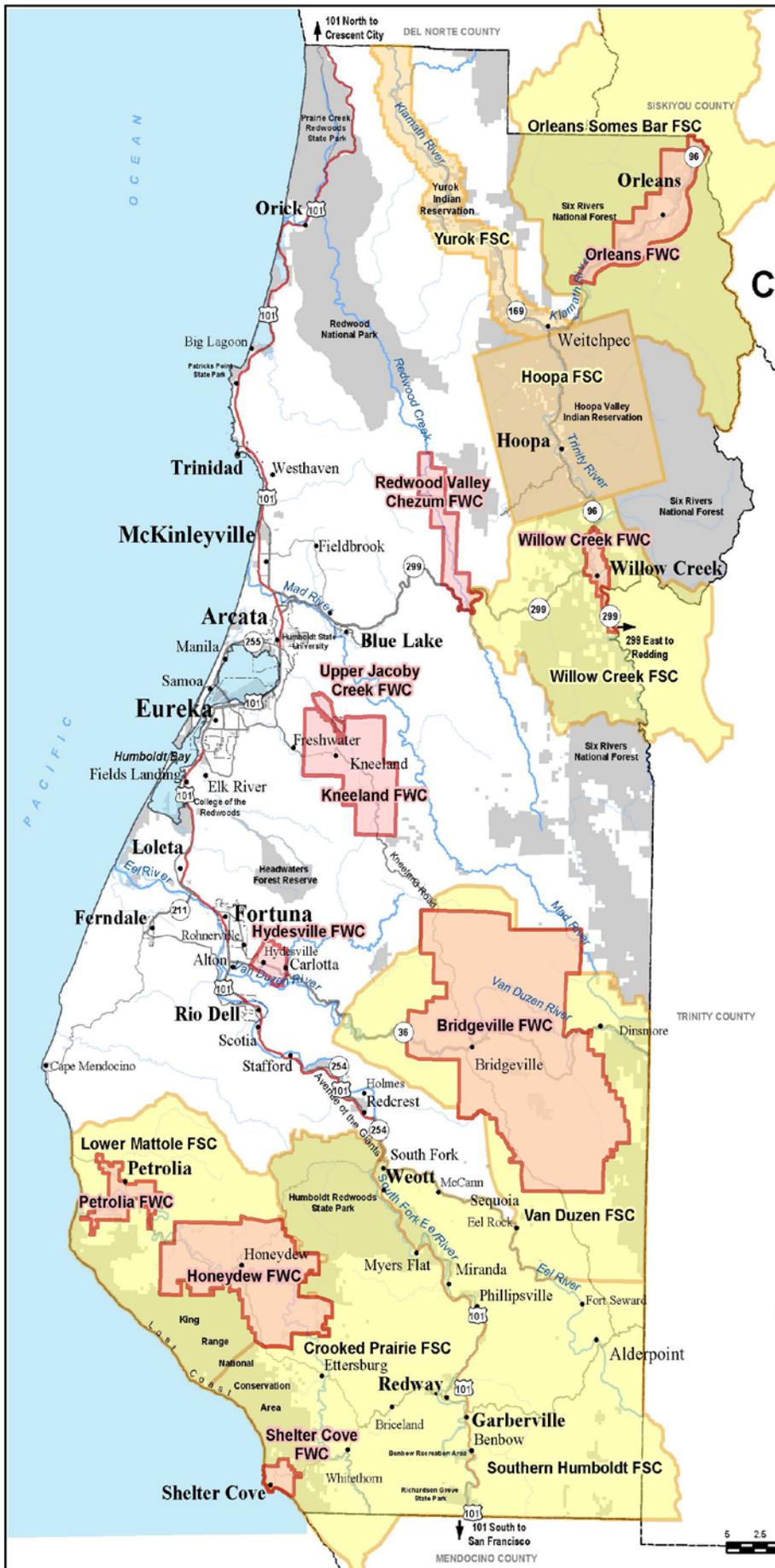


# Humboldt-Del Norte Unit Agency Direct Protection



# Humboldt County

## FIREWISE COMMUNITIES (FWC) AND FIRE SAFE COUNCIL (FSC) AREAS



**Legend**

- Fire Safe Council Boundary
- Proposed Tribal FSC
- Parks/Public/Tribal Land
- Firewise Community

This map is intended for planning purposes only and is not intended for legal property boundary determinations or precise measurement.

Map was updated by HSU Senior Practicum, May 2015.  
 Map compiled by the County of Humboldt, July 2012.  
 Contact: [jvondohien@co.humboldt.ca.us](mailto:jvondohien@co.humboldt.ca.us)



# Humboldt County

## Fire Planning Units

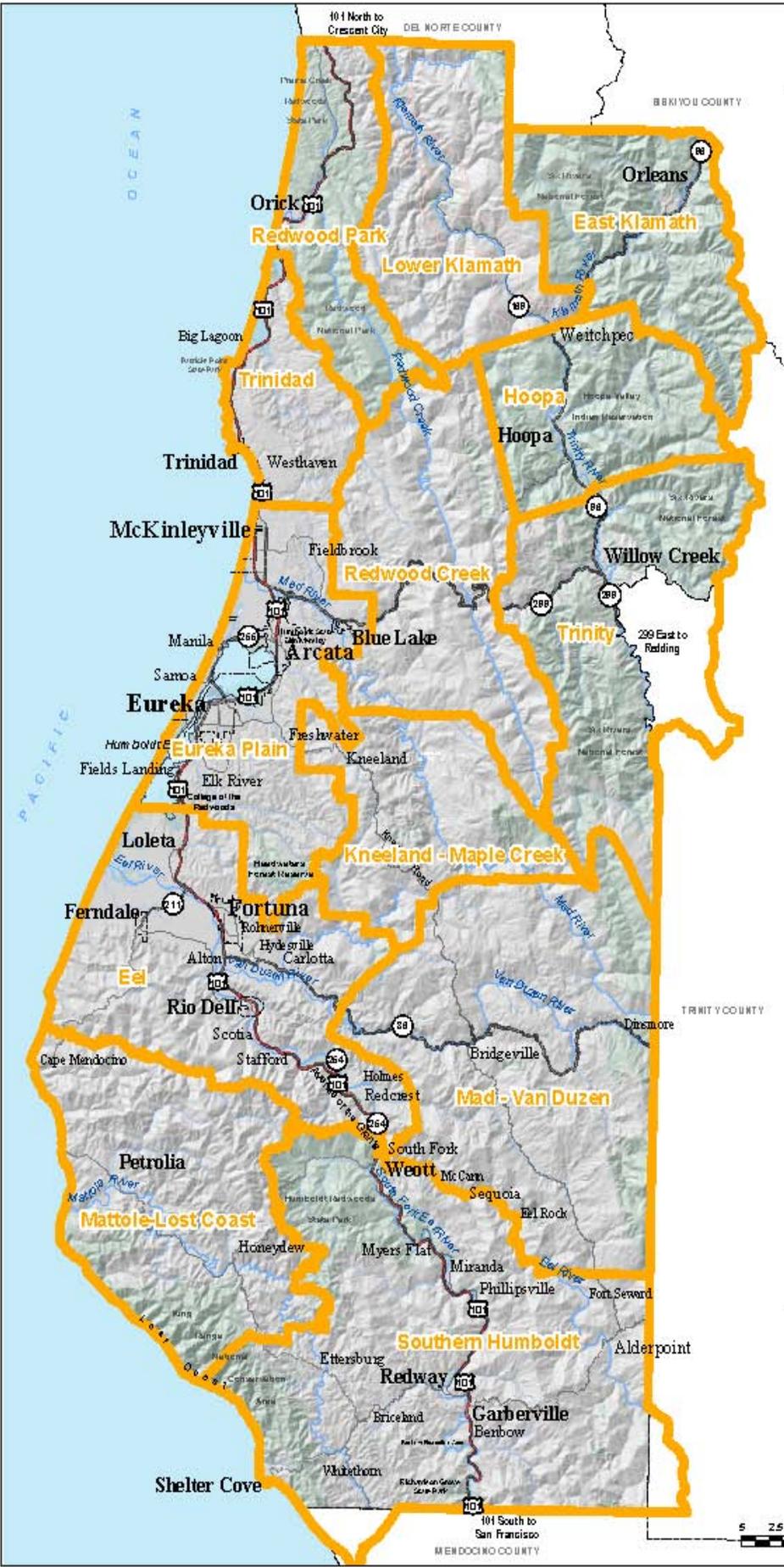
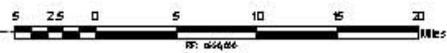
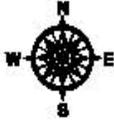


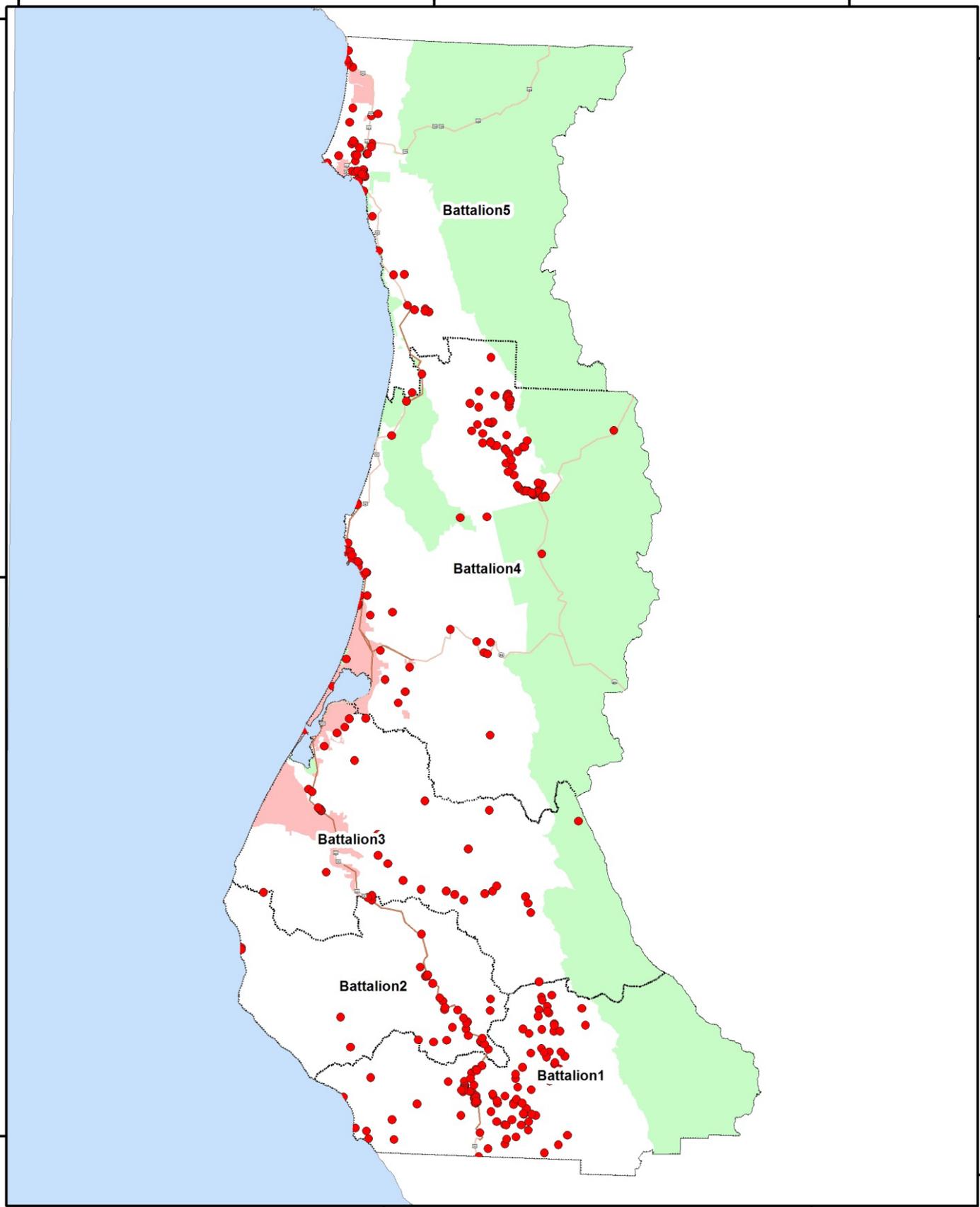
**Legend**

- Fire Planning Units
- Parks/Public Land
- Reservation/Tribal Land
- City Boundary

This map is intended for planning purposes only and is not intended for legal property boundary determinations or precise measurement.

Map compiled by Humboldt County Community Development Services (HCCDS), Jan. 2012.  
Contact: [jvondohlen@co.humboldt.ca.us](mailto:jvondohlen@co.humboldt.ca.us)





124°0'0"W

123°0'0"W

**2015 Humboldt Del Norte Unit Fire Ignitions Map**

● Ignition    □ HUU    ■ Federal DPA    ■ Local Resp    ■ Ocean



1 in = 83,333 ft

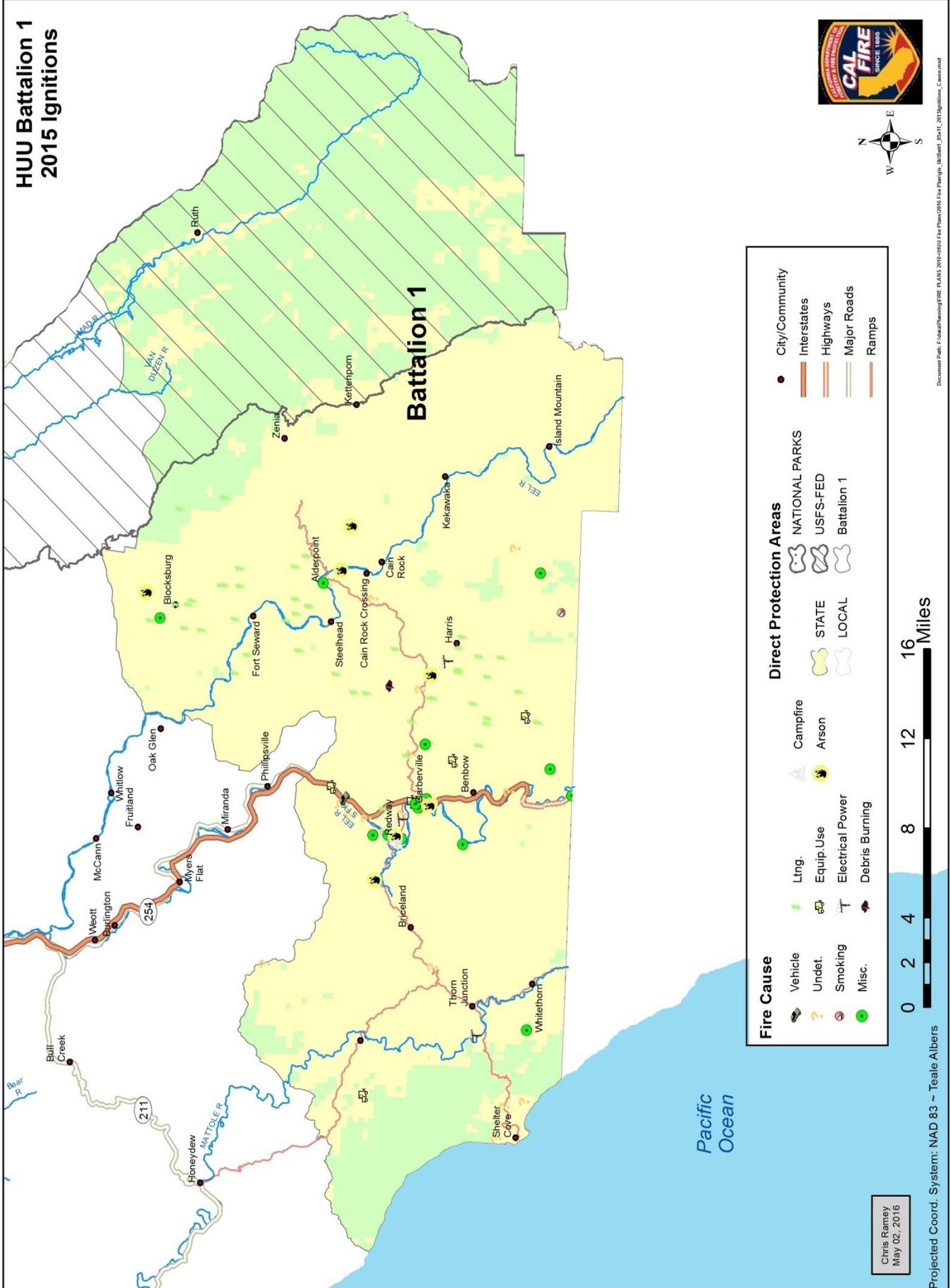
0 21,000 42,000 84,000 Feet

Coordinate System: NAD 1983 California Teale Albers  
 Projection: Albers  
 Datum: North American 1983

Date Saved: 5/4/2016 1:01:59 PM  
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# HUU Battalion 1 2015 Ignitions



Chris Ramey  
May 02, 2016

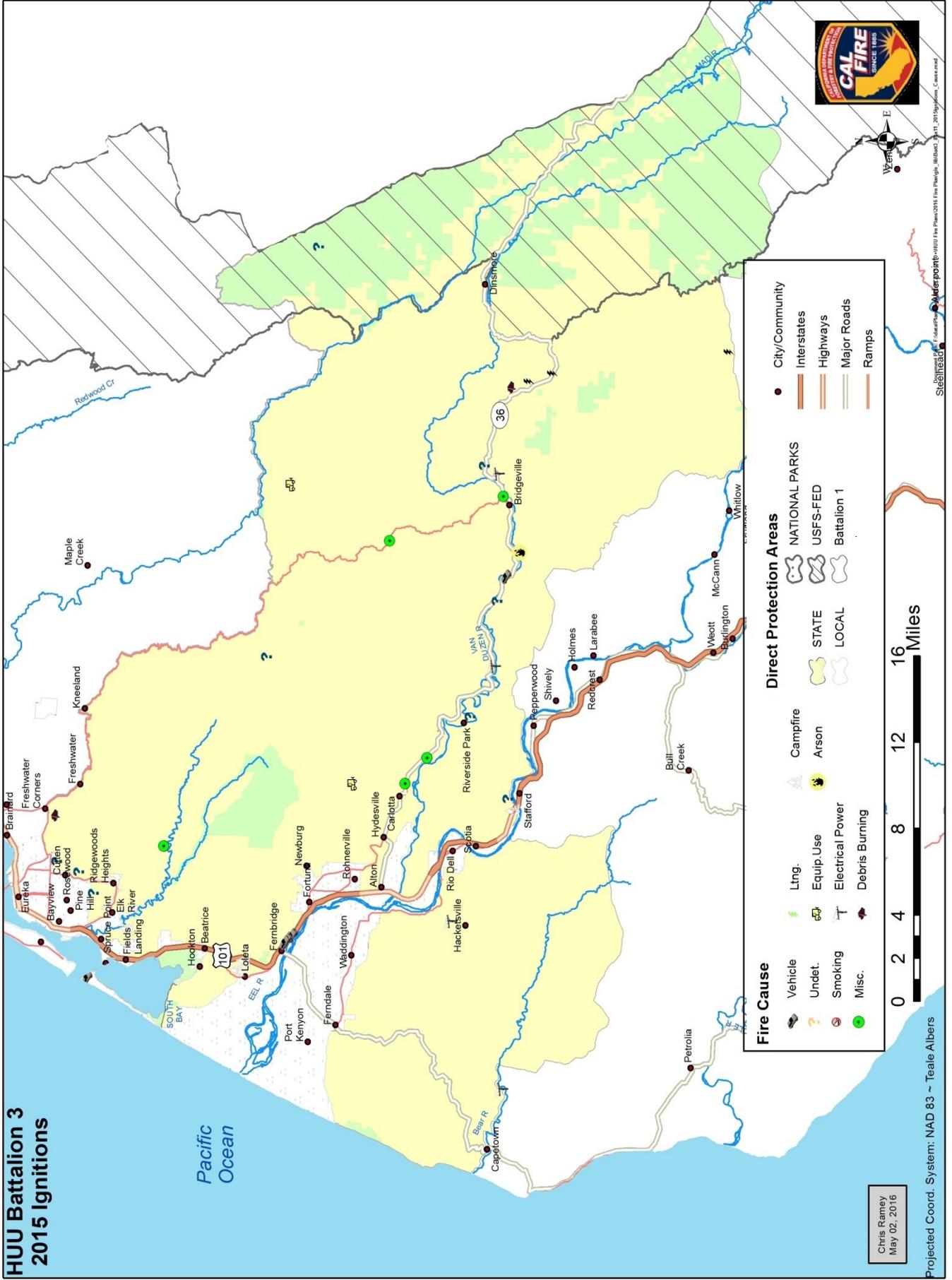
Projected Coord. System: NAD 83 - Teale Albers

Document Path: F:\data\Planning\FIRE PLANS 2015-2016\Fire Plans\HUU1\Fire Plans\HUU1\_2015\_Ignitions\_Centroid





# HUU Battalion 3 2015 Ignitions



Chris Ramey  
May 02, 2016

Projected Coord. System: NAD 83 ~ Teale Albers

# HUU Battalion 4 2015 Ignitions

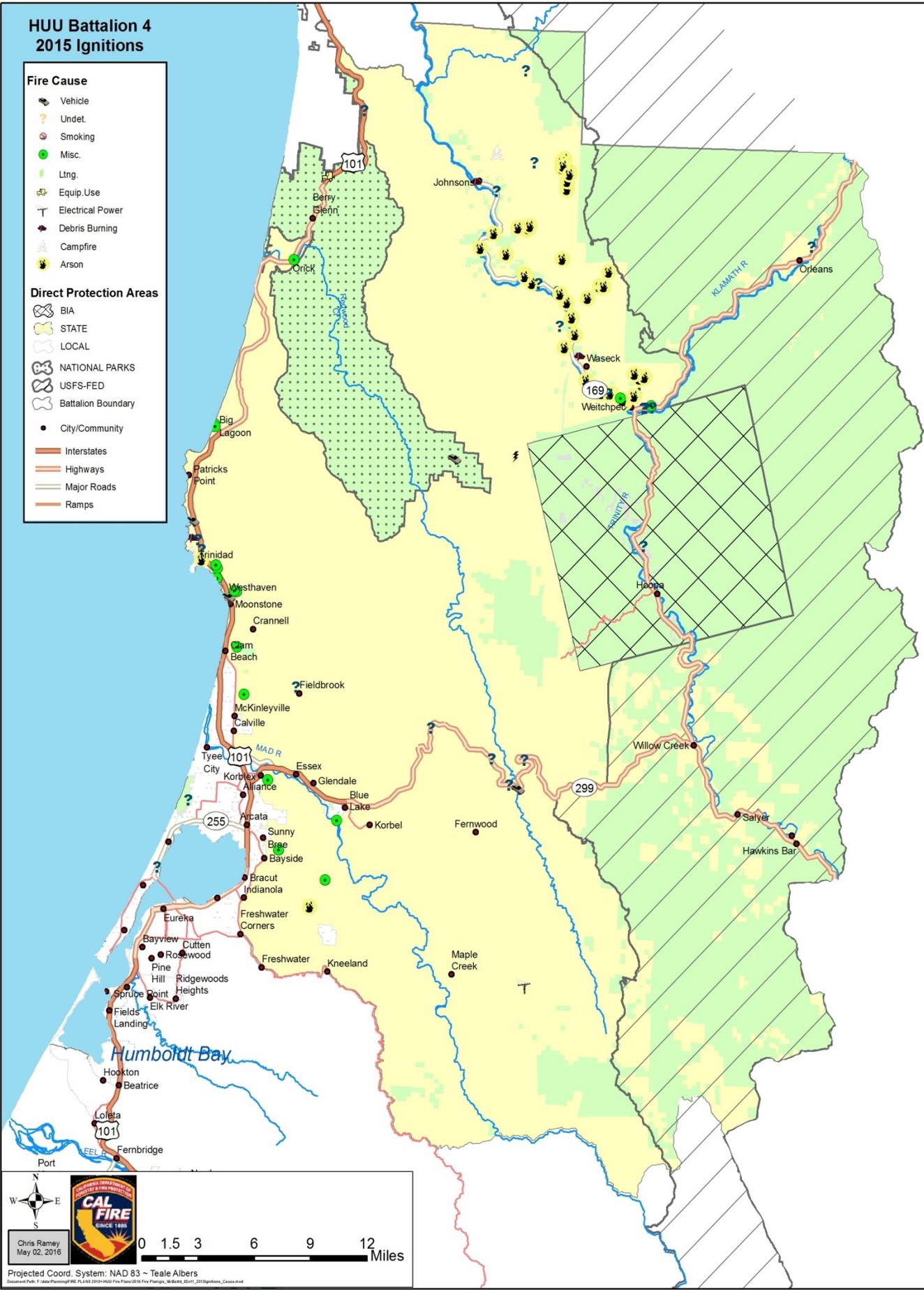
## Fire Cause

- Vehicle
- Undet.
- Smoking
- Misc.
- Ltn.
- Equip. Use
- Electrical Power
- Debris Burning
- Campfire
- Arson

## Direct Protection Areas

- BIA
- STATE
- LOCAL
- NATIONAL PARKS
- USFS-FED
- Battalion Boundary

- City/Community
- Interstates
- Highways
- Major Roads
- Ramps

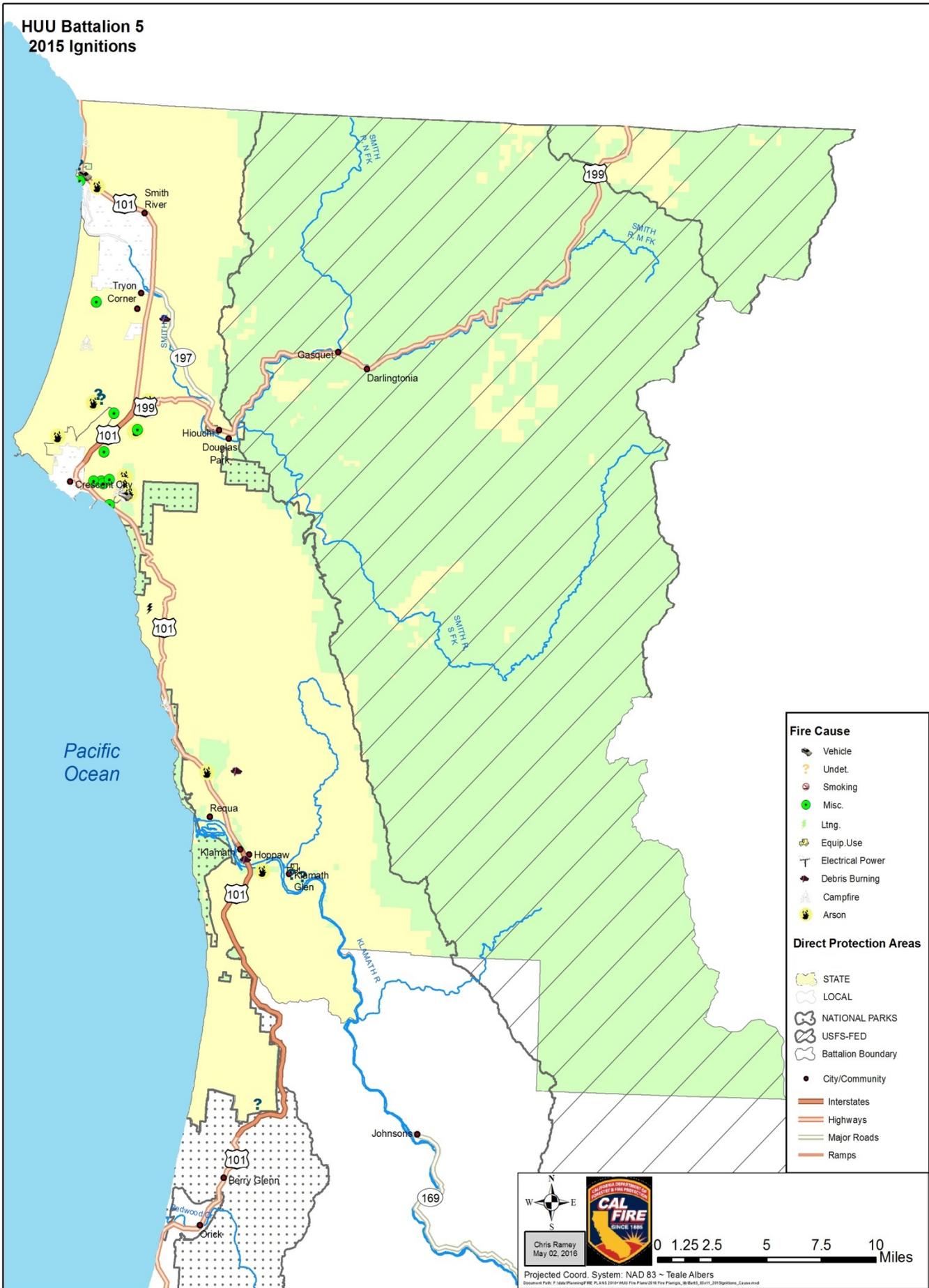


Chris Ramsey  
May 02, 2016

Projected Coord. System: NAD 83 ~ Teale Albers

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**HUU Battalion 5  
2015 Ignitions**



## ANNUAL ACCOMPLISHMENTS REPORTING 2015

Humboldt-Del Norte Unit accomplished many fuel reduction projects supporting Fire Safe Councils, Humboldt County's Fire Adapted Landscapes & Safe Homes Programs (FLASH), California Conservation Corps (CCC). In addition to the Unit fuel reduction projects, the Unit also collaborated with Humboldt County Natural Resources Planning Division, Fire Safe Councils, other nonprofit organizations and various local agencies to assisted in secured grant funding for a multitude of projects including but not limited to: fuels reduction, public outreach and public education, National Firewise Community Certification, Presentations to the Humboldt County Board of Supervisors, County Wide CWPP public meetings for CWPP updates, developing local CWPPs for local Fire Safe Councils.

### **Klamath River Prescribed Fire Training Exchange (TRES)**

In 2015, CAL FIRE helped to fund the Klamath River Prescribed Fire Training Exchange. Over 90 participants in the Klamath River TRES successfully executed controlled burns in river communities along the Klamath and Salmon Rivers. This powerful partnership between diverse local, state, tribal and federal partners has created a model for shared responsibility and ownership of fire in the Wildland Urban Interface. Using a fully staffed Type III Incident Management Team, the TRES supported three separate burn teams centered in Happy Camp, Orleans and Sawyers Bar. Over 350 acres were burned, but acres are not a fair measure of the incredible training that has occurred, or the logistics of implementing complex burns directly around homes during dry weather conditions.

A few notable TRES burns include the Tishaniik, West Simms and Creasy burn units, for different reasons. The Tishaniik Ceremonial Area has been the ignition point for two wildfires in 2001 and 2013. The Karuk Tribe purchased the property in 2014, and worked with the Klamath TRES both last year and this year to re-institute the burning of this 85 acre river bar for community protection, invasive species control and cultural resource enhancement. Night burns were used to mitigate the potential for escape.



MKWC TRES Briefing