



Strategic Fire Plan Humboldt-Del Norte Unit 2023



Collaborating with California State Parks on a prescribed burn at Albee Creek Campground.

Contents

SIGNATURE PAGE	6
SECTION I: UNIT OVERVIEW	9
UNIT DESCRIPTION	9
UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES.....	13
SECTION II: COLLABORATION	16
SECTION III: VALUES	18
SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES	21
FIRE PREVENTION.....	21
ENGINEERING & STRUCTURE IGNITABILITY.....	21
INFORMATION AND EDUCATION	22
PRE-PLANS	23
VEGETATION & FOREST FUEL MANAGEMENT	24
PRE-FIRE PLANNING – BATTALION 6	30
SECTION V: PRE- FIRE MANAGEMENT TACTICS.....	32
Resource Management Program.....	57
Unit Desired Future Conditions.....	59
APPENDIX A: PRE- FIRE PROJECTS through 5/01/23	60
APPENDIX B: UNIT GOALS AND OBJECTIVES	63
APPENDIX C: COMMUNITY WILDFIRE PROTECTION PLANS	65
APPENDIX D: ANNUAL FIRE SEASON REPORT	69
APPENDIX E: MAPS	77
ANNUAL ACCOMPLISHMENTS REPORTING 2022	82

UNIT STRATEGIC FIRE PLAN AMENDMENTS

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5/9/18	Unit Preparedness and Firefighting Capabilities	11	Updated ECC information	J. Renner
5/9/18	Appendix A	54-56	Updated with 2017 info	J. Renner
5/9/18	Appendix B	57-58	Updated with 2017 info	J. Renner
5/9/18	Appendix C	59-61	Updated with 2017 info	J. Renner
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4/23/19	Appendix A	54-59	Updated 2018 info; removed outdated info	J. Renner
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4/30/20	Section I-V	7-53	Updated with 2019 info	J. Renner
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4/26/21	Appendix B	56-57	Updated with 2020 info	J. Renner
4/27/21	Appendix C	58-62	Updated with 2020 info	C. Immitt
4/28/21	Appendix D	63-69	Updated with 2020 info	J. Renner
4/29/21	Appendix E	71-79	Updated with 2020 info	J. Renner
5/6/21	Section I-V	8-55	Updated with 2020 info	J. Renner
4/20/22	Executive Summary	7-8	Updates with new information	J. Renner
5/18/22	Section I	12	Updates with new information	K. McCray
5/04/22	CAL FIRE Grants Awarded	25	Updates with new information	J. Renner
4/20/22	Strategic Fire Plan for California	27-28	Updates with new information	J. Renner
5/18/22	Cal Fire Conservation Camps	52	Updates with current status.	K. McCray
5/2/22	CAL FIRE Fire Center	53	Updates with new information	J. Renner
5/18/22	Unit Desired Future Conditions	58	Updates with edits made	K. McCray


4/12/22	Appendix A	57-59	Updated with 2021 info	J. Renner
4/13/22	Appendix B	60-61	Updated with 2021 info	J. Renner
4/13/22	Appendix C	62-65	Updated with 2021 info	C.Immitt, J. Cavalli
4/14/22	Appendix D	66-73	Updated with 2021 info	J. Renner
4/6/22	Appendix E	74-82	Updated with 2021 info	J. Renner
4/26/22	Annual Accomplishments Reporting	83-86	Updated with 2021 info, future projects	J. Renner, J. Butcher, K. McCray
5/1/23	Section 1: Unit Overview	10	Updated information	R. Dollarhide
5/1/23	Fire History	11-12	Updated information	R. Dollarhide
5/1/23	Unit Preparedness & Firefighting Capabilities	13-15	Updated local & state resources	R. Dollarhide
5/1/23	Vegetation Management & Forest Fuels Reduction	24-27	Updated grant & project information	R. Dollarhide
5/1/23	Appendix A	55-57	Updated with 2022 information	R. Dollarhide
5/1/23	Appendix B	58-59	Updated with 2022 information	R. Dollarhide
5/1/23	Appendix C	60-63	Updated with 2022 information	R. Dollarhide
5/1/23	Appendix D	64-72	Updated with 2022 statistics	R. Dollarhide
5/1/23	Appendix E	77	Updated with 2022 information	R. Dollarhide
5/1/23	Section 5: Pre-Fire Management	31-46	Included Battalion maps	R. Dollarhide
5/1/23	Information & Education	22	Included partnership with Cal Poly Humboldt	R. Dollarhide
5/1/23	HUU BATTALION 1	33	Added Redway VTP description and update	R. Dollarhide
5/1/23	Battalion 8: Aviation	49	Updated aviation assets	R. Dollarhide

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

This Plan was collaboratively developed with interested parties, including: Federal, State, Local, and County agencies within the Humboldt-Del Norte Unit that 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 required by law and determines policy.

SIGNATURE PAGE


_____ **May 15th, 2023**
Date
Kurt McCray
Unit Chief, Humboldt-Del Norte Unit


_____ **May 15th, 2023**
Date
M. Ross Dollarhide
Planning Fire Captain, Humboldt-Del Norte Unit

EXECUTIVE SUMMARY

The Humboldt-Del Norte Unit Fire Plan is a planning document intended to be updated annually with State and Unit priorities.

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 1,914,267 acres of state responsibility lands and 1,782,111 acres 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 nearly 1.3 million acres in 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 Valley Tribe provides wildland fire protection on its reservation as delegated by the Bureau of Indian Affairs.

The HUU Strategic Fire Plan is developed by the HUU Planning Battalion through a collaborative process that includes: CAL FIRE field Battalions, fire prevention, resource management, 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 of the Fire Plan is directed by the Assistant Chiefs, Battalion Chiefs, and Foresters.

The Humboldt-Del Norte Unit Fire Plan will be successful by attaining the following goals set forth in the 2018 Strategic Fire Plan for California:

1. Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems.
2. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
3. Promote and support local land use planning processes as they relate to: (a) protection

of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.

4. Support and participate in the collaborative development and implementation of local, county, and regional plans that address fire protection and landowner objectives.

5. Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.

6. Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.

7. Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.

8. Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.

9. Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

Unit General Priorities

With Federal, local government, and community collaboration, the Humboldt-Del Norte Unit's general goals are to enhance the protection of lives, property, and natural resources from wildland fire, as well as 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 CAL FIRE unit along the California coastline. The Unit extends north to south approximately 180 miles and inland approximately 50 miles. This encompasses 1,914,411 acres of state responsibility lands and 1,782,111 of direct protection area. The Unit includes Redwood National Park, United States Forest Service (USFS) Six Rivers National Forest and Rogue-Siskiyou National Forest, the Bureau of Land Management's Headwaters Forest and King Range, as well as eleven State Parks, and 20 county parks and beaches. There are also twelve tribal agencies residing within the unit including the Hoopa Tribe, which provides wildland fire protection on their reservation as delegated Bureau of Indian Affairs. 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, and pine species 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 some tropical rainforests and often times is referred to as a temperate rainforest. The second zone occurs inland where the Douglas-fir dominates mixed conifer forests including a component of hardwood species. 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



Prairie/ Oak Woodland



Mixed Conifer

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. A proposed FHSZ update was published and released for public comment in November 2022. When adopted, HUU will see a dramatic increase in areas classified as “moderate” with “high” areas decreasing. Federally owned and managed lands remain unclassified in the latest update.

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 5,600 feet. Slopes range from moderate to very steep with 65%+ slopes occurring commonly within the Unit.

The Humboldt-Del Norte Unit Fire Danger Operating Plan (FDOP) is currently utilized to document a decision-making process for agency administrators, fire managers, dispatchers, and firefighters by establishing interagency planning and response levels. Currently, the FDOP is under review for possible updates and modifications. The public, industry, and our own agency personnel expect the wildland fire management agencies to implement appropriate and timely decisions which result in safe, efficient, and effective wildland fire management actions. An appropriate level of preparedness to meet wildland fire management objectives is based on an assessment of vegetation, climate, and topography utilizing the National Fire Danger Rating System (NFDRS). This plan provides a science-based “tool” for interagency fire managers to incorporate a measure of risk associated with decisions which have the potential to significantly compromise safety and management of wildland fires. Currently, the Remote Automated Weather Station being used as the fire severity station for the Unit is the Eel River RAWs because its location provides an accurate representation of the Unit’s most severe fire potential.

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

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, Del Norte, and Trinity counties. During the pre-settlement period (before 1875) Native American people commonly used fire as a tool to manipulate their environment for a variety of reasons. It helped minimize rodent and insect population and kept the forest understory open which made for easier travel and hunting. Additionally, burning 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) included: 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. Hundreds of sawmills existed within the

California redwood region. Often, sawmills would have their own railroads for the transportation of the logs, as well as logging camps to reside workers. 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 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 to 100-year fire cycle. However, the Southern portion of the Unit is on a 12 to 50-year fire cycle. Reviews of area newspapers and various studies at Cal Poly Humboldt 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 were destroyed 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. Further enhancements of the Forest Practice Act have strengthened protection of natural resources in California.

In recent years, the Humboldt-Del Norte Unit has experienced very large fires including: The Red Salmon Complex, McCash Fire, Slater Fire, SRF Lightning Complex, and the August Complex (a mega-fire approximately one million acres in size). These events are proof of the vulnerability of communities to wildfires within the Humboldt-Del Norte Unit.

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Humboldt–Del Norte Unit is composed of one Unit administration headquarters facility, eleven fire stations, two camps, one fire center, one air attack base, one helitack base, and one State Fire Marshal office. CAL FIRE HUU maintains fourteen frontline engines, with five engines in reserve, two dozers, four inmate hand crews (blue booked for ten inmate handcrews), two firefighter hand crews, one helicopter, one air attack, and one air tanker for fire suppression efforts. Additionally, one California Conservation Crew is exclusively available to Humboldt-Del Norte Unit from May through October of 2023. There are approximately 100 permanent fire suppression personnel, fifteen resource management personnel, and ten clerical personnel to staff these efforts. Additionally, approximately one hundred eighty limited term and seasonal personnel to supplement permanent staff during the fire season.

CAL FIRE aircraft provide rapid initial attack and are especially valuable in the Unit’s remote areas where steep terrain and narrow, winding roads greatly increase ground response times. In such situations, aircraft assigned to the Humboldt-Del Norte Unit 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 providing operational direction from their vantage point.

The Fortuna Emergency Command Center (Fortuna ECC) is staffed 24 hours, 7 days a week where they receive and process 911 calls for the Humboldt-Del Norte Unit, 36 volunteer fire departments, Arcata Fire Protection District, City Ambulance, Arcata Ambulance, and Hoopa Ambulance. The CAL FIRE ECC dispatches all vegetation fires, structure fires, medicals, and traffic accidents (all risk) in Humboldt County, with the exception of Humboldt Bay Fire (City of Eureka) and Fortuna Fire (Fortuna Fire District). In Del Norte County, the Fortuna ECC dispatches for wildland fires within the SRA. Del Norte County Sheriff’s department dispatches the ambulance and Volunteer Fire Departments. CAL FIRE is also the central ordering point for medical helicopter responses in Humboldt and Del Norte Counties. The ECC is the ordering point for the counties of Humboldt and Del Norte Operational Office of Emergency Services (OES) areas.

The Command Center staffing consists of one Battalion Chief, five Fire Captains, five Communications Operators, and one Research Data Specialist 2. All dispatching personnel are certified as Emergency Medical Dispatchers, which provides 911 callers with medical advice over the phone until help arrives. Due to the rural locations of most of the communities in the counties we serve, it’s critical to provide pre-arrival emergency instructions over the phone to increase the survival rate of patients.

The Humboldt-Del Norte Unit has experienced large catastrophic fires, especially in the southern and eastern portions of the Unit. As the area becomes more popular because of varying land uses and scenic beauty, 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 FIRE's Fire Protection Objective found in the Fire Operations Handbook, policy 7001.2 states that a system of basic fire protection will be provided so that damages to life, property and natural resources will be held at or below a level acceptable within social, political and economic constraints. CAL FIRE will strive to contain 95% of all unwanted fires at 10 acres or less.

Humboldt County has an extraordinarily strong and effective mutual aid system. Humboldt County has thirty-six volunteer and paid departments that respond to emergencies 365 days a year. CAL FIRE responds with the local fire departments to vegetation fires, structure fires, medical aids, traffic accidents, and other all-risk emergencies. 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 US Coast Guard, local ambulance services, air ambulance services on calls requiring ground or air medical transport.

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, and on the south by Humboldt County. 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 Del Norte 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 mostly ineffective for non-wildland fire emergencies.

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

Battalion 1	Battalion 2	Battalion 3	Battalion 4	Battalion 5
-Alderpoint -Briceland -Garberville -Palo Verde -Redway -Shelter Cove -Telegraph Ridge -Whale Gulch -Whitethorn	-Fruitland -Honeydew -Mattole -Miranda -Myers Flat -Petrolia -Phillipsville -Redcrest -Salmon Creek -Scotia -Weott*	-Bridgeville -Carlotta -Ferndale -Fortuna Fire -Humboldt Bay Fire -Kneeland -Loleta -Rio Dell	-Arcata Fire -Blue Lake -Fieldbrook -Hoopa VFD -Hoopa Wildland FD -Orick -Orleans -Samoa -Trinidad -Westhaven -Willow Creek	-Crescent City Fire & Rescue -Fort Dick -Gasquet -Klamath -Smith River -Yurok VFD -Yurok Wildland FD

***Not in service due to lack of staffing.**

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

<https://humboldt.gov/698/Fire-Protection-Services>

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 therein. 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

Representatives that have been involved over the years 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:

Organization	Representative
Humboldt County FSC	(Chair)
Del Norte County FSC	(President)
Trinity County FSC	(President)
Southern Humboldt FSC	(President)
Cathey Road 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 Resource Company	(Timberland Manager)
Bureau of Land Management	(Fuels Officer)
Mattole Restoration Council	(Executive Director)
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)
Humboldt Redwood Company	Timberland Manager

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 timberlands 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.

Community	Federal Register
Alderpoint	No
Alton	No
Arcata	No
Bayside	No
Bayview	No
Beatrice	No
Benbow	No
Berry Glen	Yes
Big Flat	Yes
Big Lagoon	Yes
Big Lagoon Ranch	Yes
Blocksburg	No
Blue Lake	Yes
Blue Lake Ranch	Yes
Bracut	No
Briceland	No
Bridgeville	Yes
Carlotta	No
Cobb Ridge	Yes
Crannell	No
Cutten	No
Douglas Park	Yes
Essex	No
Ettersburg	Yes
Eureka	No
Fickle Hill	Yes
Fieldbrook	No
Flying AA	Yes

Community	Federal Register
Fort Dick	No
Fortuna	No
French Hill	Yes
Freshwater	No
Friday/Morton Ranch	No
Fruitland	No
Garberville	No
Gasquet	Yes
Gray Ranch	Yes
Hawkins Bar	Yes
Hiouchi	Yes
Holmes	No
Honeydew	Yes
Hoopa Valley Indian Reservation	Yes
Humboldt Hill	No
Hydesville	No
Kettenom Valley	Yes
Klamath	Yes
Klamath Glen	No
Kneeland	No
Korbel	Yes
Kuhn Ranch/Ammon	Yes
Lado Del Rio	Yes
Mad River	Yes
Major Moore's	Yes
Maple Creek	No
McKinleyville	No

Community	Federal Register
Miranda	No
Myers Flat	No
Myrtle town	No
Oden Flat	Yes
Orick	Yes
Orleans	Yes
Patrick Creek	Yes
Patrick's Point	No
Pepperwood	No
Petrolia	Yes
Phillipsville	No
Pine Hills	Yes
Pine Mountain	No
Pioneer Tract	Yes
Redcrest	No
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
Shivley	No
Smith River	No
Sportshaven	Yes
Stafford	No

Community	Federal Register
Suzy Q Ranch	Yes
Trinidad	Yes
Trinidad Ranch	Yes
Upper Mad River	Yes
Van Duzen	Yes
Weitchpec	Yes
Weott	No
Westhaven-Moonct	Yes
Whitethorn (Thorn)	Yes
Willow Creek	Yes
Yurok Indian Reservation	No
Zenia	Yes

SECTION IV: PRE-FIRE MANAGEMENT STRATEGIES

FIRE PREVENTION

Unit prevention efforts include exhibits at local fairs, community fire safe exhibitions, issuing burn permits, 4290 permit procedures, fire patrols, implementation of fuels reduction projects, prescribed burning, news media releases, public service announcements, defensible space inspections, and providing an active board member on the Humboldt County Fire Safe Council. The Unit's 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 Unit's objective is to see a reduction in human caused fire ignitions.

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 last few decades, the number 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. Many of the new requirements took effect in 2008 and has been updated in the 2010 California Building code. The California Board of Forestry updated the State Minimum Fire Safe Regulations, effective April 2023. 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 Marshall's website, which has more in-depth information on the building code requirements and approved construction materials.

<https://osfm.fire.ca.gov/divisions/code-development-and-analysis/wildfire-protection/>

Other measures have been in effect for many years. California State Fire Safe Regulations have been in place since 1991. They provide statewide standards for roads, driveways, gates, emergency water supply, vegetation setbacks, address and road signage, and other topics related to defensible space. In the Humboldt-Del Norte Unit, the Pre-Fire Planning Battalion is the point of contact for County Planning departments for matters related to PRC 4290 and the Fire Safe Regulations. PRC 4291 provides standards for vegetative clearance – requiring a 30-foot fuel exclusion and 100-foot fuel reduction 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.

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 during Defensible Space Inspections, and social media posts. This information and education are provided to people of all ages.

Fire Prevention mascots including: Captain Cal, 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. Captain Cal, Smokey Bear, 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.

In May of 2023, the Cal Fire Humboldt/ Del Norte Unit established a formal education partnership with Cal Poly Humboldt to exchange forest and fire science knowledge through in-person educational opportunities and collaboration afield.

Public Resources Code 4290 & 4291

Defensible Space Inspectors and firefighting personnel, working under the direction of the Pre-Fire Planning Battalion, conduct compliance monitoring inspections of defensible space clearance requirements around buildings & structures on SRA lands. Concurrent with defensible space 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 the fire safe regulation application for discretionary projects in county planning.

PRE-PLANS

LIGHTNING COORDINATION AREA (LCA)

The Fortuna 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 approximately 75 lightning caused fires in 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 during times of numerous con-current emergency incidents.

LCA 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 sufficient resources and personnel are available to manage the fire).

ACTIVATION OF THE LCA

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: 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 an 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.

California Cooperative Fire Management Agreement

The authority for the Oregon Department of Forestry is provided under the "Supplement Interstate Compact for Emergency Mutual Assistance" between the states of California and Oregon, and the "Cooperative Wildland Fire Protection Agreement" between the Federal Agencies and the Oregon Division of Forestry. Under this agreement, CAL FIRE ground resources can respond initial attack into the State of Oregon up to 25 miles.

The Humboldt-Del Norte Unit is currently using CFMA to facilitate a cooperative fuel reduction project with Six Rivers National Forest near the community of Ruth. A separate fuel reduction project with Six Rivers National Forest is being planned for locations within Del Norte County.

VEGETATION MANAGEMENT & FOREST FUELS REDUCTION

Vegetation management and forest fuels reduction activities are a critical solution to increasing forest and community resiliency to impacts from wildfires. Implementing landscape level as well as strategic smaller scale fuel reduction and forest improvement projects throughout the Humboldt-Del Norte Unit is a very high priority. The use of all available means of effecting these projects in collaboration with other government entities, Fire Safe Councils, Firewise Communities, prescribed burn associations, cultural fire practitioners, and private landowners is paramount in achieving resiliency to wildfires. To foster operational and financial feasibility, landscape level projects need to include a means of treating and utilizing forest by-products such as small diameter sawlogs, biomass energy, and other potential by-products. CAL FIRE Forest Programs and grant funding as well as other sources of public and private funding are integral to leveraging operational and financial resources for these types of projects. Specifically, some landscape level project goals established by the CAL FIRE Humboldt-Del Norte Unit include shaded fuel breaks along strategic fire suppression ridges as well as areas adjacent to communities where the potential of large wildfires exist; forest-wide fuel reduction projects utilizing a portion of forest project by-products to further the scope of forest projects and create community based jobs as well as multiple social benefits; and improving access and egress for the public as well as firefighters during wildfire events. Examples of current and future projects intended to meet these goals within the Humboldt-Del Norte Unit include:

- A shaded fuel break along South Fork Ridge between State Highways 36 and 299.
- A shaded fuel break around the Salmon Creek watershed in southern Humboldt County.
- Strategic forest fuel reduction within the communities along and near Ruth Lake.
- Strategic forest fuel reduction within and adjacent to the towns Willow Creek and Salyer.
- Completion and/or maintenance of shaded fuel breaks around the towns of Bridgeville, Redway, and Garberville.
- Forest fuel reduction along State Highways within the Humboldt-Del Norte Unit.

Cal Fire Vegetation Management Plans allow 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 priorities (e.g., those identified through the Fire Plan), and those considered to be of the most value by unit staff, 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 Grant Program

Humboldt-Del Norte Unit (HUU) augments funding for local fire safe councils through matching funds derived from staff time, chipper use, fire crews, engines, dozers and grant review support. These resources are channeled mostly through letters of commitment in the grant application process. CAL FIRE has many grant opportunities available for local state and federal agencies, Native American Tribes, private forest landowners, fire safe councils, conservation groups, and non-profit organizations. Over the next few years, CAL FIRE will be awarding millions of dollars per year within the CCI Forest Health grants and CCI Fire Prevention grants. Go to <http://www.fire.ca.gov/grants> for more information.

CAL FIRE Grants Awarded in the Humboldt/ Del Norte Unit

Grant Type	Grantee	Project Name	Year Awarded	Award
Forest Health Grant	Mid Klamath Watershed Council	Western Klamath Fire Resilience and Forest Health Project	2023	\$7,000,000
Forest Health Grant	The Watershed Research and Training Center	Southern Trinity Fire Resiliency Project	2023	\$6,999,294
Fire Prevention Grant	Humboldt County	CWPP Phase V: Wildfire Preparedness	2022	\$191,318.00
Fire Prevention Grant	Yurok Tribe: Yurok Fire Department	Weitchpec Community Infrastructure Protection Project	2022	\$1,769,414.00
Fire Prevention Direct Award	Humboldt County	Willow Creek Storm Damage	2022	\$500,000.00

Fire Prevention Direct Award	Humboldt County RCD	Increasing Pace and Scale of Fuels Reduction in Humboldt County	2022	\$635,037.00
Forest Prevention Planning Grant	Humboldt County	Evacuation Ready Humboldt	2022	\$333,000.00
Forest Health Grant	Travis Ranch LLC	Travis Ranch Fire Recovery and Forest Health Improvement	2022	\$4,403,583.72
Forest Health Grant	Mid Klamath Watershed Council	Mattole and Salmon Creek Forest Health and Wildfire Resilience Project	2022	\$4,997,829.49

Prescribed Fire Programs (VMP & VTP)

Prescribed fire is an effective tool for fuels reduction, in addition to providing other positive results in managing the landscape. These projects may vary 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 or Vegetation Treatment 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, California Department of Fish and Wildlife, California Conservations Corps, US Forest Service, and National Parks Service – 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 or VTP places the liability for the burn onto the State, under a 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 contract period. The Humboldt-Del Norte Unit intends to expand prescribed fire activities into other times of the year. Private landowners, local fire agencies, and fire safe councils also conduct burn operations.

A CAL FIRE permit for burning is required from May 1st until the date the director declares, by proclamation, that the hazardous fire conditions have abated for that year. Or, at any other time during any year when the director has declared, by proclamation, that unusual fire hazard conditions exist in the area. Outside of that period, burns may be conducted without a CAL FIRE permit, so our knowledge of burn projects outside of CAL FIRE is often limited. The North Coast Unified Air Quality Management District always requires a smoke management project permit throughout 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 Prairie 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 wildfire affecting the area of a recent burn. VTP project opportunities are expected to enhance CAL FIRE forest fuel reduction project opportunities.



A large elk herd enjoying the benefits of lush grass after a Rx burn at the England VMP in 2020.

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.

Strategic Fire Plan for California

The 2018 Plan reflects CAL FIRE's focus on 1. fire prevention and suppression activities to protect lives, property, and ecosystem services, and 2. natural resource management to maintain the state's forests as a resilient carbon sink to meet California's climate change goals and to serve as important habitat for adaptation and mitigation. A vision for a natural environment that is more fire resilient; buildings and infrastructure that are more fire resistant; and a society that is more aware of and responsive to the benefits and threats of wildland fire; all achieved through local, state, federal, tribal, and private partnerships.

Through government and community collaboration, the following goals will enhance the protection of lives, property and natural resources from wildland fire, as well as 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. Each goal listed here is meant to build upon the previous one (e.g., Goal 3 builds upon the accomplishments in Goals 1 and 2). Although full attainment of a goal is

ultimately dependent upon the success of previous goals, any of the goals can be worked on at any given time based on available funding and other opportunities.

- Identify and evaluate wildland fire hazards and recognize life, property and natural resource assets at risk, including watershed, habitat, social and other values of functioning ecosystems. Facilitate the collaborative development and sharing of all analyses and data collection across all ownerships for consistency in type and kind.
- Promote and support local land use planning processes as they relate to: (a) protection of life, property, and natural resources from risks associated with wildland fire, and (b) individual landowner objectives and responsibilities.
- Support and participate in the collaborative development and implementation of local, county and regional plans that address fire protection and landowner objectives.
- Increase fire prevention awareness, knowledge and actions implemented by individuals and communities to reduce human loss, property damage and impacts to natural resources from wildland fires.
- Integrate fire and fuels management practices with landowner/land manager priorities across jurisdictions.
- Determine the level of resources necessary to effectively identify, plan and implement fire prevention using adaptive management strategies.
- Determine the level of fire suppression resources necessary to protect the values and assets at risk identified during planning processes.
- Implement post-fire assessments and programs for the protection of life, property, and natural resource recovery.

In concert with the mission of the Board, the mission of CAL FIRE is to serve and safeguard the people and protect the property and resources of California.

PRE-FIRE PLANNING – BATTALION 6

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

Hazardous fire fuels treatment projects conducted by CAL FIRE staff are monitored by the Pre-fire Planning Battalion ensuring consistent tracking and reporting. The conservation camps: Alder Camp and Eel River Camp, manage day-to-day operations with their sponsor's projects while projects involving Fire Prevention funding and grants to CAL FIRE are administered by the Pre-Fire Planning Battalion. CAL FIRE also reviews grant applications for local fire departments, fire safe councils, local tribes, and Firewise communities. The Humboldt-Del Norte Unit does not manage local CAL FIRE Forest Health or Forest Legacy Grants.

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 Planning Battalion Staff.

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, to 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 are responsible for collecting all data from CAL FIRE programs and its cooperators, entering it into Cal MAPPER and submitting it to Sacramento monthly.

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 Unit's Fire Plan and may be submitted to CNR for consideration if they meet the Fire Prevention Program and/or funding source criteria.

SECTION V: PRE- FIRE MANAGEMENT TACTICS

DIVISION / BATTALION / PROGRAM PLANS

CAL FIRE's Humboldt-Del Norte Unit is divided into five field Battalions as well as: 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

Humboldt-Del Norte Unit, Battalion 1, is located in the far southern portion 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 Mendocino National Forest to the southeast, the CAL FIRE Mendocino 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 lands.

Battalion Resources

Fire Protection within the Battalion is largely made up of volunteer Fire Departments and staffing within CAL FIRE schedule B fire stations and the Eel River Conservation Camp. The Volunteer Fire Departments within Battalion 1 include: Telegraph Ridge Fire Protection District, Shelter Cove Fire, Whitethorn Fire Protection District, Garberville Fire Protection District, Redway Fire Protection District, and Briceland Fire Protection District, as well as the 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. Eel River Conservation Camp is also located within Battalion 1. Pratt Mountain communications tower is located within the Battalion.

Districts and Municipality

There are nine volunteer departments within the Battalion: Alderpoint, Palo Verde, Garberville, Redway, Shelter Cove, Telegraph Ridge, Whale Gulch, Whitethorn, and Briceland. These Fire Districts are all located in the SRA.

Wildland and Urban Interface

Battalion 1 is largely comprised of agriculture zoned private timberland with Green Diamond Resource Company being the largest industrial timberland 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 as 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 the right combination of wet/dry weather that provides bountiful marijuana crops. With the increase of population and activity level in these areas, there has been a perceptible increase in fire ignitions because of cannabis related activities. HUU field staff attempt to work with the public within the Battalion to not only prevent fires, but to gain their trust so fire suppression is more easily achieved when fires occur. Cannabis 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, unavailability of water, hazardous materials, and armed grow site attendants are some of the issues HUU staff must contend with during emergency response in Battalion 1.

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 and oak woodland fuel type, depending on the exposure.

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

The southern interior area of Battalion 1 is similar to the Sierra-Nevada Foothill country fuel type. It features more open stands of fir as well as areas of oak woodland ecosystems. Forest understory commonly consists of grass and brush. This area escapes the fog belt and is much warmer and drier.

Under normal summer high pressure, the fire activity will diminish after sunset. 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

uplift of marine sediments and seismic activity. The Battalion lies between Pacific Ocean to the west and the Haman Ridge in southwest Trinity County to the east. The Eel and Mattole River drainages run through the Battalion in south to north orientation with very steep and narrow canyons.

Fire Safe Council / Battalion 1 Support Functions

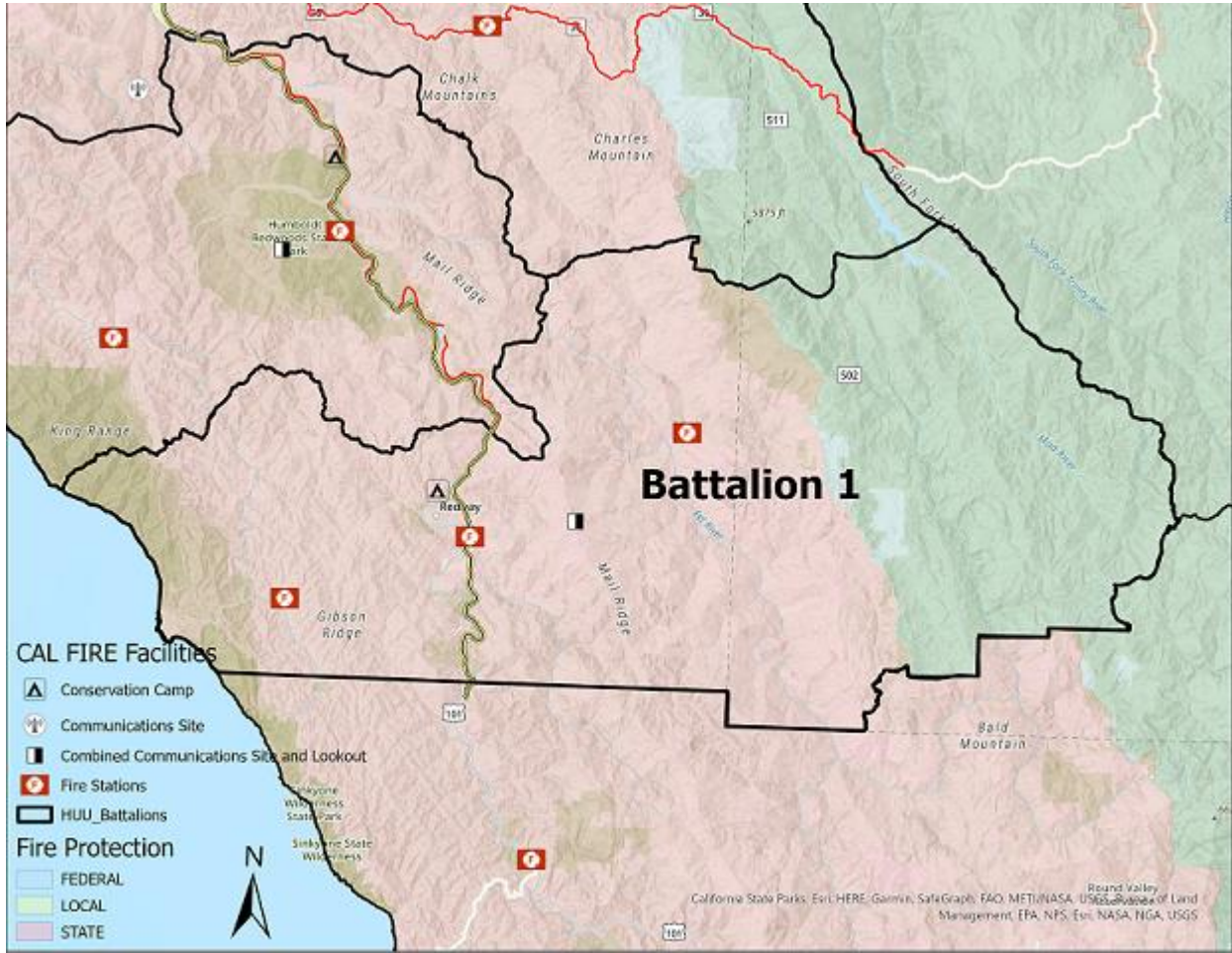
There are three active fire safe councils within Battalion 1: The Humboldt County Fire Safe Council, Lower Mattole Fire Safe Council and the Southern Humboldt Fire Safe Council. The Southern Humboldt Fire Safe Council covers the Eel River and the southern part of Humboldt County through the communities 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. Firewise Communities within the Battalion include Shelter Cove. Benbow Firewise and Garberville Firewise are in the beginning stages of becoming certified Firewise Communities.

The Southern Humboldt Fire Safe Council has successfully completed several shaded fuel breaks in and around the community of Shelter Cove and the King Range, provides defensible space assistance and education through the County Fire-Adapted Landscapes and Safe Homes (FLASH) program (currently funded through a CAL FIRE, Fire Prevention Grant), and conducts significant community wildfire preparedness outreach. The Shelter Cove Resort Improvement District, through its fire department and Firewise Community program, with support from a variety of funding sources and in collaboration with CAL FIRE (including inmate crews) and the County, has completed roadside fuels reduction, run a chipper program, and provided extensive community education and outreach. Fuels reduction projects are a priority with the Battalion and Eel River Conservation Camp, as well as Unit sponsored chippers used in accomplishing these fuel reduction programs and efforts.

The completed 2021 Garberville Shaded Fuel Break was a joint project with CAL FIRE Humboldt – Del Norte Unit, Southern Humboldt Fire Safe Council, and the Humboldt County Resource Conservation District. This project was a result of the ongoing efforts of the Southern Humboldt Fire Safe Council to improve the resilience of Garberville and other Southern Humboldt communities to wildfire. The fuel break encompasses a 48-acre area primarily on the east side of Garberville. The Redway Shaded Fuel Break Project (CalVTP) began in 2022 and is a multi-phasic effort comprised of 142 acres of mixed fuel reduction occurring in and around strategic areas of the community of Redway. Phases 1 (ridgetop fuel break) & 2 (defensible space within WUI) are nearing completion, with the final treatment being the application of prescribed fire which requires favorable weather conditions. The final phase, Phase 3, consists of treating the steep slopes adjacent to the commercial business park where crews are limited to manual treatments due to the area being inaccessible to equipment.

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



Battalion 2

Battalion 2 is located in the northern half of 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 Fire Center is also located within the Battalion.

Battalion Resources

Fire Protection within the Battalion is largely made up of volunteer fire departments and CAL FIRE stations, as well as High Rock Fire Center, and Grasshopper Lookout. The volunteer fire departments/stations operating within the Battalion include Petrolia, Honeydew, Miranda, Myers Flat, Redcrest, Fruitland Ridge, and Salmon Creek. Some of these departments are associated with a special district (see below) and others are non-district fire companies.

CAL FIRE Facilities

There are two Fire Stations in Battalion 2. Weott station houses two Type III engines during peak fire season and a full-time Battalion Chief. Mattole Station is seasonal and houses one Type III engine when it is open during staffing levels III and IV (peak staffing). Also, located within the Battalion is High Rock Fire Center and Grasshopper Lookout.

Districts and Municipality

Special districts within the Battalion that provide community fire and rescue services and wildfire response support with volunteer fire departments include, the Petrolia, Fruitland Ridge, Myers Flat, and Rio Dell (including Redcrest and Shively fire stations) fire protection districts, as well as the Miranda Community Services District. These special districts 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 timberland owner. Much of the Humboldt 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 community in the Battalion with several commercial properties as well as residential structures, some of which are 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 and isolation. 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 because of cannabis related activities. HUU is preparing to better track these ignitions to further identify and 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 slopes and ridges. Timber slash can be found in harvest areas. Grazing land can be found in the Petrolia area and much of the Mattole Valley. There is encroachment of Douglas-fir in many 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 rivers in the Battalion include: the Eel and Mattole Rivers. Marine air influence can produce strong and shifting winds, especially in the Mattole Valley

Fire Safe Council / Battalion 2 Support Functions

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. The Fire Safe Council, through its affiliation with the Mattole Restoration Council, also provides defensible space assistance, roadside vegetation treatment, and educational outreach. These activities are coordinated with CAL FIRE and County staff and funded by a variety of sources including CAL Fire, the California Fire Safe Council, PG&E, and fee for service. Petrolia Firewise and Honeydew Firewise are two very active Firewise communities within Battalion 2. Salmon Creek Firewise has been recently certified as a Firewise Community and Cal Fire is currently designing a plan to construct a shaded fuel break within the community.



HUU Battalion 3

Humboldt-Del Norte Unit Battalion 3 is located in the central portion of the Humboldt-Del Norte Unit. 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 lands.

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 (which now includes the Scotia fire station), 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, Sierra-Pacific Industries, 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 CAL FIRE stations in Battalion 3. Fortuna Station houses one Type III engine, one dozer, and a Battalion Chief. Bridgeville Station houses one Type III engine on a seasonal basis. The Rohnerville Air Attack Base and Mount Pierce communications tower are also 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, and a portion of Kneeland and Bridgeville Fire Protection Districts. Carlotta Community Services District provides funding for Carlotta fire protection. Each of these Fire Districts has portions of SRA within 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 timberland owners. 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 a high density of commercial properties and 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.

Significant cannabis cultivation operations exist in the eastern portions of the Battalion. Cannabis growers have been attracted to the area because it is remote with the ideal 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 because of cannabis related activities. 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:

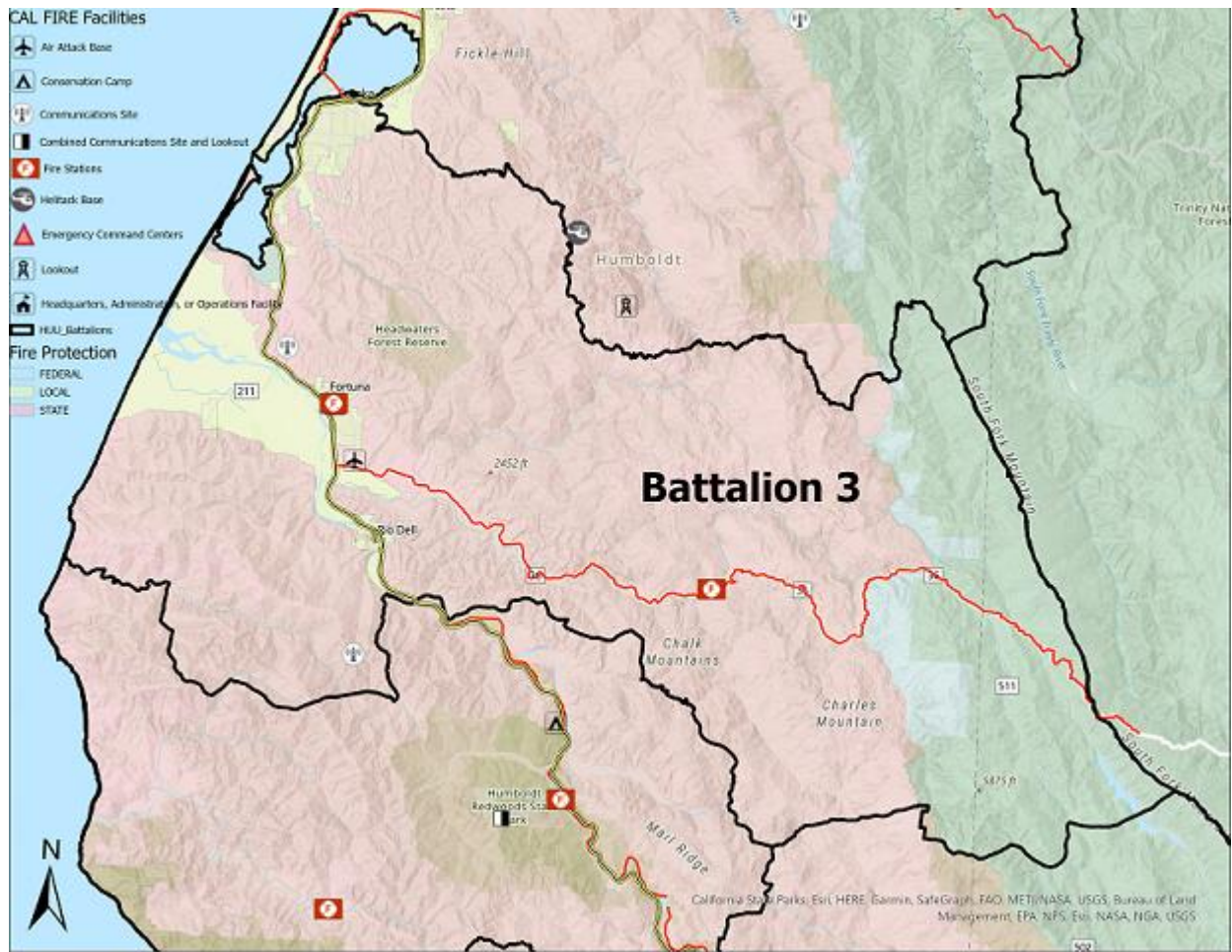
Most of Battalion 3 is comprised of coast redwood and Douglas-fir forests and mixed brush and agricultural land. The east side of the Battalion is mostly a Douglas-fir/oak woodland fuel type, depending on the exposure. Under normal summer high pressure, the fire activity will diminish after dark. The normal wind pattern is a west to northwest direction during the afternoon, and it is common to have a significant upriver wind in the afternoon in the Eel River canyon and Van Duzen River drainage 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 Nevada Foothill vegetation mixed conifer fuel type. It features more open stands of Douglas-fir and mixed conifer species, as well as areas of oak woodland. The understory is grass and brush (*ceanothus*). This area often escapes the fog belt and is much warmer and drier.

The coastal strip area of the Battalion is a redwood and Sitka spruce forest with the biomass equal to or greater than a tropical 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.

Fire Safe Council / Battalion 3 Support Functions

The Humboldt County Fire Safe Council and the Van Duzen Watershed Fire Safe Council cover 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 Watershed Fire Safe Council is active and has successfully obtained fuel reduction grant opportunities in the past. Hydesville and Bridgeville continue the re-building process to become active Firewise communities again.



HUU Battalion 4

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, 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 Protection District operates with paid engine companies and utilizes volunteers to assist with large emergencies. Blue Lake Fire Department is a volunteer department but maintains a paid Fire Chief. The volunteer departments include Kneeland Fire Protection District, Fieldbrook Community Services District, Trinidad City Fire Department, Westhaven Volunteers, Willow Creek Volunteers Fire Protection District, and Orick Community Services District. Hoopa Forestry and the Hoopa Volunteer Fire Department provide fire protection to the Hoopa Valley Indian Reservation, as well as assistance to CAL FIRE on SRA DPA. Green Diamond Resource Company, Humboldt Redwood Company, and Sierra-Pacific industries are industrial timberland companies that have resources available to assist CAL FIRE in fire suppression activities.

CAL FIRE Facilities

There are two CAL FIRE stations and a 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 covering the areas surrounding the city of Trinidad.

Districts and Municipality

There are seven fire related special districts within the Battalion; they are the communities of Kneeland Fire Protection District, Arcata Fire Protection District, Blue Lake Fire Protection District, Fieldbrook, Willow Creek Fire Protection District, and Orick Community Services District. Orleans Somes Bar Community Services District may provide nominal funding for the Orleans Volunteer Fire Department. Each of these Fire Districts has portions of their districts that are SRA. County Service Area 4 is also located within Battalion 4 and services within the district are provided by the CAL FIRE Trinidad Station on a contractual Amador Agreement basis.

Wildland and Urban Interface:

Battalion 4 is largely comprised of private timberland with Green Diamond Resource Company being largest industrial timber landowner. 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 eastern portion 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. 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. 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, hazardous materials, 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, Sitka spruce, Douglas-fir and mixed brush. The east side of the Battalion contains oak woodland as well as mixed conifer fuel types. Under normal summer high pressure, the fire activity will diminish after sunset. The normal wind pattern is a west to southwest push during the afternoon, and there is commonly a significant upriver wind in afternoon up in the Redwood Creek, Klamath River, and Trinity 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. Redwood Creek, Klamath River, and Trinity River run through the central and eastern portions of the Battalion. Mad River runs along the southwestern edge of the Battalion and all watersheds have very steep and narrow canyons.

The interior area of the Battalion is more typical of the Sierra-Nevada Foothill fuel type. It features more open stands of Douglas-fir, as well as areas of a typical oak woodland community. The understory is grass and brush. This interior 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.

Fire Safe Council / Battalion 4 Support Functions

There are three active fire safe councils within Battalion 4; the Humboldt County Fire Safe Council, Willow Creek Fire Safe Council, and the Orleans-Somes Bar Fire Safe Council (sponsored by the Mid-Klamath Watershed 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, Redwood Creek/ Chezem, and Upper Jacoby Creek. The Willow Creek and Orleans-Somes Bar Fire Safe Councils are active and have been successful in obtaining fuel reduction grant opportunities.

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. The Battalion routinely partners with cooperators for fuels reduction projects such as Lack's Creek pile burning with the BLM and the England Ranch VMP that focused on prairie restoration through controlled fire. The Battalion also partners annually with the Cultural Fire Management Council and the Mid Klamath Watershed Council to reintroduce fire to the landscape in a controlled environment for fuels reduction and native plant health.



HUU Battalion 5

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 as well as Bureau of Indian Affairs resources. Battalion 5 borders the USFS Six Rivers National Forest to the east, the Siskiyou/Rogue National Forest to the north at the Oregon border, 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 staffing at CAL FIRE facilities, including Alder Conservation Camp. There are four fire districts and one municipal department that make up the volunteer force. Additionally, National Parks maintains a Type III and a Type VI fire engine seasonally. The California Department of Corrections and Rehabilitation staffs a Type II and a Type III engine 24 hours/day at Pelican Bay State Prison available for local response.

CAL FIRE Facilities

Two seasonal Fire Stations and Alder Conservation Camp are located in Battalion 5. Assigned to Crescent City Station is one Type III engine, a Battalion Chief, and one Forester. Seasonally assigned to Klamath Station is one Type III engine. Red Mountain Lookout was decommissioned in 2021 due to a termination of a long-term land lease with Six Rivers National Forest. The termination of this lease, not at the preference of CAL FIRE, also results in the re-location of state government radio repeaters at a very high financial cost.

Districts and Municipality

There are five Fire Protection Districts within the Battalion; they are the communities of Klamath, Crescent City, Fort Dick, Smith River, and Gasquet. Each of these fire departments has a portion of their district that is in SRA. Crescent City Fire and Rescue 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 timberland holder. State and National Parks, as well as Six Rivers National Forest are also large landowners in the Battalion. There are several small communities with mostly residential structures spread out in the SRA. Crescent City is the largest city 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 northwest direction 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, the Oregon border to the north, and the Six Rivers National Forest to the east. The Smith and Klamath River drainages run east to west within Battalion 5 and have very steep and narrow canyons.

Battalion Fire History:

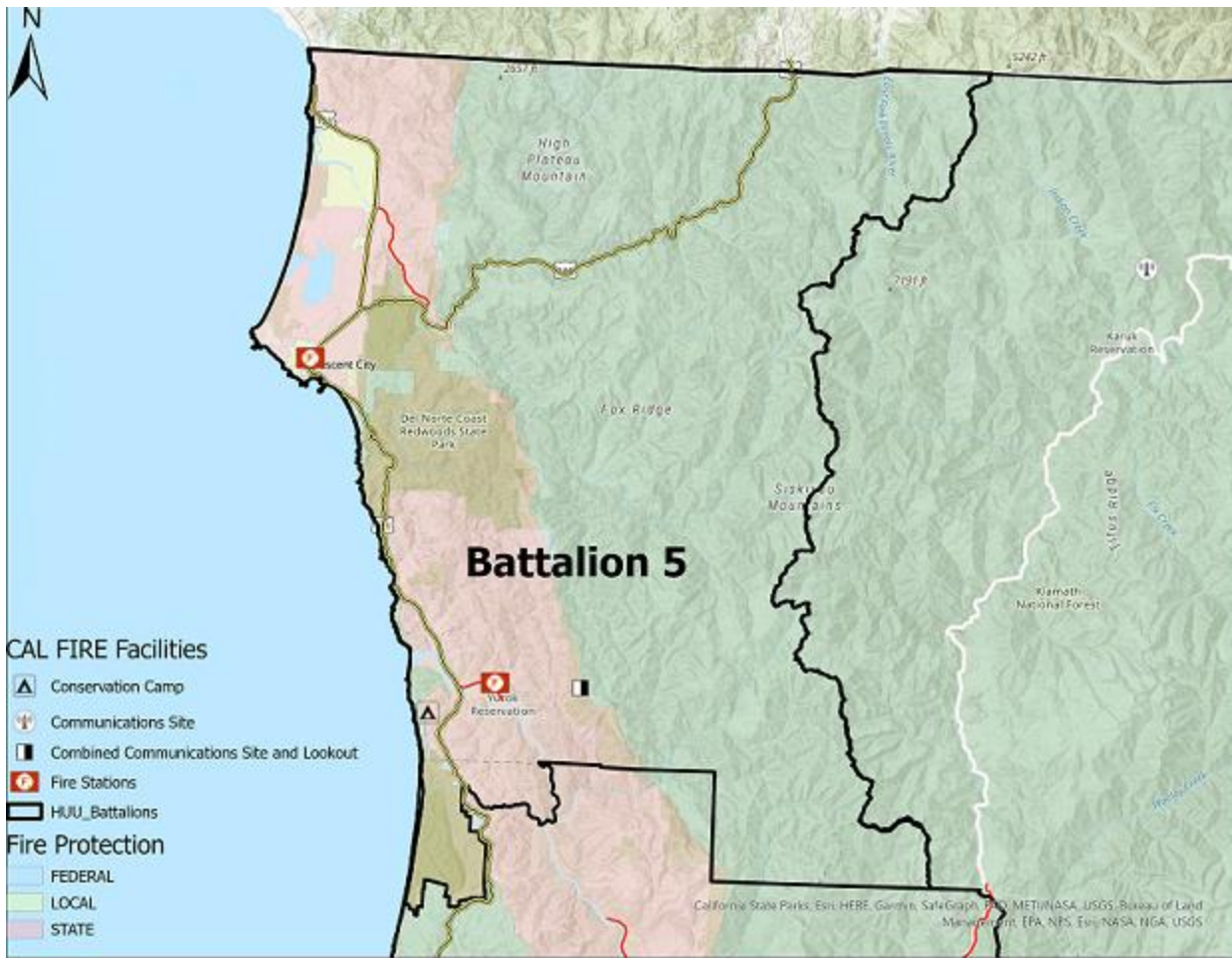
Battalion 5 and Del Norte County have had significant fire history of both lightning and human-caused fires. Most of the fires occur at the end of the summer season and the early part of fall. This trend is due to the heavy fuel loading and the associated seasonal drying finally peaking in the months of September and October leading to conducive burning conditions.

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.

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.

A significant fuels reduction project is ongoing in the Smith River watershed. Much of this project is located within the Six Rivers National Forest and is funded through a Cal Fire grant.



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.

Additional duties of the HUU Training Officer include: facilitation of Basic Firefighter Academies through College of the Redwoods, Unit Substance Abuse Coordinator, Unit RPP/Fit Test Coordinator, participation in the Humboldt County Fire Instructors' Association, and the 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, Del Norte, and Western Trinity, and Northern Mendocino Counties. The Six Rivers National Forest and portions of Shasta/Trinity, Klamath and Mendocino National Forests are also served by the Aviation Program as they are in the direct Initial Attack zone of influence. The response area in which they are responsible for serving is roughly 31 million acres. These aircraft and personnel also serve all the citizens of California when emergencies arise throughout California and southwestern portion of Oregon.



Image 2 Rohnerville Air Attack Base

The Rohnerville Air Attack Base is located southeast of Fortuna at the east end of the Rohnerville Airport (FOT). The base has two firefighting aircraft assigned from June 1st through November 1st. 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 a command-and-control platform to transport an Air Tactical Group Supervisor (Battalion Chief or 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 extinguishing the advancing fire spread.



Image 3 Kneeland Helitack Base

The Kneeland Helitack Base is located next to the Kneeland Airport 12 miles east of Eureka. The helicopter assigned to Kneeland is a Bell UH-1H “Super Huey”. The primary use of the helicopter is for quick, initial attack to suppress new wildland fires. During fire season, the helicopter is staffed with one pilot, two Fire Captains, and five Firefighters. The helicopter is also used for medical emergencies to rescue patients and transport them to a local hospital or air and ground ambulances. CAL FIRE is transitioning its entire UH-1H helicopter fleet to the Sikorsky S70i Blackhawk helicopter. Kneeland’s “CAL FIRE HAWK” helicopter should arrive by the end of 2024 and will be capable of delivering more water to fires at a faster rate with its increased flight speed and tank capacity. The helicopter is supported by Helitender 102 which is staffed by a Fire Apparatus Engineer. Helitender 102 carries 1,000 gallons of Jet A fuel, rescue equipment, and miscellaneous support equipment.



Image 4 Copter 102

In 2022 an “exclusive use” type I helicopter was assigned to Rohnerville Air Attack Base. This helicopter successfully assisted in the suppression of numerous wildfires and is expected to be assigned to the Humboldt/ Del Norte Unit for the 2023 fire season.

The use of these aircraft on emergency incidents to provide quick initial attack response to areas that can take hours for ground resources to make access due to rural and remote areas. Additionally, these aircraft play an extremely important role in supporting CAL FIRE’s goal to keep 95% of California wildland fires to 10 acres or less. At times, Cal Fire aircraft are used in emergency orientation to conduct specialty reconnaissance, provide emergency access to isolated areas, and deliver emergency supplies.

CAL FIRE and the Humboldt-Del Norte Unit's Aviation Program have a positive financial contribution to the County of Humboldt and local businesses. The County of Humboldt directly benefit with landing and fuel flow fees that can range from 25 to 30 thousand dollars per year. The associated expenses that are incurred by the bases provide a wealth of return in minimizing the impacts of wildfires.

In summary, CAL FIRE's Humboldt-Del Norte Unit Aviation Program has benefited from its positive relationship with Humboldt County businesses and the Humboldt County Airport Division. CAL FIRE will continue to utilize both bases at Rohnerville and Kneeland Airports to support the Department's mission to serve and safeguard the people and protect the property and resources of California. Due to the size of the next generation helicopter and the increased number of helicopter personnel, efforts are underway to relocate the Kneeland Helitack Base.

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, public education and outreach, media relations, and utilization of Volunteers in Prevention.

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 and Incendiary Device-Cigarette Matchbook

The fire prevention BC and FCS staff are utilized year-round for assignments to support statewide fire prevention and law enforcement mission. Additional assignments include aiding 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 preliminary origin and cause investigations.

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 participate in site inspections as part of an environmental task force lead by the Humboldt District Attorney's 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.

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. This assistance includes investigation of various misdemeanor and felony incidents.

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 Conservation Camp is located in the southern portion of the Unit just west of Redway and has historically staffed five crews. However, due to the change in social values with criminal incarceration, inmate fire crew availability has diminished. Two crews are currently staffed to provide fire suppression and fuels reduction work at various projects in the Unit. Eel River Conservation Camp works with Humboldt County Roads Department to mitigate road hazards and make improvements to traffic safety. Other project work includes: hazardous fuels reduction, shaded fuel breaks, improving emergency evacuation road access, and maintenance of parks and cemeteries.



Image 5 Eel River Crew working on a shaded fuel break.

Alder Conservation Camp #20

Alder Conservation Camp is the northern most camp in the Unit located to the west of the community of Klamath and currently staffs two fire crews that are available for fires, emergencies, and projects throughout the Unit. Just like Eel River Conservation Camp, Alder has historically staffed five crews, but has lost inmate population due to the change in social values with criminal incarceration. Alder Camp works closely with State Parks, National Park Service, United States Forest Service, local Fire Safe Councils, Bureau of Indian Affairs as well as many other local government and state agencies.



Image 6 Hiouchi Community Fuel Break located above the community prior to work being completed.



Image 7 Alder Camp crew covering piles after clearing understory fuels.

CAL FIRE Fire Center

High Rock Fire Center

High Rock Fire Center is located centrally in the Unit west of Highway 101 near the community of Redcrest. When High Rock Conservation Camp was depopulated of state inmates in December 2020, it then transformed into High Rock Fire Center. The fire crews are available for fire assignments and fuels reduction projects. The fire crew will be staffed for nine months each year, primarily during fire season. For 2023, High Rock Fire Center will be staffed with 80 Firefighter I's to staff two fire crews, seven days a week for nine months per year. When not fighting wildfires, both fire crews are actively engaged in training, facility and equipment maintenance, and forest fuel reduction projects.



Image 8 High Rock FFI hand crew hiking to fireline assignment.

Resource Management Program

Forest Practice Program

The Unit has 12 Forester positions and one Associate State Archeologist position with primary duties including the enforcement of state forest laws and regulations on non-federal lands. The Unit Resource Management staff conducts approximately 1,000 forest practice inspections per year. During these inspections Resource Management staff inspect 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 as well as prompt and adequate correction of violations when they occur.

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.

Timber Harvesting Documents are submitted to CAL FIRE for all commercial timber harvesting operations on non-federal timberlands. Registered Professional Foresters must prepare plans, and licensed timber operators must carry out operations. Interagency review teams review the plans to determine compliance with laws and regulations. Landowners are required to replant after harvesting, if necessary, to meet required stocking standards. A Timberland Conversion Permit is required from the Director of CAL FIRE 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 Timber Harvest Document.
3. Meeting the appropriate tree 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

Forest Landowner Assistance

The Unit helps administer 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 forest and community issues related to pre-fire fuels treatment, forest health, erosion control, and water quality issues.

CAL FIRE 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 benefit the quality of life for the residents of Humboldt, Del Norte, and Trinity counties. This includes prescribed burning to help maintain the Native American cultural values, practices, and settings.

Sudden Oak Death Areas

Scattered throughout the Unit are areas of Sudden Oak Death (SOD) infestation. At times, these areas become priorities for fuel treatment to check expansion of the disease and also reduce fuels buildup. Infected areas can become a priority for fuels treatment along roads and near communities due to safety reasons. While SOD can increase hazardous forest fuel conditions, it has not presented adverse effects on fire behavior in the Humboldt-Del Norte Unit. Attempts to contain SOD have largely been abandoned due to the lack of effective containment of SOD and a lack of public interest.

APPENDIX A: PRE- FIRE PROJECTS through 5/01/23

<u>TYPE</u>	<u>PROJECT NAME</u>	<u>STATUS</u>	<u>ACRES</u>
Cal VTP	Redway SFB	Active	20.16
VMP	Eaton Roughs 19 VMP	Active	601.28
VMP	England 19 VMP	Active	54.02
VMP	French Ranch 18 VMP	Active	527.71
VMP	Hunt Ranch 19 VMP	Active	564.37
VMP	Lone Star Ranch 18 VMP	Active	936.66
VMP	Mountain View 19 VMP	Active	145.61
VMP	GDRCo Williams Ridge 22 VMP	Planned	
Fire Plan	Blue Lake Levee	Active	32.45
Fire Plan	Building Capacity through the Humboldt County Prescribed Burn Association	Active	
Fire Plan	C-212 Fuels Reduction	Active	77.41
Fire Plan	CDFW FUELS REDUCTION	Active	81.81
Fire Plan	Cultural Fire Climate Project Hwy 169	Active	2,490.01
Fire Plan	CWPP Phase III: Fire-adapted Landscapes And Safe Homes	Active	
Fire Plan	CWPP Phase IV: Wildfire Preparedness	Active	1.35
Fire Plan	Gasquet SFB	Active	202.32
Fire Plan	Green Diamond Fuels Reduction	Active	166.18
Fire Plan	Humboldt County Prescribed Burn Association	Active	730.54
Fire Plan	Humboldt RCD	Active	51.65
Fire Plan	HUMBOLDT REDWOOD CO FUELS REDUCTION	Active	104.22
Fire Plan	HUU Fuels Reduction	Active	284.64
Fire Plan	Increasing Pace and Scale of Fuel Reduction in Humboldt County	Active	112.44
Fire Plan	Orick Levee FR	Active	221.46
Fire Plan	Phase II - CWPP Implementation	Active	
Fire Plan	Redwood NPS Fuels Reduction	Active	4,298.13
Fire Plan	RNP Bald Hills Rd SFB	Active	1.05
Fire Plan	RNP Davidson FR	Active	83.25
Fire Plan	RNP Howland Hill SFB	Active	9.96
Fire Plan	RNP Little Bald Hills FR	Active	5.34
Fire Plan	RNP RX	Active	1,144.37
Fire Plan	Ruth Lake Fuel Reduction	Active	209.51
Fire Plan	Smith River Collaborative Gasquet Community Protection Project	Active	1.18
Fire Plan	SRF Hiouchi/Low Divide/Big Flats Units	Active	132.33
Fire Plan	SRF HUU Air Curtain Burner	Active	
Fire Plan	SRF Little Jones Creek Project	Active	99.02
Fire Plan	State Parks Fuel Reduction	Active	2,580.85
Fire Plan	Western Klamath Community Engagement and Wildfire Risk Mitigation	Active	4.62
Fire Plan	Willow Creek Storm Recovery and Fuel Hazard Reduction	Active	18.95
Fire Plan	Bear Canyon SFB	Cancelled	
Fire Plan	Caltrans Alder South SFB	Complete	63.65
Fire Plan	Sponsor Fuels Reduction	Complete	9.77

Fire Plan	StateLine_FuelBreak	Complete	50.87
Fire Plan	Blue Lake Levee	Complete in Maintenance	32.45
Fire Plan	Orick Levee FR	Complete in Maintenance	221.46
Fire Plan	BLM Prosper Ridge Pile Burn	Complete in Maintenance	704.71
Fire Plan	Bridgeville FR	Complete in Maintenance	58.17
Fire Plan	Cathey Road Shaded Fuel Break	Complete in Maintenance	21.29
Fire Plan	Dyerville Loop Rd Fuel Reduction	Complete in Maintenance	186.28
Fire Plan	Elk Ridge SFB	Complete in Maintenance	150.28
Fire Plan	HUU TREX Assists	Complete in Maintenance	945.17
Fire Plan	Riverside Park SFB	Complete in Maintenance	43.04
Fire Plan	Shelter Cove RIDD	Complete in Maintenance	19.26
Fire Plan	Westhaven CSD FR	Complete in Maintenance	5.77
Forest Health	BLM Fuels Reduction	Planned	
Forest Health	California Forest Shared Stewardship Support Program	Active	3,952.44
Forest Health	Hoopa Valley East Viewshed Cultural Treatment and Prescribed Burn	Active	1,807.16
Forest Health	Improving Forest Health in the Yurok Community Forest and Salmon Sanctuary	Active	4,022.50
Forest Health	King Range Forest Health and Community Protection	Active	1,330.45
Forest Health	Lacks Creek Management Area Landscape Restoration	Active	1,570.12
Forest Health	Mattole and Salmon Creek Forest Health and Wildfire Resilience Project	Active	2,191.14
Forest Health	Pine Creek Watershed Forest Health Project	Active	2,754.29
Forest Health	Redwoods Rising Phase I Project	Active	2,328.60
Forest Health	Redwoods Rising Phase II	Active	1,268.77
Forest Health	Travis Ranch Fire Recovery and Forest Health Improvement Project	Active	2,582.67
Forest Health	Western Klamath Landscape Fuels Reduction and Forest Health Project	Active	8,924.35
CFIP	Redwoods to the Sea Corridor Forest Resilience Project	Complete	488.30
CFIP	Hohman CFIP 2022	Active	23.94
CFIP	Hohman CFIP 2023	Active	23.94
CFIP	Jones CFIP 2020	Active	136.62
CFIP	Walker Trust 2021 CFIP	Active	26.72
CFIP	Barkdull Management Plan	Complete	3,860.78
CFIP	Boak Management Plan	Complete	350.64
CFIP	Firehorse LLC CFIP 2022	Complete	167.57

CFIP	French Management Plan	Complete	2,913.78
CFIP	Goodrow Management Plan	Complete	361.98
CFIP	Karen M Kahn Trust 2020 CFIP	Complete	27.58
CFIP	Lima 2021 CFIP	Complete	66.67
CFIP	Maple Creek Ranch Management Plan	Complete	1,055.70
CFIP	Massei CFIP 2021	Complete	273.55
CFIP	Miller Management Plan	Complete	1,641.49
CFIP	Moeller CFIP 2022	Complete	39.44
CFIP	Newman CFIP 2022	Complete	674.17
CFIP	Nichols Management Plan	Complete	1,076.00
CFIP	North Coast Land Management LLC Plan	Complete	486.56
CFIP	Silver CFIP Management Plan	Complete	143.42
CFIP	van Eck Management Plan	Complete	2,203.29
		Total	67,281.65

APPENDIX B: UNIT GOALS AND OBJECTIVES

Statewide targets for treatments and inspections include: 45,000 combined acres of prescribed burning and fuels reduction, and 250,000 defensible space inspections are targeted. We have done well on broadcast burning and fuels reduction treatments, however, due to the limited number of available hand crews and a busier fire season, HUU did see a decrease in our completed acres for fuels reduction. Not all treatment acres are created equal and acres treated in HUU are about the most difficult in the state due to heavy fuel loads and complex topography. Unit Management staff expects a substantial amount of engine company and hand crew hours will be dedicated to completing this work.

HUU is not likely to meet the D-space targets this year due to a low number of defensible space inspectors and the rural area that we live in. Locked gates and houses spread far apart pose a challenge to completing a set number of inspections. It is the goal of the CAL FIRE Humboldt-Del Norte Unit to effectively contribute to the achievement of those targets.

Prescribed Burning Goals:

- To have an active and successful prescribed burn program in HUU, through VMP/VTP and cooperative burning.
- To increase our burn effectiveness by leveraging staff time with interested participants to achieve wildland management objectives.
- To develop our internal capacity for burning, while providing expertise and assistance to others who wish to burn.
- To not present an unnecessary impediment to successful burning – being part of the solution, not part of the problem.
- To implement and facilitate applying the right fire, at the right place, and at the right time.

HUU will effectively collaborate with other agencies, Fire Safe Councils, public organizations, private landowners, and Firewise communities to develop fuels reduction projects and prescribed fire opportunities that benefit the public and result in effectively reducing risk and loss during a wildland fire. This includes collaboration with partners to implement the Community Wildfire Protection Plan priorities described in Appendix C.

The HUU Planning Battalion intends to serve as a resource for agencies, tribes, organizations, fire departments, and communities across the Unit who are working toward a common goal: reduce impact to lives, property, and resources from wildland fire by planning and maintaining communities in a way that is compatible with our natural surroundings.

One of the targets of the HUU Planning Battalion is to attempt to reach beyond the fire service by involving homeowners, community leaders, planners, developers, and others in the effort to protect life, property, and natural resources from the risk of

wildland fire - before a fire starts.

The HUU 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.

In HUU, CAL FIRE Battalion Chiefs are to present an annual Battalion Fire Prevention Plan for their Battalion as another source for projects. In their fire prevention plan, they identify areas within their Battalion they feel would benefit from a VMP or VTP, whether it be a prescribed burn or fuel break.

Example from 2022 HUU Battalion 3 Fire Prevention Plan

Battalion 3 personnel will work with local fire departments, landowners, fire safe councils, and the Planning Battalion to identify, support, and implement fuel reduction projects and prescribed burns.

2023 Goals

- Expand the B3 VMPs and continue to meet the goals of B3 property owners.
- Work with and support the Humboldt County Prescribed Burn Association.
- Work with the Yager Environmental Stewardship group for additional VMPs.
- Identify additional projects in collaboration with local communities/groups and the Planning Battalion around the areas of Hwy 36.
- Encourage and support the development of additional Firewise Communities and the formation of Fire Safe Councils.
- Engage in roadside vegetation clearance activities in the areas with the most ignitions (see ignition analysis).

APPENDIX C: COMMUNITY WILDFIRE PROTECTION PLANS

Humboldt County Community Wildfire Protection Plan

The Humboldt County Community Wildfire Protection Plan (CWPP) was updated in 2019, following a two-year collaborative process led by the Humboldt County Fire Safe Council (HCFSC) partially funded by CAL FIRE. In addition to the broad range of fire protection and prevention entities represented by the HCFSC, the CWPP update process included extensive communication and coordination with local fire departments and fire safe councils, state and federal agencies, personnel from various county departments, and the general public.

As the final step in the update process, the Board of Supervisors, HUU CAL FIRE, and Humboldt County Fire Chiefs' Association certified that the CWPP meets the criteria of the Healthy Forest Restoration Act (HFRA), which requires that CWPPs be developed collaboratively, prioritize fuel reduction projects, and recommend measures to reduce the ignitability of structures.

Updated every five years, the Humboldt County CWPP is now in its third edition. Since 2006, the CWPP has served as the guiding document for the work of the HCFSC and has been an excellent tool for planning and securing funding for numerous projects that have helped local residents and community groups prepare for the impacts of wildfire. The Humboldt County CWPP can be accessed online: <https://humboldt.gov/FirePlanFinal>.

Project Identification

The CWPP includes a GIS database of projects that is continually updated as stakeholders work together to develop and implement projects. Many of the projects have been identified with the assistance of CAL FIRE staff and the HCFSC with input from several other local, state, and federal partners. A large portion of the potential projects were identified by community members. During each update of the CWPP, community workshops are held, in part, to provide the opportunity for residents to identify potential projects for incorporation into the database and to gather local knowledge of risks, hazards, assets, and community values. The CWPP WebGIS Portal is maintained by the County of Humboldt and can be accessed online: https://webgis.co.humboldt.ca.us/HCEGIS2.6_CWPP.

The Portal and associated GIS database is referenced by HUU CAL FIRE when developing projects and by the HCFSC when prioritizing projects for funding. When combined with other data layers such as Fire Hazard Severity Zones, building density, potential evacuation routes, and/or ignition probability, the community and agency partner identified projects can provide a powerful visualization of areas with the greatest need for treatment.

Current Implementation Projects

County Sponsored Projects

The County of Humboldt, on behalf of the HCFSC, administers several grant programs that support projects designed to advance the goals of the CWPP. The County and HCFSC will work with local planning partners over the coming year on successfully completing the projects listed below. County staff and other partners are also actively seeking funds to support CWPP Implementation Phase V; additional project work that will expand on the current funded activities. This phase of work will incorporate lessons learned from past phases and include more defensible space assistance and chipper day opportunities primarily in Shelter Cove and the greater Southern Humboldt area. More partners have signed on to directly support this project than any of the previous phases. Exercising and expanding key partnerships through implementation will build project planning and execution capacity within Humboldt County and support the continued establishment of a network of wildfire mitigation practitioners who know how to work together toward mutual goals.

CWPP IMPLEMENTATION PHASE II: DEFENSIBLE SPACE ASSISTANCE, CHIPPER DAYS, AND ROADSIDE CLEARANCE

This program, funded by both the CAL FIRE Fire Prevention Grants Program and the California Fire Safe Council (CAFSC) Grants Clearinghouse Fire Prevention Program, models a comprehensive approach to wildfire mitigation in at-risk communities that can be learned from, refined, and replicated in new priority areas throughout the county with future funding. The program funds roadside clearance, defensible space assistance for eligible residents, and free chipping services to neighborhoods across the county. In addition, two new Firewise communities: Benbow and Salmon Creek were established with assistance from this program. This grant also supported the development of the [Preparing Your Home for Wildfire](#) Brochure in partnership with University of California Cooperative Extension which can now be used as a key resource for educational outreach to Humboldt county residents.

CWPP IMPLEMENTATION PHASE III: FIRE-ADAPTED LANDSCAPES AND SAFE HOMES PROGRAM

The Fire-adapted Landscapes & Safe Homes Program, better known as "FLASH", is a cost share program designed to help property owners lower their risk to wildfire by reducing flammable vegetation around their homes and along key access routes. This grant-funded program has been active intermittently since 2010 and has helped reduce hazardous vegetation on hundreds of acres across Humboldt County. Funding from this grant has also supported an update to the [FLASH Home Risk Assessment](#) tool which is used by FLASH Technicians to educate participants about what they can do to reduce wildfire risks within the home ignition zone, including the structure. This tool is being shared widely and is designed to provide enough detail for a property owner to assess their own home without assistance if necessary. The County is continuing to refine and expand the program with the aid of additional funding awarded by CAL FIRE and the California Fire Safe Council (CAFSC) in 2021. Funds granted by the CAFSC will in part be used to connect FLASH participants with their local Prescribed Burn Association and provide burn planning services.

Collaborative Projects

CAL FIRE works closely with the HCFSC, local fire safe councils, and other community partners to further refine and implement community-identified projects stored in the CWPP WebGIS database. The Redway Fuels Reduction Project—a collaboration between CAL FIRE and the Southern Humboldt Fire Safe Council—is one such example. This multi-phased project, utilizing the CalVTP EIR will include mechanical and prescribed fire treatments to create a fuel break around the community of Redway. CAL FIRE staff will provide material resources and help secure environmental clearance; SHFSC is tasked with earning landowner buy-in and informing the project with history and local knowledge of the area. The successes of these planning efforts have attracted participation by additional landowners and the Humboldt County Resource Conservation District and have inspired the planning partners to expand their efforts to include development of a community fuel break around Garberville that is expected to be completed by end of 2022.

Local Community Wildfire Protection Plans

Within the county's 14 countywide CWPP planning units, there are several local fire safe councils that utilize their own local Community Wildfire Protection Plans in addition to the Planning Unit Action Plan for their Unit included in the countywide CWPP; these include:

- Mattole-Lost Coast Planning Unit: Lower Mattole Fire Safe Council
 - Lower Mattole CWPP: <https://humboldt.gov/LowerMattoleCWPP>
- Willow Creek Planning Unit: Willow Creek Fire Safe Council
 - Willow Creek Greater Area CWPP: <https://humboldt.gov/WillowCreekCWPP>
- Mid Klamath Planning Unit: Orleans Somes Bar Fire Safe Council
 - Orleans Somes Bar CWPP: <https://humboldt.gov/OrleansSomesBarCWPP>

The Planning Unit Action Plans (Part 4 of the countywide CWPP) serve as the primary guiding document for all Units without a local CWPP. Each Planning Unit Action Plan includes a brief introduction to the planning area, discusses its wildfire environment, community preparedness, wildfire-protection capabilities, evacuation issues and options, and concludes with a list of “Priority Action Recommendations”. The Planning Unit Action Plans and associated GIS data are considered live documents and can be refined over time as projects are completed and new ones are developed.

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. In 2020, the Del Norte Fire Safe Council with the assistance and cooperation of many organizations and agencies, including Cal Fire, completed the 2020 Del Norte CWPP update.

2020 Del Norte CWPP

Trinity County

The Trinity County Fire Safe Council holds monthly meetings addressing the various projects, and plan processes that they are involved in. Trinity County CWPP was reviewed and updated in 2020. HUU staff provided an advisory role during the update process. The link below will allow review of the Trinity County CWPP update.

2020 Trinity CWPP

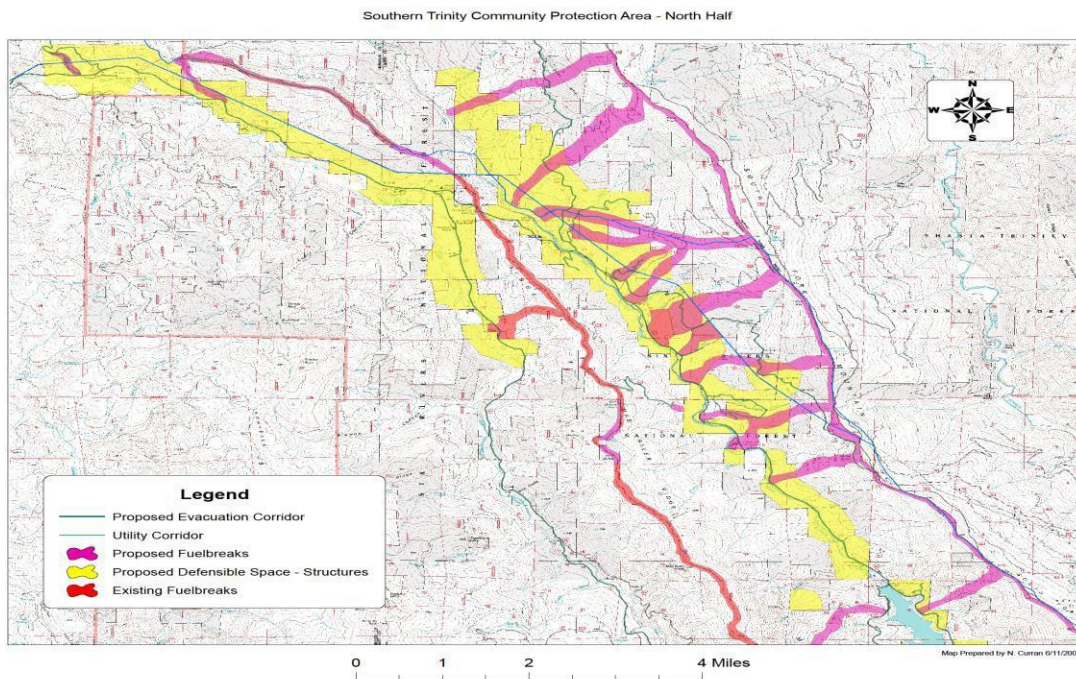


Image 9 The above map depicts identified projects in the southern Trinity County area.

APPENDIX D: ANNUAL FIRE SEASON REPORT

<u>2022 Large Fires (greater than 10 acres)</u>	
Fire Name	Acres
Ranch	26
Sylvandale	21.4
McCovey	21
Canyon	17.1
Total	85

2022 HUU Fire Prevention and Law Enforcement Activities:

- Defensible Space Inspections (DEFENSIBLE SPACE) = 4,613
- Public Education Contact Hours= 201
- Arson Arrest and other Arrests = 2
- Citations (Public Resources Code, Penal Code, Health and Safety Code, California Vehicle Code) = 6
- Fire Investigations: 27

2022 Aviation Statistics:

Kneeland Helitack Base-

- Helicopter 102 incident responses: 113
- Helicopter 102 flight hours: 32.9
- Helicopter 909 flight hours: 204.6
- Alternate aircraft flight time: 55
- Combined total flight hours: 292.5
- Gallons of water dropped on incidents: 199,717
- Helitender 102 support miles driven: 12,870
- Fire Hours: 83
- Medevac/Air Rescue hours: 15.9
- Helitorch Gallons: 2,300
- Aerial Ignition Balls Dropped: 4,445

Exclusive Use Helicopter C-93HT

- Helicopter 93HT flight hours: 72.7
- Helicopter 93HT gallons of water & agent dropped: 472,444

Rohnerville Air Attack Base-

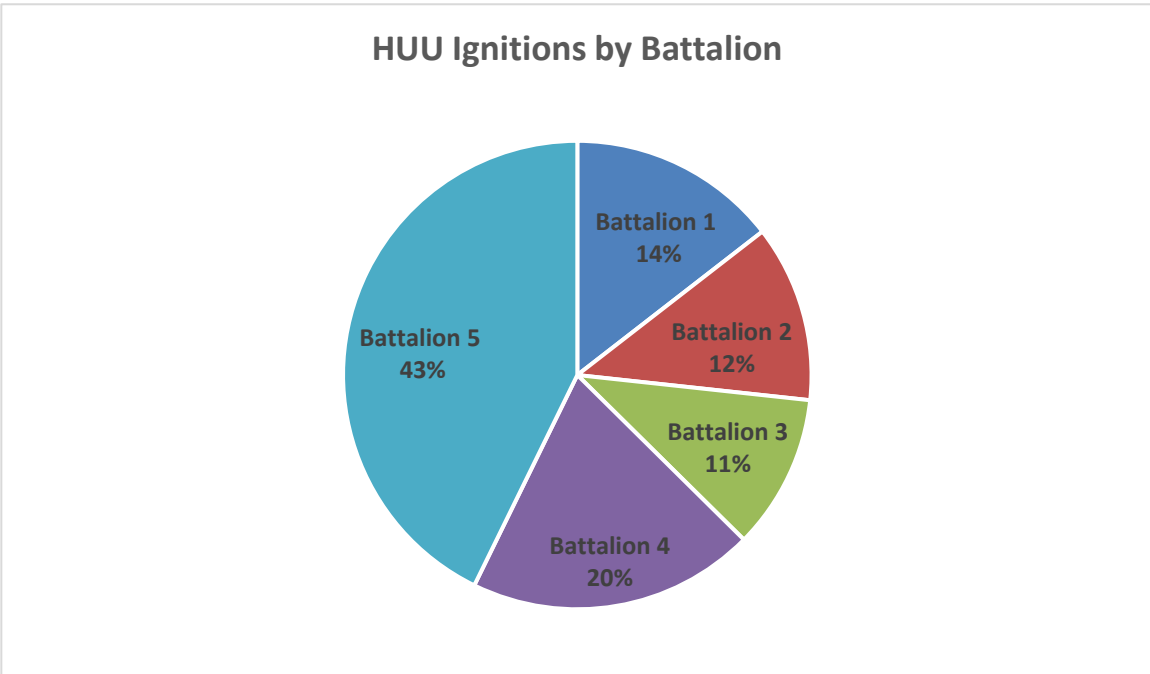
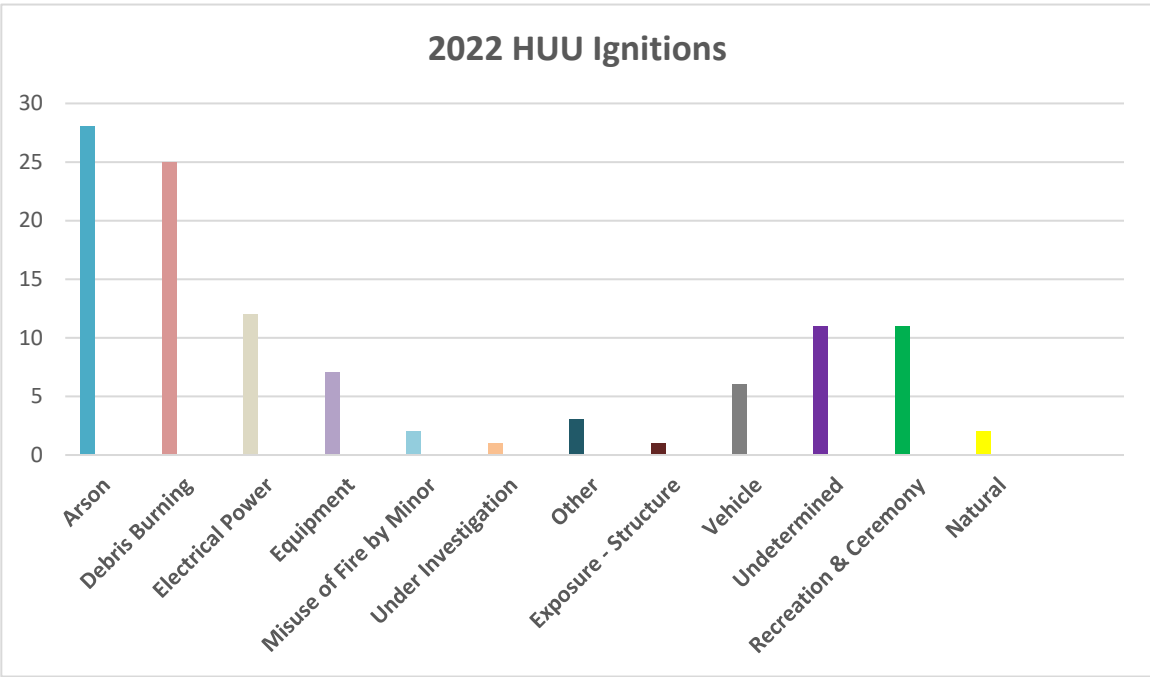
- Air Attack 120 flight hours on incidents: 150.07

- Tanker 96 flight hours on incidents: 85.14
- Flight hours from alternate aircraft: 86.05
- Combined total flight hours flown: 321.26

Fire suppression activities have a major influence on fire size and initial attack success. The 2008 to 2021 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
2016	98	201	206	5	1/1 - 12/31	6/01 - 11/7	5/19 - 11/14	7/1 - 11/7
2017	97	182	187	5	1/1 - 12/31	7/10 - 11/5	5/1 - 11/20	7/10 - 11/3
2018	99	206	208	2	1/1 - 12/31	6/11 - 12/10	4/16 - 12/9	7/2 - 12/10
2019	99	153	154	1	1/1 - 12/31	7/1 - 12/8	5/20 - 12/8	7/22 - 12/8
2020	98	162	165	3	1/1 - 12/31	6/15 - 12/20	5/25 - 12/20	6/29 - 11/9
2021	97	105	108	3	1/1 - 12/31	6/21 - 12/27	05/03 - 12/31	7/1 - 10/19
2022	97	127	131	4	1/1 - 12/31	6/13 - 11/21	04/18 - 11/21	7/1 - 10/19

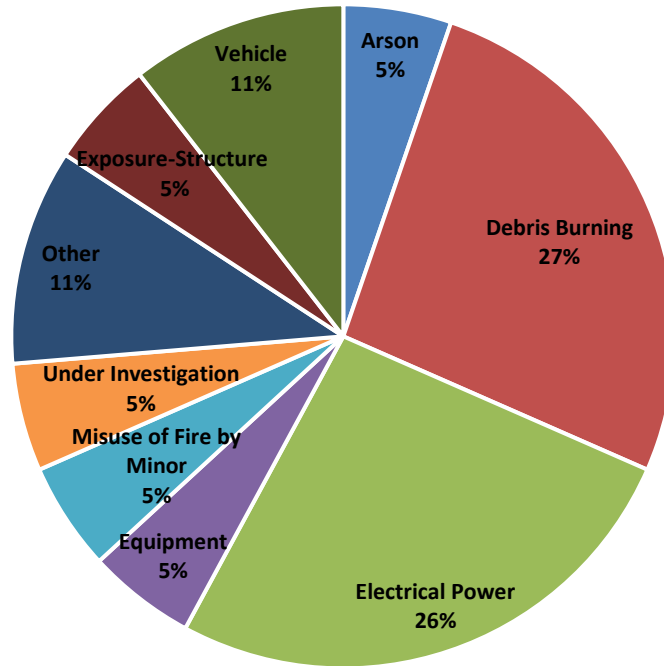
Initial attack success, ignition, and fire size data was derived from the FRAP ignitions database. It is based upon data extracted from the CAIRS (2008 to 2018) and CALFIRS (2019 to present) fire reporting systems, as well as the Computer Aided Dispatch (CAD) system for location data. Staffing dates were derived from station logs.



	Total
Battalion 1	19
Battalion 2	16
Battalion 3	14
Battalion 4	26
Battalion 5	56
Grand Total	131

2022 Battalion 1

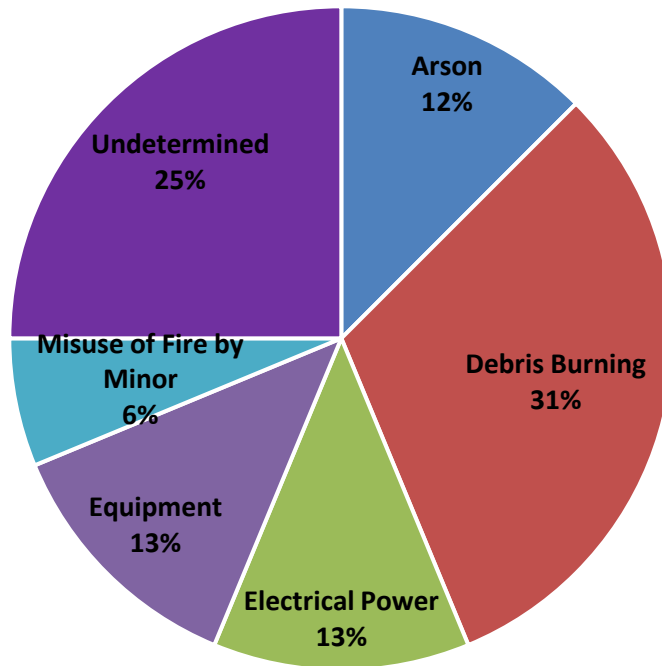
Battalion 1 2022 Fire Ignition Cause



Cause	Total
Arson	1
Debris Burning	5
Electrical Power	5
Equipment	1
Misuse of Fire by Minor	1
Under Investigation	1
Other	2
Exposure-Structure	1
Vehicle	2
Grand Total	19

2022 Battalion 2

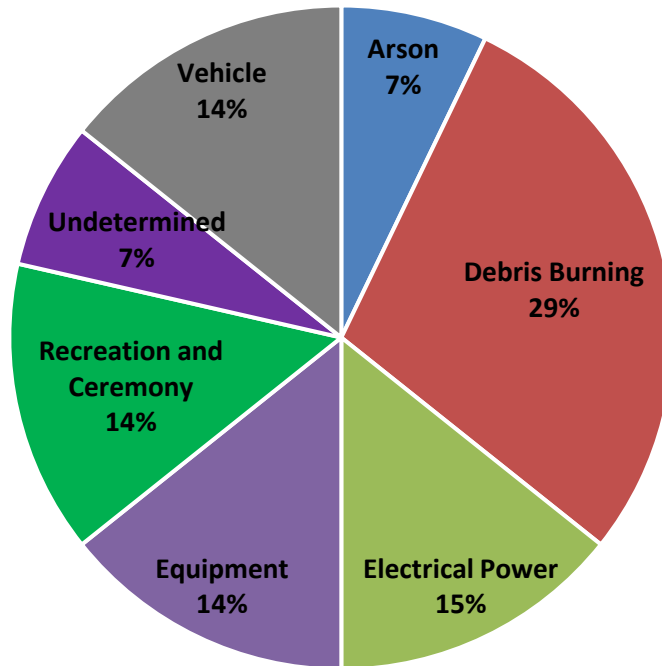
Battalion 2 2022 Fire Ignition Cause



Cause	Total
Arson	2
Debris Burning	5
Electrical Power	2
Equipment	2
Misuse of Fire by Minor	1
Undetermined	4
Grand Total	16

2022 Battalion 3

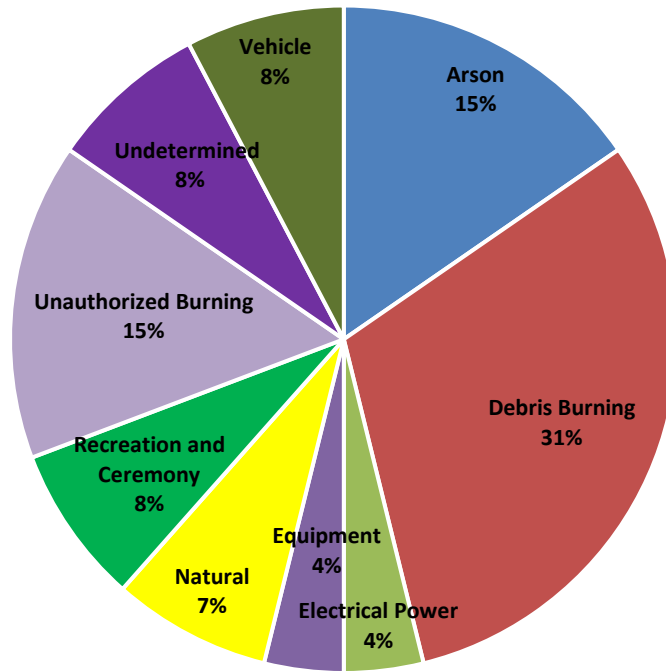
Battalion 3 2022 Fire Ignition Cause



Cause	Total
Arson	1
Debris Burning	4
Electrical Power	2
Equipment	2
Recreation and Ceremony	2
Undetermined	1
Vehicle	2
Grand Total	14

2022 Battalion 4

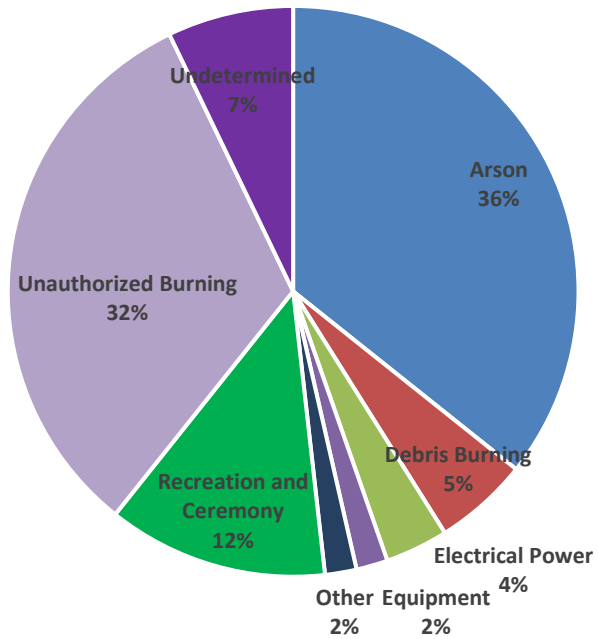
Battalion 4 2022 Fire Ignition Cause



Cause	Total
Arson	4
Debris Burning	8
Electrical Power	1
Equipment	1
Natural	2
Recreation and Ceremony	2
Unauthorized Burning	4
Undetermined	2
Vehicle	2
Grand Total	26

2022 Battalion 5

Battalion 5 2022 Fire Ignition Cause

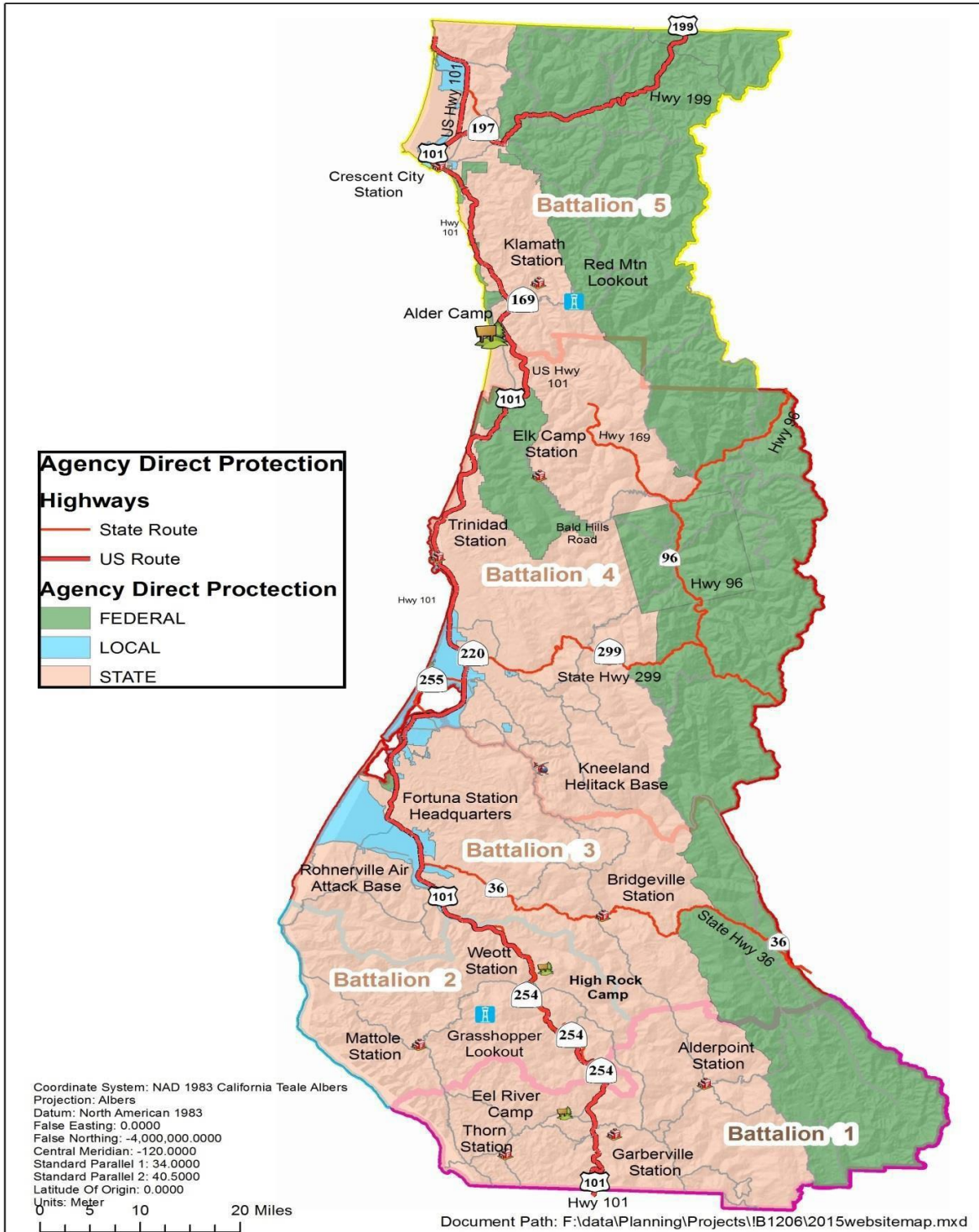


Cause	Total
Arson	20
Debris Burning	3
Electrical Power	2
Equipment	1
Other	1
Recreation and Ceremony	7
Unauthorized Burning	18
Undetermined	4
Grand Total	56

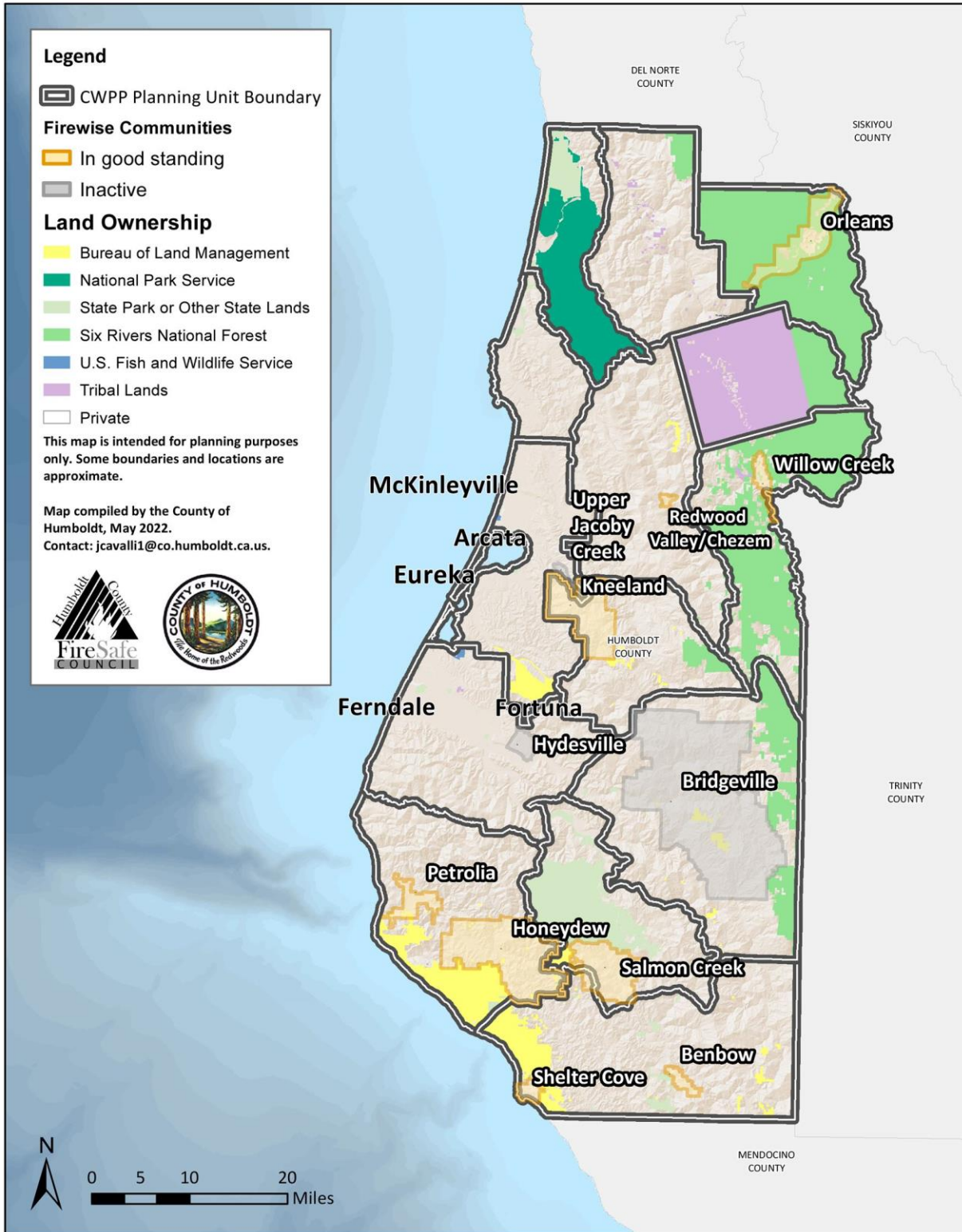
APPENDIX E: MAPS

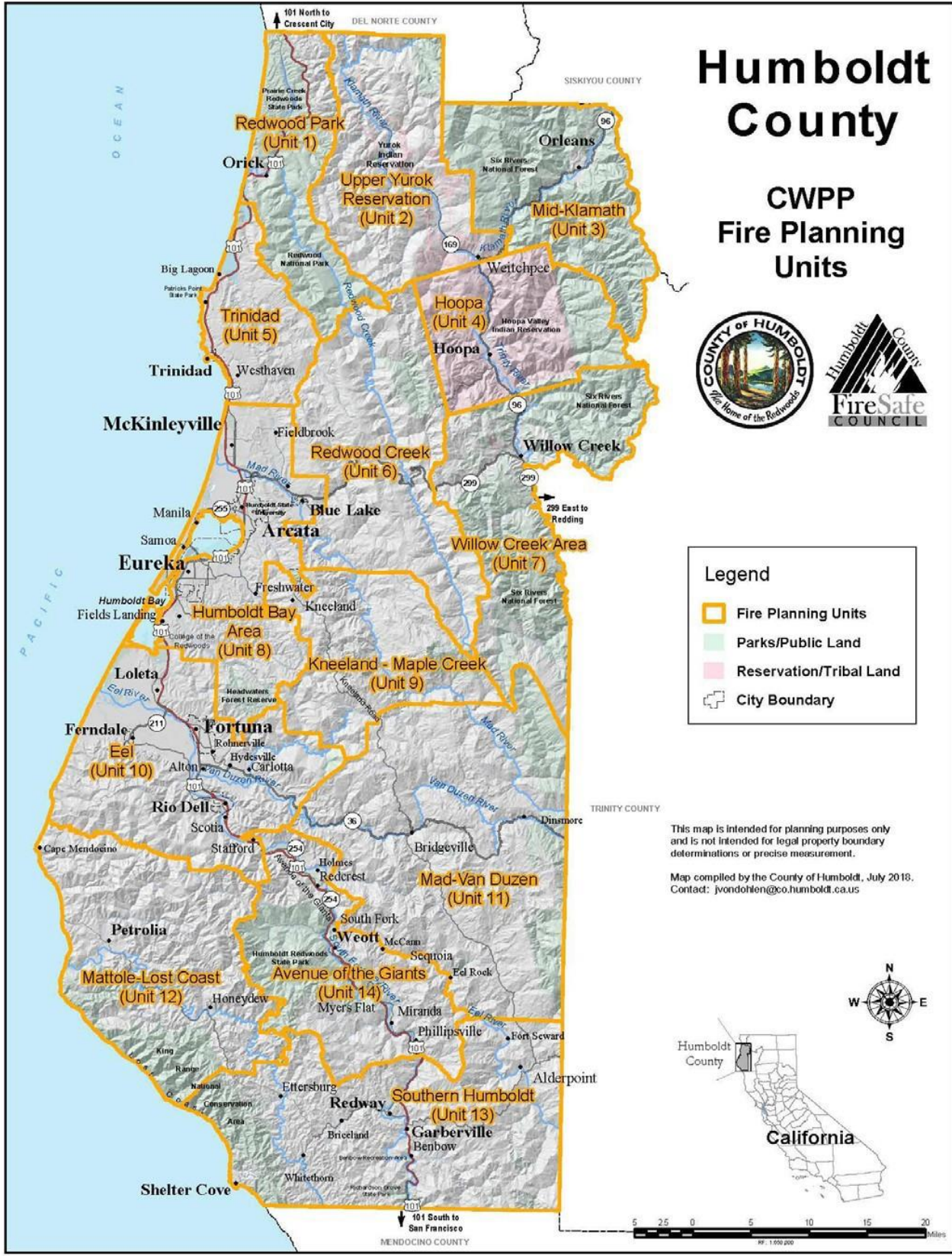


Humboldt-Del Norte Unit Agency Direct Protection

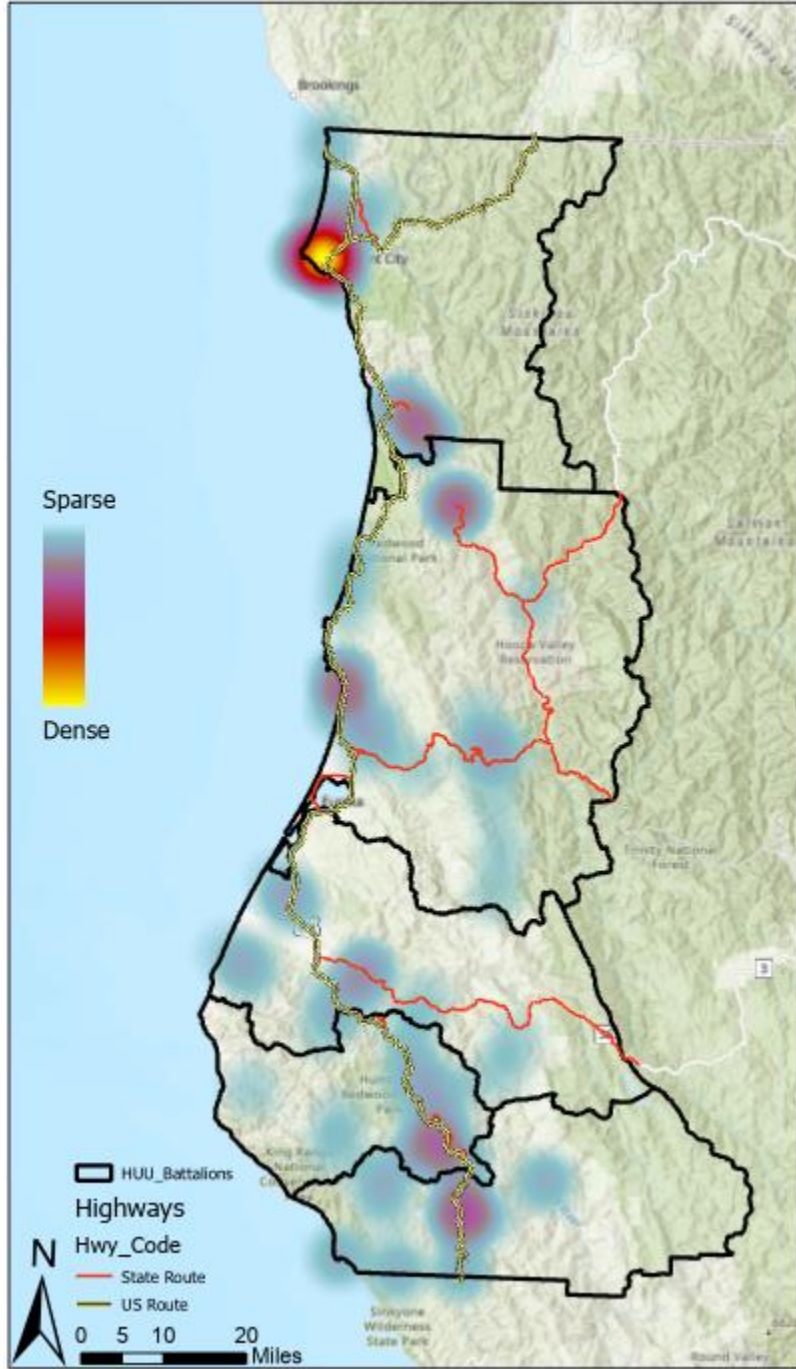


HUMBOLDT COUNTY FIREWISE COMMUNITIES





Unit Ignitions: 2022



ANNUAL ACCOMPLISHMENTS REPORTING 2022

Humboldt-Del Norte Unit fuels reduction projects are identified through the Unit Fire Plan, Humboldt County Community Wildfire Protection Plan (CWPP), Firewise Community Action Plans, Fire Safe Councils, and through collaboration with the California Conservation Corps (CCC). In addition to the CAL FIRE fuel reduction projects, the Unit also collaborates with Humboldt County Resource Conservation District, local Fire Safe Councils, various nonprofit organizations, and other local agencies to provide non-monetary match contributions for their grant funding or other fire-and-safety program support. These activities included fuel treatments, public outreach and education, presentations to the County Board of Supervisors, public meetings for CWPP updates, and support of local Fire Safe Council CWPP development.

Fuels Reduction Projects

In 2022, HUU completed 2,604 acres in fuel reduction treatments, 2 acres in fuel breaks, 17 acres in Right of Way Clearance, and 5,713 acres using prescribed fire. This amounted to a total of 8,371 treated acres.



Image 10 Garberville Shaded Fuel Break Project 2021-22.

Completed in 2022 is the Garberville Shaded Fuel Break. The town of Garberville is a hub for Southern Humboldt rural farming and ranching communities. Having a “High” and “Very High” classification for fire risk on FRAP’s “Fire Hazard Severity Zones in SRA” map and identified for fuels treatments in the Humboldt County Community Wildfire Protection Plan, treatment locations were identified to provide valuable preemptive fire fuels reductions. Treatments focus on providing defensible space around community assets and

fortifying potential suppression ridges by removing dead, diseased, dying, decadent or dense trees, chaparral, and grass species.

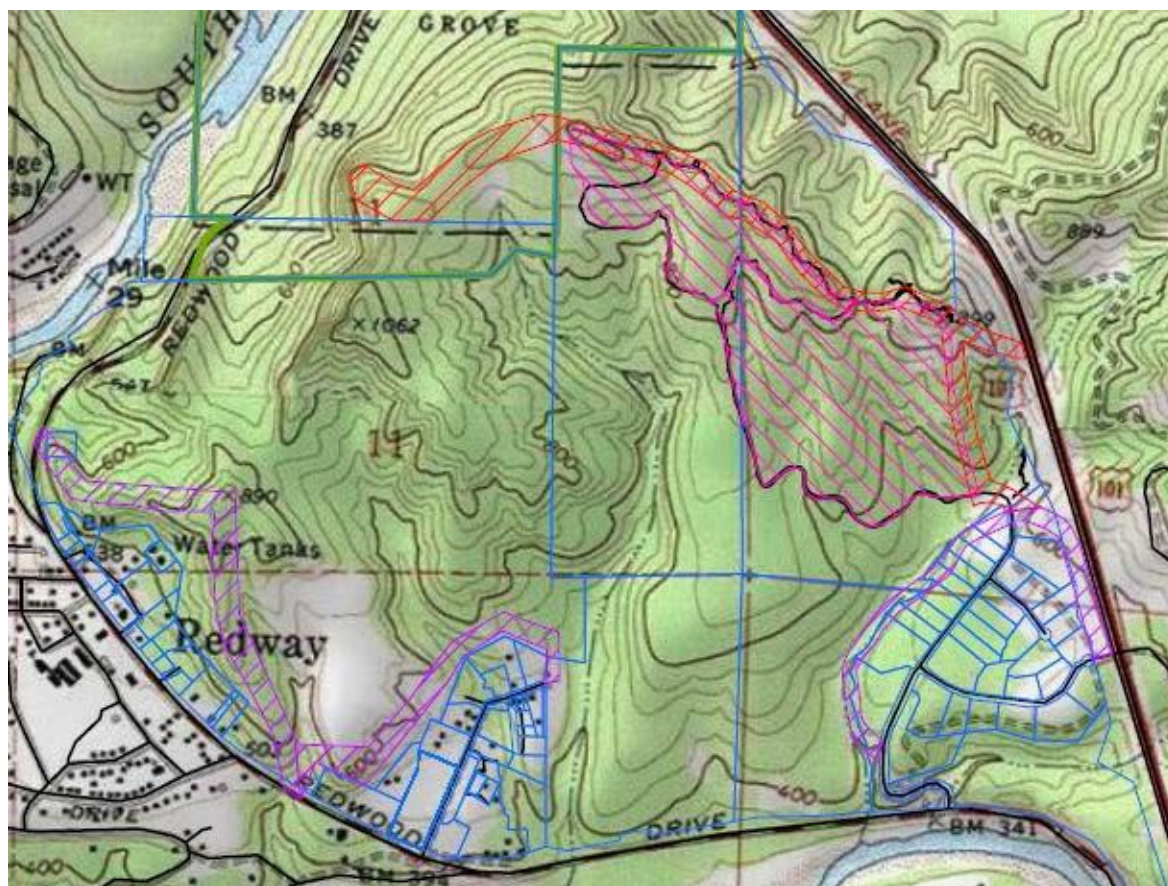


Image 11 Redway Shaded Fuel Break Project 2022-24

Nearly completed in 2022 is the Redway Shaded Fuel Break project. This project is the first project in HUU using the new Statewide Vegetation Treatment Programmatic Environmental Impact Report (Cal VTPEIR). The project combines treatment options which includes a ridge-line shaded fuel break, WUI fuel reductions, and prescribed fire.

Additional future fuels reduction projects include: a continuous shaded fuel break along South Fork Mountain ridge from Highway 299 to Highway 36; extensive fuel breaks along watershed divides and state highways; additional fuels reduction projects adjacent to cities and communities; and large landscape fuels reduction projects in strategic areas where project byproduct is utilized for forest products and biomass energy production.

Past fuels reduction projects which were improved or maintained in 2022 include: Bridgeville SFB, Riverside Park SFB, and Dyerville Loop SFB. An extended 2021 and 2022 fire season, along with a lower than normal number of fire crews, lessened the available crew days for grade projects, thus requiring prioritize of new projects over the maintenance of prior projects.

Vegetation Management Plans

Active and planned VMP burns being conducted by CAL FIRE HUU: Eaton Roughs 19 VMP, England 19 VMP, French Ranch 18 VMP, Hunt Ranch 19 VMP, Lone Star 19 VMP, Mountain View 19 VMP, Stewart Ranch 22 VMP, and Williams Ridge 22 VMP. Each planned Rx burn determination is dependent on site conditions, fire weather, resource availability, and values as determined by the landowners.

For 2022, HUU capitalized on advantageous burning conditions. Prescribed fires were conducted on the Eaton Roughs property, French Ranch, Hunt Ranch, Lone Star Ranch, and within the Humboldt Redwoods State Park. A total of 5,713 acres were treated utilizing prescribed fire. The project treatment objectives were to: use fire to control conifer encroachment to maintain and restore native oak woodland over-story, enhance rangeland and prairies, and reduce hazardous fire fuels.

Cooperative Partnership Burning

CAL FIRE Humboldt – Del Norte Unit, Redwood National Park, and Humboldt Redwood State Parks have a strong partnership conducting prescribed burning operations. The objectives of these projects are to restore and maintain open prairie grasslands by controlling fir encroachment utilizing prescribed fire. Over the past several decades the Douglas-fir encroachment into open grasslands, has threatened open range habitat and increased the potential for catastrophic wildfire.

HUU works closely with the Mid Klamath Watershed Council (MKWC) Training Exchange (TREX), Cultural Fire Management Council (CFMC) TREX, and Humboldt County Prescribed Burn Association (HCPBA). The MKWC has hosted the Klamath River Prescribed Fire Training Exchange (TREX) each fall. With help from The Nature Conservancy, the Fire Learning Network, and the Karuk Tribe, and more recently from HUU and the USFS, these events have trained hundreds of fire fighters in the skills needed for prescribed burning and have succeeded in burning hundreds of acres on private lands. In 2021, MKWC was able to complete 703 acres; 160 acres of prescribed burning and 542 acres of pile burning. Implementing year round burning has made for a positive and productive training experience.

HUU will continue to provide support, expertise, permits, equipment, and overhead to ensure successful execution of other prescribed burners with the Unit. We will continue to assist other agencies, prescribed burning organizations, and private burners to build capacity and continue enhancing all prescribed burning efforts.

Additionally, HUU is engaged in a cooperative fuel reduction project located on Six Rivers National Forest timberlands near the community of Ruth. This project includes the use of a CAL FIRE air curtain burner to burn forest fuels. During 2020 and 2021, 866 tons of fuel were burned. Six Rivers National Forest will continue the use of the CAL FIRE air curtain burner through 2022 as a collaborative project under CFMA to reduce forest fuel loading on Six Rivers National Forest properties adjacent to private properties near Ruth and the upper Mad River

watershed. The air curtain burner is presently in use in the Willow Creek area being utilized to dispose of winter storm debris.



Image 12 Air Curtain Burner being utilized for storm damage clean-up in Willow Creek.