

SECTION I: UNIT OVERVIEW

UNIT DESCRIPTION

Location

The CAL FIRE Humboldt - Del Norte Unit is the most northern unit along the California coastline. The Unit extends north to south approximately 180 miles and inland approximately 50 miles. This encompasses 1,928,267 acres of state responsibility lands and 1,927,410 of direct protection area. The Unit includes Redwood National Park, United States Forest Service (USFS) Six Rivers National Forest and the Bureau of Land Management's Headwaters Forest and Kings Range, eleven State Parks, and 20 county parks and beaches. There are also twelve tribal agencies residing within the unit including the Hoopa, which provides wildland fire protection on their reservation. The Yurok, Wiyot, Karuk and Tolowa are some of the other tribes that have lands, for which CALFIRE 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. While an actual rating for the fuels is available, some general statements can be made based on local knowledge of the fuels. The Unit is predominately mixed conifer forest (NFDRS Fuel model G) or Fire Behavior Fuel Model 10. This vegetation type consists of coast redwood, Douglas-fir, spruce with intermingled hardwoods including madrone and tanoak. A key component within this fuel type is the large amount of down and dead woody fuel. This vegetation type occurs in three zones. The coastal strip consists of coast redwood, Douglas-fir and spruce. This is a closed canopy forest with a thick, lush understory of brush. The biomass in this fuel type is equal to or greater than a rainforest. In fact it is not uncommon to have a true redwood forest referred to as a rainforest. The second zone occurs inland where the Douglas-fir dominates and resides with hardwoods. This results in a more open canopy with a sparser understory. The third zone occurs in the most southeastern portions of the unit, where the fuel is that of a typical Oak Woodland. The understory is open and consists of grass and brush (chaparral).

Sudden Oak Death (SOD)

The pathogen *Phytophthora ramorum* was first identified in Humboldt County in the late 1990s near Redway, and causes the condition commonly known as Sudden Oak Death (SOD). SOD causes 100% mortality in tanoak and has the potential to seriously impact fuel loading and fire behavior in affected stands. It has spread in southern Humboldt and is focused in the South Fork Eel River watershed north to Weott. Other sites are found near Eel Rock and in the Redwood Creek watershed north of Highway 299. CAL FIRE has worked with UC Cooperative Extension, private landowners, and State Parks to identify potential treatments for this pathogen. The areas of *P. ramorum* infection

continue to spread. The SOD areas produce higher fuel loads and affected trees are prone to rapid failure during fires. No SOD has yet been found in either Trinity or Del Norte counties.

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



Fire Hazard Severity Zones

As a component of the implementation of new WUI building code standards, CALFIRE undertook a major effort to reclassify the Fire Hazard Severity Zones (FHSZ) statewide for SRA and LRA lands. The new 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 CALFIRE's classification of those areas. There are no LRA zones in the Unit that are classified as Very High FHSZ. Federally owned and managed lands were not formally classified.

Topography and Weather

The Humboldt Del Norte Unit is a coastal region with varying topography, but for the most part is mountainous. Elevations range from sea level to 4100 feet. Slopes range from moderate to very steep with 80-90% not being uncommon.

The Fire Plan analysis of the frequency of severe fire weather has been developed. The business plan that addresses the validation process was completed this last year.

The HUU current weather station being used as a severity station for the Unit (Eel River RAWs) because of its location provides an accurate depiction of the area. We have used this RAWs as our severity station for the past several years in our Unit Weather Plan.

The unit has used various options, in the past such as the use of Fire Family Plus to tabulate existing weather data from our weather stations set in National Fire Danger Rating Zones, as addressed in the Unit Weather plan.

Using local knowledge and research work done at Humboldt State University we can define when and under what conditions severe fire weather occurs. The unit is also fortunate to have a good database (dating back to 1974) of weather observations from the Eel River manual weather observation station.

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>, We also provide an annual Unit Fire Weather Operating Plan that directs Unit fire business, fire danger thresholds, and weather related operating procedures.

Fire History

In order to fully understand the goal of the fire management plan, it is important to recognize the area's fire history. Fire has long been a part of Humboldt and Del Norte counties. During the pre-settlement period (before 1875) the Native American people commonly used fires as tools to manipulate their environment. They used fire for a variety of reasons. It helped drive out rodents and insects, kept the forest understory open, which made for easier travel and hunting. Additionally it enhanced the forbs and grasses used in basket weaving. During the settlement period (1875-1897) European settlers used fire for maintenance and enlarging the pasturelands and as a land clearing method. Major land activities during the post settlement period (1898-1940) were

livestock grazing, farming, debarking of the tanoak for tannin production and logging of Douglas-fir and coast redwood. Logging was clearly a dominant activity during this time period. Hundreds of small mills existed up and down the coastline; often the mills would have their own railroad for the transportation of the logs as well. In this time of unrefined mechanized equipment, the logging operations were simplified as much as possible. Logged areas were burned to assist with the removal of the logs and reduce the logging debris left behind. These fires were left to burn with no real control efforts. The same can be said for the area ranchers who commonly set fire to their land in order to maintain the grazing.

Many studies have been conducted on the fire frequency of the Coast Redwood. Accordingly there are varying thoughts on the fire frequency. There is also a notable difference between the northern portions of the Unit versus the southern area. Estimates for the redwoods in the northern portion of the Unit suggest a 50 to 100-year fire cycle. While in the southern portion of the unit the fire frequency is estimated to be 12 to 50 years. Reviews of area newspapers and various studies at Humboldt State University indicate that there was indeed a significant fire history from the late 1800's through early 1950's. Notable are 24 "fire seasons" between 1880 and 1952. During this time period the fire interval was 3.3 years. Some of these fires included entire towns being burned, such as the 1908 fire that destroyed the community of Luffenholz. People were left homeless, local mills and railroad tracks all perished from these large severe fires. The Civilian Conservation Corps began work in the Humboldt – Del Norte area in the mid 1930s, developing an improved local firefighting infrastructure. After 1945, the severity and number of fires began to decline significantly. The State Forest Practice Act changed the manner in which lands were managed, which led to the curtailing and changing of logging activities. Secondly, World War II had taken the work force overseas; with the return of the soldiers came an active fire suppression program.

UNIT PREPAREDNESS AND FIREFIGHTING CAPABILITIES

The Humboldt – Del Norte Unit is composed of eleven fire stations, three camps, one air attack base, and one helitack base. CDF HUU maintains 14 frontline engines, with two engines in reserve, two dozers, 15 inmate crews, one helicopter, one air attack, and one air tanker for fire suppression efforts. There are approximately 100 permanent fire suppression personnel, 12 resource management personnel, and 6 clerical personnel to staff these efforts. Additionally the Unit hires approximately 90 limited term and seasonal personnel to supplement permanent staff during the fire season.

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

The Fortuna inter-agency command center dispatches fire, law enforcement, and EMS calls for the Six Rivers National Forest, the Humboldt – Del Norte Unit, as well as for 34 volunteer fire departments, Arcata Fire Department, Redwood National Park, and the Bureau of Land Management's Kings Range National Conservation Area.

HUU has the potential for large catastrophic fires; especially in its' southern and eastern regions. With the area becoming more and more popular as an area of scenic beauty, relative low land cost, etc., the risk will continue to grow, especially for those who reside in remote areas of the Unit.

The Unit has most of its fire protection adjacent to its population centers, leaving large areas of the Unit with long response times. Cal Fire's 2010 Strategic Fire Plan vision is to strive for:

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

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

Humboldt County has an extraordinarily strong and effective mutual aid system, among all agencies and for all types of emergency response. Local fire departments are quick to assist each other and CAL FIRE, and vice versa, most often within the Mutual Aid Zones, but beyond those as needed. On wildfires, CAL FIRE and local

firefighters, paid and volunteer, work side by side as equals, all in yellow Nomex fire resistant clothing and barely distinguishable from each other in appearance and skill. On medical aid calls, local fire departments, local ambulance services, CAL FIRE, US COAST GUARD and CALSTAR or REACH emergency transport helicopters all work as one team.

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

Local Fire Agencies in HUU

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

City Fire Dept.

Eureka Trinidad

Fire Protection Dist.

Arcata	Blue Lake	Ferndale	Fortuna	Garberville
Humboldt Fire Dist.#1		Kneeland	Loleta	Myers Flat
Petrolia		Redway	Rio Dell	Samoa Peninsula
Scotia		Shelter Cove	Telegraph Ridge	Whitethorn
Willow Creek				

Volunteer Fire Dept.

Bridgeville	Briceland	Fruitland Ridge	Honeydew	Orleans
Palo Verde	Prosper Ridge	Redcrest	Salmon Creek	Sprowl Creek
Westhaven	Whale Gulch			

Community Services Dist.

Carlotta	Fieldbrook	Miranda	Phillipsville
Orick	Ruth lake	Scotia	Weott

Other Special Dist. or Agencies.

County Service Area #4, Hoopa & Yurok Fire Dept., Shelter Cove Resort Improvement Dist

Del Norte County Agencies

City Fire Dept.

Crescent City

Fire Protection Dist.

Crescent Fork Dick Smith River

Volunteer Fire Dept.

Gasquet Klamath

Trinity County Agencies

Volunteer Fire Dept.

Kettenpom Salyer (CSD) Burnt Ranch Hawkins Bar
S. Trinity