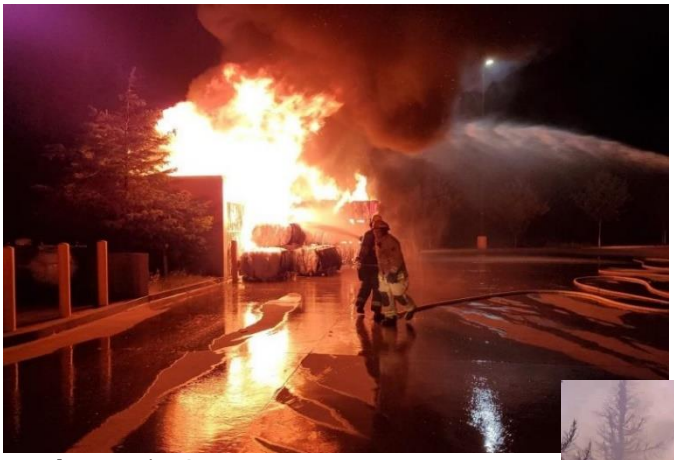
Del Norte County Fire Safe Council Community Wildfire Protection Plan 2020 Volume 1



Del Norte Fire Crews Prevent Large Propane Explosion at Walmart

Gasquet Complex Fire 2015

Red Mountain Lookout

Prepared by:
Bridgeview Consulting, LLC.
915 No. Laurel Lane
Tacoma, WA 98406
(253) 301-1330

Del Norte County Fire Safe Council
Community Wildfire Protection Plan 2020

This plan is a project of the
Del Norte Fire Safe Council
PO Box 1135
Crescent City, CA 95531
www.delnortefiresafe.org
(707) 951-5437

Acknowledgments

This Community Wildfire Protection Plan represents the efforts and cooperation of many organizations and agencies; through the commitment of people working together to improve the preparedness for wildfire events while reducing factors of risk. On behalf of the Planning Committee, we thank you for your efforts!

Contents

1 INTRODUCTION

1.1 WHY PLAN?

California experienced the deadliest and most destructive wildfires in its history in 2017 and 2018. Fueled by drought, an unprecedented buildup of dry vegetation and extreme winds, the size and intensity of these wildfires caused the loss of more than 100 lives, destroyed thousands of homes and exposed millions of urban and rural Californians to unhealthy air.[1]

Climate change, an epidemic of dead and dying trees, and the proliferation of new homes in the wildland urban interface (WUI) magnify the threat and place substantially more people and property at risk than in preceding decades. More than 25 million acres of California wildlands are classified as under very high or extreme fire threat, extending that risk over half the state.

WUI fires represent an increasingly significant concern for the State of California. California has a chronic and destructive WUI fire history with significant losses of life, structures, infrastructure, agriculture, and businesses. Most local governments that have submitted Local Hazard Mitigation Plans (LHMPs) have identified fire and WUI fires as specific hazards. Even relatively small-acreage WUI fires may result in disastrous damage.

Del Norte County is no exception to the increasingly common problem of loss from wildfire. Fuel loads have been accumulating to abnormal levels throughout the West, due to decades of fire suppression and timber harvesting.

When residents in the wildland-urban interface understand why fire safety is important, and what steps they can take to implement it at their homes and properties, they are generally interested in doing it.

1.1.1 Role of the Community Wildfire Protection Plan

This Community Wildfire Protection Plan (CWPP) provides a broad description of what is necessary for a fire to begin and how communities can defend themselves when faced with a wildfire. Fire requires fuel, oxygen, and heat. Minus one of these elements, fire cannot start. In a wildland situation these factors translate into fuel, weather, and topography. Clearly, fuel is the one factor that communities have some capacity to control. The Plan focuses on how fuel can be mitigated to enhance community safety. It outlines the steps necessary for ensuring that local fire suppression efforts are successful (e.g. residence addressing, adequate roads, proper turnarounds, secondary access, water supply, etc.).

One of the most important concepts introduced in this Plan is that of defensible space. In short, this means creating a space around a residence/structure, thereby enhancing the chances of structural and human survivability. Thus, one of the priority goals of this Plan is to document the various elements that make up defensible space and to do so in clear action-oriented terms. The Plan also lists various additional ways that a community can enhance its chances of surviving a

[1] Community Wildfire Prevention & Mitigation Report. (2019). Accessed 10 July 2019. Available online at: https://www.fire.ca.gov/media/5584/45-day-report-final.pdf

fire, including the use of fire ignition-resistant building materials and construction, water availability, escape plans, landscaping, and fuel hazard reduction. Recent evidence indicates that a structure has over an eighty percent chance of surviving a wildfire if it has adequate brush clearance and is made of ignition-resistant materials. The Plan also includes references to existing Public Resources Code sections and legislation related to fire safety.

This Plan outlines various actions that community members can take to help reduce the impact from a wildfire. In the context of the Healthy Forests Restoration Act (HFRA), a CWPP offers a variety of benefits to communities at risk from wildland fire. Among those benefits is the opportunity to establish a localized definition and boundary for the wildland–urban interface. In the absence of a CWPP, the HFRA limits the WUI to within 1/2 mile of a community's boundary or within 1-1/2 miles when mitigating circumstances exist, such as sustained steep slopes or geographic features aiding in creating a fire break.

At least 50 percent of all funds appropriated for projects under the HFRA must be used within the WUI as defined by either a CWPP or by the limited definition provided in the HFRA when no CWPP exists. In addition to giving communities the flexibility to define their own WUI, the HFRA also gives priority to projects and treatment areas identified in a CWPP by directing federal agencies to give specific consideration to fuel reduction projects that implement those plans. If a federal agency proposes a fuel treatment project in an area addressed by a community plan but identifies a different treatment method, the agency must also evaluate the community's recommendation as part of the project's environmental assessment process.[2] Fuels treatments can occur along evacuation routes regardless of their distance from the community.

1.1.2 Approval and Adoption

The HFRA requires that three entities must mutually agree to the final contents of a CWPP:

- The applicable local government (i.e., counties or cities);
- The local fire department(s); and
- The state entity responsible for forest management.

1.2 OVERVIEW OF THIS PLAN AND ITS DEVELOPMENT

The Community Wildfire Protection Plan (CWPP) effort was led and supported by the Del Norte County Fire Safe Council in conjunction with the participating jurisdictions and agencies. This CWPP for Del Norte County, California, is the result of analyses, professional cooperation and collaboration, assessments of wildfire risks and other factors considered with the intent to reduce the potential for wildfires to threaten people, structures, infrastructure, and unique ecosystems in Del Norte County, California.

This plan represents a comprehensive review and update of the 2005 plan. While portions of the original text remain, for purposes of this document, all data has been reviewed and updated with the most current information available during the 2020 update process. The Plan's layout has also been changed significantly, with appropriate, relevant data from the 2005 maintained. All maps, charts, posters, and information has been updated with new and relevant information where

[2] Preparing a Community Wildfire Protection Plan (2004). Accessed 12 July 2019. Available online at: https://secureservercdn.net/198.12.145.239/l40.06e.myftpupload.com/wp-content/uploads/2011/07/CWPP-Preparing-a-CWPP.pdf

possible. In those cases where maps cannot be re-created due to the lack of relevant data, the previous plan is cited. The CWPP update effort was led by an over-arching Planning Committee identified in Section 2, with support from Bridgeview Consulting, LLC., as the selected consultant facilitating the CWPP update process.

The Planning Partnership as a whole included Planning Committee Members, and the CWPP Work Group, which was established from the participating jurisdictions and agencies which were responsible for implementing the 2005 CWPP projects, and consists of many of the same members leading the previous plan development. The Planning Partnership also included stakeholders, who maintain subject matter expertise relevant to the plan's development, and citizens who participated to help ensure their communities resilience.

This plan and several of the planning partners involved were also part of the Del Norte County Hazard Mitigation Plan, completed in June 2019. As such, viewers of this CWPP should also review the County's Hazard Mitigation Plan (HMP) as additional information and insight into not only the wildfire risk, but other hazards of concern throughout the county which both impact and are impacted by wildfire.

1.3 DEL NORTE FIRE SAFE COUNCIL

The Del Norte Fire Safe Council is a non-governmental organization based in Crescent City, California. Its members include local residents, agencies, and organizations involved in fire prevention and protection and land management. Staffing is provided by volunteers and through grant funding. It was founded in 2001, and since then has formed active community partnerships with local, state, federal, and tribal agencies. It began with a local meeting sponsored by the California Department of Forestry and Fire Protection (CAL FIRE) and the US Forest Service (USFS), held to educate Del Norte County residents about the National Fire Plan and fire safety in general. In its current form, the Council is organized exclusively to provide education, a collaborative exchange of information, and foster fire prevention and fire safety within Del Norte County. To that end, the Council has implemented a number of projects including fuel reduction, fire protection, and community fire safety education.

1.4 FUNDING

In 2018, the Council applied for and received a grant from the California State Fire Assistance, made possible by the federal financial assistance provided to the California Fire Safe Council from the U.S. Department of Agricultural Forest Service for the specific purpose to fund the creation of this Community Wildfire Protection Plan, and to identify and prioritize projects to reduce wildfire risk through the implementation of fuel hazard reduction, community education, and pre-fire suppression in Del Norte County. Bridgeview Consulting was contracted to develop the plan, and through the collection of appropriate and necessary information regarding fire safety in Del Norte County, this 2020 Community Wildfire Protection Plan was developed. Occurring during the same timeframe as this CWPP update, the County's Hazard Mitigation Plan update was also occurring. In an effort to increase stakeholder involvement and gain beneficial information, many of the Planning Committee members from Del Norte County's Hazard Mitigation Plan (HMP) process were also involved in this CWPP update.

1.5 PLANNING UNIT BOUNDARIES

This CWPP covers those planning partners wishing to participate within Del Norte County, California. For the purposes of this document, the county was divided into eight general Planning Units (also referred to as Planning Areas, or area). Commencing at the southern end of the county, traveling northward along the coast, and then inland, those areas are as follows:

- Klamath
- Crescent City
- Fort Dick
- Smith River
- Big Flat/Rock Creek
- Hiouchi
- Gasquet

It should be noted that while all Planning Units were invited to participate, some did not, even after several attempts to reach out and gain information. With the development of the new annex template concept, those units which could not participate during the time period of the CWPP update may still do so utilizing the annex, and by following the same process as outlined in Chapter 2 of this document, which identifies the planning process utilized.

1.5.1 Fire Suppression Organizations

Within Del Norte County, there are five Fire Protection Districts:

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

There are also several governmental fire agencies in the County:

- Crescent City Volunteer Fire Department
- California Department of Forestry and Fire Protection
- US Forest Service
- Redwood National and State Parks
- Pelican Bay State Prison

Private lands not falling within the fire districts identified above include: Big Flat, Rock Creek, and Sun Star. These communities have no official structural fire protection service. The California Department of Forestry and Fire Protection (CAL FIRE) provides wildland fire protection services to these communities. When available, CAL FIRE will also respond to other emergencies; however, due to the long response times, responses for emergency medical services and structure fires are ineffective for public safety.

1.6 GUIDING PRINCIPLES

The creation of the Del Norte Community Wildfire Protection Plan was stimulated by a national effort to enhance fire safety for all communities threatened by wildfire. The Del Norte Fire Safe Council volunteered

for the task of coordinating the local effort to develop this CWPP. The Plan, in short, identifies risks and mitigation actions which, when implemented, will reduce risk from wildfire in Del Norte County. It also provides residents with relevant information concerning the protection of their homes, local businesses, and their community, providing *best practice* information, which when implemented, have been shown to be effective.

1.6.1 Additional State and Federal Guidelines Adopted

This Community Wildfire Protection Plan will include compatibility with the guidelines proposed in the National Fire Plan, the California Statewide Implementation Plan, and the Healthy Forests Restoration Act. This Community Wildfire Protection Plan has been prepared in compliance with:

- The National Fire Plan: A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment.
- National Association of State Foresters – guidance on identification and prioritizing of treatments between communities.
- The California Strategic Fire Plan (2018, 2019).
- Healthy Forests Restoration Act (2003).
- The National Cohesive Wildland Fire Management Strategy-2014 (the Strategy) was mandated by the 2009 FLAME Act, which called on the US Departments of Agriculture and Interior to create a collaboratively developed and implemented approach to wildfire challenges across multiple jurisdictions.

Vision for this Century

The Wildfire Fire Leadership Council (WLFC) adopted a vision for this century, "To safely and effectively extinguish fire when needed; use fire where allowable; manage our natural resources; and as a nation, to live with wildland fire." The Cohesive Strategy will address the nation's wildfire problems by focusing on three key areas: Restore and Maintain Landscapes, Fire Adapted Communities, and Response to Fire (WLFC, 2013).

The objective of combining these complimentary guidelines is to facilitate an integrated wildland fire risk assessment, identify fuels reduction and pre-hazard mitigation activities, and prioritize activities and efforts to achieve the protection of people, structures, the environment, and significant infrastructure in Del Norte County while facilitating new opportunities for pre-disaster funding and cooperation.

1.7 PLANNING PHILOSOPHY AND GOALS

During update of the 2020 CWPP, the Planning Committee again reviewed the planning philosophy and goals established during the original plan's development in 2005, to make certain of their applicability to the intended outcome of the CWPP, as well as to confirm their alignment with the overarching goals for the 2020 update to Del Norte County's Hazard Mitigation Plan. It is the Planning Committee's intent that this document be written as a Community Wildfire Protection Plan to meet the requirements for future National Fire Plan and other government funding sources.

The overall philosophy of this planning process is to utilize the best and most appropriate science from all partners and integrate local and regional knowledge about wildfire risks and fire behavior

while meeting the needs of local citizens, the regional economy, and the significance of this region to the rest of California.

After review and discussion during the June 2019 meeting, the Planning Committee confirmed the intent of the previous goals, but elected to slightly modify the wording, to allow for the combining of the previous goals, and to ensure alliance with the California Strategic Fire Plan, adopted in August 2018. The 2020 goals are as follows:

1. To identify priority projects to reduce risks and hazards from wildfire in Del Norte County, California. This is anticipated to be achieved principally through prioritization and implementation of fuel hazard reduction, community education, and fire pre-suppression projects and activities.
2. To use the document to provide fire safety educational information to residents of Del Norte County, empowering the community and affirming the safety of its citizens.
3. To provide a guidance document for future actions of the Del Norte Fire Safe Council.

1.8 INTEGRATION WITH OTHER PLANNING GUIDELINES

During the development of this Community Wildfire Protection Plan several planning and management documents were reviewed in order to avoid conflicting information. Existing programs and policies were reviewed in order to identify those that may weaken or enhance the wildfire hazard mitigation objectives outlined in this document. What follows is identification of some of the documents, regulatory authority in place, and relevant information reviewed and considered during this update process.

1.8.1 Del Norte County General Plan

The Planning Division of the Del Norte County Community Development Department (CDD) administers and enforces zoning and subdivision regulations in accordance with the Del Norte County General Plan. The General Plan is a set of goals, policies, standards, and implementation programs which formalize a long-term vision which guides the daily decisions concerning the County's development. The plan emphasizes innovative and flexible strategies to help guide growth and development. One of the central themes of the CDD and the General Plan is to protect and preserve the high quality of the County's natural and built environments.

The Del Norte County Community Wildfire Protection Plan will be incorporated as a tool for decision makers to further their knowledge of wildland fire risk areas in order to make more informed decisions on how future development should occur in high risk areas.

1.8.2 Del Norte County Multi-Jurisdiction All Hazard Mitigation Plan

Natural hazards impact citizens, property, the environment, and the economy of Del Norte County. Flooding, landslides, windstorms, severe winter storms, and earthquakes have exposed Del Norte County residents and businesses to the financial and emotional costs of recovering after these natural disasters. Other events such as: urban fire, terrorism, and hazardous material spills also pose dangers to the population of Del Norte County. The risk associated with natural hazards increases as more people move to areas affected by hazards. The inevitability of natural hazards, and the growing population and activity within the county create an urgent need to develop strategies, coordinate resources, and increase public awareness to reduce risk and prevent loss from

future hazard events. The Del Norte County Multi-Jurisdiction All Hazard Mitigation Plan (2019) helps identify risks posed by hazards and develops strategies to reduce the impact of a hazard event on Del Norte County.

The Del Norte County Community Wildfire Protection Plan serves to support the wildfire hazard section of the All Hazard Mitigation Plan. The CWPP provides information and an in-depth analysis of wildland fire risks in and around Del Norte County communities beyond that information contained within the County's HMP.

1.8.3 California Strategic Fire Plan (2019)

The California Strategic Fire Plan is a cooperative effort between State Board of Forestry and Fire Protection (CAL FIRE), and local communities. It is designed to act as a road map for reducing the risk of wildfire in California, and "serves and safeguards the people and protects the property and resources of California."[3]

1.8.4 Existing Capabilities

The Del Norte County Code, which includes adoption of the 2020 California Standard Building Code, contains provisions to mitigate the hazards associated with wildfires in the county. These provisions cover building construction standards covering roofing, decking, and balcony materials, attic/roof venting, and the use of spark arresters on chimneys.

The Del Norte County Fire Safe Regulations, Title 19 of Del Norte County Code, establishes fire safety regulations, including enforcement of those regulations. The Del Norte County Community Development Department administers the County Fire Safe Regulations in accordance with Section 4290 of the California Public Resources Code.

The Del Norte County Community Wildfire Protection Plan encourages this type of proactive planning at the county level. It is a recommendation of this document that similar building standards be applied to all structures built in high wildfire risk areas.

Table 1-1 identifies examples of some relevant agencies, potential funding streams, programs, and regulatory authority supporting wildfire risk management and Community Wildfire Protection Planning efforts.

TABLE 1-1.
EXISTING CAPBILITIES

Agency, Program, or Regulation	Hazard Mitigation Area Affected	Relevance
A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment	Wildfire Hazard	This strategy implementation plan prepared by federal and Western state agencies outlines measures to restore fire-adapted ecosystems and reduce hazardous fuels.

[3] CAL FIRE Strategic Plan 2019. Accessed online at: https://www.fire.ca.gov/media/5504/strategicplan2019-final.pdf

TABLE 1-1.
EXISTING CAPBILITIES

Agency, Program, or Regulation	Hazard Mitigation Area Affected	Relevance
Americans with Disabilities Act	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Bureau of Indian Affairs	Wildland Fire Hazard	The Bureau's Fire and Aviation Management National Interagency Fire Center provides wildfire protection, fire use and hazardous fuels management, and emergency rehabilitation on Indian forest and rangelands.
Bureau of Land Management	Wildland Fire Hazard	The Bureau funds and coordinates wildfire management programs and structural fire management and prevention on BLM lands.
California Coastal Management Program	Flood, Landslide, Tsunami and Wildland Fire Hazards	This program requires coastal communities to prepare coastal plans and requires that new development minimize risks to life and property in areas of high geologic, flood, and fire hazard.
California Department of Forestry and Fire Protection (CAL FIRE)	Wildland Fire Hazard	CAL FIRE has responsibility for wildfires in areas that are not under the jurisdiction of the Forest Service or a local fire organization.
California Department of Parks and Recreation	Wildland Fire Hazard	State Parks Resources Management Division has wildfire protection resources available to suppress fires on State Park lands.
California Fire Alliance	Wildland Fire Hazard	The alliance works with communities at risk from wildfires to facilitate the development of community fire loss mitigation plans.
California Fire Plan	Wildland Fire Hazard	This plan's goal is to reduce costs and losses from wildfire through pre-fire management and through successful initial response.
California Fire Safe Council	Wildland Fire Hazard	This council facilitates the distribution of National Fire Plan grants for wildfire risk reduction and education.
California Fire Service and Rescue Emergency Mutual Aid Plan	Wildland Fire Hazard	This plan provides guidance and procedures for agencies developing emergency operations plans, as well as training and technical support.
California Multi-Hazard Mitigation Plan	Hazard Mitigation Planning	Local hazard mitigation plans must be consistent with their state's hazard mitigation plan.
California State Building Code	Action Plan Implementation	Local communities must adopt and enforce building codes, which include measures to improve buildings' ability to withstand hazard events.
Civil Rights Act of 1964	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Clean Water Act	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Community Development Block Grant Disaster Resilience Program	Action Plan Funding	This is a potential alternative source of funding for actions identified in this plan.

TABLE 1-1. EXISTING CAPBILITIES		
Agency, Program, or Regulation	**Hazard Mitigation Area Affected**	**Relevance**
Disadvantaged and Low-Income Communities Investments	Action Plan Funding	This is a potential source of funding for actions located in disadvantaged or low-income communities.
Disaster Mitigation Act	Hazard Mitigation Planning	This is the current federal legislation addressing hazard mitigation planning.
Emergency Relief for Federally Owned Roads Program	Action Plan Funding	This is a possible funding source for actions identified in this plan.
Emergency Watershed Program	Action Plan Funding	This is a possible funding source for actions identified in this plan.
Endangered Species Act	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Federal Energy Regulatory Commission Dam Safety Program	Dam Failure Hazard	This program cooperates with a large number of federal and state agencies to ensure and promote dam safety.
National Environmental Policy Act	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable federal acts.
Federal Wildfire Management Policy and Healthy Forests Restoration Act	Wildland Fire Hazard	These documents mandate community-based collaboration to reduce risks from wildfire.
National Dam Safety Act	Dam Failure Hazard	This act requires a periodic engineering analysis of most dams in the country
National Fire Plan (2001)	Wildland Fire Hazard	This plan calls for joint risk reduction planning and implementation by federal, state, and local agencies.
National Incident Management System	Action Plan Development	Adoption of this system for government, nongovernmental organizations, and the private sector to work together to manage incidents involving hazards is a prerequisite for federal preparedness grants and awards
National Park Service, Redwood National Park	Wildland Fire Hazard	Park staff provide wildland and structure fire protection and conduct wildfire management within the park.
Presidential Executive Order 11990 (Protection of Wetlands)	Action Plan Implementation	FEMA hazard mitigation project grant applications require full compliance with applicable presidential executive orders.
Senate Bill 1241: General Plans: Safety Element—Fire Hazard Impacts	Wildfire Hazard	This bill requires cities and counties to make findings regarding available fire protection and suppression services before approving a tentative map or parcel map.
U.S. Fire Administration	Wildland Fire Hazard	This agency provides leadership, advocacy, coordination, and support for fire agencies and organizations.

TABLE 1-1. EXISTING CAPBILITIES		
Agency, Program, or Regulation	**Hazard Mitigation Area Affected**	**Relevance**
U.S. Fish and Wildlife Service	Wildland Fire Hazard	This service's fire management strategy employs prescribed fire throughout the National Wildlife Refuge System to maintain ecological communities.
U.S. Forest Service Six Rivers National Forest	Wildland Fire Hazard	Staff provide wildfire management primarily on National Forest lands.

Information and notification to citizens of on-going or emergent incidents is available through the County at: https://preparedelnorte.com/index.html Additional capabilities of the County are identified as appropriate throughout this plan, as well as in the Strategy portion of the document.

This page intentionally left blank

2 PLANNING PROCESS

The Community Wildfire Protection Plan is being written to meet the requirements for future National Fire Plan and other government funding sources. This section includes a description of the planning process used to develop this plan, including how it was prepared, who was involved in the process, and how all of the involved agencies participated.

2.1 DESCRIPTION OF THE PLANNING PROCESS

The Del Norte County Community Wildfire Protection Plan was developed through a collaborative process involving all of the organizations and agencies detailed in Chapter 1 of this document. The planning process included seven distinct phases which were in some cases sequential (step 1 then step 2) and in some cases intermixed (step 4 completed throughout the process):

1. **Convene Decisionmakers**, or a core team made up of representatives from the appropriate local governments, fire authorities, and state agencies responsible for forest management.

2. **Involve Community Members, Federal Agencies, and interested parties** by identifying and engaging local representatives involved in land management as appropriate, while also engaging community-based interested parties. The development of a Public Involvement Strategy which includes facilitation of the process for the formation of the planning committee and working groups, to developing a public survey, news releases, and public meetings, which includes a public review of draft documents, and acknowledgement of the final plan by the signatory representatives.

3. **Collection of Data** about the extent and periodicity of hazards in and around Del Norte County.

4. **Establish a Community Based Map** of data relevant to pre-disaster mitigation control and treatments, structures, resource values, infrastructure, risk assessments, and related data. This should include a baseline map that defines the community's WUI and displays inhabited areas at risk. This information is used to develop the community's risk assessment.

5. **Field Observations and Estimations** about risks, adjacency of structures and infrastructure to risk areas, access, and potential treatments establishes the community's priorities that lead to the identification of fuel treatment, reducing structural ignitability, and other issues of interest, such as improving fire response capabilities.

6. **Develop an Action Plan and Assessment Strategy** by developing a detailed implementation strategy to accompany the CWPP, as well as a monitoring plan that will ensure its long-term success.

7. **Analysis and Drafting of the Report** to integrate the results of the planning process, providing ample review and integration of committee and public input, followed by signing of the final document.

2.2 PLANNING COMMITTEE

The CWPP Update Planning Committee was made up of representatives from the Del Norte County Fire Safe Council, Becky Barlow, who was supported by the Project Staff. This support was provided by Fire Safe Council member Cindy Henderson, who served as one of the primary public outreach facilitators, and who was also involved during portions the development of the County's Hazard Mitigation Plan. Additional project staff support was provided by Del Norte County Emergency Services Manager Kymmie Scott.

Beverly O'Dea of Bridgeview Consulting, LLC served as the lead project manager, guiding the planning process, providing guidance on the risk assessment, authoring portions of the plan, and supporting this effort throughout the entire update process. David O'Dea of Bridgeview Consulting, LLC served as the primary lead planner and author of portions of the plan.

The Committee's responsibility was to provide guidance and leadership for the CWPP update and associated public outreach, and to make project decisions between meetings as needed. Combined, these individuals led a team of resource professionals that included members of Del Norte County government, incorporated city officials, fire protection districts, state and federal agencies, local organizations, community members, and stakeholders. The Planning Committee worked closely together for much of 2019-2020.

Following the June Countywide Operations Meeting, Del Norte County Fire Safe Council Treasurer Becky Barlow established the goal areas for inclusion in this update, and developed Work Groups composed of the Planning Committee and collaborates for each of the specific Planning Units that developed action plans, and will be responsible for overseeing their implementation.

The Planning Committee met with many residents of the County during inspections of the communities and infrastructure and at the Work Group sessions. This methodology, when coupled with the other approaches in this process, worked adequately to integrate a wide spectrum of observations and interpretations about the project.

The planning philosophy employed in this project included the open and free sharing of information with interested parties. Information from federal and state agencies was integrated into the database of knowledge used in this project. Meetings with the Planning Committee were held throughout the planning process to facilitate a sharing of information between cooperators. Furthermore, when the public meetings and work group sessions were held, many of the committee members were in attendance and shared their support and experiences with the planning process and their interpretations of the results.

Table 2-1 identities the individuals/agencies involved in this process, and the extent of participation. Each Planning Unit's annex also maintains a separate list of those planning team members and citizens involved in developing their respective annex document.

TABLE 2-1. PLANNING PARTNERSHIP			
Name	**Agency**	**Planning Committee Member**	**Stakeholder Or Citizen Member**
Becky Barlow	Del Norte County Fire Safe Council	X	X
Tim Sanderson	Del Norte County Fire Safe Council	X	X
Cindy Henderson	Del Norte County Fire Safe Council	X	X
Jim Baskin	Del Norte County Homeowner	X	X
Kymmie Scott	Del Norte County Emergency Services Manager	X	X
Heidi Kunstal	Del Norte Community Development Director	X	X
Shawn Raley	CAL FIRE	X	
Dave Esteves	CAL FIRE	X	
Jeni Peterson, GIS Specialist	US Forest Service Six Rivers National Forest	X	
Sheila Balent, Fuels Planner	US Forest Service Six Rivers National Forest	X	
Beverly O'Dea	Project Manager and Lead Planner, Bridgeview Consulting, LLC	X	
David O'Dea	Strategic Analyst and Facilitator, Bridgeview Consulting, LLC	X	
Cathy Walker	GIS Analyst, Bridgeview Consulting, LLC	X	

2.2.1 Multi-Jurisdictional Participation

Development of CWPPs call for multi-jurisdictional planning effort in achieving the development of a functional document which impacts multiple jurisdictions. This Community Wildfire Protection Plan followed a robust process, involving a wide range of individuals and planning partners.

These planning partners were represented in the Work Groups, in public meetings, and participated in the development of hazard profiles, risk assessments, and fuel reduction / mitigation measures. The planning committee meetings were the primary venue for authenticating the planning record. However, additional input was gathered from each jurisdiction in a combination of the following ways:

- During development of the 2019-2020 update to the Countywide Hazard Mitigation Plan, which included participants from both planning committees.
- Planning committee leadership visits to scheduled municipality and tribal public meetings where planning updates were provided, and information was exchanged.
- One-on-one visits between the planning committee leadership and the representatives of the municipalities, tribes, and local communities.
- Special meetings at each jurisdiction by the planning committee leadership requested by the municipality involving elected and appointed officials, municipality employees, local volunteers, business community representatives, and local citizenry.
- Written correspondence was provided monthly between the planning committee leadership and each municipality updating the cooperators in the planning process, making requests for information, and facilitating feedback.

Like other rural areas of California and the United States, Del Norte County's human resources have many demands put on them in terms of time and availability. Several of the elected officials do not serve in a full-time capacity; some of them have other employment and serve the community through a convention of community service. Recognizing this, many of the jurisdictions decided to identify a representative to cooperate on the planning committee and then report back to the remainder of their organization and serve as a conduit between the Planning Committee and the jurisdiction. Also impacting public outreach and ability to capture additional relevant information was the Coronavirus pandemic.

2.2.2 Planning Committee Meetings and Workshop Sessions

Planning Committee Meetings were led by the Consultant, with assistance from project staff. Public outreach at the Work Group Sessions was facilitated by Cindy Henderson for the Fire Safe Council, the Fire Safe Council Treasurer and Project Manager for this effort, Becky Barlow, and the County's Emergency Services Manager Kymmie Scott, who also conducted several outreach sessions with the various planning partners, as well as monthly meetings from May through December 2019 for the purposes of updating this CWPP. Specific meeting agenda and minutes are available upon request.

These meetings addressed various topics, including:

- Purpose of the CWPP
- Integration of the CWPP into other on-going planning efforts
- Planning Guidelines and Requirements
- Major Document Components (Document Outline)
- Wildland-Urban Interface
- Community Assessments
- Types of Projects
- Past or Ongoing Fuels Reduction and Education projects occurring in the County
- Mapping and GIS
- Public Involvement – Survey and Public Meetings
- Committee Responsibilities

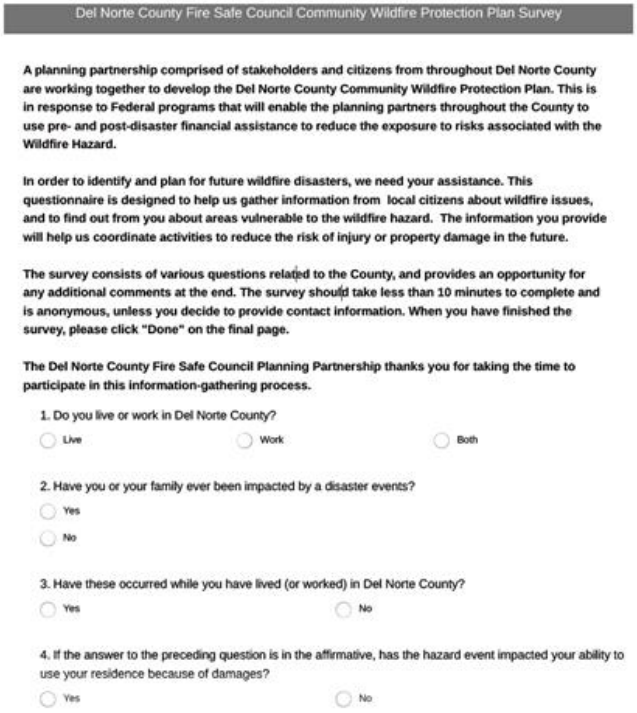
Review/Update Mission, Vision, and Goals Statements:
The mission, vision, and goals statements were reviewed at the onset of the project. Based on the review, the Planning Committee confirmed the goals as written for the 2020 update process.

Public Survey and Press Release:
Press releases and public surveys were distributed via the County's website, as well as hard copies distributed beginning June 2, 2019. Each local jurisdiction taking part in the update distributed the website information both through distribution of flyers and posters containing the survey link and website addresses, as well as distribution of hard copies at public meetings. The County's website was also used to host information, meeting notices, and survey links.

Resource and Capability Surveys:
The Resources and Capability surveys were discussed, but noted that these were primarily directed at the fire districts and wildland firefighting agencies. The purpose of these surveys is not only to provide a summary of the districts' capabilities, interagency agreements, and equipment, but also to identify problem areas and current needs.

Each district currently maintains an equipment list, which is updated annually with information provided by each district. The Logistics Section of the Del Norte County EOC maintains the list to ensure it is up to date. Due to a regular update process, the list is not maintained within this document, but is available upon request to Del Norte County Emergency Services or the Del Norte Fire Safe Council Executive Director.

2.3 PUBLIC INVOLVEMENT


Del Norte County Fire Safe Council Community Wildfire Protection Plan Survey

A planning partnership comprised of stakeholders and citizens from throughout Del Norte County are working together to develop the Del Norte County Community Wildfire Protection Plan. This is in response to Federal programs that will enable the planning partners throughout the County to use pre- and post-disaster financial assistance to reduce the exposure to risks associated with the Wildfire Hazard.

In order to identify and plan for future wildfire disasters, we need your assistance. This questionnaire is designed to help us gather information from local citizens about wildfire issues, and to find out from you about areas vulnerable to the wildfire hazard. The information you provide will help us coordinate activities to reduce the risk of injury or property damage in the future.

The survey consists of various questions related to the County, and provides an opportunity for any additional comments at the end. The survey should take less than 10 minutes to complete and is anonymous, unless you decide to provide contact information. When you have finished the survey, please click "Done" on the final page.

The Del Norte County Fire Safe Council Planning Partnership thanks you for taking the time to participate in this information-gathering process.

1. Do you live or work in Del Norte County?
Live Work Both

2. Have you or your family ever been impacted by a disaster events?
Yes
No

3. Have these occurred while you have lived (or worked) in Del Norte County?
Yes No

4. If the answer to the preceding question is in the affirmative, has the hazard event impacted your ability to use your residence because of damages?
Yes No

Public involvement in this plan was made a priority from the inception of the project. There were a number of ways that public involvement was sought and facilitated. In some cases, this led to members of the public providing information and seeking an active role in protecting their own homes and businesses, while in other cases it led to the public becoming more aware of the process without becoming directly involved in the planning.

Various community meetings took place since completion of the 2005 CWPP, including Fire Safe Community Workshops. This includes community meetings with each of the planning areas specifically to capture relevant information for this update edition of the CWPP. Those meetings were advertised within the communities via flyers, email notices, and word-of-mouth by various community members to solicit participate and input.

The Fire Safe Council Chair maintains minutes of those meetings. Relevant data has been captured as appropriate and inserted into the plan as supporting data.

In addition, during the month of August, various Planning Committee members manned a booth at the local fair. During that time, citizens were asked to comment on potential wildfire projects, as well as provide input on projects which they felt were relevant for their communities. In addition to the fair booth, the CWPP was also presented during the mitigation planning outreach sessions (see HMP outreach section for more information).

2.3.1 News Releases and Announcements

Under the auspices of the Del Norte County Fire Safe Council and CWPP Planning Committee, news releases were also distributed to the media. Informative flyers were posted around towns and to local offices within the communities. At the end of the process, another press release was distributed, and local radio stations announced its availability for review on the County's website. County distribution lists reaching in excess of 200 individuals were also used to ensure a wide distribution for review and comment.

2.3.2 Survey

Three different survey documents were created during this planning process. The first was to capture general information. The second was directed to the fire suppression entities to capture relevant data for development of the CWPP – Resource and Capability Surveys.

In order to collect a broad base of perceptions about the wildland fire risk in Del Norte County and the homeowners' perception of risk in general, the Planning Committee determined that a survey was appropriate as one method of capturing local input into the hazards and associated risks.

The survey was available both via Survey Monkey (web-based) as well as hard copies provided at various community meetings and fairs. In addition, posters were developed to announce community meetings also provided the web address to invite participation in the survey. Survey results are available from Del Norte County Fire Safe Council.

The second survey was directed to the various fire suppression entities. Its purpose was to capture information specific to those entities, including available equipment, staffing, and resources; identification of gaps which impact fire suppression activities, such as limited staffing, and to identify training needs.

2.3.3 Public Meetings

Public meetings were scheduled in a variety of communities in Del Norte County during the risk assessment phase of the planning process. Public meetings were scheduled to share information on the planning process, inform details of the community risk assessments, and discuss potential mitigation treatments. Attendees at the public meetings were asked to give their impressions of the accuracy of the information generated and provide their opinions of potential treatments.

The schedule of public meetings included multiple locations in the county, which were attended by a number of individuals on the committee and from the general public. Several joint meetings were held for the hazard mitigation plan update, as well as fire-specific community meetings of

varying types. Public meeting announcements were sent to the local news media, flyers posted in various locations, posted on the Del Norte Fire Safe Council Webpage, and distributed by committee members. A sample of one the Facebook post is included in Figure 2-1; a copy of the distributed flyer is included below in Figure 2-2. Planning Committee members also utilized existing email distribution lists to distribution information countywide.

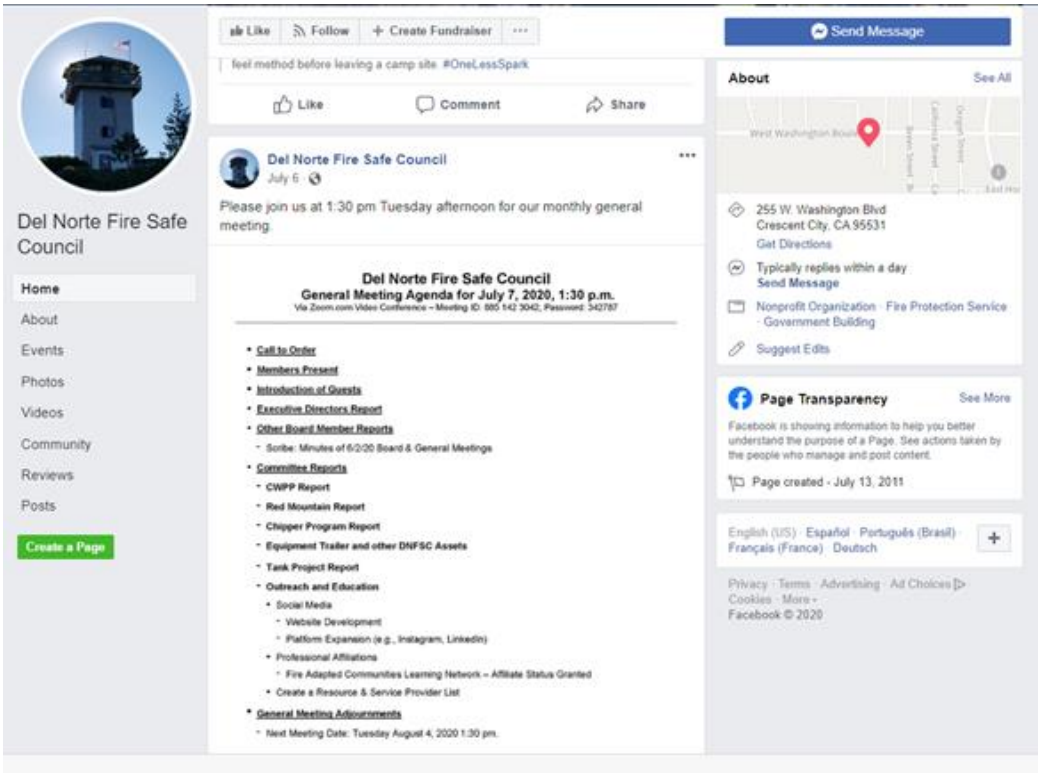


Figure 2-1 Del Norte Fire Safe Council Facebook Post Announcing Meeting

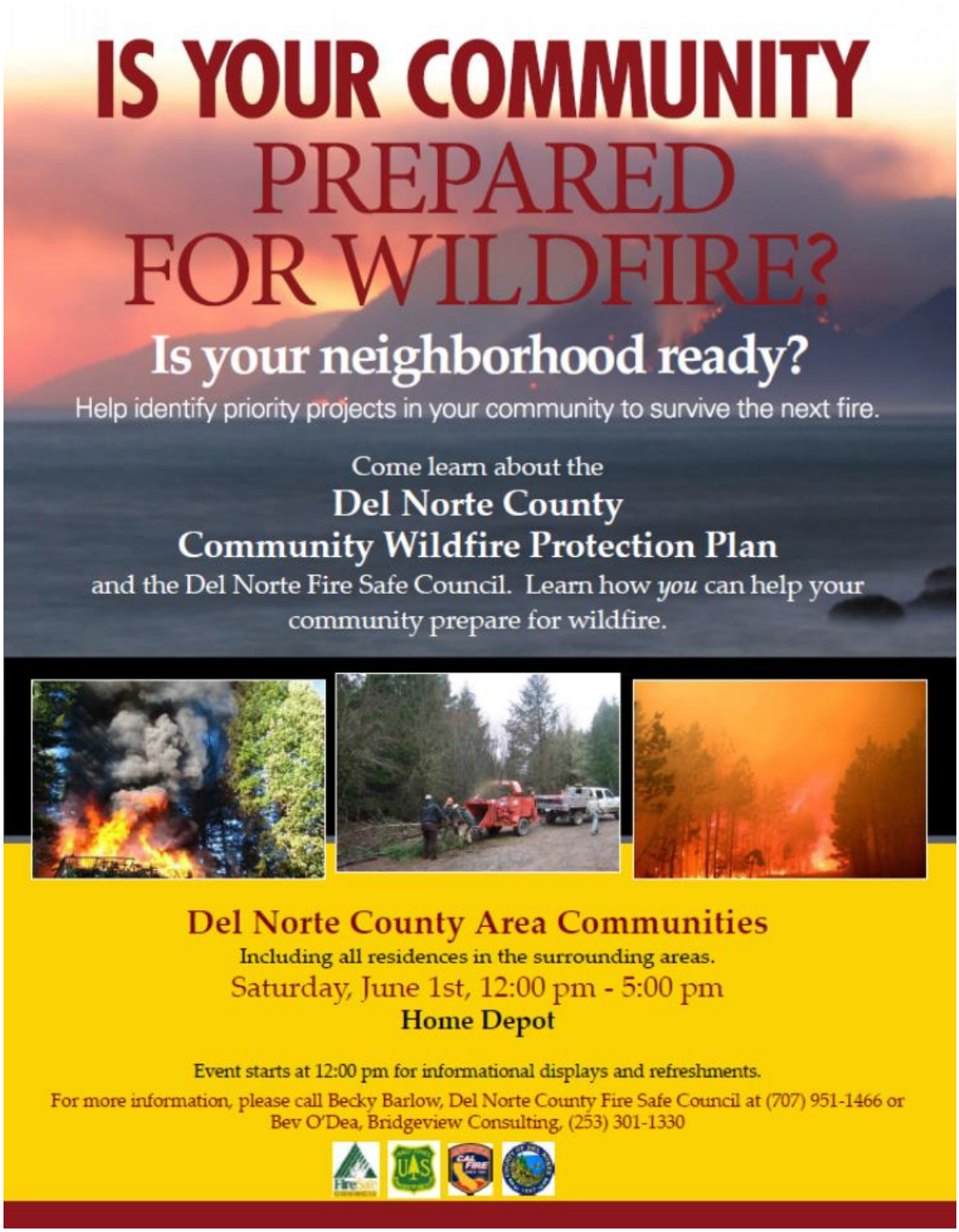


Figure 2-2 Community Flyer

Table 2-2 identifies various planning meetings and public outreach events that occurred during this planning effort.

TABLE 2-2.
PUBLIC OUTREACH EVENTS

Date	Jurisdiction	Description	Attendance
2019			
May	Countywide	Press release announcing the up-coming project released.	N/A
June 1	Countywide	Home Depot Home Show – Planning Committee Members attended the Home Depot Home Show which occurred in Crescent City. During the event, information on the Fire Safe Council was provided, as well as general information concerning the fire risk in the County. Information concerning the update to the CWPP was also provided. Citizens were asked to take surveys and provide information concerning their risk and impact from previous events.	N/A
June 6	Countywide	Fire Safe Council Lead Becky Barlow provided an overview of the CWPP update development process at the Area Operations Meeting.	~50
June 8	Countywide	Planning team members Becky Barlow, Cindy Henderson and Grant Werschkull conducted outreach and provided wildfire preparedness information at the Rock Creek Ranch. Attendees included the Smith River NRA, CALFIRE, Fire Safe Council, and community members. Discussion topics were: wildfire preparedness, including suppression systems, and the CWPP update.	~25
July 9, 2019	Planning Meeting	Discussion concerning overall project; level of involvement by County, data needs, and upcoming meetings to partner for public outreach efforts	5
Aug 1	Countywide	Kick-off meeting with Work Group and Stakeholders. This was a Countywide operations meeting with all emergency managers in attendance, discussed planning process, invited stakeholder involvement, outlined timeline and public outreach efforts, and identified survey to capture relevant information.	~50
Aug 26	Planning Committee	Discussed Fire Chief's Meeting and topics for discussion; will present strategies from last plan to obtain status update; will begin to capture projects for the 2020 update; will review equipment list, and identify gaps for potential grant opportunities	4
Aug 28	Countywide Fire Chief's Meeting	Provided overview of project; discussed possible new communities of concern; reviewed strategies from previous plan to obtain status update; begin developing new strategies for within communities; begin data capture of equipment, training, needs assessment and gap analysis	~25
Oct 28, 2019	Smith River Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~10

TABLE 2-2.
PUBLIC OUTREACH EVENTS

Date	Jurisdiction	Description	Attendance
Oct 30, 2019	Fort Dick Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~10
Nov 1, 2019	Crescent City Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~15
Nov 1, 2019	Hiouchi Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~10
Nov 2, 2019	Rock Creek Ranch Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~25
Dec 4, 2019	Gasquet Public Outreach Community Meeting	An overview of the meeting agenda, process, and involvement of residents in the plan process and mapping process.	~10
2020			
Feb-March	Each Planning Unit	Distribution of the annex templates prepared with information captured during community meetings were distributed for review and comment to each planning unit.	NA
March 3	Fire Safe Council Meeting	The quarterly Fire Safe Council Meeting occurred, where new members were elected to serve various functions on the Council. Planning team members in attendance discussed the status of the CWPP update, and provided information on its current status. It is anticipated that a draft plan will be ready for review in the May timeframe, with Council review to occur in June, during the next regularly scheduled meeting.	12
June 2	Fire Safe Council Meeting	The quarterly Fire Safe Council meeting occurred and continued review of the draft CWPP. Comments were captured and inserted into the plan as appropriate.	12
July 16	Countywide	Public Review process opened via Del Norte County posting the CWPP on its website; Facebook accounts for the Fire Safe Community and Del Norte County were utilized to announce its availability, as was radio announcements on KRCR/KPOD. The public review process remained open until July 30, 2020.	N/A
Aug/Sept	Submission to Planning Partners for Signature and Adoption	Plan Submitted for Review and Signature	

2.3.4 Documented Review Process

Review and comment on this plan have been provided through a number of avenues for the committee members as well as members of the general public. During regularly scheduled committee meetings, the committee met to discuss findings, review mapping and analysis, and provide written comments on draft sections of the document. During the public meetings, attendees observed map analyses, photographic collections, discussed general findings from the community assessments, and made recommendations on potential project areas.

During February and March 2020, each planning unit and fire organization was provided with their respective annex template for review, comment, and editing to ensure accuracy and to capture additional relevant information.

The first draft of the CWPP was completed in April 2020, and was distributed to the CWPP Planning Committee for review and comment. Due to the COVID-19 virus and California gathering restrictions, the final public review of the plan was conducted utilizing the County's website. A News Release was distributed and social media accounts were utilized announcing the Plan's availability for citizen review and comment, along with a comment matrix form on which citizens could provide input, with email transmission addresses provided where citizens could provide their comments. Email distribution lists were also utilized, reaching in excess of 200 individuals within the area. Radio announcements were also made, providing the website location of the plan, which individuals were asked to review.

After public review and comments, recommended changes were incorporated, and the completed Plan was transmitted to local, federal, and state agencies for signature in August 2020.

2.3.5 Continued Public Involvement

The Del Norte County Fire Safe Council and Del Norte County Emergency Services are dedicated to involving the public directly in review and updates of this Community Wildfire Protection Plan. The Del Norte Fire Safe Council, through the CWPP committee and in conjunction with the Planning Partnership, are responsible for the annual review and update of the plan as recommended in this document.

The public will have the opportunity to provide feedback about the Plan annually on the anniversary of its adoption at a date and time to be established, and for which community members will receive advanced notice. A copy of the Plan will be available for review through the County's Website and on CAL FIRE's website.

A public meeting will also be held as part of each annual evaluation or when deemed necessary by the planning committee. The meetings will provide the public a forum for which they can express concerns, opinions, or ideas about the Plan.

3 DEL NORTE COUNTY PROFILE

Del Norte County is at the far northwest corner of the State of California on the Pacific coast, adjacent to Oregon. The county is bounded on the north by Curry County, Oregon; on the east by Siskiyou County; on the south by Humboldt County and on the west by the Pacific Ocean. The county encompasses 1,070 square miles, 80 percent of which is forestlands, protected redwoods, and recreation areas. Most of the county is located in Six Rivers National Forest. Elevations in the county range from sea level to 6,424 feet at Bear Mountain along the county's eastern boundary. Geographically, the county is defined by its coastal plain, mountainous region and rivers. The county seat is Crescent City, the county's only incorporated city.

The county's name (commonly pronounced del nort) is from the Spanish for "the land of the north" (la tierra del norte). Because of its rugged terrain and sparse population, it is one of the least known areas in California. The county is known for its recreational fishing and hunting areas and for its natural wonders, in particular the coastal redwoods, scores of unique plants and flowers, dozens of species of coastal birds, rocky, primitive beaches and sea stacks, pristine rivers, and historic lighthouses.

Del Norte County can be divided into two topographic regions: the eastern mountainous belt in the Northern Coast Range and the Klamath Mountains; and the coastal lowlands, extending from Crescent City to the Oregon border. The wide part of the coastal lowlands is referred to as the Smith River Plain, which encompass approximately 75 square miles.

3.1 GEOLOGY

The mountainous portion of the county, which extends to the coastline 5 miles south of Crescent City, covers 92 percent of the county. The rocks of the western portion of this mountainous terrain consist predominantly of sandstone (greywacke variety) and shale of the Franciscan Complex, an intensely sheared and dismembered assemblage of mainly marine rocks deposited 90 million to 145 million years ago. Other rocks present in lesser quantities in this assemblage are metamorphosed igneous rocks (green stones), cherts, and conglomerates. These rocks were deformed during and following their deposition. The presence of numerous shear zones within this region, combined with the abundant shales, often creates serious slope stability problems in the moist climate of Northern California. To the east of the Franciscan rocks lie the older and more variable rocks of the Klamath Mountains province. While the geology of the Klamath Mountains and Northern Coast Range has been partially mapped, many details remain obscure.

3.2 SOILS

The soils of Del Norte County reflect the geologic materials of the Klamath Mountain province and coastal plain, the vegetation of the county's extensive forests and coastal plain, high annual rainfall and resulting hydrology, and a mild climate. The coastal plain includes most of the prime agricultural lands in the county, which are defined in the county land use plan on the basis of soils and area in contiguous ownership.

3.3 CLIMATE

Del Norte County is an area of moderate temperatures and considerable precipitation. Annual precipitation in the county is commonly 96 to 150 inches, with 90 percent falling between October and April. While some precipitation is in the form of snow, primarily above 4,000 feet, most is rain that soaks into forest soils, seeps into stream channels or recharges aquifers. December is the wettest month in Del Norte County with ~11.9 inches of rain, and the driest month is July with 0.4 inches, with only 2 days of rain. The wettest season is Spring with 48 percent of yearly precipitation and 4 percent occurs in Autumn, which is the driest season. Temperatures along the coast vary only 10 degrees from summer to winter, although a greater range is found over inland areas. The average high temperature for July is 69ºF, while the average low temperature during January is 38.4ºF. On average, there are 3.7 days per year when the high temperature is over 90 degrees. Annually, there are 19.2 days when the nighttime low falls below freezing.

3.4 DEMOGRAPHICS

The California Department of Finance estimated Del Norte County's population at 27,124 as of January 1, 2017, 49th in population out of 58 California counties. As of January 1, 2017, 24 percent of county residents (6,389) live in Crescent City, which is considered the economic center of Del Norte County (California Department of Finance, 2018a).

Population changes are useful socio-economic indicators. A growing population can indicate a growing economy, and a decreasing population may signify economic decline. Figure 3-1 shows California Department of Finance estimates for the population of Crescent City and the rest of the county from 2000 to 2017. The county population increased about 4 percent from 2000 to 2010 (from 27,507 to 28,610), then declined about 5 percent by 2017 (to 27,124). Similarly, Crescent City's population increased about 5 percent from 2000 to 2009 (from 7,347 to 7,698), then declined about 17 percent by 2017 (to 6,389).

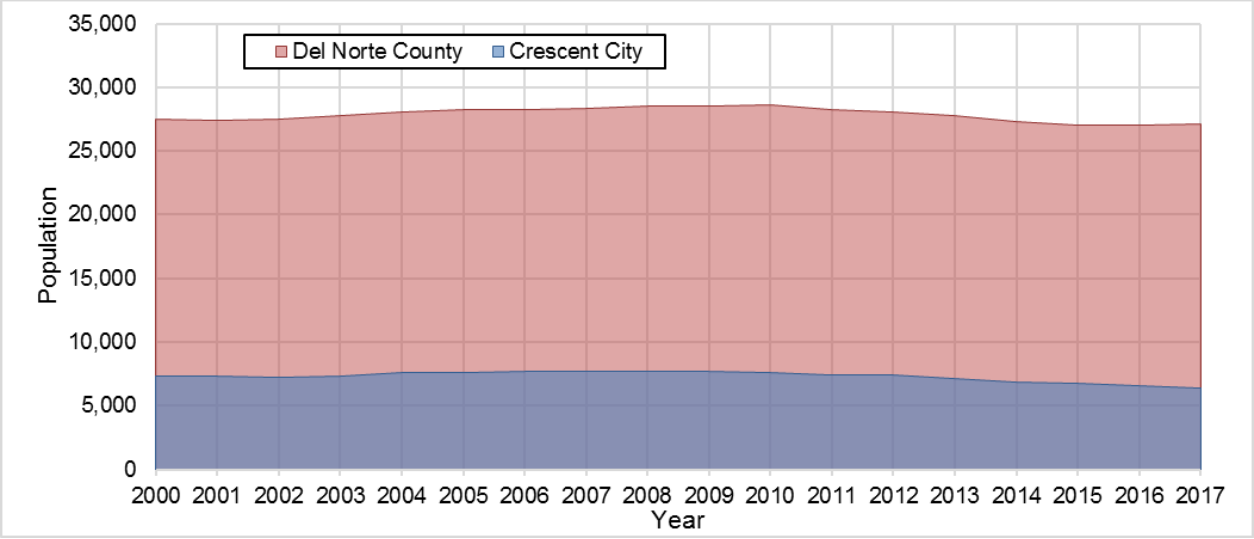


Figure 3-1 Population of Crescent City and Del Norte County
Source: California Department of Finance, 2018

3.4.1 Age Distribution

As a group, the elderly are more apt to lack the physical and economic resources necessary for response to hazard events and are more likely to suffer health-related consequences making recovery slower. Additionally, the elderly are more likely to live in assisted-living facilities where emergency preparedness occurs at the discretion of facility operators. These facilities are typically identified as "critical facilities" by emergency managers because they require extra notice to implement evacuation. Elderly residents living in their own homes may have more difficulty evacuating their homes and could be stranded in dangerous situations. This population group is more likely to need special medical attention, which may not be readily available during natural disasters due to isolation caused by the event. Specific planning attention for the elderly is an important consideration given the current aging of the American population.

Children under 14 are particularly vulnerable to disaster events because of their young age and dependence on others for basic necessities. Very young children may additionally be vulnerable to injury or sickness; this vulnerability can be worsened during a natural disaster because they may not understand the measures that need to be taken to protect themselves from hazards. Figure 3-2 identifies the age distribution by population count countywide. Based on U.S. Census data, 15.2 percent of the planning area's population is 65 or older and 23.5 percent of the population is 19 or younger.

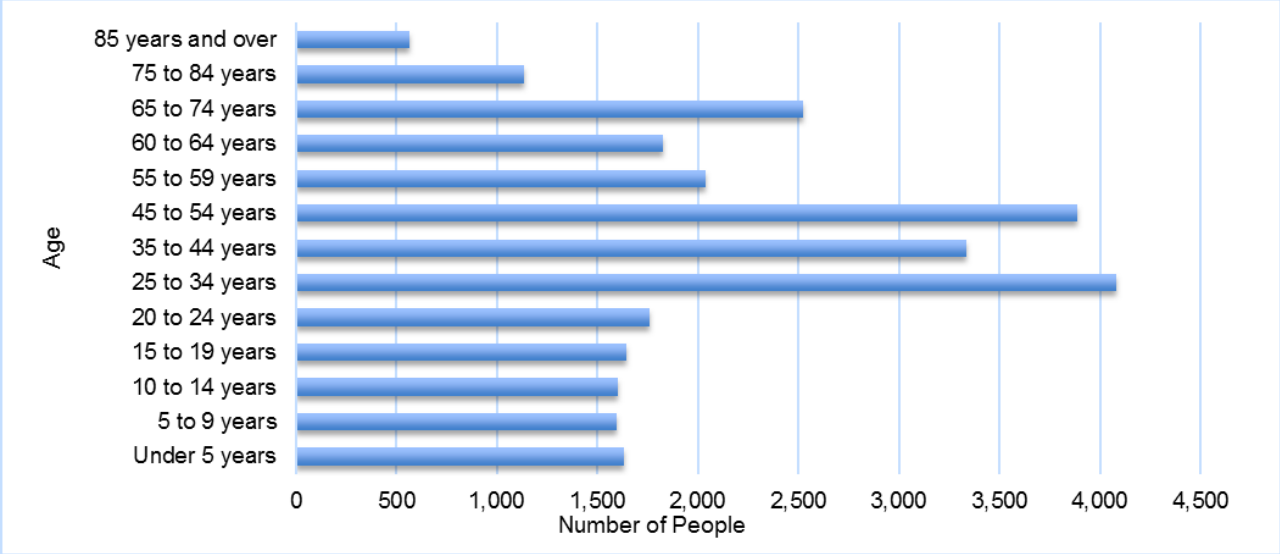


Figure 3-2 American Fact Finder 2012-2016 Age Distribution Estimates (2018)

3.4.2 Socioeconomics

Socioeconomic factors were based on evaluating conditions that are associated with populations at risk to wildfire. Some populations may experience greater risk to wildfire based on socioeconomic factors that lead to adverse health outcomes and their ability to respond to a wildfire. Factors customarily include variables such as poverty levels, individuals with disabilities, English speaking difficulties, transportation (households without a car), people over 65, and people under 5.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, directs federal agencies to identify and address any disproportionately high adverse human health or environmental effects of its projects on minority or low-income populations. Based on U.S. Census Bureau estimates, per capita income in the planning area in 2016 was $20,282, and the median household income was $56,408. It is estimated that 12.9 percent of households receive an income between $100,000 and $149,999 per year and 6.2 percent of household incomes are above $150,000 annually. The Census estimates that 16.7 percent of all families in the planning area have incomes below the poverty level. According to U.S. Census data, 12.1 percent of the over-65 population have incomes below the poverty level. Of children under 18, 28.2 percent live below the poverty level.

3.4.3 Race, Ethnicity and Language

Research shows that minorities are less likely to be involved in pre-disaster planning and experience higher mortality rates during a disaster event. Post-disaster recovery can be ineffective and is often characterized by cultural insensitivity. Since higher proportions of ethnic minorities live below the poverty line than the majority white population, poverty can compound vulnerability. According to the U.S. Census, the racial composition of the planning area is predominantly white, at about 78 percent. The largest minority populations are multi-racial at 8 percent and American Indian/Alaska Native at 7 percent. While not considered a separate race, the planning area has 19.3 percent Hispanic or Latino population. Figure 3-3 shows the racial distribution in the planning area.

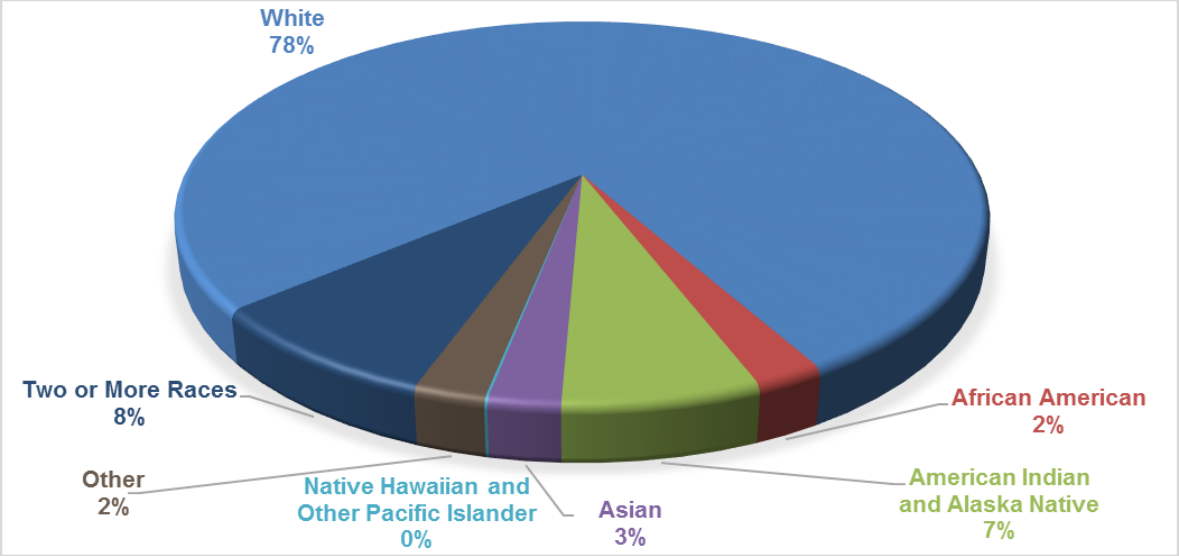


Figure 3-3 Del Norte County Race Distribution

3.4.4 Language

Communicating information to the public is essential to emergency management. Limited English proficient (LEP) individuals will likely be present in any community faced with an emergency or disaster. LEP individuals are those who have difficulty speaking, understanding, reading, or writing English. If LEP individuals are not able to access disaster information in a language they can understand, the consequences can be deadly. Approximately 12.7 percent of the households report that a language other than English is spoken at home. Based on the 2020 California Census

report, of persons 5-years and older who indicated they did not speak English "very well", the languages most identified are Spanish (63.4 percent), other Asian and Pacific Island languages (10.3 percent), and other Indo-European languages (7.4 percent).

3.4.5 Individuals with Disabilities or with Access and Functional Needs

The 2010 U.S. Census estimates that 54 million non-institutionalized Americans with disabilities live in the U.S. This equates to about one-in-five persons. Individuals with disabilities are more likely to have difficulty responding to a hazard event than the general population. Local government is the first level of response to assist these individuals, and coordination of efforts to meet their access and functional needs is paramount to life safety efforts. It is important for emergency managers to distinguish between functional and medical needs in order to plan for incidents that require evacuation and sheltering. Knowing the percentage of population with a disability will allow emergency management personnel and first responders to have personnel available who can provide services needed by those with access and functional needs. According to U.S. Census data, 50.2 percent of the over-65 population has disabilities of some kind, as well as 16.7 percent of those under 65.

All people exposed to the wildland fire hazard are potentially vulnerable to wildland fire impacts. Smoke and air pollution from wildland fires can be a severe health hazard, especially for sensitive populations, including children, the elderly and those with respiratory and cardiovascular diseases. In addition, wildland fire may threaten the health and safety of those fighting the fires. First responders are exposed to dangers from the initial incident and after-effects from smoke inhalation and heat stroke. Persons with access and functional needs, the elderly and very young may be especially vulnerable to a wildland fire if there is not adequate warning time before evacuation is needed.

3.4.6 Household Transportation

Households without a car are less likely or unable to evacuate when needed, thereby increasing the likelihood of injury or death.

3.5 CULTURAL RESOURCES

Mitigation activities in and around cultural sites have the potential to affect historic places. In all cases, the mitigation work will be intended to reduce the potential of damaging the site. Areas where ground disturbance will occur will need to be inventoried depending on the location. Ground-disturbing actions may include, but are not limited to, constructed fire lines (hand line, mechanical line, etc.), new roads to creeks to fill water tankers, mechanical treatments, etc. Traditional Cultural Properties (TCPs) will also need to be identified. Potential impact to TCPs will depend on what values make the property important and will be assessed on an individual basis.

3.5.1 National Register of Historic Places

The National Park Service maintains the National Register of Historical Places as a repository of information on significant cultural locale. These may be buildings, roads or trails, places where

historical events took place, or other noteworthy sites. As of 2019, there are 14 properties and districts listed on the National Register.[4]

3.6 TRANSPORTATION & INFRASTRUCTURE

The transportation system within the County is comprised of a significant number of roads, airport, logging roads (many gated and locked) and an extensive trail system. Access is an important component in the CWPP. The transportation system consists of a network of federal, state, and county roads and airports that all have the potential for hazardous material incidents. Of particular concern are U.S. Highways 101 and 199. These transportation systems are vulnerable to disruption from various hazards including wildfire.

Major transportation routes in the planning area are limited. If hazards negatively impact these routes and results in road closures, there could be cascading impacts on the county-wide transportation system, resulting in delays in response and recovery. The loss of major travel routes would result in loss of commerce, and could impact the ability to provide emergency services to citizens.

Primary and secondary access routes were identified by committee members and amended by the public during meetings. These routes identify the primary access routes into and out of the county that are relied on during emergencies. As such, they often receive prioritized treatment when allocating resources for hazard abatement.

Transportation routes are vulnerable to multiple hazards and have the potential to be wiped out, creating isolation issues and significant disruption to travel along the Pacific coast, including all roads, railroads, and bridges in the path of various hazards. Those that are most vulnerable are those that are already in poor condition. Utilities such as overhead power lines, cable and phone lines in the areas of occurring hazards could also be vulnerable. If phone lines were lost, significant communication issues may occur in the planning area due to limited cell phone reception in many areas. In addition, emergency response would be hindered due to the loss of transportation routes as well as some protective-function facilities located in these areas. Recovery time to restore many critical functions after an event may be lengthy, as wastewater, potable water, and other community facilities are located in the areas where wildfires may be prevalent.

3.6.1 Communication Sites

A list of names and locations of communication sites throughout Del Norte and neighboring counties is available through Del Norte County Office of Emergency Services, Logistics Section to ensure continued accuracy of the information as a function of OEM.

3.7 VEGETATION IN DEL NORTE COUNTY

California red fir and white fir mortality comprised over 75 percent of the total tree mortality observed in 2018. Approximately 14 million dead firs were recorded across 1.4 million acres, compared to ~23 million dead fir trees across 2 million acres in 2017. Statewide precipitation from October 2017 - April 2018 was 75 percent of average, compared to 170 percent for the same time period in 2016-2017. Northern California forested area rainfall totals were 80 - 90 percent of

[4] National Register of Historic Places: Weekly List Actions. National Park Service, United States Department of the Interior. Accessed 9 July 2019.

average and southern coastal areas were 40 percent of average. The 2017-2018 water year (the water year is from October 1 – September 30) was the 14th driest on record (since January 1895) and the driest since 2014. Most precipitation occurred in November 2017 and January and April 2018. It was also the state's third warmest year on record (since January 1895), with July being the warmest month ever recorded (4.9° F above the July average), and January the third warmest month on record.

Tanoak mortality attributed to sudden oak death (SOD) increased to ~1.6 million dead trees across 106,000 acres, up from ~214,000 dead trees across 18,000 acres in 2017. Mortality generally increased in extent and severity in most infested coastal areas. While Humboldt County has been infested with SOD, as of the 2018 study by the California Forest Pest Council, no infected wildland trees were detected in Del Norte County.

Lingering impacts from the 5-year drought, overstocked forests, and higher than average temperatures were the most significant factors affecting California forest health in 2018, with ~18 million dead trees mapped across 2 million acres (US Forest Service Aerial Detection Program). This was the second year in a row that tree mortality levels have declined statewide, down from a high of 54 million dead trees in 2016. Drought also caused big leaf maple mortality in many areas of northern California (CA Forest Pest Conditions, 2018)[5]. Two small tributaries of Sultan Creek in the Smith River watershed, north of Crescent City (Del Norte County), had numerous dead Port-Orford-cedars.

Dead Port-Orford-cedar at Fish Lake resistance test site, Six Rivers NF. Photo by: P. Angwin, USFS

Figure 3-4 Smith River Watershed Port-Orford-Cedar Root Disease

Shrublands have historically experienced the greatest number of acres burned in California, which is not surprising given the high-intensity nature of fires in this ecotype coupled with a geographic range that commonly occurs near higher urban populations in the state (which result in increased numbers of human-related ignitions). However, coniferous forests are burning in larger acreages in recent decades, with a significant increase in forest acreage burned during the 2010-2017 partial decade, which may be due to increased fuel loading in that ecotype. The increased fuel loading has been caused in part by a century of fire exclusion policies that limited the occurrence and extent of once-frequent but low-intensity fires that reduced woody debris and understory vegetation that increases fire intensity and severity. At present, there is heightened risk of large, high-severity fires in California's coniferous forests after the five-year (2012 to 2017) statewide drought that, along with other factors, resulted in the die-off of over 100 million trees (SHMP).

Vegetative structure and composition in Del Norte County are closely related to elevation, aspect, and precipitation. Relatively mild and dry environments characterize the undulating topography of the region which transitions from the forestland to coastal areas. The higher elevation forest ecosystems in the north and northeast regions typically contain higher fuel accumulations that have

[5] 2018 California Forest Pest Conditions. Accessed 18 March 2020. Available online at: https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd617799.pdf

the potential to burn at moderate to high intensities. The highly variable topography coupled with limited access is likely to make suppression difficult.
The patchy forests occurring along the Smith River and many of its tributaries as well as in the scabland areas are very different. These forests are much less productive due to the lack of soil. Scattered, lower density stands of primarily ponderosa pine and a minor component of Douglas fir are found in many of the sheltered drainages or where there are accumulations of loess due to topographic features. Under natural conditions, this type of forestland would burn at frequent intervals keeping brush and other ladder fuels to a minimum.

At higher elevation mountainous regions (Bear Mountain being the highest point in the county at 6,404 feet), moisture becomes less limiting due to a combination of higher precipitation and reduced solar radiation. Due to its location near the Pacific Ocean, the mountain normally receives tremendous snowfall during the winter. Therefore, vegetative patterns shift based on the elevation of the area and creates specific conditions which impact fuels and fire speed. In some instances, forested conditions possess a greater quantity of both dead and down fuels as well as live fuels. Rates of fire spread tend to be lower than those in the grasslands; however, intensities can escalate dramatically, especially under the effect of slope and wind. These conditions can lead to control problems and potentially threaten lives, structures, and other valued resources.

As elevation and aspect increase available moisture, forest composition transitions to moister habitat types. Increases in moisture keep forest fuels unavailable to burn for longer periods during the summer. This increases the time between fire events, resulting in varying degrees of fuel accumulation. When these fuels do become available to burn, they typically burn in a mosaic pattern at mid elevations, where accumulations of forest fuels result in either single or group tree torching, and in some instances, short crown fire runs. At the highest elevations, fire events are typically stand replacing as years of accumulation fuel large, intense wildfires.

California and many western states have overplanted and not thinned out their trees. These dense forests are starving for water, and trees use their root systems to steal from one another. Bark beetles takes advantage of stressed and thirsty trees to burrow through the bark and lay their eggs in the tree's living tissue. When forest density is high under drought conditions, competition for water is amplified. Trees in this weakened state are less effective at defending themselves from bark beetles and other pests. Each successful onslaught from the beetles brings forth a new brood of thousands more, further compounding the problem. As the number of host trees dwindle and precipitation returns, conditions become less favorable for the beetles and balance in the forest is restored.

Insects and disease can cause widespread mortality of forest stands in a very short amount of time. Pine bark beetle populations have continued to increase at epidemic levels throughout much of California State. Ponderosa pine and lodgepole pine seem to be the most affected species at all elevations in Del Norte County.

Insects and disease often focus and cause the most mortality in forest stands that are overcrowded or otherwise stressed by drought, recent fires, or other factors. Large areas of dead trees are a significant fire hazard. Often, dry, dead needles hang on the killed trees for several years making them prime for a potential ignition and subsequent crown fire. Thinning overcrowded stands can

help reduce stress on individual trees allowing them to better withstand insect attacks. Planting of appropriate species for the site and continual management can also help ward off future outbreaks. Many lower elevation forested areas throughout Del Norte County are highly valued for their scenic qualities as well as for their proximity to travel corridors and services. These attributes have led to increased recreational home development and residential home construction in and around forest fuel complexes. The combination of highly flammable forest types and rapid home development will continue to challenge the ability to manage wildland fires in the wildland-urban interface.

A prolonged lack of precipitation dries out vegetation, which becomes increasingly susceptible to ignition as the duration of the drought extends. In addition, lack of sufficient water resources can stress trees and other vegetation, making them more vulnerable to infestation from pests, which in turn, can make them more vulnerable to ignition. Millions of board feet of timber have been lost, and in many cases, erosion occurred, which caused serious damage to aquatic life, irrigation, and power production by heavy silting of streams, reservoirs, and rivers.

The decrease in soil carbon caused both by fire suppression and the intensity by which fires burn reduces the soil carbon presence. Such reductions further stress vegetation from related decreases in soil water-holding capability, as well as the nutrients available due to slower decomposition rates. Such reductions, when coupled with the potential increase in heavy metal(s), can influence vegetation cover.

Vegetation usually provides most of the fuel to feed wildfire, combined with other flammable materials such as buildings. However, in Wildland-Urban Interface (WUI) fires, it is often the homes and other urban fuels that provide the most fuel for a fire. Fuel includes anything that can burn: grass, shrubs, and trees, along with urban fuels such as fences, decks, furniture, cars, and houses. These can be described using *fuel models*, or, rather, in terms of their *size, volume, and arrangement:*

- Light fuels (e.g. grass, foliage, kindling-size twigs, or baskets and brooms),
- Medium fuels (e.g. shrubs, branches, and fences), or
- Heavy fuels (e.g. logs, tree trunks, and houses).

Light, medium, and heavy fuel loadings describe fuel volume. Fuel arrangement is commonly discussed in terms of continuity—both horizontal and vertical. Fuel continuity is an important concept for homeowner and community wildfire preparedness.

3.8 AIR QUALITY

The primary means by which the protection and enhancement of air quality is accomplished is through implementation of National Ambient Air Quality Standards (NAAQS). These standards address six pollutants known to harm human health including ozone, carbon monoxide, particulate matter, sulfur dioxide, lead, and nitrogen oxides (USDA Forest Service 2000).

The Clean Air Act, passed in 1963 and amended in 1977, is the primary legal authority governing air resource management. The Clean Air Act provides the principal framework for national, state, and local efforts to protect air quality. Under the Clean Air Act, the Office for Air Quality Planning

and Standards (OAQPS) is responsible for setting standards, also known as national ambient air quality standards (NAAQS), for pollutants which are considered harmful to people and the environment. OAQPS is also responsible for ensuring these air quality standards are met, or attained (in cooperation with state, Tribal, and local governments) through national standards and strategies to control pollutant emissions from automobiles, factories, and other sources (Louks 2001).

Smoke emissions from fires potentially affect an area and the airsheds that surround it. Climatic conditions affecting air quality in northeast California are governed by a combination of factors. Large-scale influences include latitude, altitude, prevailing hemispheric wind patterns, and mountain barriers. At a smaller scale, topography and vegetation cover also affect air movement patterns. Air quality in the area is generally moderate to good. However, locally adverse conditions can result from occasional wildland fires in the summer and fall, and prescribed fire and agricultural burning in the spring and fall. All major river drainages are subject to temperature inversions which trap smoke and affect dispersion, causing local air quality problems. This occurs most often during the summer and fall months and would potentially affect all communities in Del Norte County. Wintertime inversions are less frequent, but are more apt to trap smoke from heating, winter silvicultural burning, and pollution from other sources.

3.8.1 Del Norte County Air Quality

The North Coast Unified Air Quality Management District (NCUAQMD) is a regional environmental regulatory agency which has jurisdiction over Humboldt, Del Norte and Trinity counties in Northern California. The District's primary responsibility for controlling air pollution from stationary sources and is committed to achieving and maintaining healthful air quality throughout its tri-county jurisdiction. The District is one of thirty-five local air agencies in California and enforces local, state, and federal air quality regulations.

The District accomplishes its mission through public education and outreach, planning, enforcement of local rules and regulations (including approval of a Smoke Management Plan for open burning), air quality permits and promotion of clean air programs. The District works closely with the California Environmental Protection Agency (CalEPA) and the California Air Resources Board (CARB).

Through a series of air quality monitoring stations which track fine particulate matter (PM2.5), the District is able to better assess air quality in the county. The air monitoring information obtained helps predict daily air quality conditions and significant events (e.g. air stagnations), call burn bans, measure and report air quality in our communities, and operate a "Clean Air Network" to notify businesses and individual subscribers via email of air quality changes and clean air actions. The vast majority of air pollution comes from individual behaviors, which is why the Del Norte Regional Clean Air Agency provides a host of education and outreach programs. Public awareness of air pollution problems and solutions are key to achieving long term behavior change that will

result in clean, healthful air. They partner in educational programs and incentives to encourage people to make cleaner choices whenever feasible.
The District also conducts facility inspections and compliance assistance for commercial and industrial operations in the area. This includes issuing federally required permits and providing technical workshops and other resource materials.

In January 2004, the District began requiring burn permits, which are issued at minimal costs for both standard and non-standard burns. Historically, burning has been allowed only in select days, with other restrictions also existing. Additional information is available at: http://www.ncuaqmd.org/index.php?page=burn.permits.

3.9 HYDROLOGY

Much of Del Norte County is located in the Klamath River Basin, which is bounded by the state border to the north, the Pacific Ocean to the west, Redwood Creek and Mad River hydrological units to the south and Sacramento valley to the east. The planning area is part of the North Coast Resource Partnership, which in 2014 published the North Coast Regional Water Management Plan. The North Coast Region includes four entire counties, including Del Norte, as well as major portions of two counties and smaller portions of four other counties.

Water supply in the planning area comes from both surface water and groundwater sources. Surface water in the North Coast Region is extremely dependent on precipitation and resources are currently overallocated. There are three groundwater basins providing water supply: Smith River Plain, Lower Klamath River Valley, and Prairie Creek Area. The amount of groundwater varies with precipitation, infiltration, and annual withdrawals. From 2005 to 2010, groundwater accounted for 35 percent of the region's overall water supply; groundwater represents a larger portion of the water supply for many of the region's rural communities. There are estimated to be fewer than 1,300 wells in Del Norte County and six water supply and/or wastewater service providers in the planning area: Bertsch-Oceanview Community Services District; Crescent City Water District; Gasquet Community Services District; Klamath Community Services District; Smith River Community Services District; and Yurok Tribe (North Coast Resource Partnership, 2014).

The California Department of Water Resources is charged with the development of the California Water Plan. It is the State's strategic plan for sustainably managing and developing water resources for current and future generations. Required by Water Code Section 10005(a), it presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios.

California Water Plan Update 2018 provides recommended actions, funding scenarios, and an investment strategy to bolster efforts by water and resource managers, planners, and decision-makers to overcome California's most pressing water resource challenges. It reaffirms State government's unique role and commitment to sustainable, equitable, long-term water resource management; it also introduces implementation tools to inform sound decision-making. The plan's broad and diverse portfolio of recommended actions address California's critical, systemic, and institutional challenges.

A correlation to mass wasting due to the removal of vegetation caused by high intensity wildland fire has been documented. Burned vegetation can result in changes in soil moisture and loss of rooting strength that can result in slope instability, especially on slopes greater than 30 percent. The greatest watershed impacts from increased sediment will be in the lower gradient, depositional stream reaches.

Timberlands in the region have been extensively harvested for the past several decades, therefore altering riparian function by removing streamside shade and changing historic sediment deposition. Riparian function and channel characteristics have been altered by farming, ranching, and residential areas as well. The current conditions of wetlands and floodplains are variable.

3.10 WILDFIRE ECOLOGY

Where there are people, there is fire. Ninety-five percent of wildfires in California are caused by humans, whether by accident or deliberately. What makes matters perhaps worse in California than many other western states is the ever-growing number of people and homes encroaching on the wildland-urban interface (WUI), a technical name for the transition between wildlands and established municipal areas. Homes in these fire-prone areas are more vulnerable to fire, and fire agencies have to spend more to protect them. Between 1990 and 2000, 60 percent of all new housing units built in the United States were located in the WUI, with major development along the West Coast.

In Del Norte County there are several ecosystem types that have evolved with fire, including chaparral and redwood. Disturbance is a part of the natural process. [6] To suppress or prevent this disturbance changes natural processes. As a result of decades of fire suppression, ecosystems become altered and degraded. For instance, fire suppression has led to increases in the amount and type of live vegetation, as well as the size, amount, and distribution of dead fuel. As a result, the forest is more crowded, trees are unable to retain their vigor, and they are more vulnerable to insects, disease, and stand-destroying fires. For example, Douglas fir, which is a shade-tolerant tree, is quite abundant throughout Del Norte County but would not have proliferated had fire been used to manage the landscape. This is noticeable with the new Mill Creek addition to State Parks. Where once a redwood forest dominated, continued forest management converted much of it to dense Douglas fir stands. In contrast, frequent, low-intensity surface fires (such as occurred historically) cleanse the forest floor and maintain open stands of trees, thus allowing sunlight and moisture to reach the understory. When fire maintains a mosaic of vegetation and fuel to “natural” conditions, shade-tolerant trees such as Douglas fir are not able to form the dense understories that are present in the forests of Del Norte County today. In addition, fire suppression has led to a buildup of dead fuel because they are accumulating faster than they are being recycled through harvesting, fire, and decomposition.

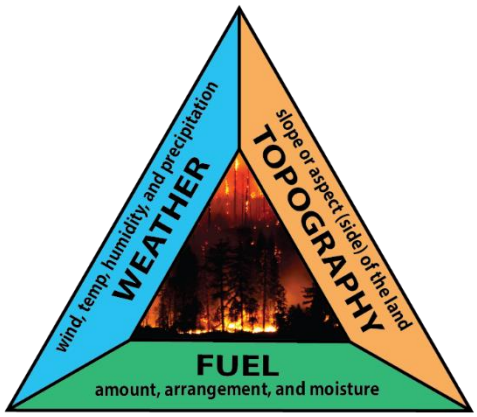
The forest floor grows dense with flammable dead branches and brush when it’s not cleared out, either manually or when burned. In many parts of California’s wildlands, these forest "fuels" have not burned or been cleared for decades, due in part to fire suppression policies by state and federal

[6] Disturbance is defined as “A natural or human-induced disruption or alteration of an ecosystem. Forest fires, tornadoes, or rockslides are examples of natural disturbances; logging, acid rain, and road-building are examples of human disturbances.” (Source: Hubbard Brook Glossary, http://www.hubbardbrook.org/education/Glossary/Glossary.htm.)

agencies. Another contributing factor to the growing forest fuel load is the increasing number of dead or dying trees caused by bark beetle infestations. These insects, along with the drought, are responsible for killing 129 million trees across California since 2010, quite literally adding fuel to the fire. In some instances, fire can have a positive impact when helping to balance certain negative elements in the environment which, when left out of control, provide fuel causing fires to burn out of control. Cool, frequent fires keep our forests healthy. Our challenge is how to remove the unnaturally high level of fuel, while maintaining ecosystem functions, processes, and health.

4 WILDLAND FIRE ENVIRONMENT

The wildlands of California are naturally fire prone. Past land and fire management practices have had the effect of increasing the intensity, rate of spread, as well as the annual acreage burned on these lands. While most of the natural communities of plants and animals have adapted to natural fire conditions, these natural communities are now at risk from catastrophic wildfire primarily due to the hazardous fuel conditions. Also, at risk are the communities that interface with these wildlands, including those within wildland-urban interface (WUI) and rural areas. Strategic management and control of wildland vegetation is essential to the safety, health, recreational, and economic wellbeing of California's citizens.



Fire Behavior Triangle

An informed discussion of fire mitigation is not complete until basic concepts that govern fire behavior are understood. In the broadest sense, wildland fire behavior describes how fires burn; the manner in which fuels ignite, how flames develop and how fire spreads across the landscape. The three major physical components that determine fire behavior are the fuels supporting the fire, topography in which the fire is burning, and the weather and atmospheric conditions during a fire event. At the landscape level, both topography and weather are beyond our control. We are powerless to control winds, temperature, relative humidity, atmospheric instability, slope, aspect, elevation, and landforms. It is beyond our control to alter these conditions, and thus impossible to alter fire behavior through their manipulation. When we attempt to alter how fires burn, we are left with manipulating the third component of the fire environment; fuels which support the fire. By altering fuel loading and fuel continuity across the landscape, we have the best opportunity to determine how fires burn.

A brief description of each of the fire elements follows in order to illustrate their effect on fire behavior.

4.1.1 Weather

Weather conditions contribute significantly to determining fire behavior, ignition, and suppression. Wind, moisture, temperature, and relative humidity ultimately determine the rates at which fuels dry and vegetation cures, and whether fuel conditions become dry enough to sustain an ignition.

Once conditions are capable of sustaining a fire, atmospheric stability, wind speed and wind direction can have a significant effect on fire behavior. Winds fan fires with oxygen, increasing the rate at which fire spreads across the landscape.

Weather is the most unpredictable component governing fire behavior, constantly changing in time and across the landscape. When the temperature is high, relative humidity low, wind speed is increasing and coming from the east (offshore flow), and there has been little to no precipitation so vegetation is dry, conditions are very favorable in Del Norte County for extensive and severe wildfires.

While these conditions occur less frequently near the coast in Del Norte County, they occur more frequently inland where temperatures are higher and the fog is less prevalent. In addition, the large amount of precipitation the County receives on an annual basis creates an abundance of vegetation, which is potential fuel. During the dry summer months this abundant vegetation dries out and becomes hazardous fuel. That fuel combined with a Chinook wind—hot and dry from the Great Basin—can produce extreme fire danger in Del Norte. The coastal area also has a local fire weather scenario when the prevailing winds from the Gulf of Alaska blow off the ocean. Readers wishing additional information on fire weather may wish to view the National Fire Weather website at: https://www.weather.gov/fire/ .

4.1.2 Topography

Fires burning in similar fuel conditions burn dramatically different under different topographic conditions. Topography alters heat transfer and localized weather conditions, which in turn influence vegetative growth and resulting fuels. Changes in slope and aspect can have significant influences on how fires burn. Generally speaking, north slopes tend to be cooler, wetter, more productive sites. This can lead to heavy fuel accumulations, with high fuel moistures, later curing of fuels, and lower rates of spread. In contrast, south and west slopes tend to receive more direct sun, and thus have the highest temperatures, lowest soil and fuel moistures, and lightest fuels. The combination of light fuels and dry sites lead to fires that typically display the highest rates of spread. These slopes also tend to be on the windward side of mountains. Thus, these slopes tend to be "available to burn" a greater portion of the year.

Slope also plays a significant role in fire spread, by allowing preheating of fuels upslope of the burning fire. As slope increases, rate of spread and flame lengths tend to increase. Therefore, we can expect the fastest rates of spread on steep, warm south and west slopes with fuels that are exposed to the wind.

4.1.3 Fuels

Fuel is any material that can ignite and burn. Fuels describe any organic material, dead or alive, found in the fire environment. Grasses, brush, branches, logs, logging slash, forest floor litter, conifer needles, and buildings are all examples. The physical properties and characteristics of fuels govern how fires burn. Fuel loading, size and shape, moisture content and continuity, and arrangement all have an effect on fire behavior. Generally speaking, the smaller and finer the fuels, the faster the potential rate of fire spread. Small fuels such as grass, needle litter and other fuels less than a quarter inch in diameter are most responsible for fire spread. In fact, "fine" fuels, with high surface to volume ratios, are considered the primary carriers of surface fire. This is apparent to anyone who has ever witnessed the speed at which grass fires burn. As fuel size increases, the rate of spread tends to decrease, as surface to volume ratio decreases. Fires in large fuels generally burn at a slower rate, but release much more energy, burn with much greater intensity. This increased energy release, or intensity, makes these fires more difficult to control. Thus, it is much easier to control a fire burning in grass than to control a fire burning in timber.

When burning under a forest canopy, the increased intensities can lead to torching (single trees becoming completely involved) and potential development of crown fire (fire carried from tree crown to tree crown).

These types of fires release much more energy. Fuels are found in combinations of types, amounts, sizes, shapes, and arrangements. It is the unique combination of these factors, along with the topography and weather, which determine how fires will burn.

The study of fire behavior recognizes the dramatic and often-unexpected affect small changes in any single component has on how fires burn. It is impossible to speak in specific terms when predicting how a fire will burn under any given set of conditions. However, through countless observations and repeated research, some of the principles that govern fire behavior have been identified and are recognized.

4.2 WILDFIRE HISTORY

Californians increasingly face the disastrous consequences of catastrophic wildfires. In 2017, there were 46 fire-related deaths (and more from fire-induced landslides); 1,436,558 acres burned; 10,822 structures destroyed and another 1,238 damaged (McLean 2018); and tens of billions of dollars in losses and associated costs. As of December 2, 2018, approximately 1.7 million acres were consumed by 7,510 wildfires (California Department of Forestry and Fire Protection 2018). California is primed for more frequent and more catastrophic wildfires as a result of extreme tree mortality, increased fuel loads, climate change leading to more extreme droughts and flooding, and continued urban development in and near wildlands.

The severity of a fire season can usually be determined in the spring by how much precipitation is received, which in turn, determines how much fine fuel growth there is and how long it takes this growth to cure out. These factors, combined with annual wind events in late summer, drastically increase the chance a fire start will grow and resist suppression activities.

Detailed records of fire ignitions and extent of impact have been compiled by the CAL FIRE and Resource Assessment Program (FRAP). FRAP includes a record of all historical wildland fires in Del Norte County.

According to program statistics, a total of 235 (reported) wildland fires burned in Del Norte County between 1909 and 2019 (most recent available date until final reports are completed by CAL FIRE).[7] The cause of 31 of those fires remains unknown. The cause of the remaining 204 fires is illustrated in Figure 4-1. Of those identified, 63 percent or 128 fires were caused by human activities. Lightning accounts for another 33 percent, or 76 fires. The month of most occurrence is August, followed by September, July, and October, respectively. Table 4-1 identifies all wildfires larger than 100 acres recorded in Del Norte County. As a result of the steep terrain, inaccessibility, and/or delay in notifications, 17 fires were over 3,000 acres. Figure 4-2 further identifies the locations of some of the wildfires occurring in the County based on data maintained by Geospatial Multi-Agency Coordination (GeoMac).

[7] California Department of Forestry and Fire Protection. https://fire.ca.gov/stats-and-events/ Accessed February 6, 2020.

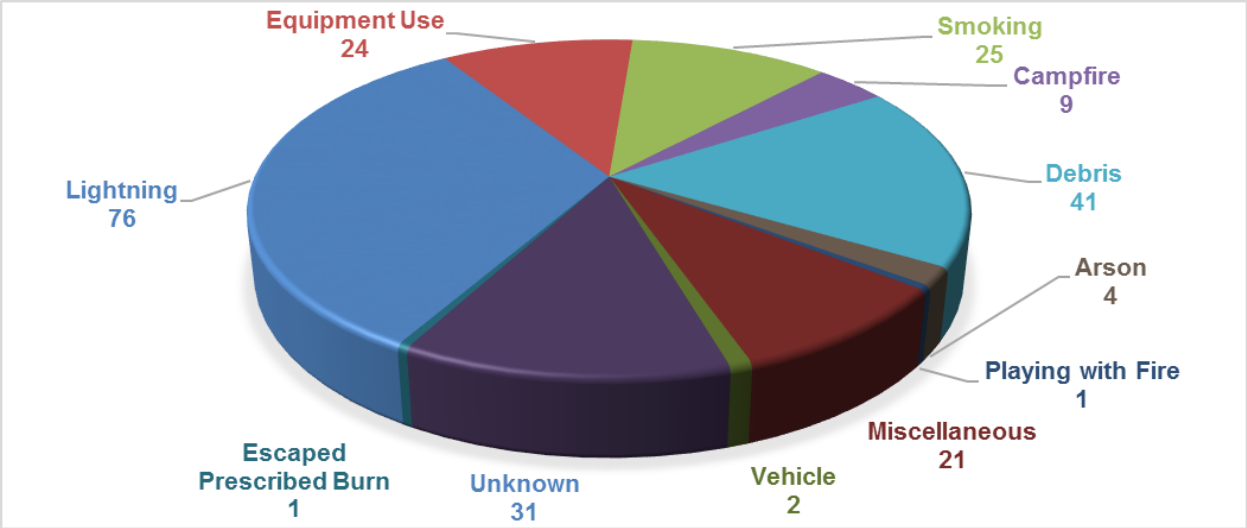


Figure 4-1 Cause of Wildland Fires 1909-2019

TABLE 4-1.
DEL NORTE COUNTY HISTORIC WILDFIRES FIRES >100 ACRES (1909 TO 2019)

Fire Name	Agency	Alarm Date	Cause	Area Burned (acres)
Marble Fire	USFS	07/19/2019	Unknown	319
Natchez Fire	USFS	07/15/2018	Lightning	>20,000
Myrtle Creek	USFS	6/26/1918	Debris	1,050
Stone Creek	USFS	6/18/1918	Debris	119
Camp Creek	USFS	6/12/1918	Lightning	3,565
Unnamed	USFS	1/1/1918	Unknown Unidentified	5,469
Young	USFS	8/7/17	Lightning	21,377
Unnamed	USFS	9/29/1917	Debris	2,970
Serpentine Camp	USFS	9/3/1917	Debris	996
Old Fire	USFS	09/13/2016	Unknown	150
Unnamed	USFS	9/7/1915	Debris	1,643
Feeder (Gasquet Complex)	USFS	8/2/2015	Lightning	898
Summit (Gasquet Complex)	USFS	8/2/2015	Lightning	640
Coon (Gasquet Complex)	USFS	8/1/2015	Lightning	5,683
Peak (Gasquet Complex)	USFS	8/1/2015	Lightning	11,525
Nickowitz	USFS	8/1/2015	Lightning	7,576
Bear (Gasquet Complex)	USFS	7/31/2015	Lightning	11,617
Blue Creek #3	USFS	11/24/2009	Debris	6,705
Signal Fire	USFS	Xx/xx/2008	Lightning	
Blue 2	USFS	6/21/2008	Lightning	17,552
Mill	USFS	6/20/2008	Lightning	65,882

TABLE 4-1.
DEL NORTE COUNTY HISTORIC WILDFIRES FIRES >100 ACRES (1909 TO 2019)

Fire Name	Agency	Alarm Date	Cause	Area Burned (acres)
Buck	USFS	7/24/2006	Lightning	422
Shelly	USFS	7/28/2002	Miscellaneous	843
Biscuit	USFS	7/13/2002	Lightning	501,082
Kellogg	CAL FIRE	4/28/2002	Vehicle	174
Bottom	USFS	9/15/2001	Lightning	101
Unnamed	USFS	10/10/1998	Unknown Unidentified	441
Unnamed	USFS	10/1/1998	Unknown Unidentified	6,284
Unnamed	USFS	10/1/1998	Unknown Unidentified	318
Unnamed	USFS	10/1/1998	Unknown Unidentified	496
Unnamed	USFS	10/1/1998	Unknown Unidentified	3,617
Unnamed	USFS	10/1/1998	Unknown Unidentified	956
Buck	USFS	9/13/1998	Miscellaneous	841
Panther	USFS	9/26/1996	Arson	943
Kevin	USFS	7/21/1994	Lightning	206
Klamath	CAL FIRE	9/11/1988	Miscellaneous	6,158
Patricks	USFS	10/5/1980	Debris	104
Panther	USFS	7/1/1972	Miscellaneous	209
Sugar	USFS	9/12/1967	Equipment Use	477
Gasquet Mtn.	USFS	9/19/1957	Miscellaneous	562
Flint Valley	USFS	9/17/1951	Lightning	325
Notice Creek	USFS	9/17/1951	Lightning	318
Lems Summit	CAL FIRE	9/16/1951	Unknown Unidentified	3,368
Pappas	CAL FIRE	7/29/1950	Unknown Unidentified	1,034
Rock Creek	USFS	7/3/1950	Smoking	153
Unnamed	USFS	9/29/1939	Lightning	199
Unnamed	USFS	9/8/1932	Debris	288
Blue Creek #4	USFS	11/25/1929	Debris	3,769
Blue Creek #2	USFS	9/15/1929	Debris	6,112
French Hill	USFS	9/1/1929	Debris	228
Bluff Creek	USFS	7/29/1927	Lightning	5,656
Nickowitz	USFS	7/24/1927	Lightning	1,004
Bluff Creek #2	USFS	9/12/1924	Debris	1,227
Bluff Creek #1	USFS	9/5/1924	Lightning	261
Summit Valley	USFS	9/1/1924	Lightning	149

TABLE 4-1.
DEL NORTE COUNTY HISTORIC WILDFIRES FIRES >100 ACRES (1909 TO 2019)

Fire Name	Agency	Alarm Date	Cause	Area Burned (acres)
C&O Lbr. Co.	USFS	8/15/1924	Equipment Use	119
Doctor Rock	USFS	9/8/1922	Debris	558
Hardscrabble	USFS	8/18/1920	Debris	199
Unnamed	USFS	8/24/1917	Debris	199
Unnamed	USFS	8/22/1911	Unknown Unidentified	258
Bluff Creek	USFS	7/24/1910	Campfire	298

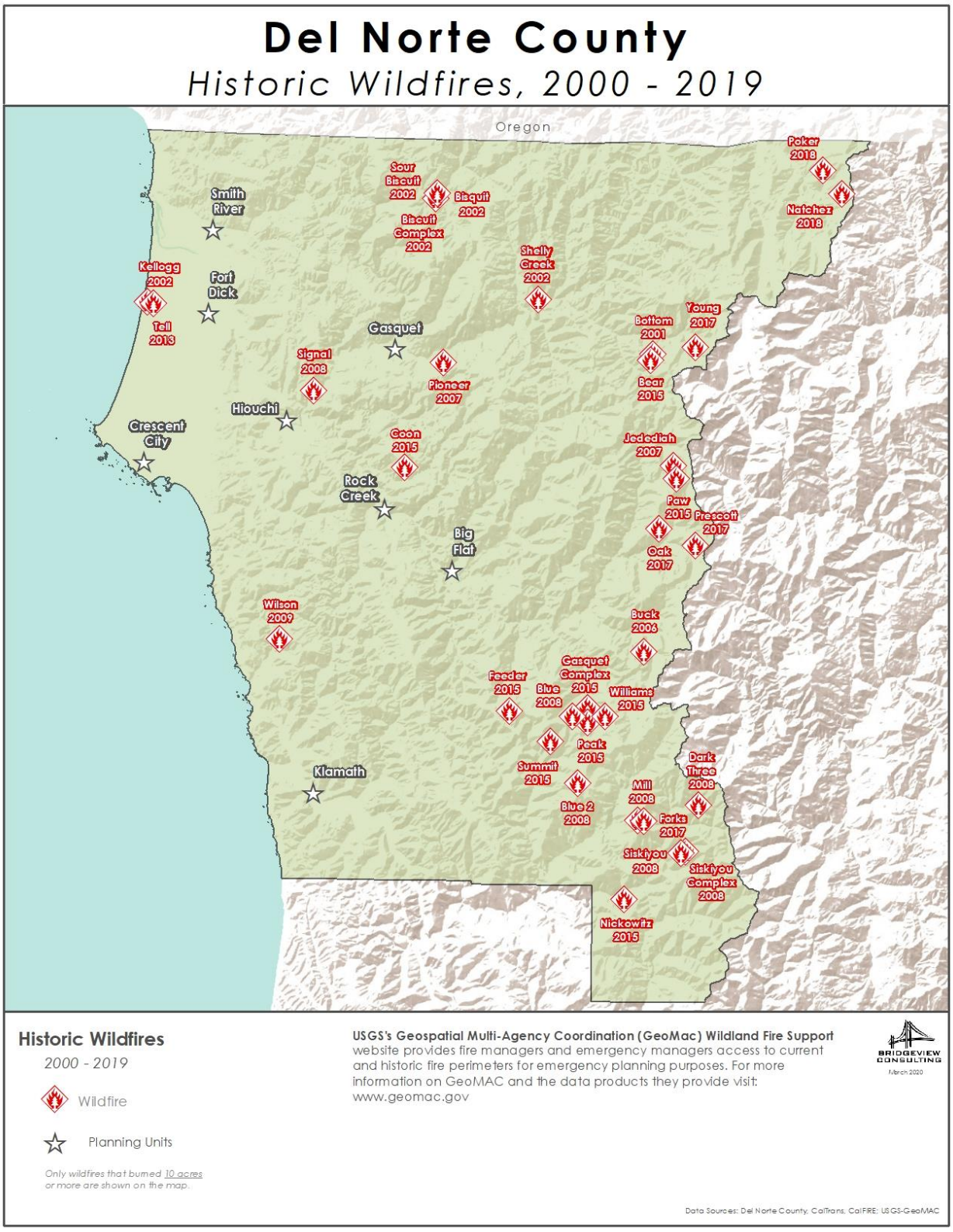


Figure 4-2 Historic Wildfires 2000-2019

The largest recorded fire in the area was the Biscuit Fire in 2002, which burned in southern Oregon and northern California. It began on July 13, 2002, due to lightning strikes and eventually burned over 500,000 acres. This fire caused the evacuation of Gasquet and surrounding communities. Its heavy smoke contributed to health problems for residents within a 100-mile radius (see Figure 4-3). The Biscuit Fire's boundaries stretched from 10 miles east of the coastal community of Brookings, Oregon; south to the communities of Hiouchi and Gasquet; east to the Illinois Valley in southern Oregon; and north to within a few miles of the Rogue River in Oregon. The fire was one of the most difficult fires to contain in recent history.

Figure 4-3 NASA Satellite Image of Biscuit Fire Smoke Distribution

Across the west, wildfires have been increasing in extent and cost of control. Due to recent fires in California, local firefighting agencies and residents believe that they are at very high risk to a large wildfire occurrence. Active fuels management programs coupled with public awareness campaigns are a high priority for lessening this risk.

4.3 RISK ASSESSMENT

For the purposes of development this CWPP, the map of Fire Hazard Severity Zones (FHSZ), delineated by CAL FIRE and adopted by the local fire protection jurisdictions was used as the primary risk assessment for this process, supported by data from Landscape Fire and Resource Management (LANDFIRE - discussed below).

The Forest Resources Assessment Program identifies that the "Very High Fire Hazard Severity Zone data was developed based on a hazard scoring schema using subjective criteria for fuels, fire history, terrain influences, housing density, and occurrence of severe fire weather, designed to delimit areas where urban conflagration could result in catastrophic losses. CAL FIRE Units developed initial recommendation maps for areas meeting threshold hazard criteria." [8] Once completed, these maps were then reviewed, modified, adopted or rejected by the local fire department throughout the State of California, and have been adopted statewide.

CAL FIRE has modeled and mapped wildland fire hazard zones using a science-based and field-tested computer model that designates moderate, high, or very high fire hazard severity zones (FHSZ). FHSZ ratings are derived from a combination of fire frequency (how often an area burns) and expected fire behavior under severe weather conditions, deriving fire frequency from 50 years of fire history data. The mapping criteria also included, among other items, fire behavior, including a zone in which embers can create ignitions, terrain, weather, and values (assets) at risk. A related concern in built-out areas is the relative density of vegetative fuels that can serve as sites for new spot fires within the urban core and spread to adjacent structures. The model refines the zones to characterize fire exposure mechanisms that cause ignitions to structures. These are all important

[8] https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

factors that predict the potential damage within the Wildland Urban Interface (WUI). Detailed discussions of the zones and how they are developed are available on the CAL FIRE website (CAL FIRE, 2012 and 2012a). (A more complete description of the mapping process may be located at the CAL FIRE website: http://frap.fire.ca.gov/projects/hazard/fhz.)

Primary factors considered in determining fire behavior include (CAL FIRE, 2017a):

- Fuel—Fuel may include living and dead vegetation on the ground, along the surface as brush and small trees, and above the ground in tree canopies. Lighter fuels such as grasses, leaves and needles quickly expel moisture and burn rapidly, while heavier fuels such as tree branches, logs and trunks take longer to warm and ignite. Trees killed or defoliated by forest insects and diseases are more susceptible to wildland fire. Forests in Del Norte Unit are predominantly mixed conifer forest consisting of coast redwood, Douglas fir and spruce, with intermingled hardwoods including madrone and tanoak. (National Fire Danger Rating System Fuel Model G or Fire Behavior Fuel Model 10). The large amount of precipitation the county receives on an annual basis creates a lot of vegetation, which is potential fuel. A key component of this fuel type is the large amount of down and dead woody fuel. This vegetation type (discussed below) consists of the following zones:

    - The coastal strip consists of coast redwood, Douglas fir and spruce. This is a closed-canopy forest with a thick understory of brush. The biomass here is equal to or greater than that of a rain forest.
    - The second zone occurs inland where Douglas fir dominates and resides with the hardwoods. This results in a more open canopy with a sparser understory.

- Weather—Relevant weather conditions include temperature, relative humidity, wind speed and direction, cloud cover, precipitation amount and duration, and the stability of the atmosphere. When the temperature is high, relative humidity is low, wind speed is increasing and coming from the east (offshore flow), and there has been little or no precipitation so vegetation is dry, conditions are very favorable for extensive and severe wildland fires. These conditions occur more frequently inland where temperatures are higher and fog is less prevalent. During the dry summer months, the county's abundant vegetation dries out and becomes hazardous fuel. That fuel combined with a Chinook wind—hot and dry from the Great Basin—can produce extreme fire danger. The coastal area has a fire-weather scenario when prevailing winds from the Gulf of Alaska blow off the ocean.

- Terrain—Topography includes slope and elevation. The topography of a region influences the amount and moisture of fuel; the impact of weather conditions such as temperature and wind; potential barriers to fire spread, such as highways and lakes; and elevation and slope of landforms (fire spreads more easily uphill than downhill).

The model also is based on frequency of fire weather, ignition patterns, and expected rate-of spread. It accounts for flying ember production, which is the principal driver of the wildland fire hazard in densely developed areas.

4.3.1 Landscape Fire and Resource Management Planning Tools

Landscape Fire and Resource Management Planning Tools (LANDFIRE), is a shared program between the wildland fire management programs of the U.S. Department of Agriculture Forest Service and U.S. Department of the Interior, providing landscape scale geo-spatial products to support cross-boundary planning, management, and operations.

Vegetation condition class and historic fire regime data presented in this document were developed by the LANDFIRE Project for regional representation. LANDFIRE data products are designed to facilitate national and regional level strategic planning and reporting of wildland fire management activities. Data products are created at a 30-meter grid spatial resolution raster data set. This information is an approximate representation of the general conditions present in an area and should be used for reference only (USDI 2008). Additional information concerning LANDFIRE is available at their website: https://www.landfire.gov/about.php.

4.3.2 Vegetation Condition Class (Fuels)

Vegetation serves as the fuels for fire. Those fuel types (e.g. vegetation, slash, etc.) that are flammable are likely to burn in a wildfire. CAL FIRE's Fire and Resource Assessment Program (FRAP) helps to identify general areas of high fuel hazard as part of the hazard assessment methodology for the California Fire Plan to identify and prioritize pre-fire projects that reduce the potential for large, catastrophic fires.

The fuel hazard ranking tells us the expected behavior of fire in severe weather (when wind speed, humidity, and temperature make conditions favorable for a catastrophic fire). The method for determining the fuel hazard ranking is based on: a) fuel behavior model, b) slope, c) brush density, and d) tree density.

There are thirteen fire behavior fuel models, each based on general classes of vegetation, fuels, and resultant fire behavior. Evaluation of the fire behavior fuel model and slope will result in a surface rank, which tells us the rate of fire spread and heat per unit area associated with each unique fuel model-slope combination.

The vegetation condition class (VCC) quantifies the amount that current vegetation has departed from the simulated historical vegetation reference conditions. VCC quantifies the amount that current vegetation has departed (changed) from the simulated historical vegetation reference conditions. The three condition classes describe low departure (VCC 1), moderate departure (VCC 2), and high departure (VCC 3). This departure is calculated based on changes to species composition, structural stage, and canopy closure.

Based on CAL FIRE data, the Humboldt-Del Norte area is predominately mixed conifer forest (NRDRS Fuel Model G or Fire Behavior Fuel Model 10). This model consists of Coast redwood, Douglas fir, and Sitka spruce, with intermingled hardwoods including Madrone and Tanoak (see Figure 4-4). [9] Figure 4-5 illustrates the types of fuels existing within Del Norte County based on the LANDFIRE analysis.

[9] CAL FIRE Humboldt-Del Norte Unit, Fire Management Plan, p. 28.

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, which consists of Coast redwood, Douglas fir and Sitka 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 the above-mentioned hardwoods. This results in a more open canopy with a sparser understory.

Increased activities by pathogens will continue to increase levels of dead and down fuel, as host trees succumb to insect attack and stand level mortality increases. Overstocked, multi-layered stands and the abundance of ladder fuels lead to horizontal and vertical fuel continuity. These conditions, combined with an arid and often windy environment, can encourage the development of a stand replacing fire. These fires can burn with very high intensities and generate large flame lengths and fire brands that can be lofted long distances. Such fires present significant control problems for suppression resources, often developing into large, destructive wildland fires.

Of additional concern is the probability or likelihood of extended spot fires. Large fires may easily produce spot fires from ½ to 2 miles away from the main fire. How fire suppression forces respond to spot fires is largely dependent upon the fuels in which they ignite. Stands of timber that are managed for fire resilience are much less likely to sustain torching and crowning behavior that produces more spot fires. The objective of fuel reduction thinning is to change the fuels in a way that will moderate potential fire behavior. If fire intensity can be moderated by vegetation treatments, then ground and air firefighting resources can be much more effective.

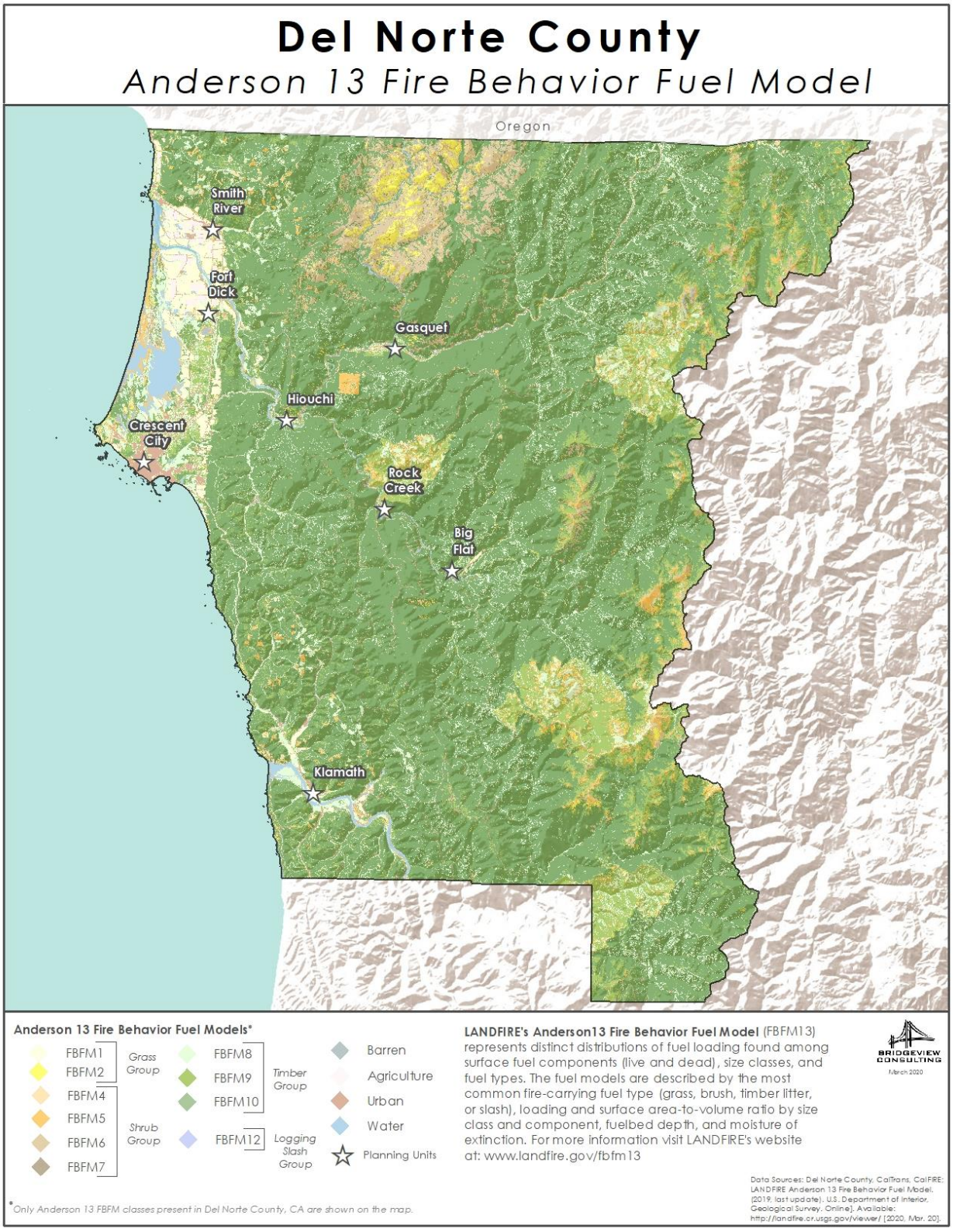


Figure 4-4 Del Norte County Fuel Models

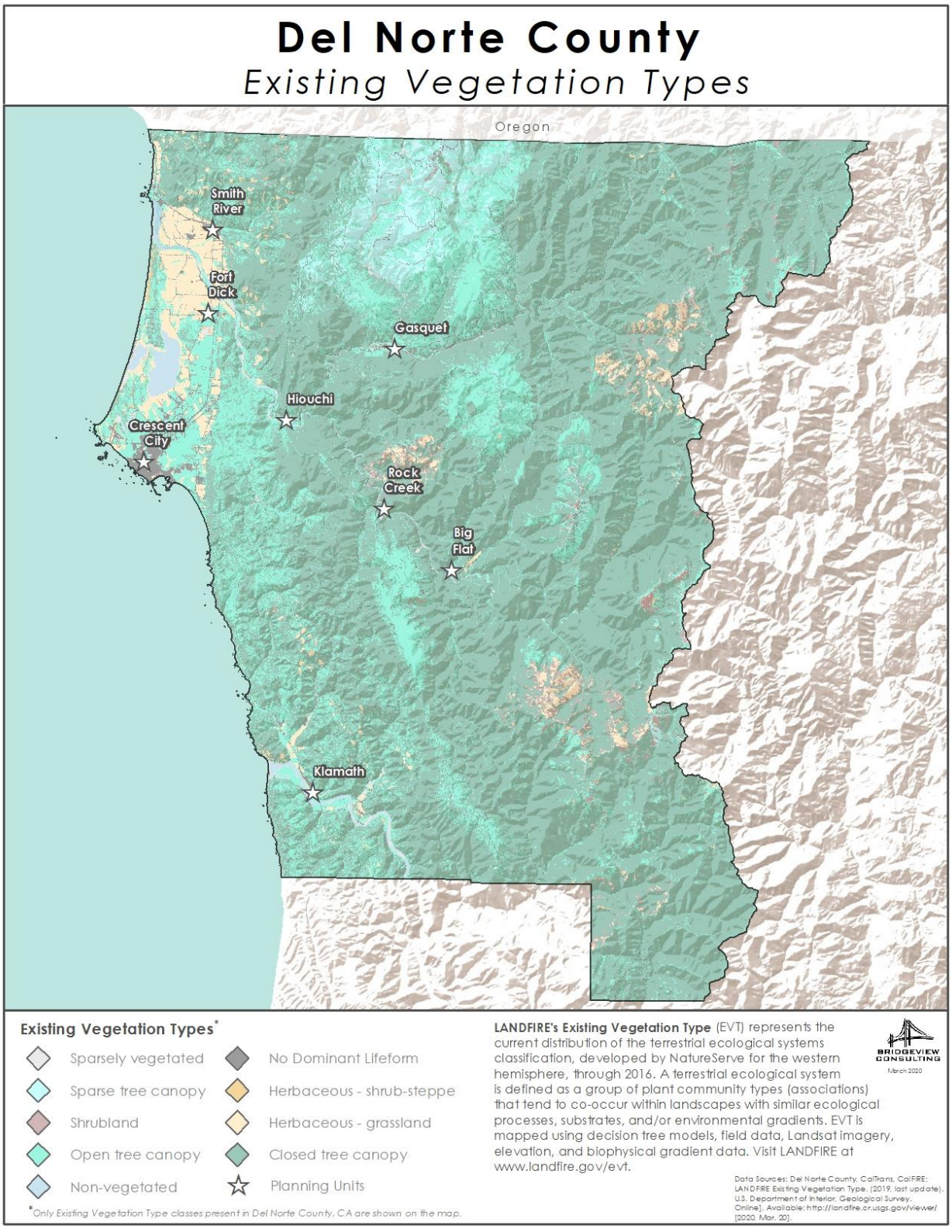


Figure 4-5 Existing Vegetation Type (Landfire)

4.3.3 Historic Fire Regime

In the fire-adapted ecosystems of California, fire is undoubtedly the dominant process in terrestrial systems that constrain vegetation patterns, habitats, and ultimately, species composition. Land managers need to understand historical fire regimes (that is, fire frequency and fire severity prior to settlement by Euro-Americans) to be able to define ecologically appropriate goals and objectives for an area. Moreover, managers need spatially explicit knowledge of how historical fire regimes vary across the landscape.

Many ecological assessments are enhanced by the characterization of the historical range of variability which helps managers understand: (1) how the driving ecosystem processes vary from site to site; (2) how these processes affected ecosystems in the past; and (3) how these processes might affect the ecosystems of today and the future. Obviously, historical fire regimes are a critical component for characterizing the historical range of variability in the fire-adapted ecosystems of California. Furthermore, understanding ecosystem departures provides the necessary context for managing sustainable ecosystems. Land managers need to understand how ecosystem processes and functions have changed prior to developing strategies to maintain or restore sustainable systems. In addition, the concept of departure is a key factor for assessing risks to ecosystem components. For example, the departure from historical fire regimes may serve as a useful proxy for the potential of severe fire effects from an ecological perspective.

Fire is the dominant disturbance process that manipulates vegetation patterns. The historic fire regime (HFR) data were prepared to supplement other data necessary to assess integrated risks and opportunities to reduce risk. The HFR theme was derived specifically to estimate an index of the relative change of a disturbance (variation) process, and the subsequent patterns of vegetation composition and structure.

A natural fire regime is a general classification of the role fire would play across a landscape in the absence of modern human mechanical intervention, but including the influence of aboriginal burning (Agee 1993, Brown 1995). The historic fire regimes data represents an integration of the spatial fire regime characteristics of frequency and severity simulated using a vegetation and disturbance dynamics model. These groups are intended to characterize the presumed historical fire regimes within landscapes based on interactions between vegetation dynamics, fire spread, fire effects, and spatial context. There are five regimes described below; those which fall within Del Norte County are identified in Figure 4-6.

- Fire Regime Group I – 0-35 year frequency and low (surface fires most common) to mixed severity (less than 75 percent of the dominant over story vegetation replaced)
- Fire Regime Group II – 0-35 year frequency and high (stand replacement) severity (greater than 75 percent of the dominant over story vegetation replaced)
- Fire Regime Group III – 35-200 year frequency and low to mixed severity
- Fire Regime Group IV – 35-200 year frequency and high severity
- Fire Regime Group V – 200+ year frequency and any severity

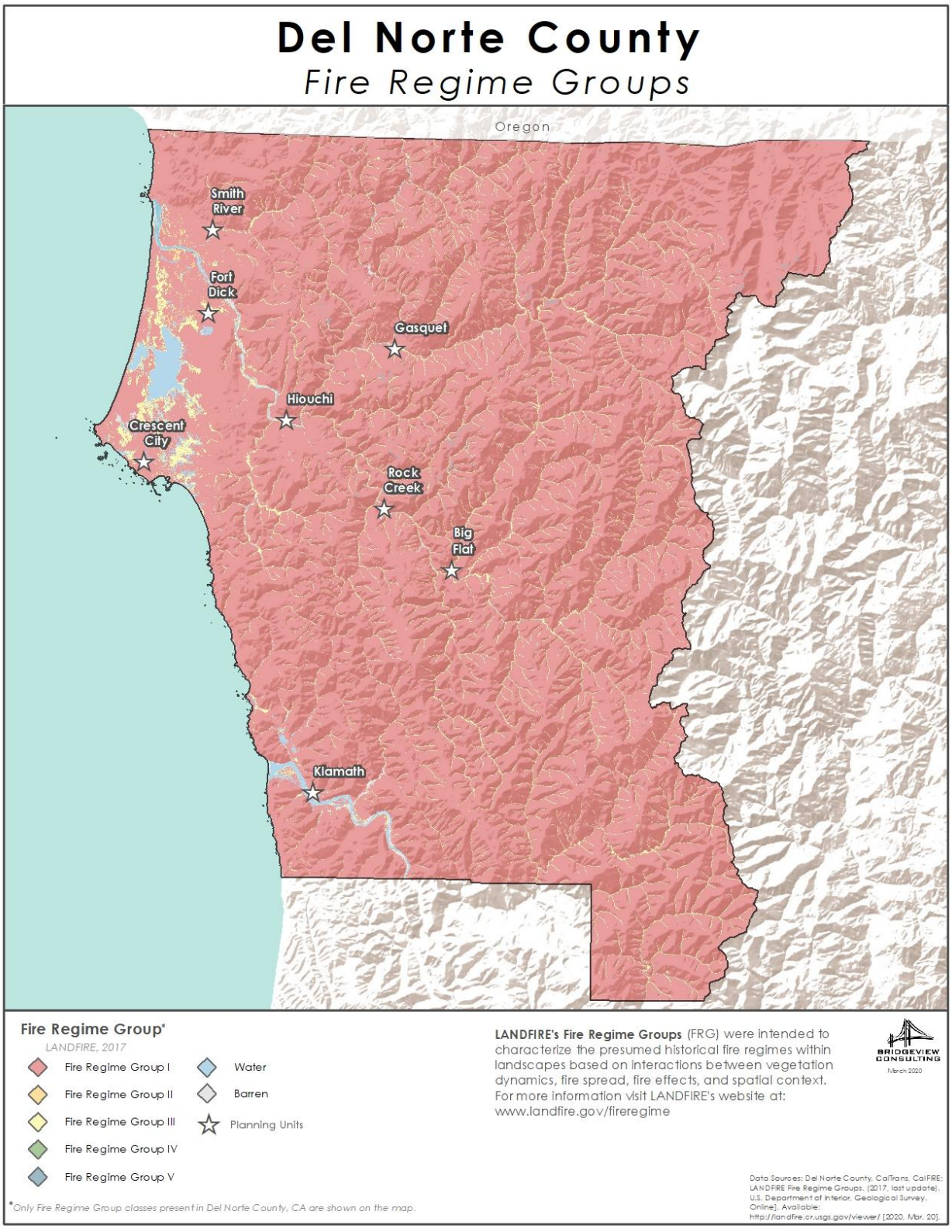


Figure 4-6 Fire Regime Groups

4.3.4 Federal Responsibility Area

Federal Responsibility Area (FRA) lands are lands where federal agencies have primary responsibility for fire protection. They are defined based on land ownership. Federal agencies (US Forest Service – Six Rivers National Forest (SRNF), and the National Park Service – Redwood National Park (RNP) have responsibility to provide wildland resource fire protection on all FRA lands in Del Norte County. This also includes the financial responsibility of preventing and suppressing fires. To more efficiently provide protection over a more contiguous land base, the Federal agencies trade protection areas with CAL FIRE (these lands are balanced within the state). The resulting lands are called USFS Direct Protection Areas or RNP Direct Protection Areas.

4.3.5 State Responsibility Area

The California Department of Forestry and Fire Protection (CAL FIRE) is dedicated to the fire protection and stewardship of over 31 million acres of State Responsibility Area (SRA) lands throughout California. Through its foresters and other natural resource professionals, CAL FIRE is responsible for the management and protection of California's natural resources. Of the 85 million acres classified as wildlands in the State, 33 million acres are forest lands, with 38 percent privately-owned and 62 percent tribal or government owned. The State's wildlands also provide critical watershed, wildlife habitat, and recreation resources in addition to valuable commercial timberland.

CAL FIRE also provides full-service emergency services to 150 local government cooperators through agreements with districts, cities, and counties (2019 Strategic Plan). Preventing wildfires in the State Responsibility Area (SRA) is a vital part of CAL FIRE's mission. While these efforts have occurred since the early days of the Department, CAL FIRE has adapted to the evolving destructive wildfires and succeeded in significantly increasing its efforts in fire prevention. The Department's Fire Prevention Program consists of multiple activities including wildland pre-fire engineering, vegetation management, fire planning, education, and law enforcement. Typical fire prevention projects include brush clearance, prescribed fire, defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, and fire-related law enforcement activities.

State Responsibility Area lands are defined based on land ownership, population density, and land use. CAL FIRE determines SRA lands per the guidelines established by the State Board of Forestry and Fire Protection. CAL FIRE has a legal responsibility to provide wildland resource fire protection on all SRA lands. This also includes the financial responsibility of preventing and suppressing fires. Lands in incorporated cities or surrounded by federal land are excluded from being SRA lands.

As of the 2017 Wildfire Activity Statistics Report prepared by CAL FIRE, within Del Norte County, CAL Fire maintains responsibility for 172,300 acres.[10]

The Department provides direction for fire prevention and enforcement of the Public Resources Code (PRC) within the SRA using fire resource assessments, a variety of available data, mapping,

[10] CAL FIRE 2017 Wildfire Activity Statistics. Accessed multiple times. Available at: https://www.fire.ca.gov/media/10059/2017_redbook_final.pdf

and other tools. Pre-fire management activities, including prescribed burning, fuel breaks, forest health treatments, and removal of hazardous vegetation, are conducted at the unit level under the guidance of Department program managers.

The Fire Hazard Severity Zones are identified in Figure 4-7. Included in the map are the various critical facilities and infrastructure as identified by the County and its local planning partners during the 2019 development of the Del Norte County Hazard Mitigation Plan. Many of those planning partners were also part of this 2020 CWPP update.

4.3.6 Local Responsibility Areas

Local fire districts and urban fire departments are responsible for providing structure protection on SRA lands. They are also responsible for providing all fire protection on Local Responsibility Area (LRA) lands. LRA lands are areas that are not federal or state responsibility. Based on CAL FIRE Analysis, they have determined that the County has no Very High Fire Hazard Severity Zones in the LRA; therefore, the County was not mapped. The initial draft map prepared to make this determination, dated 2007, is illustrated in Figure 4-8. As of this update, this remains the most current map available.

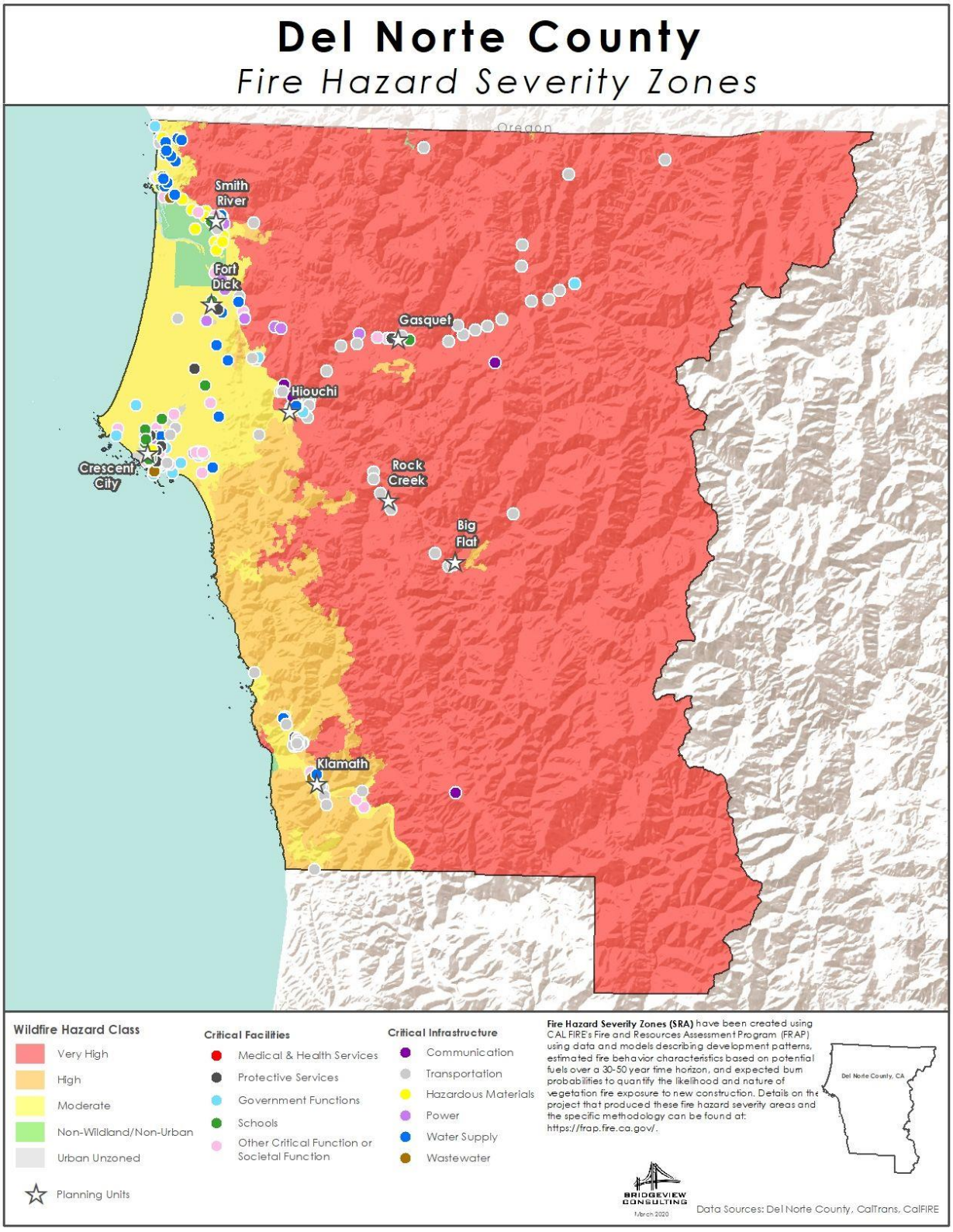


Figure 4-7 Fire Hazard Severity Zones with Critical Facilities

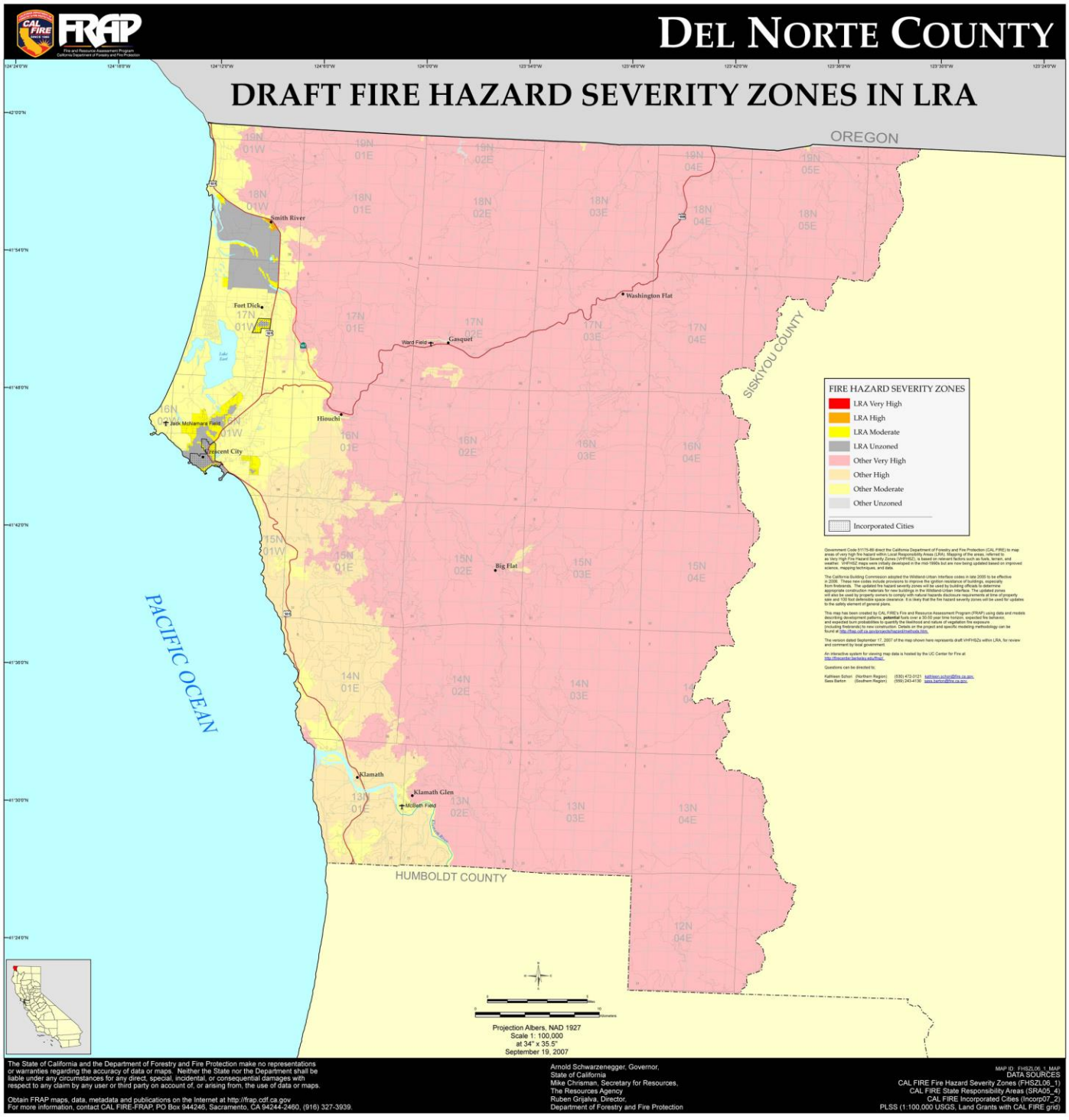


Figure 4-8 Local Responsibility Area (2007)

4.4 DEL NORTE FIRE SAFE PLANNING UNIT BOUNDARIES

In order to facilitate the mutual understanding of wildfire risks specific to areas referred to in Del Norte County, the planning committee utilized the same sub-regions as utilized for the 2005 plan. For purposes of this document, the county was divided into planning units or special districts. Typically, the boundaries lie along local fire district boundaries or known anchor points such as roads or ridgelines. The planning units fall within, or mostly within, the WUI Interface and typically include several Communities at Risk. The planning units and special districts are identified in Figure 4-9. General data on each unit are described below, starting from the southern extent of the county, and moving northward along the coast, and then inland.

Big Flat/Rock Creek

The Big Flat/Rock Creek planning unit is an inholding[11] within the Six Rivers National Forest Smith River National Recreation Area. This isolated rural community is situated along the South Fork Road (County Road 427) and the South Fork of the Smith River.

Crescent City

The Crescent City planning unit includes the city and outlying areas. To the north, this includes the neighborhoods along Washington Avenue and areas south of Fort Dick. On the east side this is much of the area east of US Highway 101, especially the Church Tree subdivision bordering Jedediah Smith Redwoods State Park and Redwood National Park on the east. The southern boundary is the Del Norte Coast Redwoods State Park and Redwood National Park.

Fort Dick

The Fort Dick planning unit centers on the community of Fort Dick, between Crescent City to the south and the Smith River to the north and the east. It is located on the US Route 101 corridor on the Redwood Coast.

Gasquet

The Gasquet planning unit is centered on the community of Gasquet, a private inholding on Highway 199, within the USFS Smith River National Recreation Area. As such, the planning area is surrounded on all sides by SRNRA. It also includes scattered private parcels along 199 near Gasquet and towards the Oregon border.

Hiouchi

The Hiouchi planning unit is centered on the community of Hiouchi, located on Highway 199, in proximity to Jedediah Smith Redwoods State and National Park. It includes the residential areas along North Bank Road (Highway 197), South Bank Road, and Low Divide Road. The planning area boundary is the park and main stem Smith River on

[11] An inholding is a privately owned parcel of land within the boundaries of a federal preserve, especially within a national park or national seashore. (http://education.yahoo.com/reference/dictionary/entries/34/i0143400.html.

the west, including the private residences along Highway 197. To the north, east, and south the planning area is bounded by the USFS Smith River National Recreation Area (SRNRA), as well as Redwood National Park to the south.

Klamath

The Klamath planning unit begins at the southern border of Del Norte County with Humboldt County, near the north end of the Prairie Creek Redwoods State Park. It continues along the coast to three miles north of the mouth of Wilson Creek.

Smith River

The Smith River planning unit is centered on the community of Smith River, between the Smith River to the south and the Oregon border to the north. It includes Green Diamond Resource Company land on the east, up to the eastern border at Six Rivers National Forest.

Sun Star

The Sun Star planning unit is the area around a 160-acre ranch inholding in the Rogue River-Siskiyou National Forest at the northern edge of Del Norte County, east of Highway 199. It is located on Dunn Creek, on the East Fork Illinois River, with primary access through Takilma, Oregon. Sun Star was previously identified within the 2005 CWPP; however, fire response authority for this area has now been transferred to the State of Oregon due to access. Therefore, no additional data has been provided or updated for the area in the 2020 update.

4.4.1 Public Land Ownership

Public landownership designations as identified by FRAP are identified in Table 4-4. The majority of land mass in Del Norte County are publicly owned; however, the predominant type of structures at risk are residential in nature. The public agency land managers include:

- USDA Forest Service for the Six Rivers National Forest (SRNF);
- National Park Service for Redwood National and State Parks;[12]
- California Department of Parks and Recreation for: Redwood National and State Parks, Mill Creek, Tolowa Dunes State Park, and Pelican State Beach; and
- California Department of Fish and Wildlife for Lake Earl Wildlife Area, Crescent City Marsh Wildlife Area, Elk Creek Wetlands Wildlife Area, and Waukell Creek Wildlife Area.

Other large land managers in Del Norte County include tribal and industrial landowners:

- Yurok Reservation;
- Elk Valley Rancheria;
- Tolowa Dee-ni' Nation; and
- Green Diamond Resource Company.

[12] In 1994 the National Park Service and the California Department of Parks and Recreation signed a memorandum of understanding and agreed to cooperatively manage Redwood National Park, Del Norte Coast Redwoods State Park, and Jedediah Smith Redwoods State Park. Collectively, these parks are called Redwood National and State Parks.

TABLE 4-2. DEL NORTE COUNTY PERCENT OF LAND OWNERSHIP		
FRAP Land Ownership*	**Acres**	**Percent of Area**
Local Government	345.3	0.07%
CA Dept. of Parks & Recreation	45,978.3	9.16%
CA Dept. of Fish & Wildlife	3,949.5	0.79%
Other State Lands	2,458.9	0.49%
National Park Service	8,513.0	1.70%
USDA Forest Service	439,645.6	87.55%
Bureau of Indian Affairs	1,279.2	0.25%
Other Federal Lands	0.1	0.00%
Total	**502,169.9**	**100%**
** Only those land ownership types located in Del Norte County, CA are listed*		

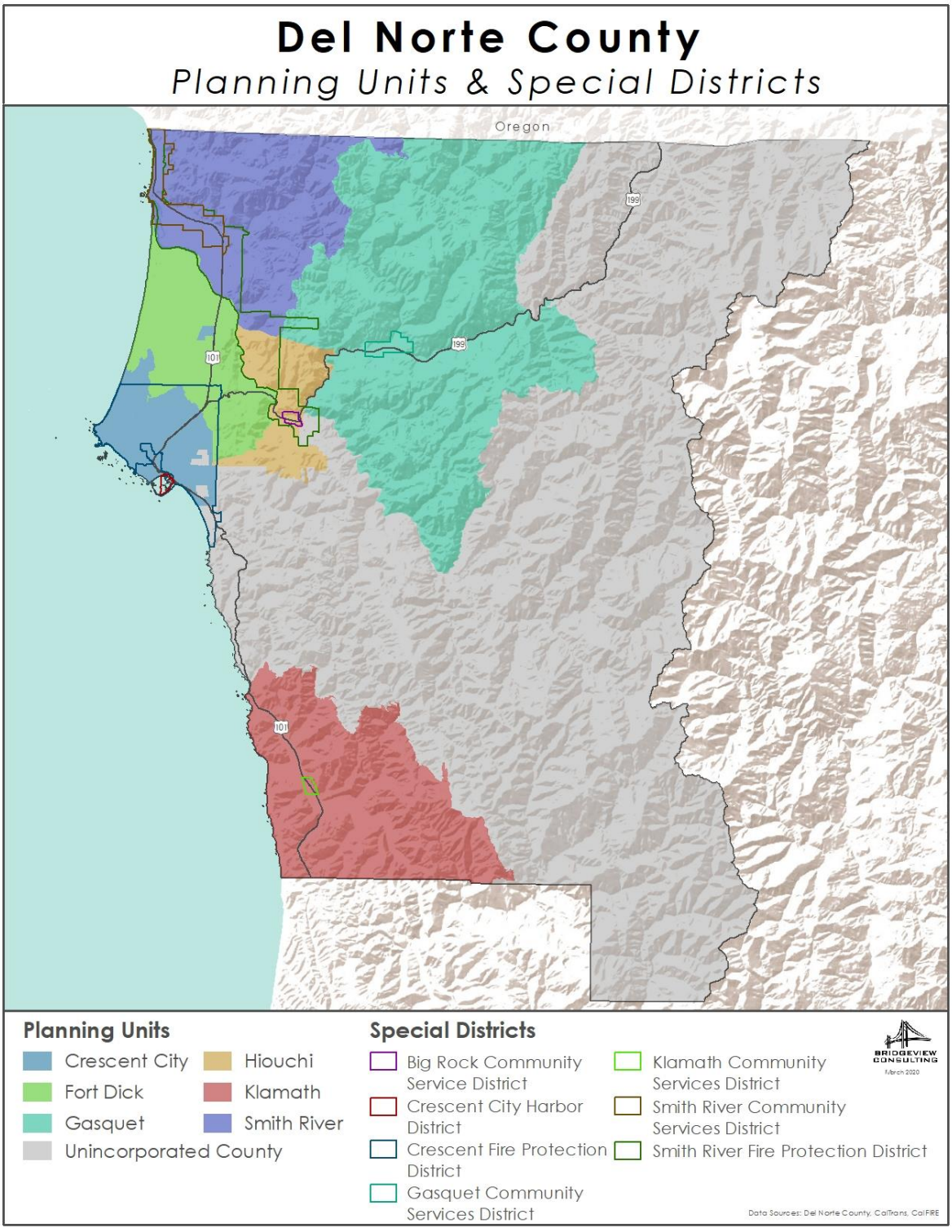


Figure 4-9 Del Norte County Planning Units and Special Districts

4.5 DEL NORTE COUNTY'S WILDLAND-URBAN INTERFACE

Natural resource lands, primarily forestlands, surround many unincorporated communities in Del Norte County. The areas where communities abut natural resource lands are known as the wildland-urban interface. At the interface, a mix of fuel, weather and topographical conditions create conditions that put a community at risk of wildland fire. A wildland-urban interface (WUI) is an area of increased human influence and land use conversion. Population and demographic trends, economic and tax issues, and land use planning and policy issues all play a part in influencing the interface. Public values and perceptions shape the way that natural resources are managed and conserved at the interface.

An interface can also be defined as a zone where human-made infrastructure is located in or adjacent to areas prone to wildland fires. Such areas contribute to a neighborhood's or community's vulnerability to a wildland fire. The Humboldt – Del Norte Unit Fire Management Plan (California Department of Forestry and Protection, 2005) discusses communities at risk based on wildland urban interface areas, but mapping techniques have evolved since that plan was developed. This hazard profile uses fire hazard severity zones rather than wildland urban interface designations to describe risk.

The WUI has gained attention through efforts targeted at wildfire mitigation; however, this analysis technique is also useful when considering other hazards because the concept looks at where people and structures are concentrated in any particular region. For Del Norte County, the WUI shows the relative concentrations of structures scattered across the county, living within a forest or other wildland area.

A key component in meeting the underlying need for protection of people and structures is the protection and treatment of hazards in the wildland-urban interface. The wildland-urban interface refers to areas where wildland vegetation meets urban developments, or where forest fuels meet urban fuels in the case of wildfires (such as houses). These areas encompass not only the interface (areas immediately adjacent to urban development), but also the continuous slopes that lead directly to a risk to urban developments be it from wildfire, landslides, or floods. Reducing the hazard in the wildland-urban interface requires the efforts of federal, state, and local agencies and private individuals (Norton 2002). The role of most federal agencies in the wildland-urban interface includes wildland firefighting, hazard fuels reduction, cooperative prevention and education and technical experience. Structural fire protection during a wildfire in the wildland urban interface is largely the responsibility of state and local governments (USFS 2001). Property owners share a responsibility to protect their residences and businesses and minimize danger by creating defensible areas around them and taking other measures to minimize the risks to their structures (USFS 2001). With treatment, a wildland-urban interface can provide firefighters a defensible area from which to suppress wildland fires or defend communities against other hazard risks. In addition, a wildland-urban interface that is properly thinned will be less likely to sustain a crown fire that enters or originates within it (Norton 2002).

By reducing hazardous fuel loads, ladder fuels, and tree densities, and creating new and reinforcing defensible space, landowners would protect the wildland-urban interface, the biological resources of the management area, and adjacent property owners by:

- minimizing the potential of high-severity ground or crown fires entering or leaving the area;
- reducing the potential for firebrands (embers carried by the wind in front of the wildfire) impacting the WUI. Research indicates that flying sparks and embers (firebrands) from a crown fire can ignite additional wildfires as far as 1¼ miles away during periods of extreme fire weather and fire behavior (McCoy *et al.* 2001);
- improving defensible space in the immediate areas for suppression efforts in the event of wildland fire.

4.5.1 Types of Wildland Urban Interface (WUI)

Three wildland-urban conditions have been identified (Federal Register 66(3), January 4, 2001) for use in wildfire control efforts. These include the Interface Condition, Intermix Condition, and Occluded Condition. Descriptions of each are as follows:

- **Interface Condition** – a situation where structures abut wildland fuels. There is a clear line of demarcation between the structures and the wildland fuels along roads or back fences. The development density for an interface condition is usually 3+ structures per acre;
- **Intermix Condition** – a situation where structures are scattered throughout a wildland area. There is no clear line of demarcation, the wildland fuels are continuous outside of and within the developed area. The development density in the intermix ranges from structures very close together to one structure per 40 acres;
- **Occluded Condition** – a situation, normally within a city, where structures abut an island of wildland fuels (park or open space). There is a clear line of demarcation between the structures and the wildland fuels along roads and fences. The development density for an occluded condition is usually similar to that found in the interface condition and the occluded area is usually less than 1,000 acres in size; and

In addition to these classifications detailed in the Federal Register, four additional classifications of population density have been included to augment these categories:

- **Rural Condition** – a situation where the scattered small clusters of structures (ranches, farms, resorts, or summer cabins) are exposed to wildland fuels. There may be miles between these clusters. The condition of the WUI connects these clusters into a relatively homogenous area.
- **High Density Urban Areas** – those areas generally identified by the population density consistent with the location of larger incorporated cities; however, the boundary is not necessarily set by the location of city boundaries. Rather, it is set by very high population densities (more than 15-30 structures per acre or more).
- **Infrastructure Area WUI** – those locations where critical and identified infrastructure are located outside of populated regions and may include high tension power line corridors, critical escape or primary access corridors, municipal watersheds, areas immediately adjacent to facilities in the wildland such as radio repeater towers or fire lookouts. These are identified by county or reservation level core teams.

- **Non-WUI Condition** - a situation where the above definitions do not apply because of a lack of structures in an area or the absence of critical infrastructure crossing these unpopulated regions. This classification is not WUI.

Review of the designated areas by the Planning Committee has concluded that the planning region includes the following WUI areas:

- Interface Condition
- Intermix Condition
- Rural Condition
- Infrastructure Areas

4.5.2 Methods for Future Delineation

The Healthy Forests Restoration Act makes a clear designation that the location of the WUI is at the determination of the County or Reservation when a formal and adopted Community Wildfire Protection Plan is in place. It further states that the federal agencies are obligated to use this WUI designation for all Healthy Forests Restoration Act (HFRA) purposes.

For the 2020 update of the Del Norte County Community Wildfire Protection Plan, the Planning Committee evaluated a variety of different approaches to determine additional WUI areas for the County, allowing the Planning Committee to identify where the highest concentrations of structures are located in reference to high risk landscapes, limiting infrastructure, and other points of concern. The WUI, as defined herein in Figure 4-10, addresses the entire county, not just communities in close proximity to federal land. This serves as a planning tool which demonstrates where homes and businesses are located and the density of those structures leading to identified WUI categories.

Each planning unit received a local-area base map which identified, among other items:

1. Planning Unit boundaries;
2. Land ownership;
3. Fire station locations;
4. Network of streets;
5. State-determined High Hazard Areas; and
6. Critical/essential facilities.

Through a facilitated process with the planning committee members and local fire agencies, community members identified those areas which they felt were at greatest risk, considering the historical fire history for the area, and previous mitigation initiatives. Utilizing a similar process for future updates will allow the Planning Committee to determine how the WUI has changed in response to increasing population densities. In addition to a formal WUI map for use with the federal agencies, it is hoped that these boundaries will also serve as a planning tool for the county and local fire districts. Additional items discussed and identified during this update process include the following:

- The types of structures and critical facilities falling within the very high and high severity zones.
- The fact that a large number of structures within the planning areas are believed to be wood-frame structures. If impacted, these structures could have a significant amount of functional downtime.
- Review of existing data contained in the 2019 Del Norte County HMP illustrates that an estimated 73 percent of the critical facilities and infrastructure in the planning area are located in the wildland fire risk areas.
- Nearly all structures in the Gasquet area are in very high fire severity zones.
- More than 50 percent of the planning area population lives in a wildfire risk area, including in the very high fire hazard severity zone.

As per the HFRA, this CWPP can propose WUI designations for additional areas of Del Norte County. For the 2020 update, the Planning Committee determined that while the existing WUI boundaries do appear to be accurate based on existing development trends, that may change during the life cycle of this plan as growth continues to expand. Growth and density are significant factors in determining wildfire risk. Those areas will be noted during the Plan's annual review for identification during future updates. Projects in these designated areas should be prioritized for funding and implementation under the National Fire Plan, which requires:

- Federal agencies to accept WUI designations defined in this plan, including those previously identified by CAL FIRE.
- Federal agencies to work with DNFSC and other interested community members to reach agreement on projects proposed within WUI areas in Del Norte County.

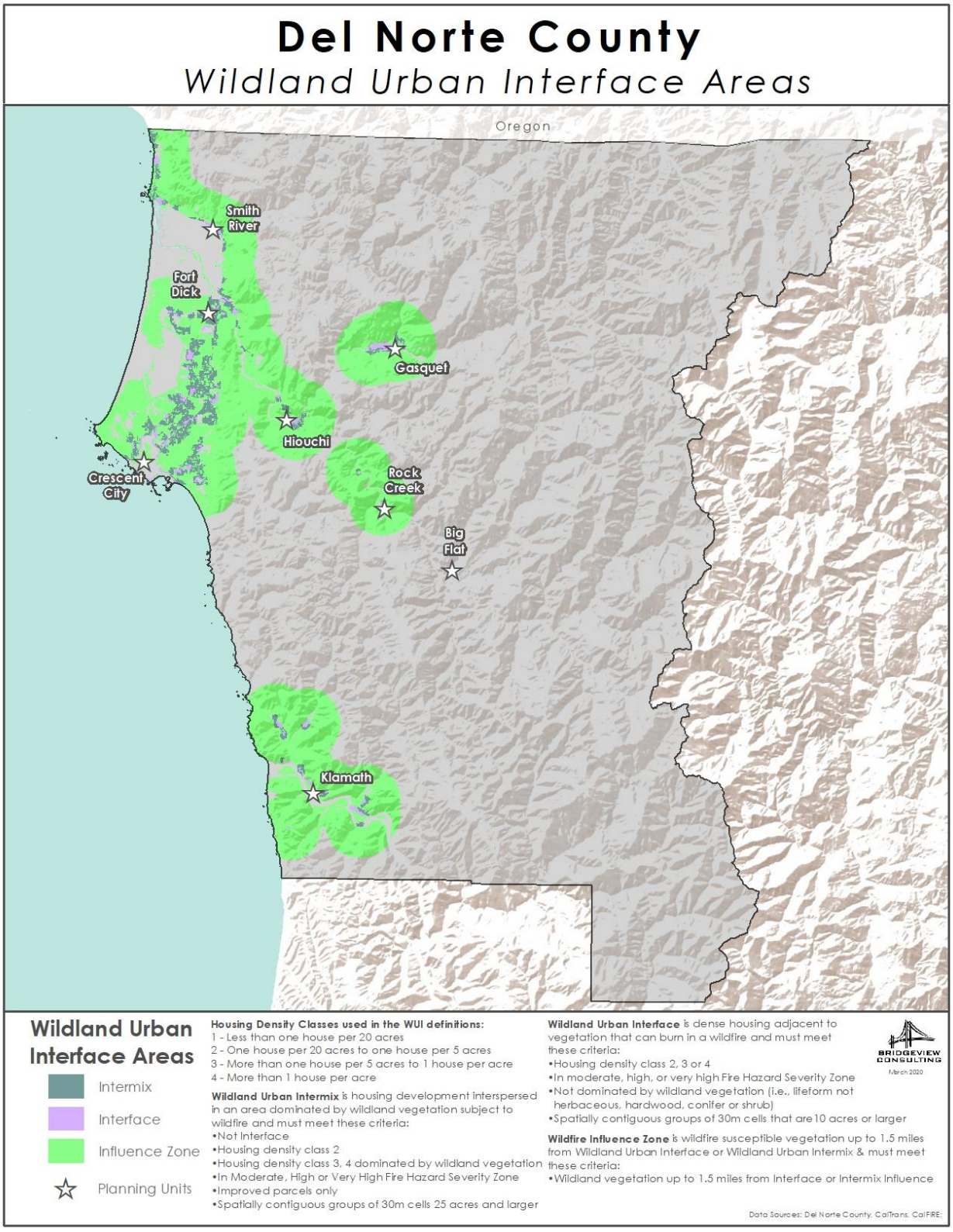


Figure 4-10 2020 Identified Wildland Urban Interface Map in Del Norte County

4.6 DEL NORTE COUNTY COMMUNITIES AT RISK

Del Norte County's fire history is a mixture of events of varying size, severity, and frequency. Del Norte County is no exception to the increasingly common problem of loss from wildfire. Fuel loads have been accumulating to abnormal levels throughout the West, due to decades of fire suppression and timber harvesting. Population growth rates have been steadily increasing throughout the County and the region. The growing appreciation for seclusion has led to significant development in the most accessible forestland areas, particularly along the river and coastal areas. Human use is strongly correlated with fire frequency, with increasing numbers of fires as use increases. The increased potential for fire starts and the fire prone landscapes in which homes have been constructed greatly increases the potential for fires in interface areas.

Within Del Norte County, there are 17 "Nationally Recognized Communities at Risk." Community At Risk has significance in terms of certain fire safe regulations. The Urban-Wildland Interface Building Standards (a result of AB 1216) apply to new construction in designated Communities At Risk. The Board of Forestry and Fire Protection Fuel Hazard Reduction Emergency Rule applies to these designated communities as well, providing a simplified regulatory process for removing fuels. Finally, this designation allows these communities to be more competitive in receiving National Fire Plan funding for fire safety and fuel reduction projects. WUI designation applies primarily to management on federal lands.

Title 19 of Del Norte County's Municipal Code does establish fire safe regulations which include access, signage, water standards, fuel modifications, and other protective measures. Building code standards also provide regulatory oversight with respect to the type of materials required for use and other initiatives to mitigate the impact of wildfires. All Communities at Risk are identified in CAL FIRE's FRAP identification are illustrated in Figure 4-11. (Source: https://frap.fire.ca.gov/media/2430/communities-at-risk_map.pdf

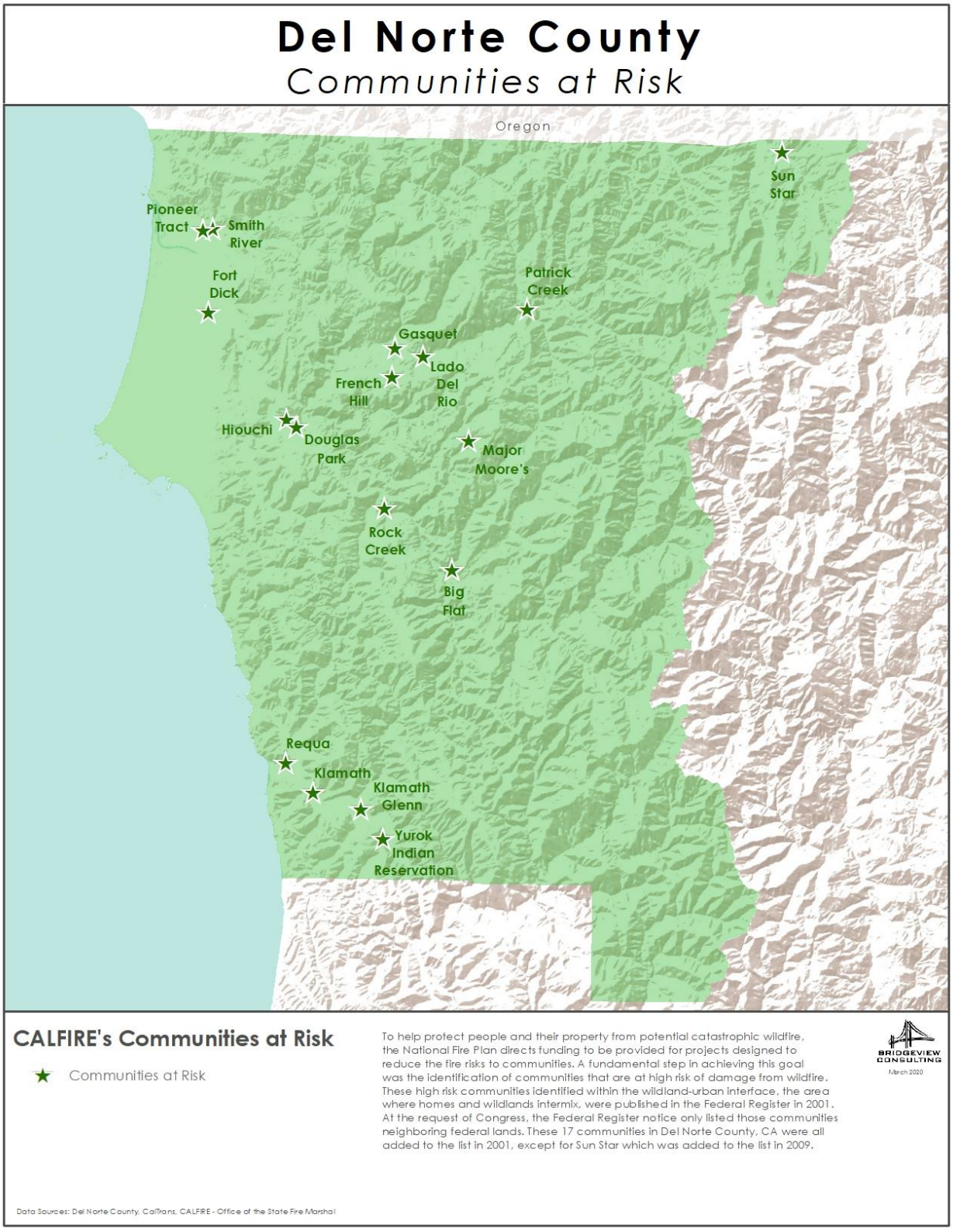


Figure 4-11 CAL FIRE Communities at Risk

4.6.1 Results of Analysis

Review of the data indicates that based on CAL FIRE's assessment, the majority of the planning units include a significant area falling within the Very High Severity Zone. The only areas not in mapped fire risk areas are small areas of the Smith River and unincorporated planning units and the City of Crescent City. Gasquet and mapped portions of Smith River fall almost entirely within the very high severity zone, as do areas within Rock Creek, Hiouchi, Klamath Glen, and Big Flat. The Sun Star area is identified within the Very High Severity Zone area as well, although due to geographic access, that area has now fallen to the responsibility of the local Oregon fire service agency for response. Both Klamath and Fort Dick fall within the Moderate Severity Zone. It should be noted that data on which these maps are based is, in some instances, dated. As such, the landscape of the area may have changed significantly. However, at present, these maps remain the best available data.

Table 4-3 illustrates the acres within the various areas of responsibility within Del Norte County. Table 4-4 identifies the acres in each fire severity zone within Del Norte County. Table 4-5 identifies the potential population exposed to the various severity zones as identified within the Del Norte County 2019 Hazard Mitigation Plan Update, while Figure 4-12 identifies the structures at risk, the majority of which are residential in nature. Table 4-6 identifies by planning unit the number of critical facilities at risk in the various hazard severity zones.

TABLE 4-3.
ACRES WITHIN AREAS OF RESPONSIBILITY

Area of Responsibility	Acres (acres)	Percent of Area
Local Responsibility Area	9,829.7	1.51%
State Responsibility Area	190,060.9	29.27%
Federal Responsibility Area	449,415.4	69.21%
Total	**649,306.0**	**100%**

Source: Del Norte County 2019 Hazard Mitigation Plan.

TABLE 4-4.
ACRES WITHIN EACH FIRE HAZARD SEVERITY ZONE

Fire Hazard Severity Zone (FHSZ)	Total Area in Zone (acres)	Percent of Total
Moderate FHSZ	48,095.5	23.6%
High FHSZ	49,516.5	24.3%
Very High FHSZ	106,163.9	52.1%
Total	**203,776**	**100.0%**

TABLE 4-5.
DEL NORTE COUNTY POPULATION EXPOSURE TO THE WILDLAND FIRE HAZARD

Fire Hazard Severity Zone	Population Exposed*	% of Total Population
Moderate	13,659	49%
High	600	2%
Very High	1,602	6%

TABLE 4-5. DEL NORTE COUNTY POPULATION EXPOSURE TO THE WILDLAND FIRE HAZARD		
Fire Hazard Severity Zone	**Population Exposed***	**% of Total Population**
Total	15,861	57%

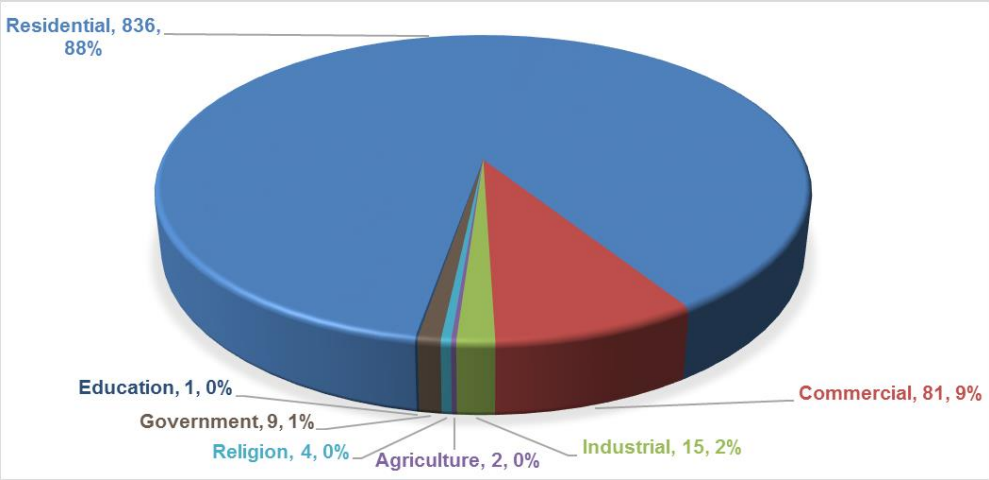


Figure 4-12 Building Type at Risk

TABLE 4-6. CRITICAL FACILITIES EXPOSURE TO THE WILDLAND FIRE HAZARD					
Planning Units	**Fire Hazard Severity Zones**				
	High	**Moderate**	**Very High**	**Not In a Fire Hazard Severity Zone**	**Total**
Crescent City		8		66	**74**
Fort Dick		13		1	**14**
Gasquet			10	14	**24**
Hiouchi	1	6	11	5	**23**
Klamath	9	15	2	3	**29**
Smith River		30	6	40	**76**
Unincorporated Co.		8	4	8	**20**
Total	**10**	**80**	**33**	**137**	**260**

5 DEL NORTE COUNTY WILDFIRE-PROTECTION AGENCIES

Due to the highly diverse range of community characteristics and fire-protection needs throughout Del Norte County, each local fire protection agency strives to develop a response and deployment system that reflects community needs, expectations, and local risks, while staying within the organization's revenue and support constraints.

With limited local and tribal fire-protection organizations, a coordinated approach to response is crucial in Del Norte County. Local fire departments are quick to assist each other, as well as state and federal partners. Fundamental to the coordination of local fire protection, the Del Norte County Fire Chiefs' Association and associated chapters work to improve the level of service throughout the county through increased coordination, communication, standardization, and support.

While wildfires constitute a small percentage of the overall calls for emergency services, demand placed on local, state, and federal firefighting resources by wildfire can be substantially greater than the combination of most of the other types of emergency-response calls.

The firefighting resources and capabilities information was gathered via a survey during this process, with information provided by the fire chiefs or representatives of the wildland firefighting agencies referenced. Each organization completed a survey with written responses. That information will be maintained by Del Norte County OES for use in the Emergency Operations Center, but are summarized within this document.

Within Del Norte County, there are five Fire Protection Districts:

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

There are also several governmental fire agencies in the County:

- Crescent City Volunteer Fire Department
- California Department of Forestry and Fire Protection
- 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 (Sun Star is now covered by the State of Oregon). These communities have no official structural fire protection service. CAL FIRE provides wildland fire protection services to these communities and when available, will respond to all other emergencies. However, due to the long response times, responses for emergency medical services and structure fires are, to a large extent, ineffective as it relates to public safety, as the same personnel are called upon during other hazard incidents as well, such as floods, landslides, and other events.

5.1.1 Crescent City Volunteer Fire Department

Chief: Bill Gillespie
Telephone: (707) 464-2421
Address: 255 W. Washington Blvd, Crescent City, Ca. 95531

District Summary:
This department encompasses the city limits of Crescent City located on Hwy 101 on the Northern California coast about 20 miles south of the Oregon border. The area offers an abundance of outdoor recreational activities utilizing the proximity of the Pacific Ocean, the Smith River and Klamath River, Redwood National and State Parks, and the Smith River National Recreation Area. Along California's northwestern edge, the area is a spectacular network of parks protecting nearly half of the world's coast redwoods, the world's tallest living things. Tourism is the leading industry in the continual transition from a resource production base to a diverse economic base. Government is the predominant industry, accounting for almost half of the total employment in the county. The county brought in Pelican Bay State Prison in 1990, which now accounts for more than 1,000 jobs and houses about 2,000 inmates.

The Crescent City Volunteer Fire Department has four paid positions that include the full-time Fire Chief and Administrative Assistant with a part-time Deputy Chief and Maintenance Worker. There are 25 active volunteer firefighters with the department. The Service area includes 2.4 square miles of the City of Crescent City and an additional 30 square miles of other geographical areas that they respond to as primary responders. The City of Crescent City has approximately population of 6,800 with approximately 23,000 additional people in the service area (as of July 2018 per US Census Bureau). With one fire station, Crescent City Volunteer Fire Department provides fire, emergency medical, regional hazardous materials, and other emergency response for the community in addition to participating in mutual aid response to neighboring districts. All firefighters have standard fire suppression and basic medical training and several are Emergency Medical Technicians (EMT). Various members have attended command and/or leadership training at National Fire Academy and have various levels of officer training, rope rescue/technical rescue training, extrication training, and wildfire training.

Issues of Concern:
1. Much of the area's building stock is of wood-frame construction built before 2008 when California building codes began requiring minimum standards for buildings in fire hazard severity zones. Large clusters of structures are wood-frame structures in high and very high severity zones.
2. Any other Issues of Concern?

Cooperative Agreements:
Various cooperative agreements exist with neighboring jurisdictions.

District Needs:
The Crescent City Volunteer Fire Department, like many jurisdictions, struggles with a lack of resources for services expected and provided. Apparatus replacement is critical, and the department does not have a vehicle replacement plan in place for fire apparatus. The department relies on older fire engines that need to be updated with additional firefighting capabilities and equipment including full hydraulic extrication tool kit and stabilization struts and Lucas devices to facilitate increased communications capabilities.

Personnel are another critical area that is lacking to include line *and* staff personnel. Major changes at the state level have significantly impacted local departments ability to provide certified baseline training to paid staff and volunteers. Allowing local state Firefighter I option through a certified academy or local institutions of higher learning would allow local fire departments to provide baseline training to staff members.

5.1.2 Crescent Fire Protection District (Crescent City Fire & Rescue)

Chief: Bill Gillespie
Telephone: (707) 464-2421
Address: 255 W. Washington, Crescent City, CA 95531

District Summary:
The Crescent Fire Protection District (FPD) is located adjacent to the City of Crescent City on the scenic redwood coast in Del Norte County, approximately 20 miles south of the California/Oregon state line. The District is responsible for providing fire protection services to the unincorporated areas surrounding Crescent City including Northcrest, Church Tree, Bertsch-Oceanview, Old Mill, and West Washington Avenue. The District provides fire protection, emergency medical, rescue, hazardous material, and any other response services relating to the protection of lives and property. There are two stations; the Cooper Station and the Bertsch Station located on Humboldt Road and the district covers 16,621 acres (26 sq. mi.) with a population of approximately 13,000. There are four paid positions including the full-time Fire Chief and Administrative Assistant as well as the part-time Deputy Chief and Maintenance Worker. All employed by City of Crescent City and contracted to Fire Prevention District.

Issues of Concern:
1. Identifying locations for and installing additional water storage for firefighting in various residential subdivisions in the response area for the FPD.
2. Acquiring and the installation of generators for critical infrastructure such as Del Norte Ambulance, County Jail, Police Department, and Fire Stations.
3. Initiating educational programs in the Del Norte Unified School District focused on Fire Safety, Emergency Preparedness, and Personal Preparedness.
4. Developing an emergency alert and communication network to provide better warning to area residents. Cell phone service throughout Del Norte County and the use of traditional alert systems relying on phone calls is not reliable enough for the geographical area.

Cooperative Agreements:
County Auto-aid agreement, mutual aid agreement with Pelican Bay State Prison Fire Department. Also, Automatic-aid with CAL FIRE for certain calls and only when they are staffed. Additional mutual aid under California Master Mutual Aid agreement.

District Needs:
The FPD is in need of a replacement for several pieces of rolling stock including a water tender and a structural fire engine. They also need to new fire rescue boat that is capable of being a more stable rescue platform. Second Lucas Device on duty vehicle for times with multiple calls (happens consistently). Additional equipment such as Lucas devises, thermal imaging cameras, four-gas monitors, and portable radios are needed as well.

5.1.3 Fort Dick Fire Protection District

Chief: Randy L. Crawford
Telephone: (707) 487-8185
E-mail: fdfd81@aol.com
Address: P.O. Box 369, Fort Dick, CA 95538

District Summary:
The Fort Dick Fire Protection District (FPD) is a small, rural fire agency located in Del Norte County, California, approximately five miles north of Crescent City and 15 miles south of the California/Oregon border. The district serves an area of approximately 32 square miles and serving approximately 6,300 people encompassing the Fort Dick area of Del Norte county. Pelican Bay State Prison is located within the district, although legally it is a part of Crescent City. The District is authorized to provide fire protection, emergency medical, rescue, hazardous material, and any other response services relating to the protection of lives and property. The Fire District is from the Ocean on the west side to the Redwood National and State Park on the east side. From the Smith River on the North Side to approximately ¼ mile north of Elk Valley Cross Road. The district largely contains unincorporated rural residential, agriculture, and resource lands, and will likely continue to develop at or less than the current county-wide rates

The Fort Dick FPD is considered a volunteer agency supplemented by paid staff. The Fort Dick FPD currently has one paid; the Fire Chief and the remainder of personnel are volunteers. The district currently has 21 volunteers who do not receive a stipend for their service. Fort Dick firefighters have received extensive training and typically meet on a weekly basis and as needed for department drills on various topics such as apparatus and pump operations, firefighting, and medical skills. The volunteers provide a quality public service for people and property and are essential to the continued health and safety of the community they serve. The Fort Dick FPD service excellence has been recognized for its exceptional safety record by the Fire Districts Association of California. The Fort Dick FPD operates two facilities, the Kings Valley Station which serves as the main fire station and includes offices, and the Lake Earl Station, an older sub-station that was built in the 1970's.

Issues of Concern:
1. The Fort Dick FPD reported that it generally had sufficient capacity to provide services to its current service area; with the exception of the areas within the district boundaries that

are removed from the Crescent City water system and rely on private water supply systems. The District struggles to provide a sufficient level of service in the area lacking fire hydrants and relies heavily on shuttling water using the District's two water tenders to provide adequate water for fire suppression. The Fort Dick FPD has required the installation of fire hydrants where it can, when development is taking place, but many areas continue to lack fire hydrants. Planned improvements for the district are to increase the number of fire hydrants and replace fire suppression vehicles.

2. The District plans to build a new station at the Lake Earl site because the current station is too small for fire apparatus and storage needs. Many of the fire suppression vehicles are 15-20 years old and will need to be replaced in the future. When the District purchases used apparatus, it is typically retrofitted to meet current standards and extend the life of such apparatus. The District replaces antiquated apparatus and equipment, as necessary, through grants and purchasing like (used) equipment.
3. Like many volunteer agencies, Fort Dick needs to ensure that they maintain sufficient funding to support its ability to purchase replacement equipment as well and updated equipment based on new standards. They require secure funding in order to maintain and provide for their volunteer firefighters who are the greatest asset for the District.

Cooperative Agreements:
They have agreements with all the other fire agencies within Del Norte County, along with fire agencies in Curry County, such as Harbor and Brookings.

District Needs:
The FPD is in need to replace several pieces of rolling stock including a Water Tender and Type 1 Fire Engine in the coming years. They also need to replace older Firefighter Personnel Protective Clothing, and Self-Contained Breathing Apparatus (SCBA) bottles.

5.1.4 Gasquet Fire Protection District

(No input received from Fire Protection District. Information gathered from Municipal Service Review & Sphere of Influence Update prepared by Del Norte Local Agency Formation Commission)

Chief: Darrell Parlasca
Phone: (707) 457-3332
Email: gasquetvfd@charter.net
Address: P.O. Box 85, 100 Firehouse Road, Gasquet, CA 95543

District Summary:
The Gasquet FPD is located east of Fort Dick and Crescent City, and just south of the California/Oregon border. The Gasquet FPD boundary encompasses approximately 236 square miles of land area, which is approximately 20 percent of the total land area in Del Norte County. The district serves a population of approximately 700 people. The middle fork of the Smith River and Highway 199 run through the district's core. Services are provided along approximately 35 miles of Highway 199, including Gasquet and surrounding unincorporated areas. The Gasquet FPD sphere of Influence (SOI) is coterminous with the district boundary.

The Gasquet FPD serves the unincorporated community of Gasquet and surrounding timber and recreational resource areas on Federal or State lands. The community of Gasquet includes a variety of residential development, public facilities such as a school and airstrip, the Smith River National Recreation Area visitor center, and a mixture of visitor and local commercial uses. Outside of the town center, the majority of the Gasquet FPD's land area consists of timber and resource uses. Approximately 50 percent of the District is covered by the Smith River National Recreation Area (Six Rivers National Forest).

The Gasquet FPD is considered a volunteer agency supplemented by paid staff. The District has one Chief, one Assistant Chief, three Captains, and 12 other volunteers including 10 first responders/firefighters, two EMTs and three nurses. The Fire Chief and Assistant Chief are paid staff members, and receive salary and benefits. All volunteers do not receive a stipend for their service. The Gasquet FPD operates one facility, the Gasquet Volunteer Fire Department Station located at 100 Fire House Road in Gasquet. The District owns the building and the approximately one-acre parcel it is located on.

Issues of Concern:

1. Due to the rural nature of the District, the availability of fire hydrants is limited to the township areas of Gasquet. Fire hydrants are maintained by the Gasquet Community Services District. The District is required to shuttle water by vehicles with water storage capacity to provide adequate water for fire suppression in outlying areas.

Cooperative Agreements:

The Gasquet FPD has mutual aid agreements with all of the Fire Protection Districts in Del Norte County, as well as Crescent City Fire, CAL FIRE, the US Forest Service, the National Park Service, Illinois Valley Fire District in Cave Junction, Oregon, and Brookings Harbor in Brookings, Oregon, and Pelican Bay State Prison. In addition, there is an auto aid agreement with the Smith River FPD Station #2 in Hiouchi.

District Needs:

The Gasquet FPD has identified as priority needs as: hose, turnouts, breathing apparatus, handheld radios, and a large generator. The district has also indicated a need for a quick response vehicle with a water tank and a brush/wildland truck.

5.1.5 Smith River Fire Protection District

Chief: Ron Simpson
Phone: (707) 487-5621
Email: smithriverfireprotectiondistrict@smithriverfire.com
Address: PO Box 187, Smith River, CA 95567

District Summary:

The Smith River Fire Protection District (FPD) is a small, rural fire agency located on the scenic redwood coast in Del Norte County, California, just south of the Oregon border and east of the Smith River. The district is responsible for providing fire suppression, rescue/extrication, hazardous material response, public assistance, and emergency medical services to the unincorporated towns of Smith River, North Bank, Hiouchi, and the surrounding rural residential

areas. The Smith River Rancheria, a federally recognized tribe of Tolowa people, is located within the Smith River FPD boundary.

The Smith River FPD operates two facilities, the main Smith River station located at 245 N. Haight Street in Smith River, and Hiouchi Station located at 105 Dunklee Lane on Highway 199 in Hiouchi. In Smith River, the District owns the building and land, and in Hiouchi the district owns the building and leases the land from California State Parks (five-year term agreement).

The Smith River FPD is approximately 17,227 acres (27 square miles) in area serving approximately 2,600 people. The District contains scattered subdivisions, rural residential development, agricultural land, and resource uses. The Smith River Rancheria lands contain residential and commercial development including Tribal offices, community center, hotel, and casino. Neighboring Del Norte County fire departments include the Gasquet FPD to the east, Crescent FPD to the southwest, and the Fort Dick FPD to the west. Several community services districts (CSDs) are located within district boundaries, including the Smith River, HRC, and Big Rock CSDs.

The Smith River FPD is considered a volunteer agency supplemented by paid staff. The District has three paid staff including a Fire Chief, Assistant Chief, and Secretary; and 17 volunteers. The Fire Chief receives a stipend and the Administrative Assistant, Project Administrator, and Maintenance Assistant are part-time staff. District firefighters are classified as Safety and Non-safety. The Safety firefighters are Firefighter 1 trained. The Non-safety provide support on fire calls, and are involved according to their level or training on other types of calls.

Issues of Concern:

1. Due to the rural nature of the District, the availability of fire hydrants is limited to the township areas of Smith River, Ocean View Drive, and Hiouchi. In areas that rely solely on private water supply systems, Smith River FPD is required to shuttle water using its two water tankers to provide adequate water for fire suppression.

2. The Smith River FPD maintains a wish-list for planned purchases and improvements, but does not maintain a full Capital Improvement Plan. Facility and apparatus needs are determined by the Chief through the Smith River FPD Board of Directors. The Smith River FPD has a limited volunteer capacity at Station #2 in Hiouchi, and is actively working to recruit volunteers to maintain the service capacity of the district. Critical infrastructure needs include installing additional hydrants (in partnership with the Smith River CSD).

Cooperative Agreements:

All bordering fire agencies, including those in Oregon: CAL FIRE, Crescent Fire, Fort Dick, Gasquet, Harbor.

District Needs:

Grant funding to assist in remodeling an existing building to replace our Station 1. Assistance with exhaust removal systems, meeting furniture, electronic equipment, kitchen equipment, laundry equipment, office equipment, parking lot gate access, signage. Also, replacement of small

tools and equipment: wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression).

5.1.6 Klamath Fire Protection District

(No input received from Fire Protection District. Information gathered from Municipal Service Review & Sphere of Influence Update prepared by Del Norte Local Agency Formation Commission)

Chief:
Telephone: (707) 482-3311
e-Mail:
Address: PO Box 369, Klamath, CA 95548

District Summary:
The Klamath Fire Protection District (FPD) is a small, rural fire agency located in Southern Del Norte County, California. The District serves the unincorporated communities of Klamath, Requa, Klamath Glen, lands of the Yurok Tribe, and the Resighini Rancheria. The Klamath FPD provides all risk emergency and non-emergency services to the district. Emergency response services include fire suppression, emergency medical services, hazardous materials response, technical and water rescue, disaster relief, and auto-extraction.

The Klamath FPD is located in southern Del Norte County, California, and encompasses approximately 306 square miles, or approximately 25 percent of the total land area in Del Norte County. The population is approximately 2,800. The northern boundary extends east/west near US Highway 101 post mile 15, the southern boundary is the Del Norte/Humboldt county line, the eastern boundary extends to the Siskiyou County Line, and the western boundary is defined by the Pacific Ocean. The District's sphere of influence follows US Highway 101 for approximately three miles north from the District Boundary to US Highway 101 post mile 18.0.

The Klamath FPD operates four facilities: Station #33, "The Glen" is located at 370 Terwer Riffle Road; Station #34, "Redwood" is located at 104 Redwood Drive; and Station #35, "Hunter Creek" is located at 19 Webber Drive. The District also has a Headquarters, that is unmanned, and serves as a command post/training center, used for meetings and training. Each station is equipped with a fire pumper truck and a rescue truck. Redwood Station has a utility trailer with a compressor to replenish firefighter's self-contained breathing apparatus (SCBA).

Issues of Concern:

1. Because of the shortage of volunteers, fire protection is often not available during the weekdays. Many volunteers work outside Klamath during work hours. The Klamath FPD has struggled to provide service within its current service area and relies heavily on mutual aid with the Crescent FPD.
2. The Klamath FPD's primary revenue sources are property taxes and an assessment fee collected and distributed by Del Norte County. The last three fiscal years show budget deficits of $10,000 to $12,000. The lack of adequate funding ultimately results in limited administrative capacity; inadequate facilities, equipment, and apparatus; and contributes to the lack of adequate personnel. There are opportunities for the Klamath FPD to enter into

a memorandum of understanding/agreement with the Yurok tribe to provide a new source of stable ongoing funding. The Klamath FPD should meet regularly with the County Auditor to establish a balanced budget, as recommended by the Grand Jury.

3. The Klamath FPD should consider developing a formal contract or fee-based auto aid agreement with Crescent City Fire and Rescue due to the frequency of mutual aid requests. This would eliminate the time-consuming element inherent in mutual aid agreements, where permission to share resources is sought and obtained by Communications Center staff before units can be dispatched. When a house is on fire, an additional 5 to 15-minute delay can mean the difference between moderate damage and a total loss. With an automatic aid agreement, this type of permission is not required; the Communications Center immediately dispatches the closest available unit(s), with everyone working together to handle the incident.

Cooperative Agreements:
The Klamath FPD has mutual aid agreements with all of the fire protection districts in Del Norte County, as well as Crescent City Fire, the National Park Service, CAL FIRE, and the US Forest Service. Both the Resighini Rancheria and Yurok Reservation are located within the District boundary. Under current conditions the District relies heavily on mutual aid with Crescent FPD.

District Needs:

Many of the District's vehicles are 1970 and 1980 vintage and are in need of replacement. The stations housing these vehicles are old and in need of restoration and more consistent cleaning efforts inside and out. The Grand Jury noted that a better system of organization for equipment and supplies is also needed at all District facilities.

5.2 WILDLAND FIRE DISTRICTS

State and federal agencies generally provide wildland fire suppression services based on their land ownership. Furthermore, the federal and state agencies will also work with local fire departments to form mutual aid agreements for wildland fire suppression assistance outside of their jurisdiction. The following summaries describe agencies in Del Norte County who currently have wildland fire responsibilities and resources.

5.2.1 California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE Humboldt Del Norte Unit
118 N Fortuna Blvd
Fortuna, CA 95540
(707) 725-4413

District Summary:
The Department's diverse programs work together to plan protection strategies for over 31 million acres of privately-owned wildlands, and to provide emergency services of all kinds throughout California. CAL FIRE's jurisdiction extends the length and breadth of the State, and the heart of its emergency response and resource protection capability is a force of approximately 6,100 full-time fire professionals, foresters, and administrative employees; 2,600 seasonal firefighters; 105 California Conservation Corps (CCC) firefighters; 600 Volunteers In Prevention (VIP); and 3,500 inmates and wards.

Through its foresters and other natural resource professionals, CAL FIRE is responsible for the management and protection of California's natural resources. Of the 85 million acres classified as wildlands in the State, 33 million acres are forest lands, with 38 percent privately-owned and 62 percent tribal or government owned. The State's wildlands also provide critical watershed, wildlife habitat, and recreation resources in addition to valuable commercial timberland. CAL FIRE's Resource Management Program plays an integral role in combatting climate change through the management and protection of California's forest and natural resources under its Forest Practice, Urban Forestry, Fuel Reduction, Demonstration State Forest, Pest Management, Landowner Assistance, Environmental Protection and Regulation, Archaeology, Fire and Resource Assessment, and Nursery programs.

State Responsibility Area:
The California Department of Parks and Recreation (State Parks) manages Redwood National and State Parks (RNSP). In Del Norte County RNSP State Parks include Del Norte Coast Redwoods State Park and Jedediah Smith Redwoods State Park. In addition to these, State Parks also manages the 5,000-acre Tolowa Dunes State Park (which includes the Lake Earl State Park Project and Wildlife Areas), the 5-acre Pelican State Beach, and the newly acquired 25,000-acre Mill Creek Property. CAL FIRE is the primary responder to this state park.

The Mill Creek Property is a forty-square-mile area located six miles southeast of Crescent City that includes 121 acres of secondary coast redwood and Douglas fir forest as a result of the substantial historical logging, with several acres of primary old growth redwood stands. The property links large areas of old-growth redwood forest with National Forests in the western part of the Klamath-Siskiyou Mountains. Save-the-Redwoods League (SRL) negotiated an option to purchase the property from Stimson Lumber Company in 2001, and the sale was finalized in June 2002. At that time, Save-the-Redwoods League transferred ownership and land management to the State under stewardship of the State Parks.

Cooperative Agreements:
The largest of CAL FIRE's cooperative programs involves an agreement for the exchange of fire protection services with federal wildland fire agencies, including (among others) the U.S. Forest Service (USFS) and the National Parks Service (NPS). The goal is to have the closest agency respond to a wildfire, regardless of jurisdiction. Through this cooperative relationship, California is able to access federal and state resources throughout the United States to help in times of disaster, when Department resources are depleted. In turn, CAL FIRE provides assistance through interstate compact agreements to Federal and other state wildfire agencies throughout the Nation.

Through the California Cooperative Wildland Fire Management and Stafford Act Response Agreement (CFMA), CAL FIRE and various federal agencies have the commitment of those agencies to improve wildland firefighting efficiency by facilitating the coordination and exchange of personnel, equipment, supplies, services, information and funds among the agencies participating.

Further information about CAL FIRE'S capabilities, programs, and firefighting resources can be found on tier extensive website - https://www.fire.ca.gov/

5.2.2 California Department of Fish and Wildlife

District Summary:
In Del Norte County the California Department of Fish and Wildlife (CDFW) manages the 5,624-acre Lake Earl Wildlife Area, 339-acre Crescent City Marsh Wildlife Area, 160-acre Elk Creek Wetlands Wildlife Area, and the 28-acre Waukell Creek Wildlife Area.

The area is susceptible to severe fire weather due to offshore prevailing winds associated with flows from the Gulf of Alaska, and Old Mill Road is a possible ignition source.

Cooperative Agreements:
As a result of the designation as a State Responsibility Area (SRA), CAL FIRE acts on any wildfires in the area.

5.2.3 U.S. Department of Agriculture Forest Service (USDA) Six Rivers National Forest/Smith River National Recreation Area

Chief: Duane Franklin - Fire Management Officer
Telephone: 707-457-9651
e-Mail: Duane.Franklin@usda.gov
Address: PO Box 228
Gasquet, CA 95543

District Summary:
Within Del Norte County, the US Forest Service provides wildland fire protection on National Forest lands and private in-holding within the boundaries of the Six Rivers National Forest (SRNF). The SRNF provides wildland fire protection to over 1,000 residence in their 585 square-mile service area in Del Norte County. The service area includes the communities of Washington Flat, Gasquet, Low Divide, Hiouchi, Rock Creek, and Big Flat.

Cooperative Agreements:
USDA has cooperative Fire Agreements with local volunteer fire departments, CAL FIRE, and various other Federal Agencies.

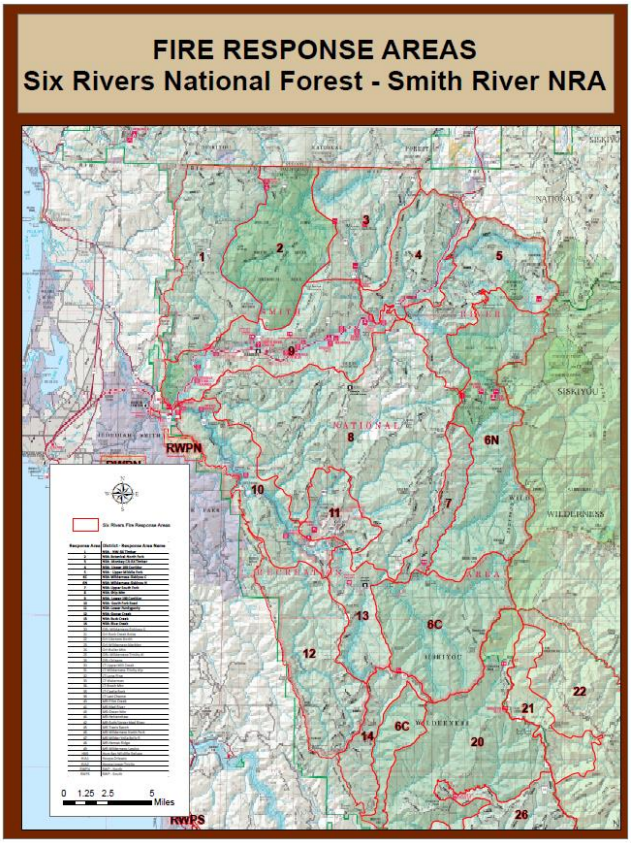


Figure 5-1 Six Rivers National Forest - National Response Area

District Needs:
The biggest necessity is the allocation of funding to create defensible space around the various communities that the USDA aids with fire protection services.

6 MITIGATION STRATEGIES AND ACTION PLAN

The development of a mitigation strategy allows the community to create a vision for preventing future impacts from hazards of concern. This is accomplished by establishing a common set of mitigation goals, a common method to prioritize actions, and evaluation of the success of such actions.

Specific mitigation goals and projects were developed for Del Norte County and its Planning Units in their attempt to establish an overall mitigation strategy by which the County would enhance resiliency of the area. In some cases, these action items are communitywide. In other cases, they are specific to the Planning Unit. While funding is a primary focus of this effort, the planning partnership determined that identification of non-fundable projects should not prohibit their identification in this document. As such, in some instances, projects are identified for which funding may not be grant-eligible.

In Del Norte County, all aspects of wildland fire are addressed at an inter-agency cooperative level. Collaboration between federal, state, and local fire agencies results in strong cooperative relationships among the partnering agencies. As part of the inter-agency cooperation process, basic fire prevention and mitigation strategy consists mainly of pre-suppression. Pre-suppression involves interagency training and communication; wildfire awareness, prevention and preparedness outreach and education; and collaboration among fire agencies.

Because Del Norte County is a large area that encompasses many different land ownership and management types, the mitigation strategies in this CWPP have been written from a broad perspective, with additional recommendations and mitigation strategies for each of the planning units contained in their respective annex documents.

Critical to the implementation of this Community Wildfire Protection Plan will be the identification of, and implementation of, an integrated schedule of treatments targeted at achieving a reduction in the number of human caused fires and overall impact of wildland fires on Del Norte County. As there are many land management agencies and thousands of private landowners in Del Norte County, it is reasonable to expect that differing schedules of adoption will be made and varying degrees of compliance will be observed across all ownerships.

Del Norte County encourages the philosophy of instilling disaster resistance in normal day-to-day operations. By implementing plan activities through existing programs and resources, the cost of mitigation is often a small portion of the overall cost of a project's design or program.

The land management agencies in Del Norte County are participants in this planning process and have contributed to its development. Where available, their schedule of land treatments have been considered in this planning process to better facilitate a correlation between their identified planning efforts and the efforts of Del Norte County.

Additional factors in identifying potential strategies to reduce risk includes the element of existing regulatory and environmental laws in place. This will be determined by the owner of the parcel

implementing the treatment. Thus, if proposed activities are to occur on federal lands, then the National Environmental Policy Act (NEPA) will determine environmental protection measures. Similarly, if the proposed action is to occur on state lands or private lands, then the Forest Practices Act and California Environmental Quality Act (CEQA) would govern environmental impacts. We have not diminished private property rights through the development of this document. Environmental protection is inherent to all projects because of the existing regulatory environment within the State of California.

Most treatments should begin with the home evaluation, the implicit factors of structural ignitability (roofing, siding, deck materials), and vegetation within the treatment area of the structure. However, treatments in the low population areas of rural lands may look closely at access (two ways in and out) and communications through means other than land-based telephones. Contrarily, subdivisions with densely packed homes surrounded by forests and dense underbrush may require more time and effort implementing fuels treatments beyond the immediate home site to reduce the probability of a crown fire entering the subdivision.

6.1 WILDFIRE MITIGATION ACTIVITIES

Overall, a shift in resources from the defense of the WUI from wildfire to the mitigation of wildfire hazards and risks in advance of events will build a safe operating space for fire-prone communities that increases adaptive resilience to wildfire. Encouraging development away from fire-prone areas, reducing fuels on private lands in and near communities, and retrofitting and building homes to withstand ignition will increase the adaptive capacity for managing more wildfire (Calkin et al. 2014), similar to adaptive approaches for other natural hazards such as flooding and earthquakes (Moritz et al. 2014). We also can change how we build, live, and work in fire-prone landscapes to keep our communities safe, healthy, and vibrant.

Throughout the community planning process for this Community Wildfire Protection Plan, project staff was continually asked by residents what could be done about property owners who did not create defensible space and hence posed a risk or hazard to their neighbors. This is the type of issue that is either best addressed by regulation and/or policy, or through incentives. Given the independent nature of many Del Norte residents, it may be most effective to motivate through incentives rather than through regulations. However, some regulations will be necessary, especially in terms of new development.

With the exception of Crescent City, all of Del Norte County is unincorporated. Therefore, the issue of countywide defensible space must be addressed at the County level. This is not an issue unique to Del Norte. Currently the cities, towns, fire protection districts, and wildland fire agencies within Del Norte County have extensive mutual aid agreements that serve to increase the protection and effectiveness of all Del Norte County fire response entities. Local fire agencies provide mutual aid for each other to the fullest extent possible.

6.2 STRATEGY TOPICS

During development of the strategies to be considered during the life cycle of this plan, specific topics were identified and discussed as potential areas to be included within this current 2020 update. Planning Committee Members leading the effort provided a power point presentation that

identified various topics, such as those identified below. In some instances, the type of actual project was associated with several topics.

- Policy Development
  - Requirements for Defensible Space
  - Land Use Development Requirements and Restrictions
  - Insurance Based Incentives
  - Maintain and enforce current WUI building and fire codes
  - Signage
  - Designation of WUI boundaries and Communities at Risk
  - Reducing Structural Ignitability – Construction Standards

- Reducing Structural Ignitability
  - Utilize construction materials that are non-combustible

- Public Education and Outreach
  - Maintain relevant information for law enforcement and firefighter such as Fire Atlas and Emergency Response Guides (ERG)
  - Turn Around Spaces
  - Signage programs
  - "Fire Danger" signage programs
  - Emergency Communication systems
  - Evacuation Routes

- Fuel Reduction Activities – Reducing Structural Ignitability
  - Defensible Space
  - Brush Clearing
  - Fuel Breaks
  - Shaded Fuel Breaks
  - Prescribed Burns
  - Mechanical Fuel Reduction
  - Construction Standards

- Planning
  - Evacuation
  - Fire Safety, Emergency Preparedness, and Personal Preparedness in Del Norte School District
  - Family Disaster and Evacuation Plans
  - Secondary Emergency Access and Evacuation Routes

- Resource
  - Identification of resources

- Gap Analysis
  - Provide information for advanced long-range planning with respect to equipment, training requirements and career opportunities

- Water storage locations and equipment
- Food storage locations

6.3 COUNTYWIDE WILDFIRE MANAGEMENT ACTIVITIES

As per the Community Wildfire Protection Plan (CWPP) Guidelines and the Healthy Forest Restoration Act (HFRA), mitigation strategies were developed to reduce risks of wildfire in Del Norte County. There are many specific actions that will help improve the safety in a particular area; however, there are also many potential mitigation activities that apply to all residents and all fuel types. Each of the participating jurisdictions maintain strategies within their individual annexes. They identify specific projects that will be pursued within the jurisdiction.

As part of the implementation of wildfire mitigation activities in Del Norte County, a variety of management tools may be used. Management tools include but are not limited to the following:

- Homeowner and landowner education
- Policy changes for structures and infrastructure in the Wildland Urban Interface
- Home site defensible zone through fuels modification
- Community defensible zone through fuels alteration
- Access improvements
- Emergency response enhancements (training, equipment, locating new fire stations, new fire districts)
- Regional land management recommendations for private, state, and federal landowners

Maintaining private property rights will continue to be one of the guiding principles of this plan's implementation. Sound risk management is a foundation for all fire management activities. Risks and uncertainties relating to fire management activities must be understood, analyzed, communicated, and managed as they relate to the cost of either doing or not doing an activity. Net gains to the public benefit will be an important component of decisions.

Of significant focus during the 2020 plan update cycle will be an outreach effort to increase landowners with Stewardship plans, as it has been demonstrated that areas with such plans are very active in taking precautionary measures, thereby reducing the risk of catastrophic wildfires.

6.4 REGIONAL LAND MANAGEMENT RECOMMENDATIONS

Wildfires will continue to ignite and burn depending on the weather conditions and other factors enumerated earlier. However, active land management that modifies fuels, promotes healthy range and forestland conditions, and promotes the use of these natural resources (consumptive and non-consumptive) will ensure that these lands have value to society and the local region. We encourage the U.S. Forest Service, the U.S. Fish and Wildlife Service, State Parks, the California Department of Forestry and Fire Protection (CAL FIRE), industrial forestland owners, private forestland owners, and all agricultural landowners in the region to actively manage their wildland-urban interface lands in a manner consistent with reducing fuels and risks.

6.5 CAPABILITIES ASSESSMENT

In addition to the regulatory authority discussed in Section 1.8.4, as well as throughout the plan, the following identify several additional on-going and adaptive actions underway within Del Norte County. These items have had a positive impact on reducing the risk Countywide.

Public Outreach Campaigns: As more and more people move into the wildland urban interface of Del Norte County, the need for a coordinated wildfire education program becomes paramount. Many new residents in high wildland fire risk areas are not aware of the potential threat, nor do they recognize the lack of defensibility and/or accessibility of their homes. It is important that the local fire districts and departments in Del Norte County have the funding and materials needed to develop educational programs for citizens in their response areas. General awareness of the risk, home defensible space, evacuation procedures, sheltering, and adequate access to structures are just a few of the potential topics that could be covered. A concerted effort to provide basic materials to all fire districts and other cooperating organizations has been a priority of the Del Norte Fire Safe Council.

The safest, easiest, and most economical way to mitigate unwanted fires is to stop them before they start. Generally, prevention actions attempt to avoid human-caused fires. Campaigns designed to reduce the number and sources of ignitions can be quite effective. Prevention campaigns can take many forms. Traditional "Smokey Bear" type campaigns (pictured right) that spread the message passively through signage can be quite effective. Such signs remind viewers of the dangers of careless use of fireworks, burning when windy, and leaving unattended campfires can be quite effective. It is impossible to say just how effective such efforts actually are, however, the low costs associated with posting of a few signs is inconsequential compared to the potential cost of fighting a fire.

Slightly more active prevention techniques may involve mass media, such as radio or the local newspaper. The federal government has been a champion of prevention, and could provide ideas for such tips. When fire conditions become high, brief public service messages could warn of the hazards of misuse of fire or any other incendiary device. Such a campaign would require coordination and cooperation with local media outlets. However, a campaign is likely to be worth the efforts, costs, and risks associated with fighting unwanted fires.

Fire Reporting and Emergency Response: California receives approximately 27 million 911 calls annually, and the state is in the process of developing an Internet Protocol (IP) based 911 system, able to receive calls and data from new and emerging technologies and devices. The state's Office of Emergency Services has led a number of Next-Gen 911 pilot projects in several counties and other locations. The state is assisting various counties in their Next-Gen 911 projects in the form of funding and project management. The statewide project is set to be complete by late 2021.

The success of the Enhanced – 911 (E-911) emergency reporting system can be measured by the frequency that fire calls route to the county emergency centers. Some wildland firefighting agencies maintain direct Forest Fire Reporting numbers, but the bulk of fire reports go to the Communication Centers.

The Del Norte County Sheriff's Department, provides countywide law enforcement and fire dispatch services. The Sheriff's Department serves as the primary public safety answering point (PSAP) for the County's 9-1-1 system. The Sheriff's Department serves as the direct dispatch center for the local fire departments in Del Norte County, but not for the wildland protection agencies. Often, the PSAP does not transfer or relay a reported wildland fire to the agency having jurisdiction of the fire. When a wildland fire is reported they only need to transfer or relay the information to one inter-agency dispatch center in Fortuna. Under California Code, Section 53114.2, the PSAP centers have established mandatory standards to provide the fast, most reliable access to emergency services, which include direct dispatch, transfer, and relay of the emergency to the appropriate response agency.

The North Coast Interagency Communication Center (CANCIC) serves as the focal point to provide all-risk dispatching, logistical support, intelligence, resource status and availability, relative to anticipated and ongoing incident activity for all cooperating agencies within the CANCIC area of influence. The center facilitates movement of resources between cooperating agencies, units and concurrently ensures fire suppression capabilities by monitoring weather, fire danger and prescribed burning activity within the area. The center also responds to requests for resources to neighboring units and NWCC. During 2019, CANCIC reported that they tracked 1,114 calls for service that included reports of Wildfire, Prescribed Burns and Smoke Checks.

When a fire call comes into Del Norte County E-911 Communication Center, the local fire protection districts are paged out to respond. Then the Communication Center staff calls the appropriate wildland agency and relays the fire report info along with the reporting party's phone number.

Burn Permits: The burning of yard and garden waste is a vital part of many landowners' fuels reduction and property protection program. In many cases this is the only option available for landowners to get rid of hazardous fuel loads on their property due to a variety of reasons including physical capacity, limited access to necessary hauling equipment, distance to disposal sites, and many others. Burning yard and garden waste is an efficient and effective tool for fire mitigation; therefore, it is important that Del Norte County maintain this type of public burning program, and important for citizens to obtain the burn permits in advance of such activities, as they are regulated by, among others, the North Coast Unified Air Quality Management District (see Chapter 3 above). The North Coast Unified Air Quality Management District, under an agreement with CAL FIRE and local fire districts, assumed primary responsibility for the issuance of both Agricultural and Residential burn permits.

All burn permits are subject to fire restrictions in place with CAL FIRE and local fire protection districts. Anyone wishing to conduct a burn needs to first check with appropriate departments to determine the process in place at that time as they are changed based on current fire conditions.

Defensible Space: Effective mitigation strategies begin with public awareness campaigns designed to educate homeowners of the risks associated with living in a flammable environment. California's Public Resource Code 4291 requires a defensible space clearance around homes and structures of 100 feet. Proper clearance to 100 feet dramatically increases the chance of a structure surviving a wildfire. This defensible space also provides for firefighter safety when protecting homes during a wildland fire.

Residents of Del Norte County must be made aware that home defensibility starts with the homeowner. Once a fire has started and is moving toward a structure or other valued resource, the probability of that structure surviving is largely dependent on the structural and landscaping characteristics of the home. "Living with Fire, A Guide for the Homeowner" is an excellent tool for educating homeowners as to the steps to take in order to create an effective defensible space. Residents of Del Norte County are encouraged to work with local fire departments and fire management agencies within the county to complete individual home site evaluations. The California Department of Forestry and Fire Protection (CAL FIRE) and United States Fire Administration (USFA) will do a free fire inspection of homes. Fire prevention programs are coordinated with Fire Safe Councils and local fire departments.

Homes without defensible space may get passed over in favor of protecting those with defensible space, which have a greater chance of survival and offer firefighters a safer environment. Home defensibility steps should be enacted based on the results of these evaluations. Beyond the homes, forest management efforts must be considered to slow the approach of a fire that threatens a community.

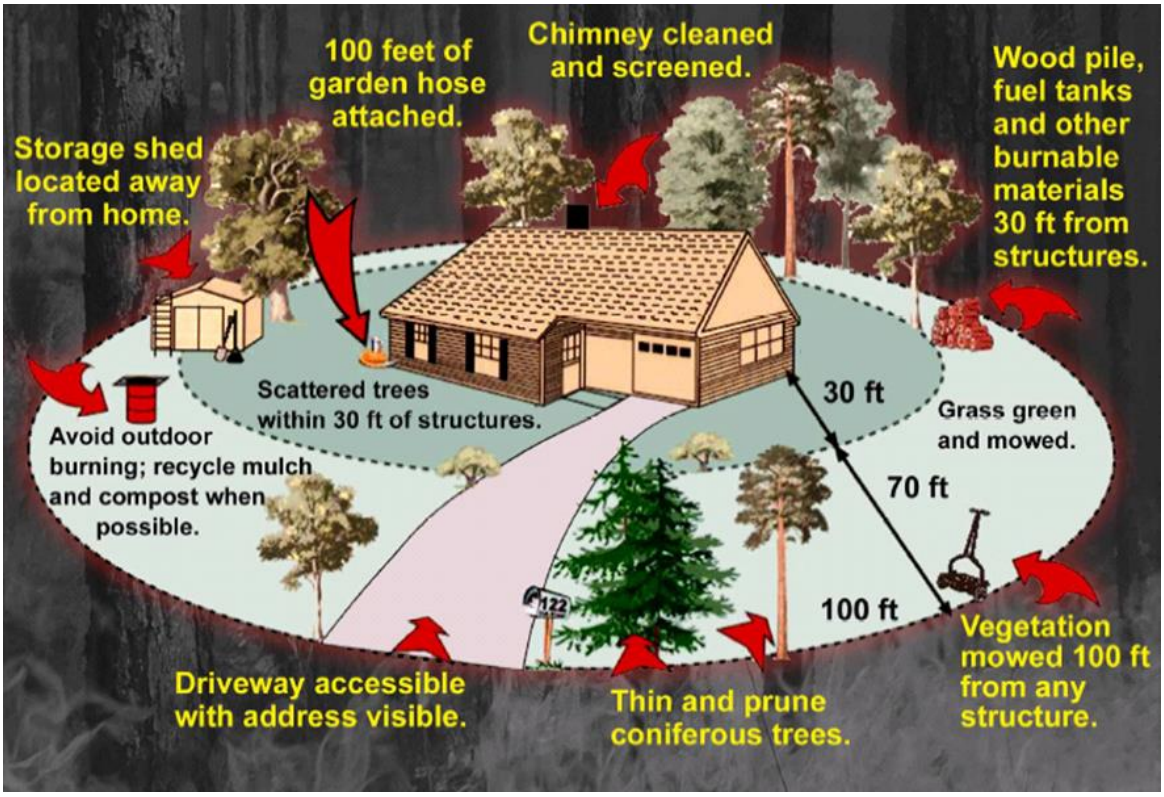


Figure 6-1 Measures to Protect Homes from Wildfire

Figure 6-2 Firewise USA Ember Threat and Home Ignition Zones
Source: Firewise USA

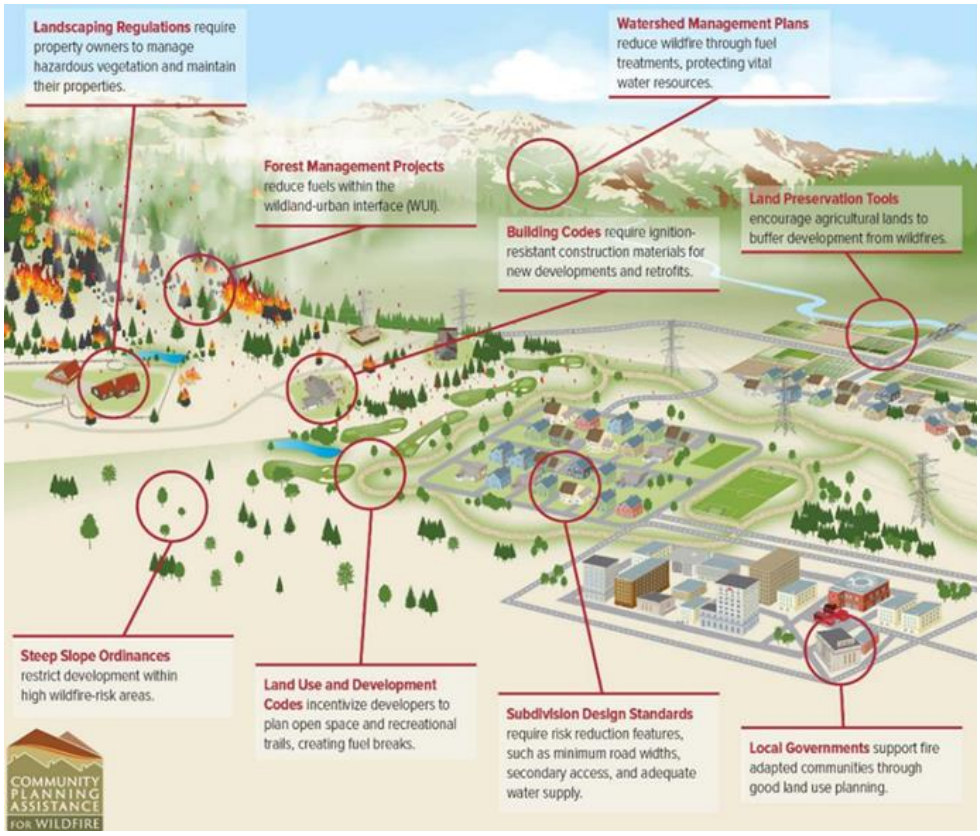


Figure 6-3 Potential Land Use Mitigation Activities to Reduce Wildfire Impact

Assembly Bill No. 2911, Chapter 641 (approved 2018) further requires that (on or before July 1, 2021, and every 5 years thereafter) the State Board of Forestry and Fire Protection, in consultation with the State Fire Marshal, to survey local governments and fire districts to identify existing subdivisions in either a state responsibility area or a very high fire hazard severity zone, without secondary egress routes, that are at significant fire risk. The bill would require the board, in consultation with the State Fire Marshal and the local governments, to develop recommendations to improve the subdivision's fire safety, as provided. The bill would require the board to provide final recommendations to the identified local governments.

Evacuation Plans: Development of community evacuation plans is necessary to assure an orderly evacuation in the event of a threatening wildland fire. Designation and posting of escape routes would reduce chaos and escape times for fleeing residents. Community safety zones should also be established in the event of compromised evacuations. Efforts should be made to educate homeowners through existing homeowners associations or creation of such organizations to act as conduits for this information. Want to know more? Check out *Ready for Wildfire* (Ready, Getting Set, Go! Evacuation Guide): www.readyforwildfire.org

Accessibility: Fires within communities surrounded by natural areas are the most dangerous and costliest fires in North America. Growing at a staggering 4,000 acres per day, these Wildland-Urban Interface (WUI) communities are rapidly becoming the nation's single largest fire concern. (NIST - https://www.nist.gov/industry-impacts/reducing-impact-wildland-urban-interface-fires). Fire chiefs, emergency personnel and citizens throughout the County have identified home accessibility issues as one of the primary concerns in some parts of Del Norte County. Many homes and driveways have been constructed without regard to access requirements of large emergency vehicles. Lack of accessibility restricts engagement by fire suppression resources. Enforcement of Del Norte County's existing road standards as codified in Del Norte County Code 19.08 regarding road and driveway construction regulations for fire apparatus would prevent accessibility issues in new developments. The stated intent of the County Code is that "Road and street networks, whether public or private, unless exempted under Section 19.04.030(b), shall provide for safe access for emergency wildland fire equipment and civilian evacuation concurrently, and shall provide unobstructed traffic circulation during a wildfire emergency consistent with Section 19.08.020 - 19.08.110. (Ord. 2016-003)". Wildfire risk can be lessened, and firefighter safety can be improved by keeping vegetation including tall grass, brush, and trees a safe distance from the road right-of-way. This will not only improve accessibility, but will also allow the road to serve as a control point for suppression activities. Furthermore, firefighter access should not be impeded by locked gates or electronically controlled gates, overhead obstructions, low load capacity bridges, or other obstacles.

Of vital importance is the accessibility of the homes to emergency apparatus. If a home cannot be protected safely, firefighting resources will not jeopardize lives to protect a structure. Thus, the fate of the home will largely be determined by homeowner actions prior to the event. In many cases, homes' survivability can be greatly enhanced by following a few simple guidelines to increase accessibility such as widening or pruning driveways and creating a turnaround area for large vehicles.

Driveways should be designed to allow fire and emergency vehicles and equipment to reach your house. Access roads should have a minimum 10-foot clearance on either side of the traveled section of the roadway and should allow for two-way traffic. Ensure that all gates open inward and are wide enough to accommodate emergency equipment. Trim trees and shrubs overhanging the road to a minimum of 13 1⁄2 feet to allow emergency vehicles to pass.

Fuels Reduction: Recreational facilities should be kept clean and maintained. In order to mitigate the risk of an escaped campfire, escape proof fire rings and barbeque pits should be installed and maintained. Surface fuel accumulations in nearby forests can also be kept to a minimum by periodically conducting pre-commercial thinning, pruning, and possibly controlled burns.
Other actions that would reduce the fire hazard would be thinning and pruning timbered areas, creating a fire-resistant buffer along roads and power line corridors, and strictly enforcing fire-use regulations. Ensuring that the area beneath power lines has been cleared of potential high-risk fuels and making sure that the buffer between the surrounding forest lands is wide enough to adequately protect the poles as well as the lines is imperative.

The county-wide fuel reduction Chipper Program was made possible by a grant from the Del Norte County Resource Advisory Committee (RAC). Del Norte Fire Safe Council has a chipper and will lend it out to residents.

Rural Addressing: In order to assure a quick and efficient response to an event, emergency responders need to know specifically where emergency services are needed. Continued improvement and updating of the rural addressing system and signage is necessary to maximize the effectiveness of a response. Making sure addresses are clearly visible from the road will greatly assist emergency responders.

Livestock grazing in and around the communities of Del Norte County has led to a reduction of many of the fine fuels that would have been found in and around the communities and in the wildlands of Del Norte County. Domestic livestock not only eat these grasses, forbs, and shrubs, but they also trample certain fuels to the ground where decomposition rates may increase. Livestock ranchers tend their stock, placing additional sets of eyes into the forests and rangelands of the County where they may observe ignitions or potentially risky activities. Livestock grazing in this region should be encouraged in the future as a low cost, positive tool of wildfire mitigation in the wildland-urban interface and beyond.

Forest management: The forest management programs of The California Department of Forestry and Fire Protection (CAL FIRE) has led to some reduction of wildland fuels; however, there is significant room for growth in fuels reduction programs. In addition, many private and industrial forest landowners have implemented very active forest management programs that are leading to a significant decrease in high risk fuels. Furthermore, forests are dynamic systems that will never be completely free from risk. Treated stands will need repeated treatments to reduce the risk to acceptable levels in the long term.

Agriculture is a significant component of Del Norte County's economy. The original conversion of these lands to agriculture from rangeland and forestland was targeted at the most productive soils and adjacency to water. Many of these productive rangeland ecosystems were consequently

also at some of the highest risk to wildland fires because biomass accumulations increased in these productive landscapes. The result today is much of the landscape historically prone to frequent fires, has been converted to agriculture, which is at a much lower risk than prior to its conversion. The preservation of a viable agricultural economy in Del Norte County is integral to the continued management of wildfire risk in this region.

Prescribed fire can be used as a tool in forest and rangeland management programs to accomplish several goals. Prescribed fire, when done correctly and in appropriate areas, can help reduce hazardous fuel loads. Prescribed fire has also been used to prepare sites for seeding or planting, improve wildlife habitat, manage competing vegetation, control insects and disease, improve forage for grazing, enhance appearance, and improve access.

Other Activities: Other specific mitigation activities are likely to include improvement of emergency water supplies and management of trees and vegetation along roads and power line rights-of-way. Currently both the State of California and Del Norte County (under Title 19 of the Del Norte County Code) adopt the most recent building codes, which provide for more fire conscious construction techniques such as using fire resistant siding, roofing, and decking or implementing road standards in rural areas.

6.6 PROPOSED PROJECT AREAS

Many projects identified by the CWPP Planning Committee have multiple factors contributing to the potential wildfire risk to residents, homes, infrastructure, and the ecosystem. Treatments within the project areas will be site specific, but will likely include homeowner education, creation of a wildfire defensible space around structures, fuels reduction, and access corridor improvements. Specific site conditions may call for other types of fuels reduction and fire mitigation techniques as well.

CAL FIRE, U.S. Fish and Wildlife Service, U.S. Forest Service, Del Norte County Resource Conservation District, and/or individual fire protection districts may take the lead on implementation of many of these projects. Identification of project were purposely identified without regard to land ownership in order to capture the full breadth of the potential wildland fire risk. Coordination and participation by numerous landowners will be required for the successful implementation of the identified projects.

6.7 STATUS OF PREVIOUS WILDFIRE MITIGATION ACTIVITIES

As of this 2020 update, status of the 2005 projects are outlined below. These projects will continue to be maintained and expanded upon in the future as the need arises, and funding allows. In line with this plan, the first priority was creating strategically located fuel breaks in the communities throughout Del Norte County. Mitigation activities utilized the current road systems and ridge tops around the various communities.

Gasquet Community

1. 2003 - Gasquet Community Protection Project (262 acres)
   Six different fuelbreaks were completed around the community of Gasquet.
   5 Miles of Roadside Fuelbreaks

- Pioneer Village (7 acres) - Pioneer Road.
- French Hill Trail- (59 acres) - Trail a crossed from the Forest Service. Highway 199 to French Hill Road.
- North Fork Loop- (14 acres) –Above the North Fork Loop.
- Gasquet Mobile Home Park-(21 acres) –Above the Gasquet mobile home park.
- Gasquet Mountain Road- (108) - Gasquet Mountain Road.
- Wagon Wheel- (53 acres) – French Hill Road.

This project is an ongoing project that was identified prior to the 2005 CWPP. The area has been retreated every 5-7 years. The most recent treatment was completed in July 2020 through a 2017 grant secured funded from the National Fish and Wildlife Foundation.

2. 2009 - Elk Camp Ridge Fuelbreak (282 acres)
    - Located north east of the town of Gasquet. Nearest road access is the Gasquet Toll Road to Elk Camp Ridge Road.

Approximately 59 acres of this area received fuel treatment and removal of invasives through the 2017 National Fish and Wildlife Foundation grant referenced above.

3. 2015 - Gordon Hill Vegetation and Fuels Management Project (1168 acres)
   35 Miles of Roadside Fuelbreaks
    - County 411 (French Hill Road) and 405 roads, and FS Road 17N07.
    - This project also helps protect the community of Big Flat/Rock Creek.

Big Flat/Rock Creek Community

1. 2008 - Big Flat Vegetation and Fuels Management Project- (735 acres)
   25 Miles of Roadside Fuelbreaks
    - County Road 405 (Hurdy Gurdy), FS Roads 16N03, 16N02, 15N38, 15N39, and Forest Road 15 (GO Road).
2. 2009 - Coon Mountain Project- (750 acres)
    - FS Roads 17N07, 17N07J, and 17N07G.
3. 2005 - South Fork Road Shaded Fuelbreak Project (50 acres)
    - Approximately two miles of shaded fuelbreak along Road 427
        - This project was contained in the 2005 CWPP as a "Top Priority Fuel Reduction Projects, for Immediate Implementation." Since that time, the subject project was funded through State Responsibility Area funding, permitted through Del Norte County, and implemented by the CA Conservation Corps. This project is again in need of occurring.

Hiouchi Community

1. 2009 - Hiouchi Community Protection Project- (190 acres)
   5 Miles of Roadside Fuelbreaks
    - Located on the ridgeline east of the town of Hiouchi and FS Road 17N23 off Low Divide Road.

2. 2011 - Station 3 Fuelbreak Project- (205 acres)
   5 Miles of Roadside Fuelbreaks
   - FS Road 17N21 and 17N22 off Low Divide Road.

Washington Flat Community

1. 2017 - Little Jones Creek Project- (385 acres)
   17 Miles of Roadside Fuelbreaks
   - FS Road 17N08 (Little Jones Creek), Forest Road 16 (Jawbone), 17N05, and 18N08 (Siskiyou Fork), 17N27.

2. 2019 - Knopki South Project-(406 acres)
   17 Miles of Roadside Fuelbreaks
   - FS Road 18N07 (Knopki Creek) and 18N04.

3. 2020 - North Knopki Projects-(377 acres)
   20 Miles of Roadside Fuelbreaks
   - FS Road 18N07 (Knopki Creek) and 18N11.

6.8 PRIORITIZATION SCHEME - BENEFIT COST ANALYSIS

The method for prioritizing initiatives for the 2020 update differs from the method used for the previous mitigation initiatives. The benefit/cost analysis conducted during this planning process is not of the detailed variety required by various FEMA (and other) project grant eligibility.

Because this is a multi-area plan, the prioritization of initiatives specific to the jurisdictions must be done at the individual level based on local impact, and the needs and programs of that body Funding to complete any initiative will likely be acquired from a variety of sources, with the lack of funding itself preventing an initiative from being implemented. As such, the less formal approach used during this process versus a formal Benefit Cost Analysis is more appropriate because some projects may not be implemented for up to 10 years, and associated costs and benefits could change dramatically in that time. As such, analyses will be performed on projects at the time of application using a detailed benefit-cost model.

While the factors involved in the ranking remain similar (e.g., impact to people, property, economy, environment), there is now a consistent category or level (high/medium/low) assigned with those identified factors to allow for the addition of new strategies over the life cycle of this plan, without having to numerically re-prioritize the entire list. The process also supports the plan maintenance strategy for review, addition, and reprioritization of initiatives on an annual basis, reducing the level of effort involved in a numeric system of ranking, and enhancing the likelihood that the annual review will occur as a reduced level of effort will be required.

During community meetings, the following elements were identified and discussed to assist in determining the high / medium / low parameters. The data to reach determination of these were items identified in the Risk Assessment portion of this process (e.g., impact to people, property, economy, environment).

6.8.1 Prioritization

The prioritization of new projects and deletion of completed projects will occur annually and be facilitated by the CWPP planning committee to include the County Board of Supervisors, Crescent City Council, fire district chiefs and commissioners, agency representatives (CAL FIRE, USFS, etc.), and other community organizations. All mitigation activities, recommendations, and action items mentioned in this document are dependent on available funding and staffing. The prioritization of projects will be based on the selection of projects which create a balanced approach to mitigation which recognizes the hierarchy of treating in order (highest first):

- People
- Infrastructure
- Economy
- Cultural
- Environmental

Parameters were established for assigning the ordinal ratings of high, medium, and low to the potential benefits associated with projects, as well as the costs of these projects.

Benefit ratings were defined as follows:

- **High (5)—**Project will provide an immediate reduction of risk or injury exposure for life and property.

- **Medium (3) —**Project will have a long-term impact on the reduction of risk exposure for life and property, or the project will provide an immediate reduction in the risk exposure for property loss.

- **Low (1) —**Long-term benefits of the project are difficult to quantify in the short term, but the project maintains a benefit to the planning unit when viewed long-term.

Cost in some cases is subjective based on the entity's financial situation, which is a primary purpose in electing this method, so that it can be applied equally to all parties. Cost ratings were defined as follows:

- **High (1)** —Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).

- **Medium (3)** —The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment; the cost of the project would have to be spread over multiple years; or the cost of the project could partially be funded with existing funds.

- **Low (5)** —The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly. Prioritization of the projects in such a manner serves as a guide for choosing and funding projects. The graphic below illustrates an example of the spreadsheet utilized by the Planning Committee to prioritize the existing projects.

Example Strategy Priority Ranking Table								
	Benefit			Cost			Results	
Strategy	High (5)	Medium (3)	Low (1)	High (1)	Medium (3)	Low (5)	Subtotal	Priority
Fuels Reduction	5				3		8	High
Policy Development		3			3		6	Medium
Public Education	5					5	10	High
Planning		3				5	8	High
Infrastructure Enhancement	5			1			6	Medium
Equipment (Chipper)		3				5	8	High
Generators		3		1			4	Medium

Figure 6-4 Example of Priority Ranking Spreadsheet

6.8.2 Final Ranking

The project prioritization scheme has been designed to rank projects on a case by case basis based on the planning unit. Identifying projects countywide would not be an effective method, as in many cases, a very good project in a lower priority category could outrank a mediocre project in a higher priority. The intent is not to restrict funding to only those projects that meet the high priorities because what may be a high priority for one community may not be a high priority at the county level, or for other communities. The flexibility to fund a variety of diverse projects based on varying reasons and criteria is a necessity for a functional mitigation program at the County and community level. It also allows for flexibility during annual reviews to develop new strategies, without having to numerically reprioritize projects.

The intent in most cases is that projects will be administered by county and local jurisdictions with overall coordination provided by CAL FIRE, Del Norte Fire Safe Council, and Del Norte County Emergency Services, as deemed appropriate.

The project priorities are defined as follows:

- **High Priority**—A project has benefits that exceed cost and meet the goals of this planning process; funding potentially has been secured or is an ongoing project and meets eligibility requirements for various grant programs. High priority projects can be completed in the short term (1 to 5 years).

- **Medium Priority**—A project that has benefits that exceed costs; a project for which funding has not been secured, but that is grant eligible under grant programs. The project can be completed in the short term once funding is secured. Medium priority projects will become high priority projects once funding is secured.

- **Low Priority**—A project that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, or for which the time line for completion is long term (1 to 10 years). Low priority projects may be eligible for grant funding from other programs.

Through a facilitated process involving the Planning Committee members, each mitigation action item identified by the respective planning units were ranked. Table 6-1 identifies the prioritization of those action items.

TABLE 6-1
COUNTYWIDE RANKED INITIATIVES

Initiative (Initiatives are grouped together for like-projects)	Crescent City	Fort Dick	Gasquet	Hiouchi	Rock Creek/ Big Flatt	Smith River	Countywide	Priority H/M/L
Develop and implement or increase Signage program.	X		X		X	X	X	M
Foster a culture of preparedness among neighbors.	X	X	X	X	X	X	X	H
Work with local parks to create a robust buffer zone between parks areas and community.	X	X	X	X	X	X	X	H
Identify and address road access issues wherever possible, providing information to County EOC for use during activations, and fire protection organizations countywide to ensure information exchange for mutual aid.							X	H
Increase water availability, installing water storage tanks where necessary with proper fittings and which are mapped.	X				X	X		H
Initiate evacuation planning and begin drills and exercises testing those plans.							X	H
Develop a Food Storage program.	X							L
Hold Community Chipper Days	X							H

TABLE 6-1 COUNTYWIDE RANKED INITIATIVES								
Initiative (Initiatives are grouped together for like-projects)	**Crescent City**	**Fort Dick**	**Gasquet**	**Hiouchi**	**Rock Creek/ Big Flatt**	**Smith River**	**Countywide**	**Priority H/M/L**
Coordinate with citizens to develop Family Disaster and Evacuation Plans.			X				X	H
Work with local fire protection organizations to establish a fire department recruitment strategy to get more volunteers, with an effort in identifying volunteers who can respond during daytime hours.	X	X						M
Working with local fire protection agencies, conduct fuels reduction assessments annually.	X	X	X	X	X	X	X	H
Conduct Prescribed /Mechanical Fuel Reduction activities.			X					
Develop and implement a Defensible Space program including Brush Clearing, Strategic Fuel Breaks, Fuel Reduction, Shaded Fuel Breaks, Fire Breaks, Brush Back, Evacuation Routes, and Turn Around Spaces plans focusing efforts on community-identified Areas of Concern.	X	X	X	X	X	X	X	H
Develop and institute educational and service-learning programs in the Del Norte Unified School District focused on Fire Safety, Defensible Spaces, Emergency Preparedness, and Personal Preparedness.	X						X	H
Work with local planning partners to seek out grant funding for equipment and critical infrastructure.	X	X				X	X	H
Ensure WUI Building Standards are strictly enforced.				X			X	H

Any recommended vegetation treatments must be undertaken with the consent and involvement of the property owner and the observance of all applicable local, tribal, state, and federal laws and regulations, which includes permitting authority as projects are developed.

It should not be assumed that just because an area is identified as WUI, that it will therefore receive treatments because of this identification alone. Nor should it be implicit that all WUI treatments will be the application of the same prescription. Instead, each location targeted for treatments must be evaluated on its own merits: factors of structural ignitability, access, resistance to control, population density, resources and capabilities of firefighting personnel, and other site-specific factors.

It also should not be assumed that WUI designation on federal or state lands automatically equates to a treatment area. Public land management agencies are still obligated to manage according to their respective management plans. Their management plans have legal precedence over the WUI designation until such a time that they are revised to reflect updated priorities.

Through the California Climate Investments (CCI) Fire Prevention Grant Program, CAL FIRE aims to reduce the risk of wildland fires to habitable structures and communities, while maximizing carbon sequestration in healthy wildland habitat and minimizing the uncontrolled release of emissions emitted by wildfires. Qualifying projects and activities include those related to hazardous fuel reduction and removal of dead, dying, or diseased trees, fire prevention planning, and fire prevention education. Projects include Vegetation clearance in critical locations to reduce wildfire intensity and rate of spread, Workshops, meetings, materials creation, and other educational activities with the purpose of increasing knowledge and awareness of information that could be used to reduce the total number of wildland fire and acres burned, and development of evacuation plans

6.9 FUNDING OPPORTUNITIES

County Board of Supervisors and the elected officials of all jurisdictions will evaluate opportunities and establish their own unique priorities to accomplish mitigation activities where existing funds, staffing, and resources are available and there is community interest in implementing mitigation measures. If no federal funding is used in these situations, the prioritization process may be less formal. Often, the types of projects that the County can afford to do on their own are in relation to improved codes and standards, department planning and preparedness, and education. These types of projects may not meet the traditional project model, selection criteria, and benefit-cost model.

When federal or state funding is available for hazard mitigation, there are usually requirements that establish a rigorous benefit-cost analysis as a guiding criterion in establishing project priorities. The Fire Safe Council and County of Del Norte will strive to understand the basic federal grant program criteria which will drive the identification, selection, and funding of the most competitive and worthy mitigation projects.

What follows identifies various additional funding streams which communities may consider in their attempt to gain funding to institute the various mitigation action items.

6.9.1 Federal Emergency Management Agency (FEMA) Building Resilient Infrastructure and Communities (BRIC)

FEMA's new Building Resilient Infrastructure and Communities program (previously the Pre-Disaster Hazard Mitigation Grant Program) will support states, local communities, tribes, and territories as they undertake hazard mitigation projects, reducing the risks they face from disasters and natural hazards.

6.9.2 The California Department of Forestry and Fire Protection (CAL FIRE)

CAL FIRE is responsible for fire protection within State Responsibility Areas (SRA) and preventing wildfires in the State Responsibility Area (SRA) is a vital part of CAL FIRE's mission. While these efforts have occurred since the early days of the Department, CAL FIRE has adapted to the evolving destructive wildfires and succeeded in significantly increasing its efforts in fire prevention. The Department's Fire Prevention Program consists of multiple activities including wildland pre-fire engineering, vegetation management, fire planning, education, and law enforcement. Typical fire prevention projects include brush clearance, prescribed fire, defensible space inspections, emergency evacuation planning, fire prevention education, fire hazard severity mapping, and fire-related law enforcement activities.

6.9.3 CAL FIRE's Forest Health Grant Program

The program seeks to significantly increase reforestation, fuels management, fire reintroduction, and treatment of degraded areas. CAL FIRE funds projects that proactively restore forest health to reduce greenhouse gases, protect upper watersheds where the state's water supply originates, promote the long-term storage of carbon in forest trees and soils, minimize the loss of forest carbon from large, intense wildfires, and further the goals of the California Global Warming Solutions Act of 2006 (AB 32). The emphasis of the Forest Health Program is to increase the carbon stored in living trees and protect forests, fish and wildlife habitats, native plant species and water. This requires preventing epidemic tree mortality, protecting water quality in upper watersheds, and creating forests consisting of optimally spaced trees that are resilient to disturbances such as wildfire and tree mortality. Forests with these attributes will be able to store carbon for long time periods with a lower risk of loss to wildfire or insects and disease.

6.9.4 California Climate Investments Fire Prevention Grant Program

Through the California Climate Investments (CCI) Fire Prevention Grant Program, CAL FIRE aims to reduce the risk of wildland fires to habitable structures and communities, while maximizing carbon sequestration in healthy wildland habitat and minimizing the uncontrolled release of emissions emitted by wildfires. Qualifying projects and activities include those related to hazardous fuel reduction and removal of dead, dying, or diseased trees, fire prevention planning, and fire prevention education.

6.9.5 CAL FIRE's Fire Prevention Grant Program

The program seeks to fund local projects that address the risk of wildfire and reduce wildfire potential to communities in, and adjacent to, forested areas. Qualified activities include hazardous fuel reduction, fire prevention planning and fire prevention education with an emphasis on improving public health and safety.

6.9.6 CAL FIRE Forest Improvement Program

The purpose of the California Forest Improvement Program (CFIP) is to encourage private and public investment in, and improved management of, California forest lands and resources. This focus is to ensure adequate high-quality timber supplies, related employment and other economic benefits, and the protection, maintenance, and enhancement of a productive and stable forest resource system for the benefit of present and future generations.

The program scope includes the improvement of all forest resources including fish and wildlife habitat, and soil and water quality. Cost-share assistance is provided to private and public ownerships containing 20 to 5,000 acres of forest land.

6.9.7 The CAL FIRE Resource Assessment Program (FRAP)

FRAP assesses the amount and extent of California's forests and rangelands, analyzes their conditions, and identifies alternative management and policy guidelines.

6.9.8 Environmental Quality Incentives Program (EQIP)

EQIP provides financial and technical assistance to agricultural producers to address natural resource concerns and deliver environmental benefits such as improved water and air quality, conserved ground and surface water, increased soil health and reduced soil erosion and sedimentation, improved or created wildlife habitat, and mitigation against increasing weather volatility.

6.9.9 Office of the State Fire Marshal (OSFM)

OSFM is the CAL FIRE program that protects life and property through the development and application of fire prevention, engineering, training and education, and enforcement. As part of this mission, OSFM establishes a fire-safe environment for the people of California, which serves as a foundation for local agencies to build on as they strive to meet their specific goals. The Office of State Marshal web site serves as a valuable resource and a one-stop shop for all things related to these goals. Please make sure to check back on this website regularly as content is updated periodically.

6.9.10 Emergency Watershed Protection Program (EWP)

The USDA Natural Resources Conservation Service (NRCS) is responsible for administering the program and the program was created by Congress to respond to emergencies caused by natural disasters. The program is designed to help people reduce imminent hazards to life and property caused by floods, fire, drought, earthquakes, windstorms, and other natural disasters. The purpose of the EWP program is to help communities with a common problem. It is generally not an individual assistance program. All projects undertaken must be sponsored by a political subdivision of the State such as a city, county, or a flood control district.

6.9.11 Vegetation Management Program (VMP)

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

VMP allows private landowners to enter into a contract with CAL FIRE to use prescribed fire to accomplish a combination of fire protection and resource management goals. Implementation of VMP projects is by CAL FIRE Units. The projects which fit within a unit's priority areas (e.g., those identified through the Fire Plan) and are considered to be of most value to the unit are those that will be completed. The Vegetation Management Program has been in existence since 1982 and has averaged approximately 25,000 acres per year since its inception.

6.9.12 Volunteer Fire Assistance (VFA) Grant

The VFA Program is a Federally funded grant program that allows California to provide local and rural fire departments with minor firefighting, training, communications, and safety equipment for their volunteer firefighters. The VFA Program is not intended for major equipment (fire engines, vehicles, etc.) or Capital repairs. The VFA Program has a 50/50 match requirement, which means that the applying department must be able to meet the intended grant award, dollar for dollar.

6.9.13 California Master Mutual Aid Agreement

CAL FIRE assists other fire departments within the State when Department resources are available, regardless of the type of disaster. In turn, CAL FIRE can access the local government fire departments through the same agreement for assistance in wildland fire suppression. The Governor's Office of Emergency Services (OES) can also request that CAL FIRE assist with non-fire emergencies when the Governor has declared a State of Emergency. When wildland fires rage across the state and resources are stretched thin, agreements with the California Military Department provide for California National Guard resources. This includes activation of the giant C-130 aircraft known as Modular Airborne Fire Fighting System (MAFFS), helicopters, support personnel, communications equipment, and other specialized resources.

6.9.14 Federal Government

The largest of CAL FIRE's cooperative programs involves an agreement for the exchange of fire protection services with federal wildland fire agencies, including the U.S. Forest Service (USFS), Bureau of Land Management (BLM), and National Parks Service (NPS). The goal is to have the closest agency respond to a wildfire, regardless of jurisdiction. Through this cooperative relationship, California is able to access federal and state resources throughout the United States to help in times of disaster, when Department resources are depleted. In turn, CAL FIRE provides assistance, through interstate compact agreements to the Federal and other state wildfire agencies throughout the nation.

6.9.15 Conservation Camp Program

CAL FIRE is currently authorized to operate 39 Conservation Camps statewide that house nearly 4,300 inmates and wards. These camps are operated in conjunction with the California Department of Corrections and Rehabilitation (CDCR). Through these cooperative efforts CAL FIRE is authorized to operate 196 fire crews year-round. These crews are available to respond to all types of emergencies including wildfires, floods, search and rescue, and earthquakes. When not responding to emergencies, the crews are busy with conservation and community service work projects for state, federal, and local government agencies. Fire crews perform several million hours of emergency response each year, and more on work projects.

6.9.16 National Volunteer Fire Council Fire Corps

Fire Corps is a program under the federal Citizen Corps initiative that connects resource-constrained fire/EMS departments with community members to assist in non-emergency roles. This allows first responders to focus on training and operational duties while at the same time increasing the department's capacity and services.

Fire Corps members can assist with administration, fundraising, public fire prevention and life safety education, home safety checks and smoke alarm installation programs, apparatus maintenance, and much more. Fire Corps tasks are limited only by the needs of the department.

6.9.17 National Fire Protection Association's Firewise USA

Wildfires are a natural process. It is the vision of Firewise Communities that, with adequate planning and cooperation among varying interests, wildfires can occur without disastrous loss of life, property, and resources. To that end, the National Firewise Communities Program provides a number of wildland/urban interface resources for firefighter safety, community planning, landscaping, construction, and maintenance to help protect people, property, and natural resources from wildland fire.

6.9.18 Multi-Jurisdictional Mutual Aid Agreements

Mutual aid is characterized by one or more agencies providing support to another agency upon request. Automatic aid is characterized by an ongoing agreement between agencies that the resources of one department will respond automatically to service calls in the other jurisdiction. Automatic aid agreements are typically established when the physical presence of a station in one jurisdiction is sufficiently close to another jurisdiction to provide a quick response. A countywide mutual aid agreement is in place in Del Norte County and all local fire districts and departments are a signatory to the agreement. Mutual aid resources across the California border remain untapped. The communities of Brookings and Harbor, Oregon are capable of providing mutual aid into the Crescent City area in half the travel time required by Humboldt County resources. Del Norte fire agencies should consider including these agencies in their mutual aid resources. (Countywide Fire Services Municipal Service Review & Sphere of Influence Update)

6.10 DEL NORTE COUNTY WILDFIRE PROTECTION IDENTIFIED NEEDS

The agencies and organizations contributing to this update are making significant contributions towards community preparedness in Del Norte County. To expand on their efforts and continue to build local wildfire preparedness and community wildfire-adaptation capacity, each planning unit identified their own specific mitigation action items to help reduce wildfire risk and impact. Countywide, many of those efforts were uniform in nature.

Those items in Table 6-2 have been identified as the priority community-wide preparedness needs in Del Norte County over the next five years. Each planning unit has identified additional unit-specific application of these initiatives, as well as others.

TABLE 6-2. DEL NORTE COUNTY WILDFIRE PROTECTION SUMMARY OF PRIORITY NEEDS 2020-2025
Volunteers for local fire organizations.
Repairs and maintenance of local fire equipment and funding for replacement of safety equipment.
Consistent training, with local training opportunities for fire departments and companies.
Development of regionally based or located fire-training programs and facilities, to include fire academy, and driver-operator training skills, as well as career development opportunities.
Options for expanding service capabilities to support the ever-increasing demand for service.
Consistent and sustainable funding sources for all fire-service organizations and agencies.
Pre-fire attack planning resources for all local agencies.
Multi-jurisdictional evacuation mapping.

6.11 RESOURCE AND CAPABILITY ENHANCEMENTS

There are a number of resource and capability enhancements identified by the rural and wildland firefighting districts in Del Norte County. All of the needs identified by the districts are in line with increasing the ability to respond to emergencies and are fully supported by the Community Wildfire Protection Plan committee. The implementation of each project will rely on either the isolated efforts of the fire districts or a concerted effort by the County to achieve equitable enhancements across all of the districts.

In addition to identifying the planning unit's needs based on community input, the following items have been identified as collective priority needs for fire-service organizations in Del Norte County. They are based on the experience of fire-protection organizations operating here and on information gleaned during this CWPP process. More specific needs for each local fire organization can be found in their respective Planning Unit Annex.

6.12 LAND USE TRENDS

Growth will continue to present the greatest challenge to fire management in the urban interface over the long term. The increase in demand for homes throughout Del Norte County has resulted in significant changes in land use patterns. Many agricultural lands and private non-industrial forest lands have been sold and subdivided over the last few decades, pushing residential development further into the wildland-urban interface. All property exposed to the wildland fire hazard is vulnerable. Structures that were not constructed to standards designed to protect a building from a wildland fire may be especially vulnerable. Beginning in 2008, California State Building code established minimum standards for new buildings in fire hazard severity zones. Since 2008, building codes have been regularly updated, the most recent update occurring with the adoption of the 2019 Building Codes.

Most housing in the various planning units, approximately 84 percent, were built prior to 2008 (U.S. Census, 2018). The vast majority of new WUI areas are the result of new housing (97 percent), and not related to an increase in wildland vegetation. Furthermore, WUI growth often results in more wildfire ignitions, putting more lives and houses at risk. Wildfire problems will not

abate if recent housing growth trends continue.[13] This trend will continue into the future, as forestland and rangelands are sold for real estate development. This will have a dramatic effect on the ability of emergency resources to maintain current levels of fire protection without considerable increases in funding for equipment, personnel, and training. Indeed, several emergency response resources in Del Norte County are already at a critical threshold. Further increases in protection responsibility will come at the expense of preparedness, as emergency resources are increasingly spread over an expanding protection area.

[13] USDA Forest Service. (2018) Rapid growth of the US wildland-urban interface raises wildfire risk. Available at: https://www.nrs.fs.fed.us/pubs/55817

7 PLAN MAINTENANCE

All risk assessments were made based on the conditions existing at the time of development of this update, utilizing best available science in place at the time the planning occurred. It should be noted, however, that in some instances data is dated. In addition, the fire seasons from the previous several years have altered much of the landscape in California as a whole, and as such, information may not be as valid as before. Given the severity of those previous fires and the work involved in updating such base information, the time between the previous occurrences and development of this plan has not allowed for the updating of all data needed (e.g., vegetation studies to determine potential fuel types), although the information remains the best available for use in this planning effort. The purpose of this planning process is not to develop new data or information, but rather to utilize existing data developed by subject matter experts and scientists in the field, and apply that data in this Plan to allow for decision-making based on informed knowledge, and not speculation. Thus, the recommendations in this section have been made in light of those conditions, while also realizing that the components of risk and the preparedness of the County's resources are not static. It will be necessary to fine-tune this plan's recommendations annually to adjust for changes in the components of risk, population density changes, infrastructure modifications, and other factors.

As part of the policy of Del Norte County in relation to this planning document, this document should be reviewed annually (from date of adoption) at a special meeting of the entire planning partnership, open to the public and involving all entities, municipalities, jurisdictions, where action items, priorities, budgets, and modifications can be made or confirmed.

The Del Norte County Fire Safe Council or County Emergency Services Manager (or an official designee of the Del Norte County Board of Supervisors) is responsible for the scheduling, publicizing, and leadership of the annual review meeting. During this meeting, participating jurisdictions will report on their respective projects and identify needed changes and updates to the existing plan.

Maintenance to the plan should be detailed at this meeting, documented, and attached to the formal plan as an amendment. Re-evaluation of this plan should be made on a five-year life cycle of its acceptance, and every five-year period following

8 PLAN EXECUTION

8.1 SIGNATURE PAGES

This Del Norte County Community Wildfire Protection Plan has been developed in cooperation and collaboration with the representatives of the following organizations, agencies, and individuals.

8.1.1 Resolution of Adoption by the Del Norte County Board of Supervisors

Provided as separate document.

8.1.2 Signatures of Participation by Del Norte County Fire Districts / Departments and Supporting Entities

This Community Wildfire Protection Plan and all of its components identified herein were developed in close cooperation with the participating entities listed.

_____ _____

Crescent City Fire & Rescue — Date
By: Bill Gillespie

_____ _____

Fort Dick Fire — Date
By: Randy Crawford

_____ _____

Gasquet Fire — Date
By: Nick Karanopoulos

_____ _____

Klamath Fire — Date
By: Lonnie Levi

_____ _____

Smith River Fire — Date
By: Ron Simpson

_____ _____

Cal-Fire Del Norte County Batallion Chief — Date
By: Shawn Raley

_____ _____

Cal-Fire Assistant Unit Chief for Humboldt and Del Norte Counties — Date
By: Dave Esteves

_____ _____

Crescent City — Date
By: Blake Inscore, Mayor

_____ _____

Del Norte County Emergency Management — Date
By: Kymmie Scott

_____ _____

Del Norte County Board of Supervisors — Date
By: Roger Gitlin – District 1

_____ _____

Del Norte County Board of Supervisors — Date
By: Lori Cowan – District 2

_____ _____

Del Norte County Board of Supervisors — Date
By: Chris Howard – District 3

_____ _____

Del Norte County Board of Supervisors — Date
By: Gerry Hemmingsen, Chair – District 4

_____ _____

US Forest Service — Date
By: Jeff Marszal – District Ranger

_____ _____

US Forest Service — Date
By: Duane Franklin, Fire Management Officer

_____ _____

National Parks Service — Date
By: Rick Young, Fire Management Officer

_____ _____

Del Norte County Fire Safe Council — Date
By: Tim Sanderson, Board Chair

_____ _____

Del Norte County Fire Safe Council — Date
By: Becky Barlow, Treasurer

_____ _____

Yurok Tribe — Date
By: Joseph James, Chair

_____ _____

Smith River Alliance — Date
By: Grant Werschkull, Executive Director

_____ _____

Smith River Alliance — Date
By: Patricia McCleary, Executive Director

REFERENCES

Note: As this document represents an updated from the 2005 document, some references listed remain in support of that document.

Agee, J.K. 1993. Fire ecology of the Pacific Northwest forests. California: Island Press.

Agee, J.K. 1998. The Landscape Ecology of Western Forest Fire Regimes. Northwest Science, Vol. 72, Special Issue 1998.

Barrett, J.W. 1979. Silviculture of ponderosa pine in the Pacific Northwest: the state of our knowledge. USDA Forest Service, General Technical Report PNW-97. Pacific Northwest Forest and Range Experiment Station, Portland, OR. 106 p.

Brown, J.K. 1995. Fire regimes and their relevance to ecosystem management. Pages 171-178 *In* Proceedings of Society of American Foresters National Convention, Sept. 18-22, 1994, Anchorage, AK. Society of American Foresters, Wash. DC.

California Department of Forestry and Fire Protection (CAL FIRE). 2019 Strategic Plan. Available online at: https://www.fire.ca.gov/media/5504/strategicplan2019-final.pdf

California Department of Forestry and Fire Protection. (CAL FIRE). Communities at Risk. Accessed multiple times for 2020 update. Available online at: https://frap.fire.ca.gov/media/2430/communities-at-risk_map.pdf

General Accountability Office. Technology Assessment – "Protecting Structures and Improving Communications during Wildland Fires". GAO-05-380. April 2005.

Johnson, C.G.; Clausnitzer, R.R.; Mehringer, P.J.; Oliver, C.D. 1994. Biotic and Abiotic Processes of Eastside Ecosytems: the Effects of Management on Plant and Community Ecology, and on Stand and Landscape Vegetation Dynamics. Gen. Tech. Report PNW-GTR-322. USDA-Forest Service. PNW Research Station. Portland, Oregon. 722pp.

Johnson, C.G. 1998. Vegetation Response after Wildfires in National Forests of Northeastern Oregon. 128 pp.

Louks, B. 2001. Air Quality PM 10 Air Quality Monitoring Point Source Emissions; Point site locations of DEQ/EPA Air monitoring locations with Monitoring type and Pollutant. California Department of Environmental Quality. Feb. 2001. As GIS Data set. Boise, Id.

McCoy, L., K. Close, J. Dunchrack, S. Husari, and B. Jackson. 2001. May 6 –24, 2001. Cerro Grande Fire Behavior Narrative.

National Register of Historic Places. 2020. Available online at: https://www.nps.gov/subjects/nationalregister/index.htm

Norton, P. 2002. Bear Valley National Wildlife Refuge Fire Hazard Reduction Project: Final Environmental Assessment, June 20, 2002. Fish and Wildlife Service, Bear Valley National Wildlife Refuge.

Page-Dumroese, Deborah; Martin Jurgensen, and Alan Harvey. Fire and Fire-Suppression Impacts on Forest-Soil Carbon. (2003). Accessed 02 Feb 2020. Available online at: https://www.fs.fed.us/rm/pubs_other/rmrs_2003_page_dumroese_d001.pdf

U.S. Census Bureau. 2020 Population and other data. American FactFinder. Available online at https://www.census.gov/ . Last accessed August 2020.

USDI, Geological Survey. 2020. The National Map LANDFIRE Existing Vegetation Cover. Available online at https://www.landfire.gov/vegetation.php. Accessed various times 2019-2020.

USDI, Geological Survey. 2020. The National Map LANDFIRE Fire Regime. Available online at https://www.landfire.gov/fireregime.php. Accessed various times 2019-2020.

Del Norte County Fire Safe Council Community Wildfire Protection Plan 2000 Volume 2

Prepared by:
Bridgeview Consulting, LLC.
915 No. Laurel Lane
Tacoma, WA 98406
(253) 301-1330

BRIDGEVIEW CONSULTING

Contents

This page left intentionally blank.

INTRODUCTION

BACKGROUND

The Community Wildfire Protection Plan (CWPP) effort was led and supported by the Del Norte County Fire Safe Council (DNFSC) in conjunction with the participating jurisdictions and agencies. This CWPP for Del Norte County, California, is the result of analyses, professional cooperation and collaboration, assessments of wildfire risks and other factors considered with the intent to reduce the potential for wildfires which threaten people, structures, infrastructure, and unique ecosystems in Del Norte County, California.

In the context of the Healthy Forests Restoration Act (HFRA), this Community Wildfire Protection Plan offers a variety of benefits to communities at risk from wildland fire. Among those benefits is the opportunity to establish a localized definition and boundary for the wildland–urban interface.

This Plan outlines various actions that community members should take when a wildfire threatens. These include evacuation; keeping friends and family members informed of their plans and whereabouts; gas/propane shut-off; water preparation and use; closing of all interior and exterior doors; and emergency communication.

THE PLANNING PARTNERSHIP

Initial Solicitation

The Del Norte County Fire Safe Council solicited the participation of all eligible planning partners at the outset of this project beginning in May 2019. A press release was issued in May, announcing the project kickoff and inviting participation. All planning partners from the previous 2005 plan were invited to again take part in the effort. A local area template was prepared for each planning unit. Those completing the process and their annex document by June 20, 2020 were included in the initial submission for review and adoption.

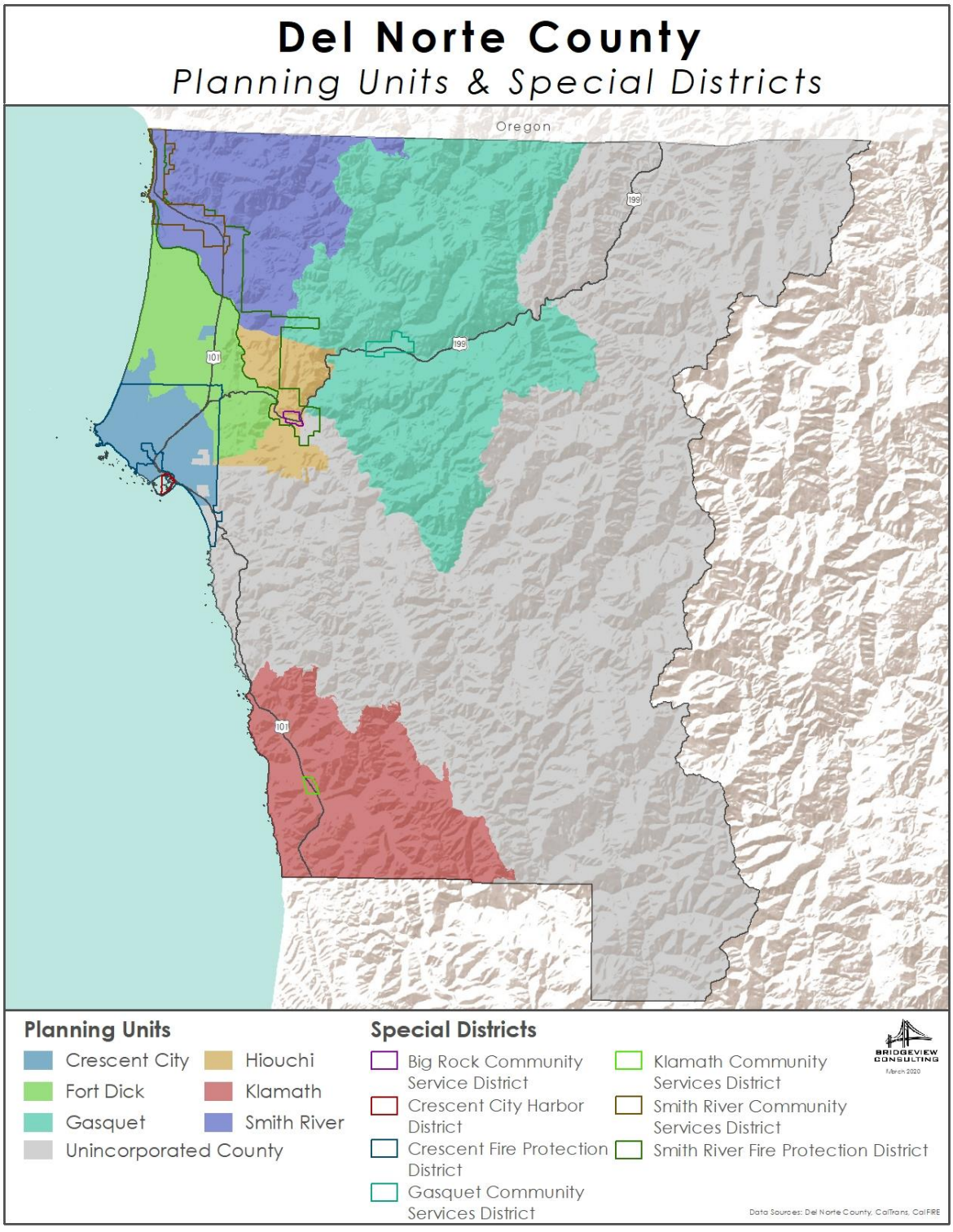
ANNEX-PREPARATION PROCESS

Templates

Following the same planning process for information gathering as identified in Chapter 2 of Volume 1, templates were created to help the planning partners prepare their jurisdiction-specific annexes to include information specific to their respective area. The intent of the annex development was to establish an easier method for annual review and update. Each planning partner followed the plan development process identified in Chapter 2 of Volume 1, including the community meetings, identification of areas of concern, review of the critical facilities, assets and infrastructure at risk, and development of local-area strategies to reduce the impact from wildfires. Each of the planning units identified and prioritized their own respective strategies based on the process identified in Chapter 6 of Volume 1.

FINAL COVERAGE UNDER THE PLAN

Those templates completed by the planning units make up the remaining chapters of Volume 2. The figure below identifies all of the planning units and special districts throughout Del Norte County.



Planning Units and Special Districts in Del Norte County

1. CRESCENT CITY PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN ANNEX

1.1 INTRODUCTION

This Annex details the planning elements specific to the Crescent City Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

1.2 PLANNING TEAM POINT(S) OF CONTACT

The Crescent City Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Crescent City Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

PLANNING TEAM MEMBERS COMMUNITY MEETING OF CRESCENT CITY PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Chief Bill Gillespie - Crescent Fire Protection District	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general CWPP; served as planning team member on CWPP development team.
Battalion Chief Joe Gregorio – Crescent Fire and Rescue	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential

PLANNING TEAM MEMBERS COMMUNITY MEETING OF CRESCENT CITY PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
		areas of concern and risk; reviewed documents and provided input into overall general CWPP; served as planning team member on CWPP development team.
Vanessa Duncan - Crescent Fire Protection District	Project Partner	Provide direction and information, assisted with prioritization of strategies.
Joe Gregorio – Citizen	Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Cora Healy-Jones, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Stan Jones, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
June Feather, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Lynne Sullens, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Brenda Devlin-Graig, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Pete Graig, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Sue Schnieder, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

PLANNING TEAM MEMBERS COMMUNITY MEETING OF CRESCENT CITY PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
Elli Kimbuer, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Amanda Hixon, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

1.3 PLANNING UNIT PROFILE

The Crescent City planning area includes the city and outlying areas. To the north, this includes the neighborhoods along Washington Avenue and areas south of Fort Dick. On the east side this is much of the area east of highway 101, especially the Church Tree subdivision bordering Jedediah Smith Redwoods State Park and Redwood National Park on the east. The southern boundary is the Del Norte Coast Redwoods State Park and Redwood National Park. The city lies on the Pacific, just south of Point Saint George, and about twenty miles south of the Oregon border, and has experienced tsunami conditions 17 times between 1943 and 1994, the most significant being the 1964 tsunami, which resulted in 12 fatalities.

The Crescent City planning area encompasses the city and surrounding private lands, and is 1.6 square miles in size with a population of 6,805 (2018). Recent trends illustrate that the overall population of the area has decreased since 2010 by approximately 10.9 percent. Principal employment in the area includes federal, state, and local government, as only ~28% of Del Norte County is privately owned, with the City serving as the county seat.

Wildland-urban interface here is predominantly on the south and eastern edges of the area. To the south, Crescent City butts up against the Del Norte Coast Redwoods State Park and Redwood National Park (RNP). To the east, RNP and Jedediah Smith Redwoods State Park interface with the edge of the suburban development. These interface areas are predominantly redwood forests, of all age classes. The younger forests tend to have high fuel loads and ladder fuel.

As a coastal town, the City has weather that remains cool throughout the year, with summer temperatures averaging 60-70 degrees Fahrenheit and winter temperatures averaging 40-50 degrees. Annual rainfall averages 75 inches per year, with the occasional severe winter storm bringing winds of up to 90 miles per hour.

1.4 PLANNING UNIT'S ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components. The area is densely populated when

compared to other areas of the County, serving as the County Seat. Review of the Fire Hazard Severity Map illustrates that the Planning Area has no high or very high fire severity risk areas.

Local residents who attended the community meeting reviewed the map, and worked together to identify areas of concern where wildfires could occur within the intermix areas, and also identified wildfire reduction projects. Figure 1-1 also identifies the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process. In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 1-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 1-1
COMMUNITY-IDENTIFIED ASSETS AT RISK

Airport (McNamara Field)	Hambro Forest Products
Camp Lincoln	Point Saint George buildings
College of the Redwoods	State Park Headquarters off Elk Valley Road
Sutter Coast Hospital	Cultural Center
Power Station	Businesses
Cell Towers	Waste and Water Treatment
OES and Red Cross supplies	Radio Station
Convalescent Homes and Care Facilities	Museum
Crescent City Fire and Rescue District office and facilities	Senior center/living
Private and Charter Schools	Del Norte Unified School District Office and Schools
Del Norte County Government Buildings	Lake Earl Wildlife Area
Pelican Bay State Prison	County Jail
Vet Clinics, Del Norte County Agricultural Department, Animal Control Facilities	Fairgrounds
Library	

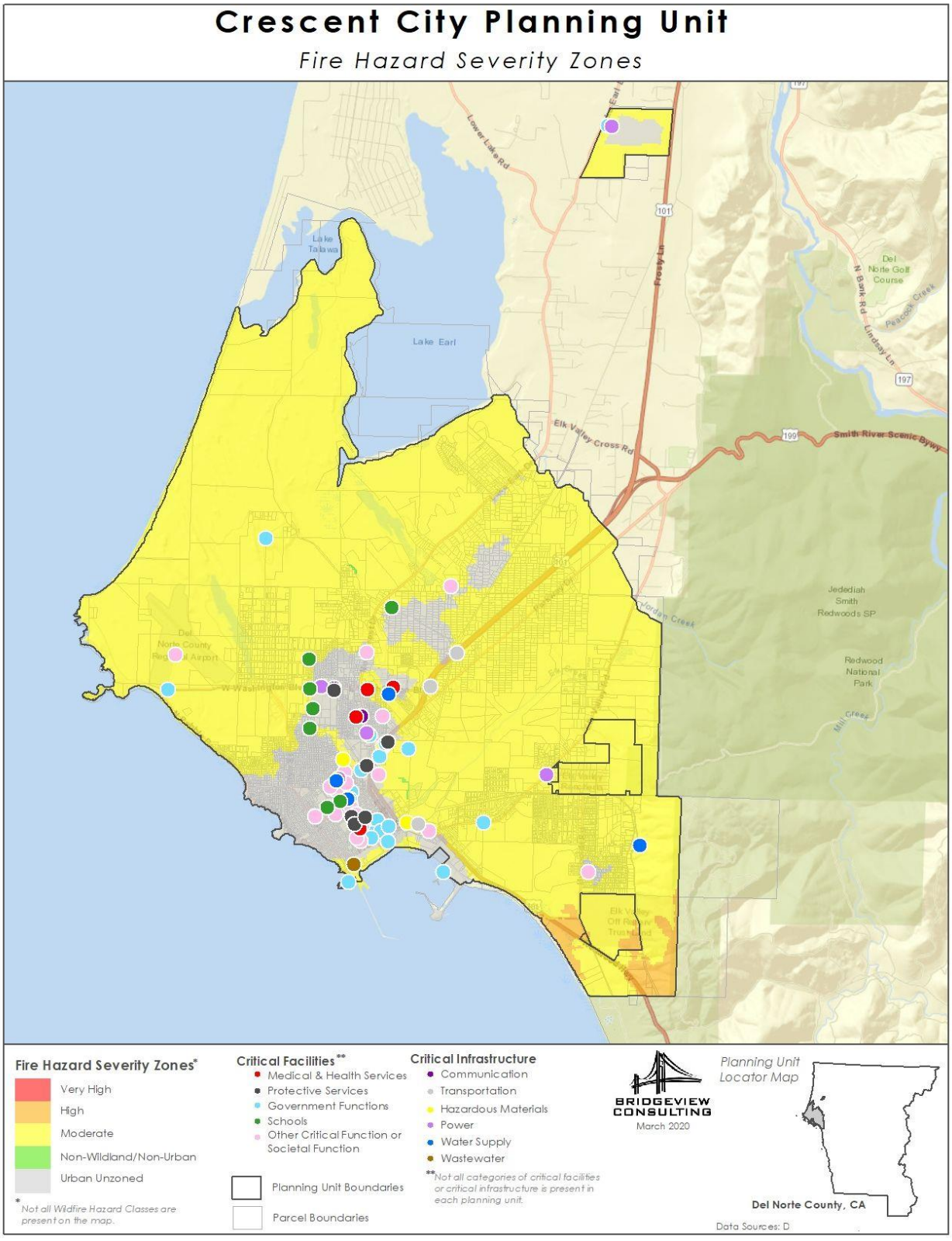


Figure 1-1 Crescent City Fire Severity Zones and Critical Assets and Infrastructure

1.5 CURRENT WILDFIRE FIRE ENVIRONMENT

The greatest hazard in the area is densely stocked second-growth forests in the vicinity of the older forests. Figure 1-1 identifies the current wildfire environment within the Crescent City Planning Area. Review of the planning area map identifies no critical infrastructure currently within a high hazard area. That does not mean, however, that a wildfire cannot occur within the planning area, particularly in the urban interface areas.

Specific areas of concern include those identified by community members in Table 1-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings.

TABLE 1-2
COMMUNITY-IDENTIFIED AREAS OF CONCERN

Between Church Tree and Bertsch tract	Outlying Crescent City neighborhoods
Areas along Highways 197, 199, and 101.	The Parks, between Elk Valley/Parkway Drive through the Elk Creek drainage
Subdivisions along Parkway Drive	Area surrounding the Airport and Point Saint George (possible grazing areas to reduce fuel loads).
South Beach	Howland Hill Road

1.6 FIRE HISTORY

Given this area's location near the coast and the fact that it is an urban area, the Planning Area does not have a notable wildfire history. Structure fires are obviously more common because of the large concentration of structures. There are burned redwood stumps in the area, which bear witness to the natural fire history of the redwood region.

The 2003 Canoe Fire in Humboldt County reminded North Coast residents that old redwood trees can burn under the right conditions. The lightning fire started in an old-growth redwood stand in Humboldt Redwoods State Park, burning 5,554 hectares (13,774 acres) before it was contained. Fuel characteristics and weather contributed to the fire's progression. Topography, access, fuel loading and management considerations affected fire suppression tactics and effectiveness.

No additional fires were documented in this area during the community meetings.

1.7 WATER SOURCES

The City of Crescent City is the major supplier of water to the city and the surrounding unincorporated county areas. There is a hydrant system within the city limits and some areas beyond. Other areas are on wells or community water tank systems, such as in the Church Tree subdivision (30,000-gallon water tank) and Meadowbrook Acres. Pine Grove School has a 20,000-gallon water tank.

During the community meeting, the participants did identify locations of additional water storage for fire-fighting, such as subdivisions along Parkway Drive. They also felt it was prudent to purchase and install additional tanks in coordination with the local fire departments.

1.8 FIRE PROTECTION RESOURCES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 1-3 identifies local community fire protection resources available within the Planning Unit. Table 1-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

TABLE 1-3
LOCAL COMMUNITY FIRE PROTECTION RESOURCES

Personnel	Serves		Fire Apparatus
	Residents	Area	
Crescent City Volunteer Fire Department			
25 Volunteers	13,000	16,621 acres (26 sq. mi.)	Structural Fire Engines – 2 Command Vehicle – 2 Squad Pick up – 1 Squad Suburban - 1 Truck – 1 Cert Rehab Vehicle - 1
Crescent Fire Protection District			
25 including the following: • Fire Chief • Administrative Assistant • Deputy Chief (part-time) • Maintenance Worker (part time).	13,000	16,621 acres (26 sq. mi.)	Structural Fire Engines – 3 Wildland Fire Engines – 1 Water Tenders – 3 Rescue – 1 Rescue Boat – 1 Utility – 1 Squad - 2

TABLE 1-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building, and roads.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan
Water Shortage Contingency Plan.	Yes	
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the Crescent City Fire Protection District also provides information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by Crescent City community members.
Defensible space inspections program	Yes	
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Crescent City Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy

1.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 1-5. Each of the items identified themselves may become fundable projects.

TABLE 1-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	Yes – Infrastructure facilities for Del Norte Ambulance, County Jail, Police Department, and Fire Stations.
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	
Insufficient home address signs delay emergency response	The planning team identified the critical need to have legal addresses and street signs in place, particularly along neighborhoods east of Highway 101.
Insufficient availability of fire protection water.	Additional locations for water storage for firefighting in subdivisions along Parkway Drive. The Planning team identified the need to purchase and install tanks with the local fire departments.
Additional equipment needs	Dump truck to assist with Chipper program. Replacement of Self-Contained Breathing Apparatus and bottles for Crescent City Fire Protection District (CCFPD). Replace Water Tender for CCFPD. Replace a Structural Fire Engine for CCFPD. Replace Rescue Boat with more stable rescue platform for CCFPD. Second Lucas Device on duty vehicle for CCFPD and Crescent City Volunteer Fire Department (CCVFD). Thermal imaging cameras, four-gas monitors, and portable radios. Full hydraulic extrication tool kit and stabilization struts for Structural Fire Engine of CCVFD.

1.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important

for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire. It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

1.11 Wildfire Priority Projects and Status of Previous Projects

Since the last plan was completed, the Planning Unit completed several of the projects identified previously. Many of those projects, due to the length of time since the last plan was updated, are now again viable projects, and identified as such below.

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 1-6 lists the action items/strategies that make up the district's hazard mitigation action plan, as well as the current status of the previous projects.

Information includes the actual action item, a qualitative assessment of the estimated cost (defined within the base plan), potential funding sources, the timeframe, and the type of initiative associated with each item. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

TABLE 1-6
HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 - Conduct brush clearing in areas containing Community-identified Areas of Concerns in Table 1-2.					
High	CAL FIRE, Safer, HMGP, Fire Safe Council	Long-Term	Yes – The Planning Area (PA) previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventative Activities, Property Protection, and Natural Resource Protection	High

TABLE 1-6 HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #2 – Work with local area municipalities, DNFSC and CAL FIRE to conduct community chipper days.					
Medium	CAL FIRE, Safer, HMGP	Short - Term		Public Information, Preventative Activities, Property Protection, and Natural Resource Protection	High
Initiative #3 – Identify and create strategic fuel breaks in areas containing Community-identified Areas of Concerns.					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventative Activities, Property Protection, and Natural Resource Protection	High
Initiative #4 – Conduct regular fuels reduction and strategic fuel breaks in vicinity of Community-identified Areas of Concern, such as the airport and Point Saint George; between Church Trees Subdivision and Bertsch Tract, and the Parks, between Elk Valley/Parkway Drive through Elk Creek drainage; along Hwys. 197, 199, and 101.					
Medium	CAL FIRE, Safer, HMGP	Short-Term		Public Information, Property Protection, Emergency Services, and Natural Resource Protection	Medium
Initiative #5 – Develop and implement a signage program for property addresses not properly marked.					
Medium	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #6 – Conduct a study to determine locations of additional water storage facilities for firefighting in the Community-identified Area of Concern, such as along Parkway Drive.					
Medium	CAL FIRE, Safer, HMGP	Short-Term		Public Information, Preventative Activities, Property Protection, and Emergency Services	Medium
Initiative #7 – Develop and institute educational programs in the Del Norte Unified School District focused on Fire Safety, Emergency Preparedness, and Personal Preparedness.					
Low	CAL FIRE, Safer, HMGP	Long-Term		Public Information, Preventive Activities, and Emergency Services	High
Initiative #8 - Develop and institute a service-learning program in the Del Norte Unified School District focused on Fire Safety and Defensible Spaces.					
Low	CAL FIRE, Safer, Fire Safe Council	Long-Term		Public Information, Preventive Activities, Property Protection,	Medium

TABLE 1-6 HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
				Recovery, and Natural Resource Protection	
Initiative #9 – Work with local planning partners to seek out grant funding for generators for critical infrastructure such as Del Norte Ambulance, County Jail, Police Department, and Fire Stations.					
High	BRIC, HMGP, CAL FIRE, Safer, HLS	Long-Term		Structural Projects, Property Protection, and Emergency Services	High
Initiative #10 – Identify and develop a food storage program for Crescent City and surrounding areas.					
Low	CAL FIRE, Safer, HMGP	Short-Term		Public Information and Emergency Services	Medium
Initiative #11 – Identify and develop a water storage program for Crescent City and surrounding areas.					
Medium	CAL FIRE, Safer, HMGP	Short-Term		Public Information, Preventative Activities, Structural Project, Property Protection, Emergency Services, and Natural Resource Protection	Medium
Initiative #12 – Seek out and obtain grant funding to replace expiring equipment and apparatus.					
High	CAL FIRE, Safer, HMGP	Long-Term		Public Information, Preventative Activities, Structural Project, Property Protection, Emergency Services, and Natural Resource Protection	High
Initiative #13 – Establish and maintain a recruitment and retention program for volunteers for CCFPD and CCVFD. This includes funding to provide for career personnel.					
High	CAL FIRE, Safer, local municipality	Long-Term		Emergency Services	High
Initiative #14 – Work with state to establish a priority-based firefighter I option through the academy or College of the Redwoods for CCFD.					
High	CAL FIRE, Safer, College scholarship program	Long-Term		Public Information, Preventative Activities, Structural Project, Property Protection, Emergency Services, and Natural Resource Protection	Low

1.12 ADDITIONAL LOCAL CAPABILITIES

The fire service organization and local community members have identified the following additional capabilities in place to help reduce the risk and vulnerability to wildfire:

- All Crescent City Fire Protection District (CCFPD) and Crescent City Volunteer Fire Department (CCVFD) have standard fire suppression and basic medical training.
- Some CCFPD and CCVFD personnel are qualified Emergency Medical Technicians (EMT).
- Various CCFPD and CCVFD members have attended command and/or leadership training at National Fire Academy.
- Various levels of officer training, rope rescue/technical rescue training, extrication training, etc. been provided to CCFPD and CCVFD personnel.
- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.
- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and makes the chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

2. FORT DICK PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN ANNEX

2.1 INTRODUCTION

This Annex details the planning elements specific to the Fort Dick Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

2.2 PLANNING TEAM POINT(S) OF CONTACT

The Fort Dick Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Fort Dick Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

PLANNING TEAM MEMBERS COMMUNITY MEETING OF FORT DICK PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Chief Randy Crawford – Fort Dick Fire Protection District	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general

PLANNING TEAM MEMBERS COMMUNITY MEETING OF FORT DICK PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
		CWPP; served as planning team member on CWPP development team.
Assistant Chief Gary Emerson – Fort Disk Fire Protection District	Project Partner	Provide direction and information, assisted with prioritization of strategies
Battalion Chief Matt Berry – Fort Dick Fire Protection District	Project Partner	Provide direction and information, assisted with prioritization of strategies, provided planning information
Randy Crawford – Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Matt Berry - Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Julie Preston – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Don Preston – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Stacy Potterf – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Rebecca Green - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of

PLANNING TEAM MEMBERS COMMUNITY MEETING OF FORT DICK PLANNING UNIT		
Name / Representative	**Position/Title**	**Planning Tasks**
		concern and development of strategies to help reduce fire risk.
Chuck Hoha - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

2.3 PLANNING UNIT PROFILE

The Fort Dick planning area is between the town of Crescent City to the south, the Pacific to the west, and the Smith River to north and east. Much of the land surrounding this area is agricultural, with many acres in flower bulb production. Lake Earl State Park/Tolowa Dunes is a dominant landscape feature.

The Pelican Bay State Prison is located within this planning area, although legally a part of Crescent City. It has ~4,200 people on site. Fort Dick was designated as a Community At Risk from wildfire by CAL FIRE and the California Fire Alliance in 2001.

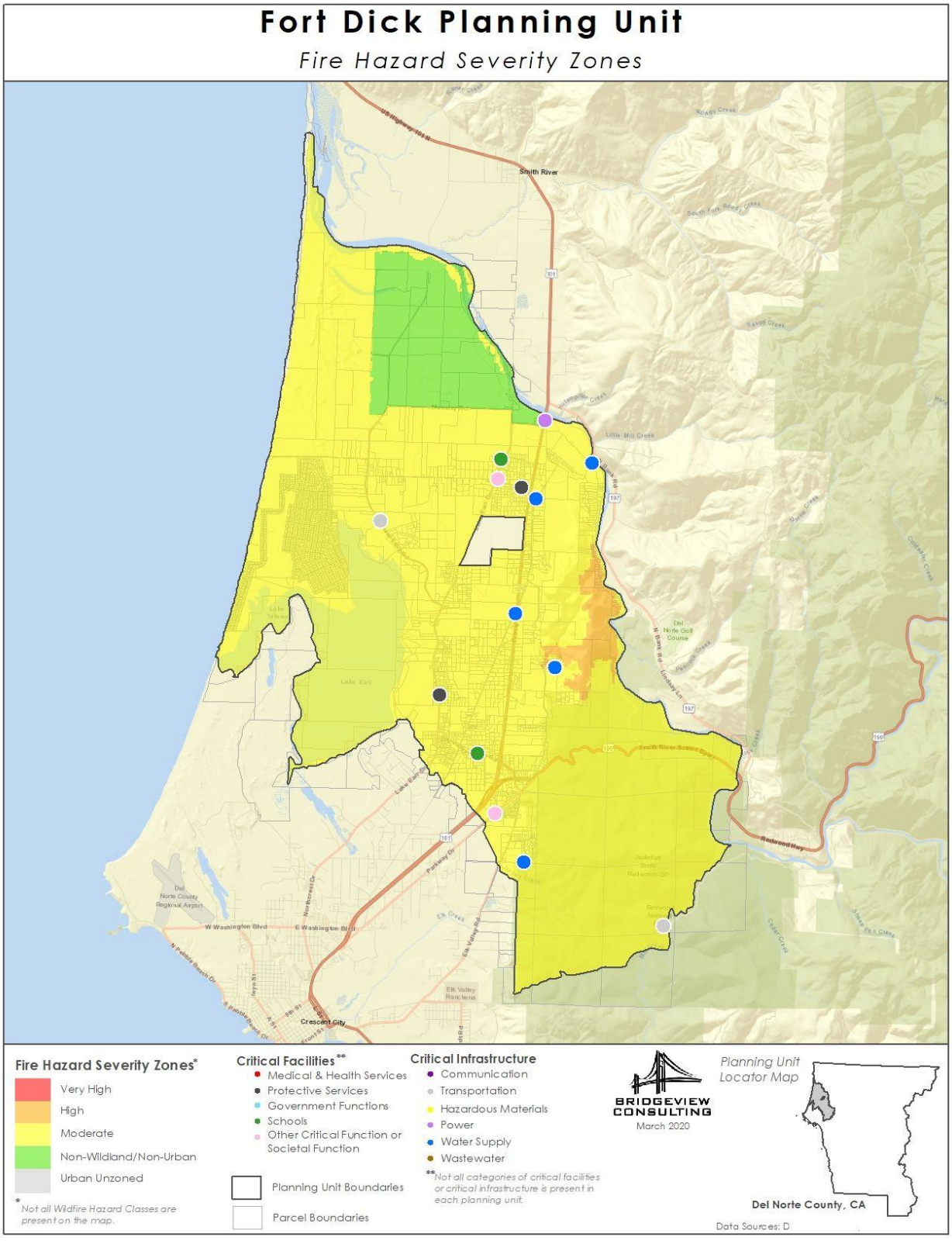


Figure 2-1 Fort Dick Planning Unit Fire Severity Zones and Critical Facilities and Infrastructure

2.4 PLANNING UNIT'S ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at risk in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components.

The Fire Hazard Severity Map (Figure 2-1) illustrates those areas of greatest concern throughout the Planning Unit. Local residents who attended the community meeting reviewed the map, and worked together to identify additional areas of concern, and the wildfire projects. Figure 2-1 also illustrates the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process. In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 2-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 2-1
COMMUNITY-IDENTIFIED ASSETS AT RISK

Residential structures with no defensible spaces	KOA Campground
Golf Course	Lake Earl / Tolowa Dunes
Ramblin' Redwood Campground and RV Park	Businesses around Lake Earl and Morehead Road
Power Stations	Camp Lincoln House (Historical)
Fort Dick Church	Fort Dick Fire Hall
Grange Hall	Redwood School

2.5 CURRENT WILDFIRE FIRE ENVIRONMENT

Figure 2-1 identifies the current wildfire environment within the Fort Dick Planning Area. Specific areas of concern include those identified by community members in Table 2-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings.

Although Fort Dick is located along the coast, with primarily urban and agricultural lands, much of the western portion is identified by CAL FIRE as Very High Fire Threat. This is likely due to strong coastal winds and the history of fire starts in this area, especially around Lake Earl. The Pacific Shores area is especially susceptible to fire.

Redwood School is the designated evacuation locations for the Fort Dick community; however, both need defensible space. The South Bank Road area only has one way in and out. The road enters the area under Dr. Fine Bridge. If an earthquake were to take this bridge out, the neighborhood would have no evacuation route.

TABLE 2-2 COMMUNITY-IDENTIFIED AREAS OF CONCERN	
Downtown Fort Dick (including Redwood School, Grange Hall, and Fort Dick Church)	Defensible space around key assets at Tolowa Dunes State Park, Pacific Shores and Lake Earl.
Pacific Shores Subdivision	Wonder Stump residential area
South Bank Road	Kings Valley residential area
Lake Earl Fire Station	Kings Valley Fire Station

2.6 FIRE HISTORY

Within the Base Plan, the Planning Team identified all historic wildfire events which have occurred within the County. Historically the big fires in the Fort Dick area include the mercantile store 30 to 40 years ago, the Alexandre Dairy Barn Fire three years ago (started in a burn barrel), a beach fire on Kellogg Beach (400 acres, started by a vehicle), a fire 75 years ago south of present Pelican Bay State Prison (Skeleton Park), a 1988 fire across the street from the Prison (transient-started, 80 acres), and a Simpson land fire 10 to 15 years ago (started by arson). The Planning Team identified no additional (significant) fires during the community meeting.

2.7 WATER SOURCES

Water sources were identified as 12 hydrants on the east side of Highway 101 (Kings Valley Road), two off Arrowhead Drive, and two off Wonder Stump Road. Nearly all water in the area is from wells with no generator backup. Six hydrants are projected for Wonder Stump Road at the intersections and projected subdivision to the north of Kings Valley Road. The hydrant system is supported by a 120,000-gallon tank. There is also a large pond in a field along Kings Valley Road.

2.8 FIRE PROTECTION RESOURCES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 2-3 identifies local community fire protection resources available within the Planning Unit. Table 2-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

TABLE 2-3 LOCAL COMMUNITY FIRE PROTECTION RESOURCES			
Personnel	**Serves**		**Fire Apparatus**
	Residents	**Area**	
Fort Dick Fire Protection District			
21 Volunteers 3 Explorers 1 Paid Staff – Fire Chief	6200	32 square miles	Engines – 4 Tenders – 2 Squads – 1 Rescue - 2

TABLE 2-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building and roads, all located within the CDD.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan
Specific equipment response plans.		
Water Shortage Contingency Plan.		
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the Fort Dick Fire District also provides information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program		

TABLE 2-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Noxious Weed Eradication Program or other vegetation management		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by Fort Dick Community.
Defensible space inspections program	Yes	
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Fort Dick Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy
Other		

2.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 2-5. Each of the items identified themselves may become fundable projects.

TABLE 2-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	Yes
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	Yes
Insufficient home address signs delay emergency response	Gap – residence should have legal address and street signs to enable efficient emergency response; especially crucial in Wonder Stump and Kings Valley.
Insufficient availability of fire protection water.	Yes

TABLE 2-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Additional equipment is necessary, such as: (identify)	Replacement of Water Tender for Fort Dick Fire Protection District (FDPD). Replacement of Type 1 Fire Engine for FDPD. Updating existing Firefighter Personnel Protective Clothing for FDPD. Replace existing Self-Contained Breathing Apparatus (SCBA) for FDPD.

2.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire. It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

2.11 WILDFIRE PRIORITY PROJECTS AND STATUS OF PREVIOUS PROJECTS

Since the last plan was completed, the Planning Unit completed several of the projects identified previously. Many of those projects, due to the length of time since the last plan was updated, are now again viable projects, and identified as such below.

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 2-6 lists the action items/strategies that make up the district's hazard mitigation action plan, as well as the current status of the previous projects.

Information includes the actual action item, a qualitative assessment of the estimated cost (defined within the base plan), potential funding sources, the timeframe, and the type of initiative associated with each item. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

TABLE 2-6
HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No (Brief Description) If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 – Create defensible spaces / shaded fuels break around designated Community-identified areas including, but not limited to Kings Valley, Wonder Stump Road and South Bank Road.					
High	CAL FIRE, Safer, HMGP	Short-Term	Yes - The Planning Area (PA) previously completed this effort to some degree, but the project is continual in nature.	Structural Project, Property Protection, and Natural Resource Protection	High
Initiative #2 – Conduct prescribed burn / mechanical fuel reduction in areas containing Community-identified Assets at Risk and Areas of Concerns.					
Medium	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventative Activities, Property Protection, and Natural Resource Protection	High
Initiative #3 – Develop and implement a signage program for property addresses not properly marked, particularly in the Wonder Stump and Kings Valley neighborhoods.					

TABLE 2-6 HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No (Brief Description) If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Medium	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed a portion of this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #4 – Inspect, create, and improve alternative evacuation routes with room for fire apparatus to drive into and turn around, particularly within Wonder Stump Road and South Bank Road areas, as well as other areas.					
High	CAL FIRE, Safer, HMGP, BRIC	Long-Term	No	Public Information, Preventive Activities, Property Protection, and Emergency Services	High
Initiative #5 – Inspect, create, and improve Shaded Fuels Breaks in areas containing Community-identified Assets at Risk and Areas of Concerns.					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #6 – Seek out grant funding for generators at the Lake Earl Fire Station.					
Medium	CAL FIRE, Safer, HMGP	Long-Term	No	Structural Projects, Property Protection, and Emergency Services	High
Initiative #7 – Seek out, develop, and maintain steady state funding for the fire district.					
High	CAL FIRE, Safer, HMGP, Property Taxes, Yield Taxes, Reserve Funds	Long-Term	No	All	High
Initiative #8 – Inspect, provide and/or replace as necessary “Fire Danger” signage in areas containing Community-identified Assets at Risk and Areas of Concerns.					
Medium	CAL FIRE, Safer,	Short-Term	Yes - The PA previously completed this effort to	Public Information, Preventive Activities,	Medium

TABLE 2-6 HAZARD MITIGATION ACTION PLAN MATRIX AND STATUS UPDATE					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No (Brief Description) If yes, current status indicated.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
			some degree, but the project is continual in nature.	Property Protection, Emergency Services, and Natural Resource Protection	
Initiative #9 – Replace Water Tender for Fort Dick Fire Protection District (FDPD).					
High	CAL FIRE, Safer,	Short-Term	No	Preventive Activities, Property Protection, Emergency Services, and Recovery	High
Initiative #10 – Replace Type 1 Fire Engine for FDPD					
High	CAL FIRE, Safer	Short-Term	No	Preventive Activities, Property Protection, Emergency Services, and Recovery	High
Initiative #11 – Update and replace existing Firefighter Personnel Protective Clothing for FDPD to ensure safety of firefighters, including SCBA equipment.					
High	CAL FIRE, Safer,	Short-Term	No	Emergency Services, Preventive Activities, Property Protection, and Recovery	High

2.12 FUTURE NEEDS

- Maintain training in the latest firefighting equipment and techniques for Fort Dick Fire Department (FDPD).
- Maintain funding for FDPD in order to purchase and update equipment as needed.
- Maintaining Volunteer Firefighters for FDPD.

2.13 ADDITIONAL LOCAL CAPABILITIES

The fire service organization and local community members have identified the following additional capabilities in place to help reduce the risk and vulnerability to wildfire:

- Fort Dick Fire Department personnel have been trained in Fire Investigation, Diver for water rescue, Wildland Firefighting, and as Emergency Medical Technician (EMT).
- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.

- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

3. BIG FLAT / ROCK CREEK PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN ANNEX

3.1 INTRODUCTION

This Annex details the planning elements specific to the Big Flat/Rock Creek Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

3.2 PLANNING TEAM POINT(S) OF CONTACT

The Big Flat/Rock Creek Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Big Flat/Rock Creek Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

LOCAL PLANNING TEAM MEMBERS COMMUNITY MEETING OF BIG FLAT/ROCK CREEK AREA		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Tim Sanderson – Del Norte Fire Safe Council	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general CWPP; served as planning team member on CWPP development team.
Grant Werschkull – Citizen	Community Host	Hosted event and served as POC to distribute and capture information; assisted with dissemination of

LOCAL PLANNING TEAM MEMBERS COMMUNITY MEETING OF BIG FLAT/ROCK CREEK AREA		
Name / Representative	**Position/Title**	**Planning Tasks**
		community meeting information, capturing information identifying areas of risk, and potential projects.
Tyler Lentz, Chris Hooper, James Baskin, Bonnie Anderson, Walter Huffman, Lindsey Dunham, Sheila Balent, Julianna Olate, Dwayne Franklin, Jerry Cochran, Steve Lucero, Richard Olate, Brett Minty, Robyn Dal Porto, Mike Frederick, Cheryl Sea Rafferty, Darci Short, Paul Ronjoin, and Joe Gillespie – Citizens	Planning Team Members	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

3.3 PLANNING UNIT PROFILE

The Big Flat/Rock Creek planning area is an inholding[1] within the Six Rivers National Forest (SRNF) - Smith River National Recreation Area. This isolated rural community is situated along the South Fork Road (FS Road 427) and the South Fork of the Smith River.

Big Flat and Rock Creek are two communities along the South Fork Road (USFS Road 427) completely surrounded by Six Rivers National Forest, Smith River National Recreation Area. Both were designated as Communities At Risk by the US Department of Interior in the Federal Register on August 17, 2001.

The land is a mix of ranches and small rural homesteads. Both communities are situated along the South Fork of the Smith River. Big Flat is a large meadow that straddles the Jones Ridge Road off the South Fork Road.

This community is off both the electrical and phone grid. There is very little cell phone service here. Therefore, this community is very isolated in terms of electronic communication. There is a current discussion regarding bringing a power line down the South Fork Road to these communities.

[1] An inholding is a privately owned parcel of land within the boundaries of a federal preserve, especially within a national park or national seashore.

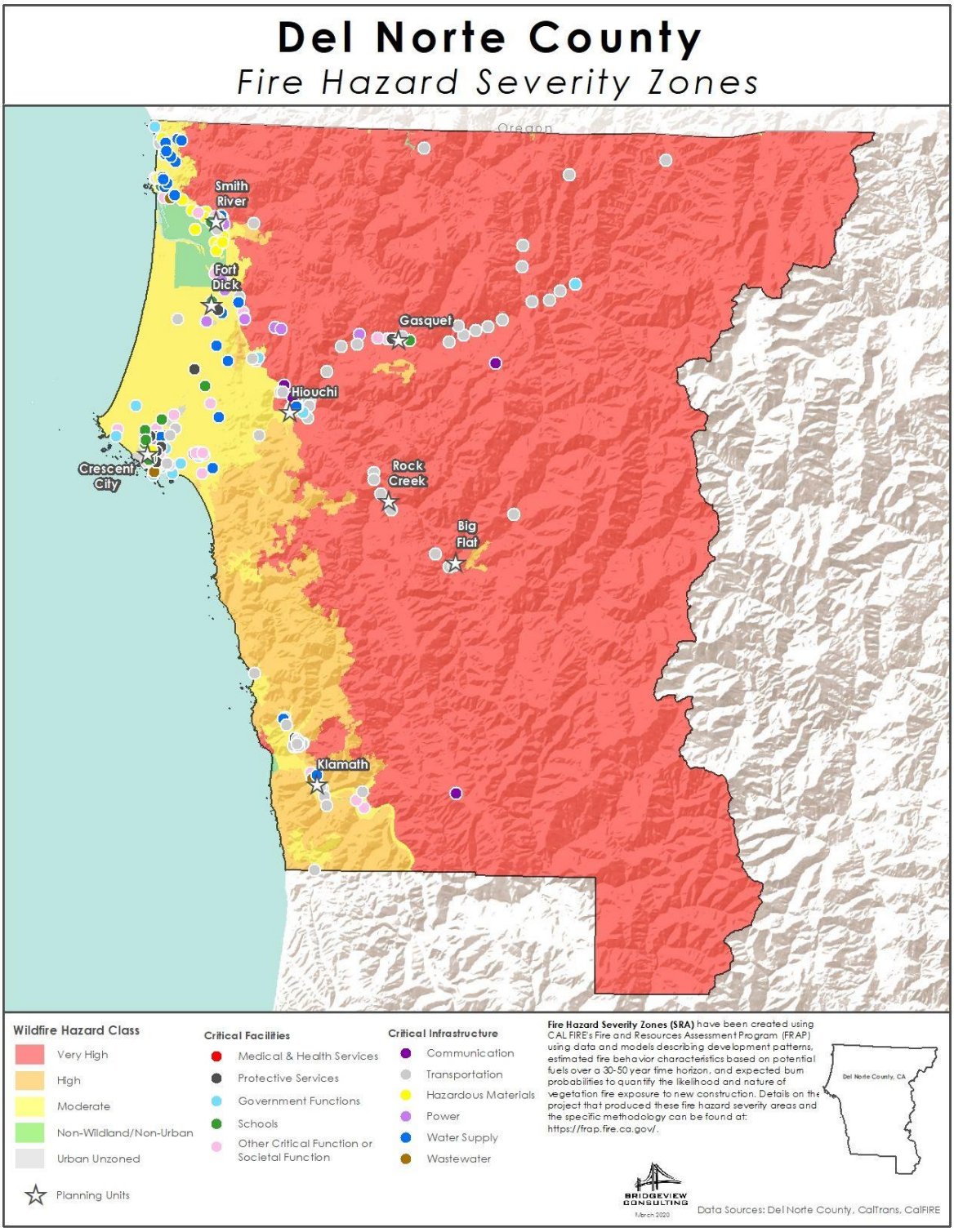


Figure 3-1 Rock Creek Big Flat Planning Unit and Critical Facilities and Infrastructure

3.4 PLANNING UNIT'S ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at risk in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components.

The Fire Hazard Severity Map (Figure 3-1) illustrates those areas of greatest concern throughout the Planning Unit. Local residents who attended the community meeting reviewed the map, and worked together to identify additional areas of concern, and the wildfire projects. Figure 3-1 also illustrates the fire severity for the Planning Area, as well as the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process.

In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 3-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 3-1
COMMUNITY-IDENTIFIED ASSETS AT RISK

Big Flat and Rock Creek communities	Bar-Ric Mutual Water Company
Rock Creek Ranch	Jedediah Smith Redwood State Park
Wild and Scenic Smith River	Del Norte Coast Redwoods State Park
Big Flat Campground	Gasquet Orleans (GO) Road Area
Boulder Creek, and Paradise Areas	Ship Mountain, Bear Basin, and Red Mountain Lookouts
Jones Creek Water Seat	Del Norte Coast Redwood Park

3.5 CURRENT WILDFIRE FIRE ENVIRONMENT

Figure 3-1 identifies the current wildfire environment within the Big Flat/Rock Creek Planning Area. Specific areas of concern include those identified by community members in Table 3-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings. Table 3-2 also provides areas identified for potential shaded fuel breaks.

During the public meeting, community members identified the following key hazard areas in Big Flat/Rock Creek or surroundings where fires could start:

- Big Flat, Rock Creek, Boulder Creek, and Paradise Areas
- Gasquet Orleans (GO) Road Area
- Rock Creek Ranch
- Ship Mountain, Bear Basin, and Red Mountain Lookouts
- Jones Creek
- Communications Sights
- Jedediah Smith State Park
- Del Norte Coast Redwood Park
- Big Flat Campground
- Wild and Scenic Smith River

This community is surrounded by Very High Fire Threat areas as defined by CAL FIRE. According to CAL FIRE, one of the highest fire threat areas in the County sits northeast of Big Flat, in the headwaters areas of Jones and Hurdy Gurdy Creeks. Given that major fire conflagrations often are pushed by winds from the northeast, this is a direct threat to this community (2007 Del Norte Fire Safe Plan).

Evacuation is a critical issue in the planning unit, as there is only one primary road in and out. It is 16 miles from the end of Big Flat to 199 along the main (South Fork) road. There are, however, alternate evacuation routes that travel through the National Forest.

The French Hill Road (County Routes 411 and 405) is a County-maintained road, as it was the original road into Big Flat. The south end of the road is called the Big Flat Road as well. It is a narrow, one-lane road along the top of the ridge in many sections. The Camp 6 repeater site is on the top of the ridge on French Hill Road. The French Hill Road meets Highway 199 just west of Gasquet. It would not be a quick evacuation route, but it is an alternative.

The Jones Ridge Road (USFS Road 16) travels the Big Flat valley and then climbs up Jones Ridge as a rough, one-lane road to become Ship Mountain Road, which is where the Ship Mountain Fire Lookout is located. It is staffed through fire season by SRNF personnel. This road is a two-lane gravel road along the top of the ridge when it becomes Jawbone Road. Road 16, which is another long, slow evacuation route out of the Big Flat/Rock Creek area. This road meets Highway 199 several miles east of Gasquet, west of Washington Flat. Both of these routes, however, are northeast of the South Fork Road, the direction of a typical fire conflagration scenario.

The west slope of South Fork Smith watershed from Rock Creek to Goose Creek is identified as a Very High Fire Threat level. The headwaters of Jones and Hurdy Gurdy Creeks in the area near Four Brothers is also identified as Very High Fire Threat. This area is directly northeast of Big Flat. Given that most severe fires in this area come from the northeast, this is a very real threat to Big Flat (2007, Del Norte Fire Safe Plan).

TABLE 3-2
COMMUNITY-IDETNIFIED AREAS OF CONCERN

Area	Concern
Rock Creek communities	Legal address and street signs required
Residential areas	Brushing back of roads

TABLE 3-2 COMMUNITY-IDETNIFIED AREAS OF CONCERN	
Area	Concern
Rock Creek, Boulder Creek, Paradise and Big Flat	Emergency communication systems
Bottom of Jones Ridge/Ship Mountain Road to USFS road 16N02T	Create a shaded fuel break
Rock Creek/Boulder Creek area on the south side of the South Fork Road	Create and maintain a shaded fuel break
Rock Creek Subdivision, the lower Rock Creek Road, along south Fork road at Haines Flat, and along Rattlesnake Slide and Rattlesnake lake Road	Create a shaded fuel break
Undeveloped river terrace across the river from the Boulder and Rock Creek development areas	Reduce hazardous fuels and to maintain ecological integrity
Bar-Ric Mutual Water Company	Infrastructure assessment to evaluate readiness for wildfire
Rock Creek Ranch area around the Rock Creek – Boulder Creek community	Additional 2500-gallon tanks
Rock Creek community	Fire training for volunteer firefighters
Rock Creek communities	Defensible space
Rock Creek area	Fuel reduction
Rock Creek, Boulder Creek, Big Flat and Paradise	Upgrade fire system
Rock Creek, Boulder Creek, Big Flat and Paradise	Family Disaster and Evacuation Plans

3.6 FIRE HISTORY

Historically, the big fires in the Big Flat/Rock Creek area have been the Buck Fire, Hurdy Gurdy (1953), Sugar (1967), Jones Creek Ridge, Rock Creek (1950), Rattlesnake (1959), Big Flat (1962), and Haines (1960) and Coon (2015) Fires.

3.7 WATER SOURCES

The Rock Creek subdivision has a 15,000-gallon water tank that provides storage for the neighborhood and several hydrants. The system is run on direct pressure from Deer Creek. There is another 5,000 gallons of water stored in tanks at Rock Creek Ranch and on the Boulder Creek Road near South Fork Road. At Rock Creek Ranch the tanks are plumbed to also be filled from the river and there are 13 pressurized hydrants.

Through the RAC grant to DNFSC, several tanks were placed in both communities. Big Flat residences get their water from springs or wells. Several homes have water storage tanks. As of the meeting date (March 25, 2004), there were still three 2,500-gallon tanks to place. In Big Flat, the Stevens Ranch has 10,000 gallons among several tanks, the Stokes Ranch has 3,000 gallons, and there are 5,000 gallons at Bill Jones' residence (2,500 by east end and 2,500 at the west end of the flat).

3.8 FIRE PROTECTION RESOURCES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 3-3 identifies local community fire protection resources available within the Planning Unit. Table 3-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

Big Flat and Rock Creek do not have a local fire department. Gasquet FPD and Smith River FPD (from Hiouchi Station #2) will respond here, as well as CAL FIRE (Crescent City) and SRNF (Gasquet), however, it will likely take them around half-an-hour on the roads to arrive.

TABLE 3-3
LOCAL COMMUNITY FIRE PROTECTION RESOURCES

Personnel	Serves		Fire Apparatus
	Residents	Area	
Gasquet FPD (minimum response time ~30 minutes)			
No information provided			
Smith River FPD – Hiouchi Station #2 (minimum response time ~30 minutes)			
17 Volunteers 4 Paid position • Fire Chief (stipend)	2600	59 (27 s.m. in district; 32 s.m. SOI)	Structural Fire Engines – 2 Tenders – 2 Utility Vehicle – 1 Rescue – 2

TABLE 3-3
LOCAL COMMUNITY FIRE PROTECTION RESOURCES

Personnel	Serves		Fire Apparatus
	Residents	Area	
• Administrative Assistant (part time) • Projects Administrator (part time) • Maintenance Assistant (part time)			
Crescent City Fire Protection District (minimum response time ~30 minutes)			
25 including the following: • Fire Chief • Administrative Assistant • Deputy Chief (part-time) Maintenance Worker (part time).	13,000	16,621 acres (26 sq. mi.)	Structural Fire Engines – 3 Wildland Fire Engines – 1 Water Tenders – 3 Rescue – 1 Rescue Boat – 1 Utility – 1 Squad - 2
Crescent City Volunteer Fire Department (minimum response time ~30 minutes)			
25 Volunteers	13,000	16,621 acres (26 sq. mi.)	Structural Fire Engines – 2 Command Vehicle – 2 Squad Pick up – 1 Squad Suburban - 1 Truck – 1 Cert Rehab Vehicle - 1
SRNF (Gasquet) (minimum response time ~30 minutes)			
No information provided			

TABLE 3-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building and roads, all located within the CDD.

TABLE 3-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan
Specific equipment response plans.		
Water Shortage Contingency Plan.		
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the various fire protection districts also provide information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program		
Noxious Weed Eradication Program or other vegetation management		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by Big Flat/Rock Creek/Boulder Creek/Paradise community members.
Defensible space inspections program		

TABLE 3-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Big Flat/Rock Creek/Boulder Creek/Paradise Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy
Other		

3.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 3-5. Each of the items identified themselves may become fundable projects.

TABLE 3-5
ISSUES OF CONCERN

	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	
Insufficient home address signs delay emergency response	Yes – Identified as a 2020 strategy
Insufficient availability of fire protection water.	Yes - Rock Creek Ranch area around the Rock Creek – Boulder Creek community

TABLE 3-5
ISSUES OF CONCERN

	Yes/No Identify Area or Gap
Additional equipment is necessary, such as:	Replacement of small tools and equipment including mobile radios by the Smith River Fire Protection District (SRFPD). A dump truck to assist with Chipper program. Replacement of Self-Contained Breathing Apparatus and bottles for Crescent City Fire Protection District (CCFPD). Replacement of Water Tender for CCFPD. Replacement of a Structural Fire Engine for CCFPD. Replacement of Rescue Boat with more stable rescue platform for CCFPD. Second Lucas Device on duty vehicle for CCFPD and Crescent City Volunteer Fire Department (CCVFD). Additional equipment for CCFPD to include thermal imaging cameras, four-gas monitors, and portable radios. Full hydraulic extrication tool kit and stabilization struts for Structural Fire Engine of CCVFD. New Tender for Smith River Fire Protection District (SRFPD). Updating existing Firefighter Personnel Protective Clothing for SRFPD. Replace existing Self-Contained Breathing Apparatus (SCBA) for SRFPD. Replacement small tools and equipment [wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression)] for SRFPD.

3.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire. It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

3.11 WILDFIRE PRIORITY PROJECTS AND STATUS OF PREVIOUS PROJECTS

Since the last plan was completed, the Planning Unit completed several of the projects identified previously. Many of those projects, due to the length of time since the last plan was updated, are now again viable projects, and identified as such below.

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 3-6 lists the action items/strategies that make up the district's hazard mitigation action plan, as well as the current status of the previous projects.

Information includes the actual action item, a qualitative assessment of the estimated cost (defined within the base plan), potential funding sources, the timeframe, and the type of initiative associated with each item. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

TABLE 3-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 – Working with Smith River RPD and Del Norte County, develop a signage program for property addresses not properly marked. This may include GPS requirements for all residences and key roads.					
Medium	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #2 - Seek out funding to purchase replacement of small tools and equipment for the Smith River Fire Protection District.					
Medium	CAL FIRE, Safer, HMGP, Tax revenue	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #3 - Seek out funding to update mobile radios for the Smith River Fire Protection District.					
Medium	CAL FIRE, Safer, HMGP, Tax revenue	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #4 – Establish an Emergency Communication System for Rock Creek, Boulder Creek, Paradise and Big Flat. This may include a repeater on Ship Mountain.					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes	Public Information, Preventive Activities, Structural Projects, Property Protection, and Emergency Services	High
Initiative #5 – Working with SRFN and others, establish Shaded Fuel Breaks throughout the Community, including: the headwaters areas of Jones and Hurdy Gurdy Creeks; the bottom of Jones Ridge/Ship Mountain Road to USFS Road 16N02T, connecting to Fox Ridge Road; the south side of the South Fork Road, which should be maintained and expanded; and in the Rock/Boulder Creek areas, along the river across from Rock Creek Subdivision, the lower Rock Creek Road along South Fork Road at Haines Flat, and along Rattlesnake Slide and Rattlesnake Lake Road. . Additional areas for fuel breaks are identified in Table 3-2.					

TABLE 3-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
High	CAL FIRE, Safer, HMGP	Short-Term	Yes	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #6 – Establish Fuels Reduction projects, including brushing back of roads in residential areas throughout the community for areas identified in Table 3-2. This effort should also include opportunities created during the annual June Wildfire Preparedness Meeting hosted at Rock Creek Ranch.					
Low	CAL FIRE, Safer, HMGP	Short-Term	Yes. Some of those areas were completed, but due to the time that has elapsed, are again needed.	Public Information, Preventative Activities, Property Protection, and Natural Resource Protection	Medium
Initiative #7 – Working with Bar-Ric Mutual Water Company, secure funding for an Infrastructure Assessment of the Bar-Ric Mutual Water Company.					
Medium	CAL FIRE, Safer, HMGP	Short-Term	No	Preventive Activities, Structural Projects, and Property Protection	Medium
Initiative #8 – Install 2,500-gallon water tank at Rock Creek.					
High	CAL FIRE, Safer, HMGP	Long-Term	No	Preventive Activities, Structural Projects, Property Protection, Emergency Services, and Natural Resource Protection	Medium
Initiative #9 - Seek out training opportunities for fire personnel on newly obtained equipment.					
High	CAL FIRE, Safer, HMGP,	Long-Term	No	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #10 - Create defensible space around the community . This includes coordination through joint efforts with SRNF and community members, including the Coon Restoration Project and any SRA strategic fuels reduction.					
High	CAL FIRE, Safer, HMGP	Long-Term	No	Public Information, Preventive Activities,	High

TABLE 3-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
				Property Protection, and Emergency Services	
Initiative #11 – Working with property owners such as the Smith River Alliance, create a Fuels Reduction program in coordination with Smith River NRA fuels planners and the Fire Safe Council.					
Low	CAL FIRE, Safer, HMGP	Long-Term	No	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #12 – Upgrade the firefighting water system in the Rock Creek, Boulder Creek, Big Flat, and Paradise communities.					
High	CAL FIRE, Safer, HMGP	Long-Term	No	Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High

3.12 ADDITIONAL LOCAL CAPABILITIES

The fire service organization and local community members have identified the following additional capabilities in place to help reduce the risk and vulnerability to wildfire:

- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.
- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and makes the chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

4. GASQUET PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN

4.1 INTRODUCTION

This Annex details the planning elements specific to the Gasquet Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

4.2 PLANNING TEAM POINT(S) OF CONTACT

The Gasquet Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Gasquet Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members **Community Meeting of Gasquet Area**		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council (DNFSC)	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Dave Esteves, Division Chief, Cal Fire	Project Partner	Provide direction and information, assisted with prioritization of strategies, provided planning information
Nick Karanopoulos – Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information

Local Planning Team Members Community Meeting of Gasquet Area		
Name / Representative	**Position/Title**	**Planning Tasks**
		identifying areas of risk and potential projects.
Devon Morgante – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Rick Morgante – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Darrell Parlasca – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Sheila Balent – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Linda Serrel – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

4.3 PLANNING UNIT PROFILE

Gasquet is small community of approximately 500 year-round residents (over 600 summer residents) nestled along the banks of the Middle Fork Smith River and Highway 199, completely surrounded by the Smith River National Recreation Area. It is 18 miles in from Highway 101 and the coast. Gasquet was designated as a Community At Risk by the US Department of Interior in the *Federal Register* on August 17, 2001.

> "The village of Gasquet has grown a great deal since Horace (Gasquet) erected the first building back in 1857. Gasquet now boasts a church, an elementary school (K-8), a craft shop, Gasquet Mobile Home Park, volunteer fire department, a US Post Office, an American Legion Hall, a US

> Forest [Service] Ranger Station, a Community Council, a cafe, a motel, a village store, and even a small airstrip for private aircraft."[2]

This planning area includes the various private parcels along Highway 199 to the Oregon border. The Bar-O Boys Ranch, which was a Juvenile Facility located at Washington Flat and affiliated with the Del Norte County Unified School District, has been acquired by Del Norte County since completion of the last CWPP, and no longer operates in the same capacity. No replacement use has yet been identified by the Board of Supervisors. The Ranch has historically participated in DNFSC fuel reduction projects. Patrick Creek Lodge is a historical building at the mouth of Patrick Creek on the Smith River. Across the highway is a Forest Service campground. There are also a few homes on Siskiyou Fork Road.

The Gasquet community is different from most other Del Norte communities in that it does not have the coastal influence. Therefore, temperatures here are on average at least ten (or more) degrees higher than Crescent City. As well, in the late afternoon, the winds increase blowing up the Smith River.

[2] Gasquet Mobile Home Park, http://www.harborside.com/~hnvweth/5.html

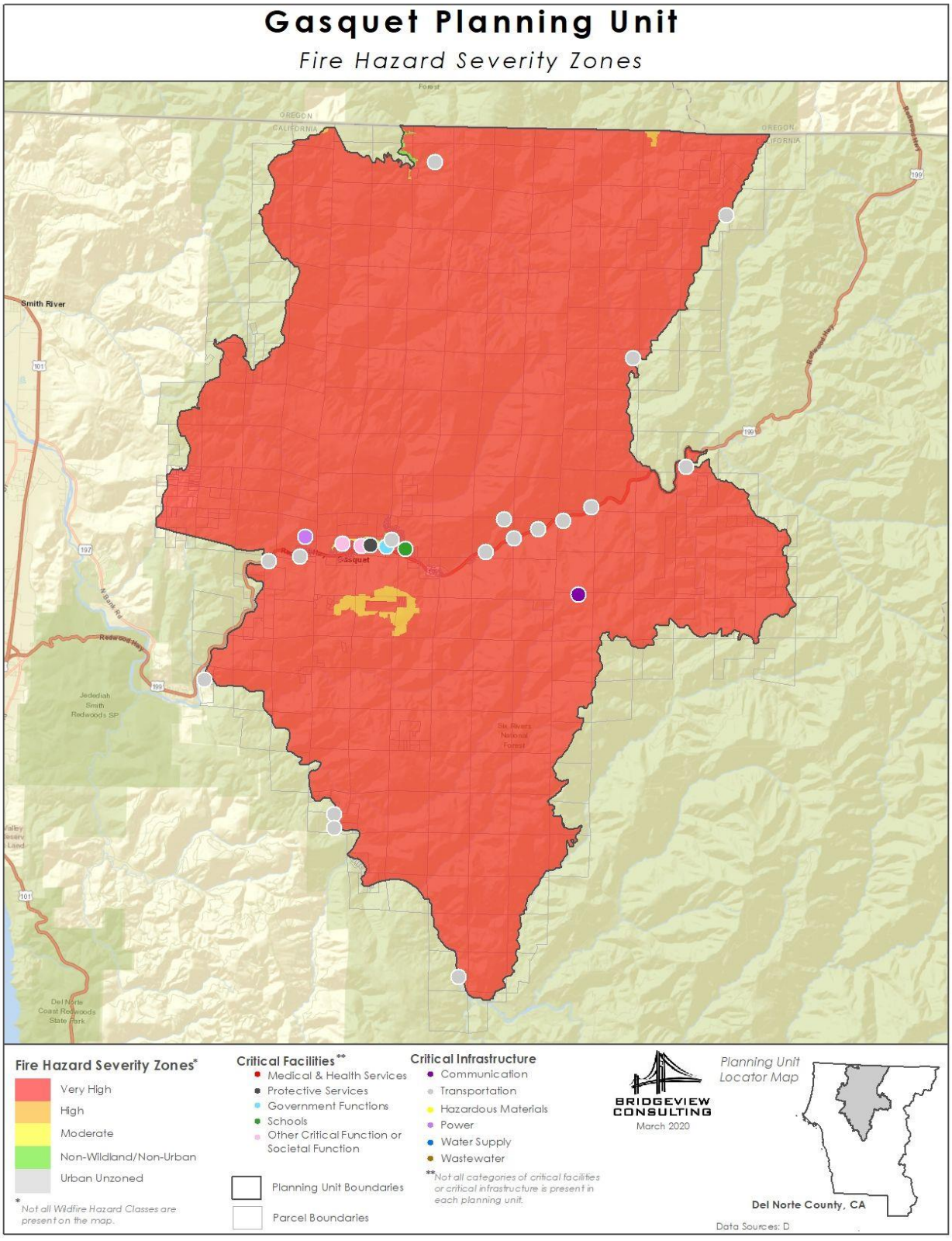


Figure 4-1 Gasquet Community Planning Unit and Critical Facilities and Infrastructure

4.4 PLANNING UNIT'S ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at risk in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components.

The Fire Hazard Severity Map (Figure 4-1) illustrates those areas of greatest concern throughout the Planning Unit. Local residents who attended the community meeting reviewed the map, and worked together to identify additional areas of concern, and the wildfire projects. The map also identifies the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process. In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 4-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 4-1
ADDITIONAL COMMUNITY-IDENTIFIED ASSETS AT RISK

Adams Station	Madame Gasquet Grave Site (Historical Site)
Gasquet Community and Businesses	CCC Cabins next to Gasquet Mobile Home Park
Gasquet Community Service District - Water Treatment Facility	SRNF Ranger Station (including historical buildings)
Mountain Elementary School	CalTrans Yard
Power Lines	Power Substation
Ward Field Airport	Bar-O Boys Ranch (currently non-operational)
Pappas Flat Cultural Site	McMillan Ranch and Bridge
Patrick Creek Lodge and Campground	Darlingtonia species of plants on Middle Fork and North Fork Roads, and Highway 199 near Pioneer Road
Valhalla Apartments	County properties
Fire Station	

4.5 CURRENT WILDFIRE FIRE ENVIRONMENT

Figure 4-1 also identifies the current wildfire environment within the Gasquet Planning Area. Specific areas of concern include those identified by community members in Table 4-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings.

The Gasquet planning area is one of the highest fire risk and hazard areas in the County. This interface community is surrounded by National Forest lands, many of which have been either previously logged or have increasing numbers of dead trees, both resulting in high fuel loads. In addition, this community is isolated, being situated along winding Highway 199. There are several alternate evacuation routes (Gasquet Mountain Road, French Hill Road, Jawbone Road). However, all of these roads are narrow and winding, often only one lane and gravel for long stretches. Therefore, they are not conducive to rapid evacuation.

As shown in the map, Gasquet is surrounded by Very High Fire Threat areas. In addition, there are many dead trees on National Forest land around Gasquet. The Forest Service has been very active with fuel reduction and educational efforts in and around Gasquet. They recently cleared ladder fuel on Forest Service lands surrounding Pioneer Village. DNFSC received funding to create defensible space on the private property adjacent to the Forest Service project as well as in the North Fork Loop neighborhood. Finally, the Gasquet landfill has a spot to dump yard waste. The Forest Service burns this twice a year for the residents.

TABLE 4-2
ADDITIONAL AREAS OF CONCERN

Rock Creek and Big Flat	Hillsides NE of Gasquet above Gasquet Middle Park and Gasquet Toll Road
Pioneer Road subdivision and North Fork Loop	Hillside north of Gasquet
French Hill, Jawbone, and Ship Mountain Road	Gasquet Mountain Road
Washington Flat	Parcels along Highway 199

4.6 FIRE HISTORY

Within the Base Plan, the Planning Team identified all historic wildfire events which have occurred within the County. Historically, the big fires in the Gasquet area are the Panther (1996), Biscuit (2002), and Shelly (2002) Fires. This community is getting accustomed to big fires and evacuation. The entire community was evacuated during the Biscuit Fire. Everything north of the Middle Fork Bridge (North Fork Loop and Azalea Lane) was also evacuated in 1996 for the Panther Fire.

4.7 WATER SOURCES

Gasquet Community Services District pumps water from the river into a large (1/2 million gallon) tank with gravity feed. In the past, when power has been out, the fire department has pumped the water, as there may be no generator back up. DNFSC has installed twelve 2,500-gallon water tanks in the greater Gasquet area, and another six on the North Fork Loop. In addition, they put in four tanks at the Bar-O Boys Ranch.

4.8 FIRE PROTECTION RESOURCES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Within Del Norte County, the US Forest provides wildland fire protection on National Forest Lands and private in-holding within the boundaries of the Six Rivers National Forest (SRNF). The SRNF provides wildland fire protection to over 1,000 residence in their 585 square-mile service area in Del Norte County. SRNF's service area includes the communities of Washington Flat, Gasquet, Low Divide, Hiouchi, Rock Creek, and Big Flat, and also respond to areas outside of the immediate service area. SRNF may be called upon to provide services throughout the United States, and has existing Cooperative Fire Agreements with local VFD's, CAL FIRE and other federal agencies. 75 percent of the area requires 15 minutes or longer to respond, with 15 percent response time within 10 minutes. During 2019, SRNF responded to over 1,060 calls for service, 61 of which were for wildland fires.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 4-3 identifies local community fire protection resources available within the Planning Unit. Table 4-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

TABLE 4-3
LOCAL COMMUNITY FIRE PROTECTION RESOURCES

Personnel	Serves		Fire Apparatus
	Residents	Area	
Gasquet FPD (fire and medical emergency response)			
Paid Staff • Fire Chief • Assistant Chief	800	151,334 acres 236 sq. mi.	Fire Engine – 1 Engine / Tender – 1 Command - 1 Rescue – 1 Utility - 1
USDA Forest Service			
Paid Staff • Fire Staff 43 • Non Fire positions 30 • 20-Person Hotshot Crew • 2 Type 3 Engine Crews • 1 Water Tender • 3 Fire Prevention Officers • 1 Fire lookout (Ship Mountain)		585 Square Miles of service area.	2 600-gallon Engines 1 1,500 gallons Tender 2 Fire Prevention/Patrol Vehicles with 50 gallon slip-on pumps SRNF also has a Wilderness EMT

TABLE 4-3 LOCAL COMMUNITY FIRE PROTECTION RESOURCES			
Personnel	**Serves**		**Fire Apparatus**
	Residents	**Area**	
• 1 Fire Management 1 Assistant Fire Management Officer •			

TABLE 4-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building and roads, all located within the CDD.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan
Specific equipment response plans.		
Water Shortage Contingency Plan.		
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;

TABLE 4-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	**Available (Yes/No)**	**Department/Agency/Position**
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the Gasquet Fire Protection District also provides information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program		
Noxious Weed Eradication Program or other vegetation management		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by the Gasquet Community.
Defensible space inspections program	Yes	
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Gasquet Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy
Other		

4.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 4-5. Each of the items identified themselves may become fundable projects.

TABLE 4-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	Yes

TABLE 4-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Insufficient home address signs delay emergency response	Yes – Identified as a 2020 Strategy
Insufficient availability of fire protection water.	
Additional equipment is necessary, such as: (identify)	

4.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire. It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

4.11 WILDFIRE PRIORITY PROJECTS AND STATUS OF PREVIOUS PROJECTS

Since the last plan was completed, the Planning Unit completed several of the projects identified previously. Many of those projects, due to the length of time since the last plan was updated, are now again viable projects, and identified as such below.

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 4-6 lists the action items/strategies that make up the Unit's hazard mitigation action plan, as well as the current status of the previous projects.

Information includes the actual action item, a qualitative assessment of the estimated cost (defined within the base plan), potential funding sources, the timeframe, and the type of initiative associated with each item. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

In addition, DNFSC received national fire Plan funding in 2004 for fuel reduction in Pioneer Village and North Fork Loop. Residents in these areas should fully cooperate with this project to increase the effectiveness of fuel treatments. The Pioneer Road subdivision lies along a single road that is accessed from Hwy 199 across from the Panther Flat campground. There are 13 homes on this dead-end road, most in small parcels of two to five acres. SRNF completed 18 acres of shaded fuelbreak on their boundary. That break now needs to be extended onto the private land, continued through the curtilage areas around the homes in the form of defensible space, and then followed along the Pioneer Road. This project is approximately 20 acres to undertake complete fire safety for this remote neighborhood, including cutting of the brush and chipping.

TABLE 4-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 - Create firebreaks / brush back / water tank areas in the designated Community-identified Assets at Risk, including a shaded fuelbreak along French Hill and Jawbone, Ship Mountain roads. This will also provide improved evacuation ability for Rock Creek and Big Flat. Connect these with a fuelbreak along USFS Road 17N04 to protect this community from fires coming from the south.					
High	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Structural Project, Property Protection, and Natural Resource Protection	High

TABLE 4-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #2 – Work with SRNF to reduce fuel on the hillsides immediately to the northeast of Gasquet, above Gasquet Middle fork Road and Gasquet toll road. Combine this with intensive defensible space treatments around private properties in this area.					
High	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Structural Project, Property Protection, and Natural Resource Protection	High
Initiative #3 – Work with SRNF to inspect, create, and improve Shaded Fuels Breaks in areas containing Community-identified Assets at Risk and Areas of Concerns, including along Gasquet Mountain Road, both to use in fire suppression efforts and to improve road as an evacuation route from Gasquet to the coast (via Rowdy Creek or Low Divide Roads).					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #4 -Work with SRNF and private property owners to create defensible spaces and reduce fuel around designated Community-identified Assets at Risk, particularly on the hillside directly north of the Gasquet community. This includes working with residents, who must be diligent in creating and maintaining defensible space, including along outlying areas of Gasquet and scattered inhabited parcels along Highway 199.					
High	CAL FIRE, Safer, HMGP	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Structural Project, Property Protection, and Natural Resource Protection	High
Initiative #5 – Explore options for secondary emergency access to Community-identified Assets at Risk. This includes exploring options for a secondary emergency access route for the Bar-O Boys Ranch and Washington Flat area residents. This may be via Jawbone Road to Ship Mountain.					
Low	Cal Fire, Safer, HMGP	Long-Term		Public Information, Preventive Activities, Property Protection,	High

TABLE 4-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
				Emergency Services, Recovery, and Natural Resource Protection	
Initiative #6 - Develop a signage program for property addresses not properly marked. Do this in conjunction with an intensive community education program on the need for good signage.					
Medium	CAL FIRE, Safer, Fire Safe Council	Short-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #7 – Coordinate with citizens to develop Family Disaster and Evacuation Plans, as Gasquet residents must be prepared for eventual evacuation.					
Low	CAL FIRE, Safer, HMGP	Long-Term		Public Information, Preventive Activities, Emergency Services, and Recovery	Medium
Initiative #8 – Coordinate with stakeholders for fuel reduction activities in and around power lines.					
Low	CAL FIRE, Safer, HMGP	Long-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High

4.12 ADDITIONAL COMMENTS

- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.
- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

5. SMITH RIVER PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN ANNEX

5.1 INTRODUCTION

This Annex details the planning elements specific to the Smith River Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

5.2 PLANNING TEAM POINTS OF CONTACT

The Smith River Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Smith River Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members **Community Meeting of Smith River Area**		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Chief Ron Simpson – Smith River Fire Protection District	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general CWPP; served as planning team member on CWPP development team.

Local Planning Team Members Community Meeting of Smith River Area		
Name / Representative	**Position/Title**	**Planning Tasks**
Alyce Pearson – Smith River Fire Protection District Volunteer	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general CWPP; served as planning team member on CWPP development team.
Geoff Antill, Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Jeramy Phillips, Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Jack Wilson, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Cindy Wilson, Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

5.3 PLANNING UNIT PROFILE

Smith River is a coastal community, with much of its outer area in agricultural land. It is the northern most community in coastal Del Norte, with a population of 2,000. The Smith River planning area is centered on the community of Smith River, just south of the Oregon border and east of the mouth of the river. The town center is located near Rowdy Creek. On the east it is bounded by Green Diamond Resource Company lands and the south by the Smith River.

This planning area is seeing significant development, especially on the hills facing the ocean. Recent subdivisions like Spyglass and Nautical Heights have only one principal access road, winding up the ridge with no alternate access. This is especially significant given that the eastern border of these developments is forested, making this a serious interface issue.

The western edge of Smith River is covered in agricultural land, where flower bulbs are principally grown, giving this community the title of "Easter Lily Capital of the World." The industry brings in approximately $6.6 million annually, making it one of the largest in the County.

Smith River was originally designated as a Community At Risk from wildfire by CAL FIRE and the California Fire Alliance in 2001.

5.4 PLANNING UNIT'S ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at risk in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components.

The Fire Hazard Severity Map (Figure 5-1) illustrates those areas of greatest concern throughout the Planning Unit. Local residents who attended the community meeting reviewed the map, and worked together to identify additional areas of concern, and the wildfire projects. The map also identifies the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process. In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 5-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 5-1
ADDITIONAL COMMUNITY-IDENTIFIED ASSETS AT RISK

Spyglass hillside	River Banks
Ruby Van Deventer Park	

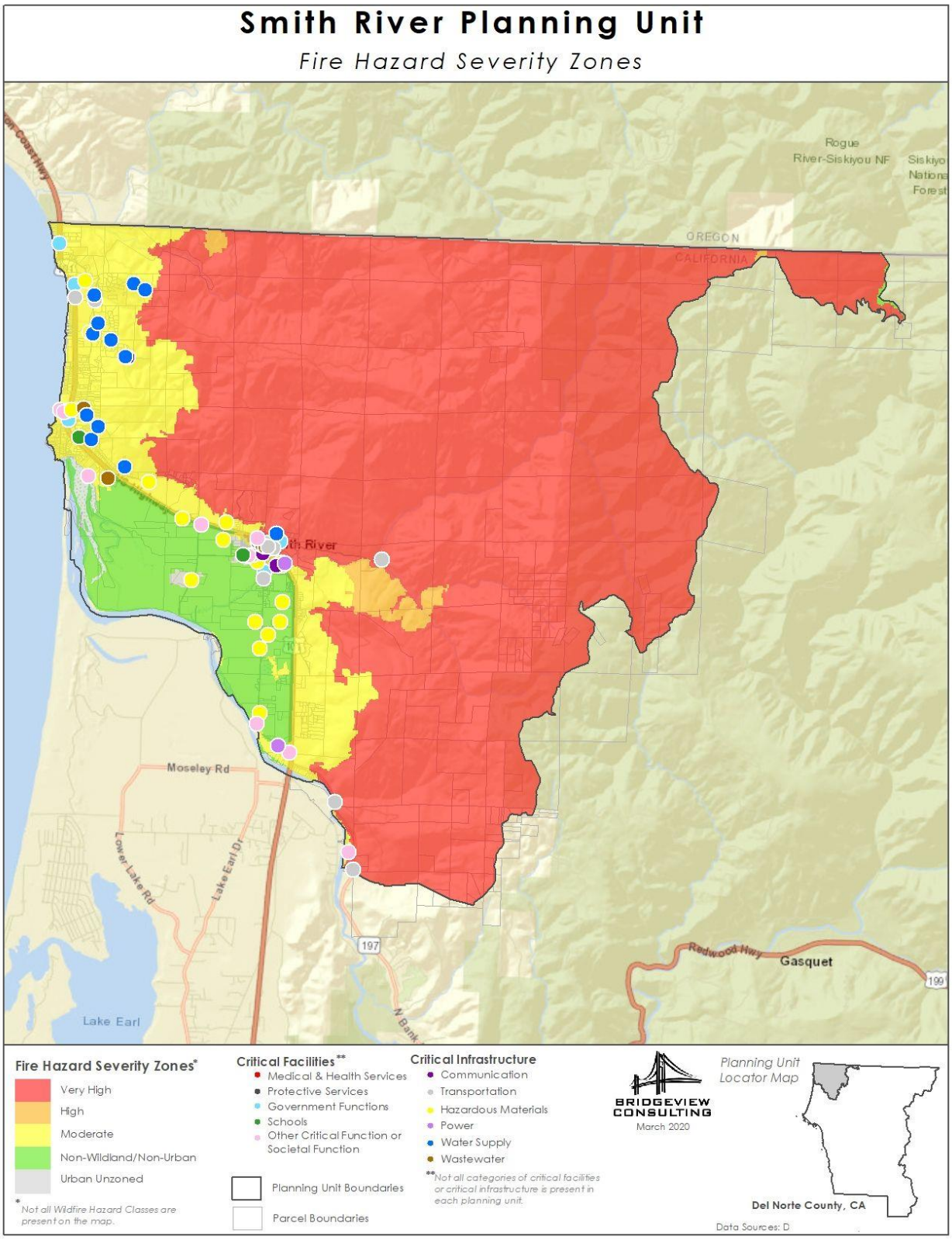


Figure 5-1 Smith River Fire Severity Zones and Critical Assets and Infrastructure

5.5 CURRENT WILDFIRE FIRE ENVIRONMENT

Figure 5-1 also identifies the current wildfire environment within the Smith River Planning Area. Specific areas of concern include those identified by community members in Table 5-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings.

TABLE 5-2
ADDITIONAL AREAS OF CONCERN

Alta, Alsars, and Fire Stations	Evacuation roads into and out of Spyglass
Water tanks on Spyglass	Cell towers on Spyglass Ridge
Highway 101 area	

5.6 FIRE HISTORY

Within the Base Plan, the Planning Team identified all historic wildfire events which have occurred within the County.

5.7 WATER SOURCES

The town water system has four wells, and 750,000 gallons total water storage (two 250,000, one 150,000, and several small tanks in subdivisions). There are water availability issues along Rose Lane, Knutsen Lane, High Meadow Drive, Rossini Lane, and Oma Lane. Many of these areas are on wells. Nautical Heights has a 100,000-gallon tank. Spyglass has 40,000- and 75,000-gallon tanks. There is a pond at the end of Sun River Road and a 10,000-gallon water tank on the road.

5.8 FIRE PROTECTION RESOURCES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 5-3 identifies local community fire protection resources available within the Planning Unit. Table 5-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

TABLE 5-3
LOCAL COMMUNITY FIRE PROTECTION RESOURCES

Personnel	Serves		Fire Apparatus
	Residents	Area	
Smith River Fire Protection District			
17 Volunteers 4 Paid position • Fire Chief (stipend) • Administrative Assistant (part-time) • Projects Administrator (part-time) • Maintenance Assistant (part-time)	2600	59 (27 s.m. in district; 32 s.m. SOI)	Structural Fire Engines – 2 Tenders – 2 Utility Vehicle – 1 Rescue – 2
Hiouchi Fire Protection District			
No information provided			
3rd Low Divide Road			
No information provided			

TABLE 5-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building and roads, all located within the CDD.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan

TABLE 5-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Specific equipment response plans.		
Water Shortage Contingency Plan.		
Education and Outreach		
Local citizen groups or non-profit organizations focused on emergency preparedness?		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the Fort Dick Fire District also provides information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Hazardous Vegetation Abatement Program		
Noxious Weed Eradication Program or other vegetation management		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by Smith River Community.
Defensible space inspections program	Yes	
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Smith River Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy
Other		

5.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 5-5. Each of the items identified themselves may become fundable projects.

TABLE 5-5
ISSUES OF CONCERN

	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	Yes - for Fire Stations.
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	Yes
Insufficient home address signs delay emergency response	Yes – Identified as a 2020 strategy.
Insufficient availability of fire protection water.	Yes
Additional equipment is necessary, such as: (identify)	Yes – New Tender for Smith River Fire Protection District (SRFPD). Updating existing Firefighter Personnel Protective Clothing for SRFPD. Replace existing Self-Contained Breathing Apparatus (SCBA) for SRFPD. Replacement small tools and equipment [wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression)] for SRFPD.

5.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the

area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire. It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

5.11 WILDFIRE PRIORITY PROJECTS AND STATUS OF PREVIOUS PROJECTS

Since the last plan was completed, the Planning Unit completed several of the projects identified previously. Many of those projects, due to the length of time since the last plan was updated, are now again viable projects, and identified as such below.

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 5-6 lists the action items/strategies that make up the district's hazard mitigation action plan, as well as the current status of the previous projects.

Information includes the actual action item, a qualitative assessment of the estimated cost (defined within the base plan), potential funding sources, the timeframe, and the type of initiative associated with each item. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

TABLE 5-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, indicate current status.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 - Seek out grant funding for generators at Alta, Alsars, and Fire Stations.					

TABLE 5-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, indicate current status.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Medium	CAL FIRE, Safer, HMGP, HLS	Long-term		Structural Projects, Property Protection, and Emergency Services	Medium
Initiative #2 - Seek out, develop, and maintain steady state funding for the fire district.					
High	CAL FIRE, Safer, HMGP, Tax revenue	Long-term		Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #3 - Seek out funding to assist us in remodeling an existing building to replace Fire Station 1.					
High	CAL FIRE, Safer, HMGP, Tax revenue	Long-term		Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #4 - Seek out funding to purchase replacement of small tools and equipment.					
Low	CAL FIRE, Safer, HMGP, Tax revenue	Short-term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #5 - Seek out training opportunities and funding for live fire exercises, code enforcement, fire investigation, First Responder (EMR), and EMT.					
Low	CAL FIRE, Safer, HMGP, Tax revenue	Long-term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #6 - Inspect, create, and improve evacuation roads in the Spyglass area.					

TABLE 5-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No If yes, indicate current status.	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
High	CAL FIRE, Safer, HMGP, Tax revenue	Long-term		Public Information, Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #7 - Create Defensible Area around the cell phone towers of Spyglass Hill.					
High	CAL FIRE, Safer, HMGP	Long-term		Public Information, Preventive Activities, Property Protection, and Emergency Services	High
Initiative #8 – Develop a signage program along Highway 101.					
Medium	CAL FIRE, Safer,	Short-term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #9 – Develop a signage program for property addresses not properly marked.					
Medium	CAL FIRE, Safer,	Short-term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Property Protection, and Emergency Services	Medium
Initiative #10 - Seek out funding to update Mobile radios.					
Medium	CAL FIRE, Safer, Tax revenue, HLS	Short-term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium

5.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/ VULNERABILITY

- Replacement of Water Tender for Smith River Fire Protection District (SRFPD).
- Updating existing Firefighter Personnel Protective Clothing for SRFPD.

- Replace existing Self-Contained Breathing Apparatus (SCBA) for SRFPD.
- Training Firefighter 1, First Responder (EMR), EMT for SRFPD personnel.
- Securing grant funding to assist SRFPD in remodeling an existing building to replace Fire Station 1. Assistance with exhaust removal systems, meeting furniture, electronic equipment, kitchen equipment, laundry equipment, office equipment, parking lot gate access, and signage.
- Securing funding to purchase replacement small tools and equipment [wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression)].
- Recruiting and retention of Volunteer Firefighters for SRFPD.

5.13 ADDITIONAL COMMENTS

The fire service organization and local community members have identified the following additional capabilities in place to help reduce the risk and vulnerability to wildfire:

- SRFPD personnel have been trained and equipped for water rescue.
- SRFPD personnel have been trained in big rig/bus extrication techniques.
- SRFPD personnel have been trained as Emergency Medical Technician (EMT).
- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.
- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

6. HIOUCHI PLANNING UNIT COMMUNITY WILDFIRE PROTECTION PLAN

6.1 INTRODUCTION

This Annex details the planning elements specific to the Hiouchi Area, a participating Planning Unit in the Community Wildfire Protection Plan (CWPP) developed by the Del Norte County Fire Wise Council. This Annex is not intended to be a standalone document, but rather appends to and supplements the information contained in the base plan document. As such, all sections of the base plan, including the planning process and other procedural requirements apply to and were met by the Planning Unit. For planning purposes, this Annex provides additional information specific to the communities contained within the Planning Unit, with a focus on providing greater details on the areas of risk and concern, and strategies for fire reduction activities for this Planning Unit only. This document serves as an update to the Planning Unit's previously completed plan. All relevant data has been updated with new information as appropriate and as identified within the planning process discussed in Volume 1.

6.2 PLANNING TEAM POINT(S) OF CONTACT

The Hiouchi Planning Area followed the planning process detailed in Section 2 of the Base Plan. In addition to providing representation on the overall Planning Team developing the CWPP, the Hiouchi Planning Area also formed their own internal planning team to support the broader planning process. Individuals assisting in this Annex development are identified below, along with a brief description of how they participated.

Local Planning Team Members **Community Meeting of Hiouchi Area**		
Name / Representative	**Position/Title**	**Planning Tasks**
Becky Barlow – Del Norte Fire Safe Council	Project Manager	Provide strategic direction; led community meetings; conducted outreach efforts to capture areas of concern
Cindy Henderson – Del Norte Fire Safe Council Coordinator	Project Coordinator	Provide strategic oversight; provided information on Fire Safe Council; assisted in coordination of meetings and served as scribe to capture minutes.
Chief Ron Simpson – Smith River Fire Protection District	Project Partner	Provide information on district; provided contact information; provided information on fire equipment, apparatus, needs and gaps; assisted in identifying potential areas of concern and risk; reviewed documents and provided input into overall general

Local Planning Team Members Community Meeting of Hiouchi Area		
Name / Representative	**Position/Title**	**Planning Tasks**
		CWPP; served as planning team member on CWPP development team.
Alyce Pearson – Smith River Fire Protection District	Project Partner	Provide direction and information, assisted with prioritization of strategies
Jeramy Phillips – Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Elaine Fallgren - Citizen	Community Host	Hosted event and served as POC to distribute and capture information, assisted in dissemination of community meeting, assisted with the capturing of information identifying areas of risk and potential projects.
Sheila Balent – Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Dee Kennedy - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Myrna Finley - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.
Mike Finley - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

Local Planning Team Members Community Meeting of Hiouchi Area		
Name / Representative	**Position/Title**	**Planning Tasks**
Adrien Nash - Citizen	Planning Team Member	Attended community meeting; provided information and input on areas of concern and development of strategies to help reduce fire risk.

6.3 PLANNING UNIT PROFILE

Hiouchi is a small town located along Highway 199, just east of the Jedediah Smith State Park old-growth redwood forest, at an elevation of 163 feet. The town straddles the highway and the main stem of the Smith River just west of the confluence of the South and Middle Forks. Highway 197—also known as North Bank Road—follows the Smith River from Highway 199 to Highway 101. The Highway 197 area is included in the Hiouchi planning area. Hiouchi is experiencing increasing development on both sides of the highway, including Hiouchi mountain on the north, South Fork, Howland Hill, and Douglas Park areas on the south side of the Smith River, and along North Bank Road. It is bordered by Redwood National and State Parks to the west and Smith River National Recreation Area to the north, east, and south.

Hiouchi was designated as a Community At Risk by the US Department of Interior in the *Federal Register* on August 17, 2001.

Hiouchi is situated on the Smith River and hence receives canyon winds; the afternoon breeze comes up the river. It is on the edge of the maritime climate, with the fog reaching the nearby redwoods, so it is cooler than Gasquet just a few miles upriver. There are significant amounts of development continuing to occur at a fairly rapid pace in nearly all directions from Hiouchi: along North Bank Road (Highway 197), south side of Smith River, Hiouchi Mountain north of town. Several of these areas have one-way in and out access and are in densely vegetated or steep terrain. Much of the development is happening in interface lands, with homes being built in forested areas, adjacent to either the Parks or Green Diamond Resources Company land. These neighborhoods will be very dangerous in a large wildfire event. The Planning Team feels that strong steps must be taken by the county to ensure that any future development along Highway 197 and 199 here is developed with fire safety in mind WUI building standards must be strictly enforced here. This includes many areas along Highway 197 and south of the Smith River such as Douglas Park. The Planning Team also felt that it is important for developers to cooperate and comply with the needs of local emergency personnel, such as Smith River FPD, to ensure the safety of future homeowners.

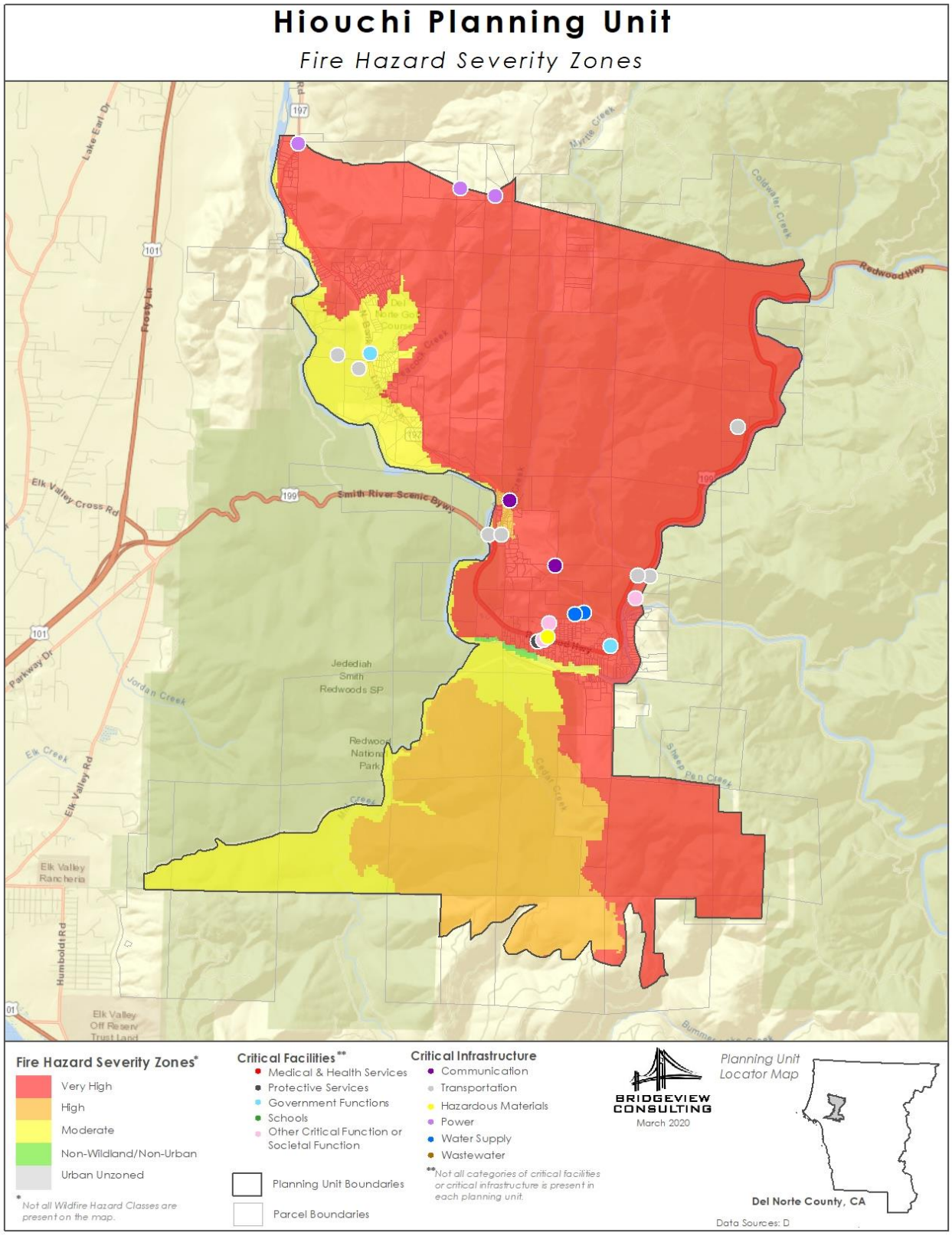


Figure 6-1 Hiouchi Fire Hazard Severity Zones and Critical Assets and Infrastructure

6.4 PLANNING UNITS ASSETS AT RISK

Assets and values at risk are those things that are important to the quality of life that can be threatened with destruction or loss from wildfire. These include a variety of things, such as homes, businesses, critical infrastructure, cultural sites, wildlife habitat, natural resources, air quality, recreational facilities and areas, historical structures, and any other important attribute that individual communities rely on for their well-being.

The majority of community assets at risk in the planning unit are residential homes, commercial and service industries, community or town centers, schools, and critical infrastructure components.

The Fire Hazard Severity Map (**Error! Reference source not found.**1) illustrates those areas of greatest concern throughout the Planning Unit. Local residents who attended the community meeting reviewed the map, and worked together to identify additional areas of concern, and the wildfire projects. The map also illustrates the location of the critical facilities at risk to wildfire. Critical facilities were identified through the recently completed hazard mitigation plan, and was thought to be the most detailed accounting for all local structures, and therefore utilized as the starting point in the process. In addition to the assets identified in the map, some of the key community-identified assets in the area identified by community members at public workshops are detailed in Table 6-1. The list is not intended to be a comprehensive list, but rather illustrates participating community members' concerns.

TABLE 6-1
ADDITIONAL COMMUNITY-IDENTIFIED ASSETS AT RISK

Covered Bridge	Jedediah Smith Redwoods State Park/Ranger Station
Hiouchi Businesses	Smith River FPD Stations #2 and #3
Hiouchi Café	Power line system
Hiouchi Community and Residences	Cell Towers
Hiouchi Water System (water tank and pump)	Highway 199 Egress
Myrtle Creek Botanical Area	Wild and Scenic Smith River
Hiouchi Hamlet	

6.5 CURRENT WILDFIRE FIRE ENVIRONMENT

Figure 6-1 also identifies the current wildfire environment within the Hiouchi Planning Area. Specific areas of concern include those identified by community members in Table 1-2. This list is not meant to be all encompassing, but rather provide some general areas of concern as identified by the community members present during meetings. There are scattered areas of Very High Fire Threat to the north and east of Hiouchi.

TABLE 6-2 ADDITIONAL AREAS OF CONCERN	
Jedediah Smith Redwoods State Park	Hiouchi Mountain Road to Ashford Road
Highway 197 and south to Douglas Park	Hiouchi Ridge Fuelbreak from Serpentine point off Hiouchi Mountain Road along the ridge to the northwest to USFS Road 17N23
Land in areas of communication and cell towers	Low Divide Road
Forest areas adjacent to Parks and Green Diamond Resources Company land	

6.6 FIRE HISTORY

Historically, the big fires in the Hiouchi community have been the Howard and Biscuit (2002) Fires. Some outer Hiouchi residents were evacuated during the Biscuit Fire.

6.7 WATER SOURCES

Water is an issue for many outlying areas of Hiouchi, as only central Hiouchi has a hydrant system. DNFSC installed two 2,500-gallon water tanks on Douglas Park, and four tanks on Low Divide and six on upper Ashford Road at Hyatt Heights. Christensen Way (a cul-de-sac) at the forks of the Smith River has a 25,000-gallon swimming pool and a 5,000-gallon pond; two houses to the west on Douglas Park there is another swimming pool. A residence on North Bank Road has a 25,000-gallon swimming pool. There are four irrigation ponds at the golf course on North Bank Road with 500,000 gallons storage. HRC Community Services District has eight tanks, with 75,000 to 85,000 gallons storage off Low Divide. Jed Smith Lane subdivision off North Bank Road has its own water system.

6.8 FIRE PROTECTION CAPABILITIES

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This section provides information on how planning mechanisms, policies, and programs are integrated into other on-going efforts. It also identifies the Unit's capabilities with respect to preparing and planning for, responding to, recovering from, and mitigating the impacts of hazard events and incidents.

Capabilities include the programs, policies and plans currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. The capabilities include regulatory capabilities which influence fire reduction; administrative and technical capabilities, including education and outreach, partnerships, and other on-going efforts; fiscal capabilities which support mitigation efforts, and classifications under various community programs. Table 1-3 identifies local community fire protection resources available within the Planning Unit. Table 1-4 identifies additional technical capabilities in place that are used to implement fire safety programs and community hazard-related information.

TABLE 6-3 LOCAL COMMUNITY FIRE PROTECTION RESOURCES			
Personnel	**Serves**		**Fire Apparatus**
	Residents	**Area**	
Smith River Fire Protection District			
17 Volunteers 4 Paid position • Fire Chief (stipend) • Administrative Assistant (part-time) • Projects Administrator (part-time) • Maintenance Assistant (part-time)			Structural Fire Engines – 2 Tenders – 1 Utility Vehicle – 1 Rescue – 2

TABLE 6-4 ADMINISTRATIVE AND TECHNICAL CAPABILITY		
Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Professionals trained in building or infrastructure construction practices.	Yes	Del Norte County Community Development Department (CDD), which includes engineers, planners, building and roads, all located within the CDD.
Warning Systems/Services (Reverse 9-1-1, outdoor warning signs or signals, flood or fire warning program, etc.?).	Yes	Through Del Norte County
Hazard data and information available to public.	Yes	Through both this CWPP and the Countywide Hazard Mitigation Plan
Education and Outreach		
Citizen Emergency Response Training (CERT)	Yes	Del Norte County Emergency Management has trained CERT and SAR members which can be deployed to areas as needed.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness)	Yes	The County has on-going public outreach campaigns; Fire Safe Council also provides information during various public events;

TABLE 6-4
ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available (Yes/No)	Department/Agency/Position
Multi-seasonal public awareness program?	Yes	Del Norte County Emergency Management has a seasonal awareness program; the Smith River Fire Protection Fire District also provides information to citizens throughout the year as events evolve during various community gatherings.
On-Going Mitigation Efforts		
Fire Safe Councils	Yes	
Chipper program	Yes	Fire Safe Council has chipper equipment which can be utilized by Hiouchi community.
Defensible space inspections program	Yes	
Identification of fire resistant building materials	Yes	Fire Safe Council distributes educational information concerning fire resistant materials and other efforts which citizens can do to reduce fire danger. Information was distributed during the Hiouchi Community Meeting
Fire Sprinkler Codes	Yes	California Building Standards Code
Address signage for property addresses	Yes	Identified as a 2020 strategy
Other		

6.9 COMMUNITY ISSUES OF CONCERN

The Planning Unit has identified issues of concern in Table 6-5. Each of the items identified themselves may become fundable projects.

TABLE 6-5
ISSUES OF CONCERN

	Yes/No Identify Area or Gap
Generators needed for backup power for water systems, fire hall	Yes - for Fire Stations.
Road access during emergency response sometimes difficult because of road conditions and lack of access permission.	Yes
Insufficient home address signs delay emergency response	Yes
Insufficient availability of fire protection water.	Yes

TABLE 6-5 ISSUES OF CONCERN	
	Yes/No Identify Area or Gap
Additional equipment is necessary, such as: (identify)	Yes – Replacement of Water Tender for Smith River Fire Protection District (SRFPD). Updating existing Firefighter Personnel Protective Clothing for SRFPD. Replace existing Self-Contained Breathing Apparatus (SCBA) for SRFPD. Replacement small tools and equipment [wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression)] for SRFPD.

6.10 EVACUATION

When wildfires have the potential to become disasters by threatening life and safety, procedures are initiated to support the safe evacuation of people, animals and livestock from potentially hazardous areas. During such events, community evacuation sites may be established where residents can go to survive a wildfire. Evacuation sites will be established in different locations depending on the anticipated path of the wildfire and location of affected population. The determination for the location of these sites is normally made by the County of Del Norte Emergency Operations Center Incident Commander, in cooperation with an Incident Management Team. The Sheriff and Emergency Officials will customarily use the County of Del Norte Alert Mass Community System, and potentially door-to-door methods to inform residents about the threat and where residents should go to take shelter.

Evacuation routes in the Planning Unit will depend on the location of the community at risk and law/fire recommendations, based on fire behavior, wind patterns, traffic and ingress of emergency vehicles. Poorly or inaccurately marked streets and intersections present a challenge for emergency responders. Roadways and driveways that are overgrown with flammable vegetation, and that have inadequate turn around spaces hampers firefighting capabilities. Other ingress and egress impediments may include steep road sections, fallen trees or power lines, wooden bridges, one-way in/out roadways and driveways that could inhibit evacuation and emergency response vehicles, or leave residents stranded should the roads become blocked. The potential for landslides in the area could also inhibit access, particularly if wildfires were initiated by an earthquake. It is extremely important for citizens to educate themselves with respect to the surrounding areas in which they reside. The best way for emergency personnel to alert you of an emergency in your area is to be contacted by email, text messages, landlines, or cellphone. A minimum of two uses are recommended, but you may elect all four. Evacuation notifications are geographically targeted, so if you receive notice to evacuate, it is important to take the advice of first responders, paying particular attention to the routes which should or should not be utilized. To sign up for notifications, visit: Prepare Del Norte at https://preparedelnorte.com/index.html

If a catastrophic incident occurs, it may be impossible to reach designated evacuation sites. If that is the case, people will need to make decisions on their own, seeking shelter where they can survive the passage of the wildfire.

It can be very difficult to determine the right thing to do as fire approaches, which is why it is critical to have a plan, and most importantly, evacuate early. Research options, and take to fire and emergency service representatives about evacuation procedures, expected fire behavior in their neighborhood, and what to do if they get trapped. Cal Fire and Idaho Firewise offer advice on what to do if you become trapped:

- https://www.readyforwildfire.org/prepare-for-wildfire/go-evacuation-guide/what-to-do-if-trapped/
- http://idahofirewise.org/evacuation/if-you-get-trapped/

6.11 WILDFIRE PRIORITY PROJECTS AND STATUS OF PREVIOUS PROJECTS

The community members within the Planning Unit identified and prioritized a wide range of actions based on the risk assessment, and their knowledge of the district assets and hazards of concern. Table 2-6 lists the action items/strategies that make up the district's hazard mitigation plan. Background information and information on how each action item will be administered, responsible agency/office (including outside the district), potential funding sources, the timeframe, and the type of initiative associated with each item are also identified. The community members also prioritized their projects based on a five-year implementation schedule on what they felt were high/ medium/ and low priority projects founded on their knowledge of the needs of the local community.

In addition to Planning Unit specific strategies, the group also identified countywide initiatives, which are contained within the primary body of the base plan.

TABLE 6-6
HAZARD MITIGATION ACTION PLAN MATRIX

Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #1 - Create Shaded Fuel Breaks around designated Community-identified Assets at Risk, including along Low Divide Road. This will serve as a fuel break between the new development of Highway 197 and the community of Hiouchi. It will also provide improved evacuation access for residents along the road and serve as an alternate route to Gasquet and possibly Hiouchi. In addition, Park Service should maintain shaded fuelbreak between Jedediah Smith Redwoods State Park and the town of Hiouchi. A shaded fuel break is also needed from Hiouchi Mountain Road to Ashford Road to connect to SRNF fuel break. This will help protect the community of Hiouchi from wildfires coming from SRNF or further north or northeast.					
High	CAL FIRE, Safer, HMGP	Short-Term	Yes - The Planning Area (PA) previously completed this effort to some degree, but the project is continual in nature.	Structural Project, Property Protection, and Natural Resource Protection	Medium

TABLE 6-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
Initiative #2 - Identify and create alternative evacuation routes for designated Community-identified Assets at Risk. This includes working with SRNF to identify alternate evacuation routes north from Hiouchi to Low Divide road, while protecting Myrtle Creek Botanical area.					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventive Activities, Property Protection, and Emergency Services	Medium
Initiative #3 – Ensure WUI Building Standards are strictly enforced in Community-identified Additional Areas of Concern.					
Low	CAL FIRE, Safer, HMGP	Long-Term		Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #4 – Develop additional water storage in Community-identified Additional Areas of Concern. This includes adding more water tanks in non-fire hydrant areas such as Douglas Park and the north end of Hwy 197.					
Medium	CAL FIRE, Safer, HMGP	Long-Term		Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #5 – Working with local residents, create Defensible Areas in Community-identified Additional Areas of Concern. Residents in the Hiouchi area must be diligent in creating and maintaining their defensible space. For those in interface areas with forest and brush close to their homes, this should be to a minimum of 100 feet. Residents must also be diligent about their road clearances to ensure emergency vehicles access.					

TABLE 6-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventive Activities, Property Protection, and Emergency Services	High
Initiative #6 - Create Fuel Breaks on main road and ridge top systems. Working with SRNF, maintain the 200 ft wide Hiouchi Ridge Fuelbreak from Serpentine point off Hiouchi Mountain Road along the ridge to the northwest to tie into road 17N23, where SRNF has created a firebreak along the top of this road for one and a half miles.					
High	CAL FIRE, Safer, HMGP	Long-Term	Yes - The PA previously completed this effort to some degree, but the project is continual in nature.	Public Information, Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #7 - Coordinate with stakeholders for fuel reduction activities in and around power lines. Pacific Power and Light should keep the corridor of power lines clear					
Low	CAL FIRE, Safer, HMGP	Long-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #8 - Coordinate with stakeholders for fuel reduction activities in and around communication and cell towers.					
Low	CAL FIRE, Safer, HMGP	Long-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	High
Initiative #9 - Seek out, develop, and maintain steady state funding for the fire district.					
High	CAL FIRE, Safer, HMGP, Tax revenue	Long-Term		Public Information, Preventive Activities, Structural Projects, Property Protection,	High

TABLE 6-6 HAZARD MITIGATION ACTION PLAN MATRIX					
Estimated Cost (High/ Medium/ Low	Source of Funding? (List grants that may be utilized)	Timeline Short-Term or Long-Term	Initiative included in Previous Plan? Yes or No	Initiative Type: Public Information, Preventive Activities, Structural Projects, Property Protection, Emergency Services, Recovery, Natural Resource Protection	Priority of project based on Community Discussions High/ Medium/ Low
				Emergency Services, Recovery, and Natural Resource Protection	
Initiative #10 - Seek out funding to purchase replacement of small tools and equipment.					
Medium	CAL FIRE, Safer, HMGP, Tax revenue	Short-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #11 - Seek out training opportunities and funding for live fire exercises, code enforcement, fire investigation, First Responder (EMR), and EMT.					
Low	CAL FIRE, Safer, HMGP, Tax revenue	Long-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium
Initiative #12 - Seek out funding to update Mobile radios.					
Medium	CAL FIRE, Safer, HMGP, Tax revenue	Short-Term		Preventive Activities, Property Protection, Emergency Services, Recovery, and Natural Resource Protection	Medium

6.12 FUTURE NEEDS

- Replacement of Water Tender for Smith River Fire Protection District (SRFPD).
- Updating existing Firefighter Personnel Protective Clothing for SRFPD.
- Replace existing Self-Contained Breathing Apparatus (SCBA) for SRFPD.
- Training Firefighter 1, First Responder (EMR), EMT for SRFPD personnel.

- Securing grant funding to assist SRFPD in remodeling an existing building to replace Fire Station 1. Assistance with exhaust removal systems, meeting furniture, electronic equipment, kitchen equipment, laundry equipment, office equipment, parking lot gate access, and signage.
- Securing funding to purchase replacement small tools and equipment [wild land tools, water bags, mop-up kits, water rescue throw bags, wilderness patient extraction (one-wheeled liter), Compressed Air Foam (slide-in unit for fire suppression)].
- Recruiting and retention of Volunteer Firefighters for SRFPD.

6.13 ADDITIONAL COMMENTS

The fire service organization and local community members have identified the following additional capabilities in place to help reduce the risk and vulnerability to wildfire:

- SRFPD personnel have been trained and equipped for water rescue.
- SRFPD personnel have been trained in big rig/bus extrication techniques.
- SRFPD personnel have been trained as Emergency Medical Technician (EMT).
- California Department of Forestry and US Forest Service will conduct free fire inspections of homes.
- Del Norte Fire Safe Council has Homeowner's Checklist available to interested property owners.
- Del Norte Fire Safe Council has "Before, During and After" flyers for interested citizens.
- National fire threads are available for water stands.
- Del Norte Fire Safe Council has a Chipper program and chippers available at the cost of diesel fuel for property owners to use.
- Del Norte Fire Safe Council has chainsaws, hedge trimmers, weed eaters, and various safety equipment available at no cost for fuel reduction activities by property owners.

A. ACRONYMS

The following acronyms are used throughout the annexes in this volume:

AFG—Assistance to Firefighters Grant Program
BIA—Bureau of Indian Affairs
BRIC - Building Resilient Infrastructure and Communities
Cal OES—California Office of Emergency Services
CCFR —Crescent City Fire & Rescue
CCHD—Crescent City Harbor District
CDBG—Community Development Block Grant
CDD—Del Norte County Community Development Department
CDWR—California Department of Water Resources
CFPD—Crescent Fire Protection District
COOP/COG—Continuity of Operations and Continuity of Government
DNCC—Del Norte County Code
DNFSC – Del Norte Fire Safe Council
EMPG—Emergency Management Performance Grants
EVR—Elk Valley Rancheria
FAA—Federal Aviation Administration
FHWA—Federal Highway Administration
FMA—Flood Mitigation Assistance Grant Program
FMAG—Fire Management Assistance Grant Program
GCSD—Gasquet Community Services District
IHS—Indian Health Service
HMA—Hazard Mitigation Assistance
HMGP—Hazard Mitigation Grant Program
HSGP—Homeland Security Grant Program
NOAA—National Oceanic and Atmospheric Administration
NRCS—Natural Resources Conservation Service
PA (C-G)—Public Assistance Categories C through G
PDM—Pre-Disaster Mitigation replaced August 2020 with Building Resilient Infrastructure and Communities
PVC—Polyvinyl chloride
SAFECOM—U.S. Department of Homeland Security program for emergency communications interoperability
SAFER—Staffing for Adequate Fire & Emergency Response Grants
SCADA—Supervisory control and data acquisition
SRCSD—Smith River Community Services District
SRFPD—Smith River Fire Protection District
TDN—Tolowa Dee-ni' Nation
USDA—U.S. Department of Agriculture