

NOTE TO READERS

This document represents the main body (*Parts 1, 2, and 3*) of the 2019 Humboldt County Community Wildfire Protection Plan.

To view or download the remainder of the plan, including the individualized action plans for each of the county's 14 planning units (*Part 4: Planning Unit Action Plans*), details regarding the Risk Assessment (*Part 5: Risk Assessment Detail*), and background information (*Part 6: Appendices*), visit:

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN

<https://humboldtgov.org/FirePlanFinal>

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

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PART 1—Background and Introduction

1.1 INTRODUCTION

In 2002, the Humboldt County Board of Supervisors formed the Humboldt County Fire Safe Council (HCFSC) to oversee the preparation of a countywide plan to support the development and implementation of community fire-safe programs and activities. The third edition of this plan, now known as the Humboldt County Community Wildfire Protection Plan, or CWPP, has been thoroughly revised under the direction of the HCFSC to incorporate new information and understanding of wildfire risks and to update the overall strategy for preparedness and response. The purpose of the CWPP is to inspire and guide actions that will help mitigate the potential for wildfire loss in all vulnerable communities within the boundaries of Humboldt County.

Why Does Humboldt County Need a CWPP?

According to the 2018 Strategic Fire Plan for California, “loss of life and structures as a direct or proximate result of wildland fires is at an all-time high,” and “recent trends have shown an increase in the number of ignitions, area burned, and impacts to ecosystems.”² It is fortunate that Humboldt County communities and wildlands have avoided, thus far, the significant losses experienced by neighboring counties during the last few years. This CWPP’s risk assessment concludes that weather and fire patterns, together with Humboldt County’s rugged topography and dense fuel loads, combine to create a generally high fire risk during dry parts of the year. There are indications that the level of risk could continue to grow in the face of climate change, increasing fuel loads, the spread of forest diseases such as sudden oak death, and continued residential and commercial development in the *wildland urban interface* (WUI).

Currently, there are periods of high fire risk for every Humboldt County community, including coastal areas, when conditions are just right for a single fire ignition to have potentially devastating consequences. It is also becoming increasingly common that,

ACKNOWLEDGING AND LEARNING FROM THE LOSSES OF OUR NORTHERN CALIFORNIA NEIGHBORS¹

Butte County:

Camp Fire (November 2018): Most destructive and deadliest California wildfire.
153,336 acres, 18,804 structures lost, 86 lives lost.

Mendocino County:

Mendocino Complex (July 2018): Largest California wildfire.
459,123 acres, 280 structures lost, 1 life lost.
Redwood Valley Fire (October 2017): Twentieth most destructive and eleventh deadliest California wildfire.
36,523 acres, 546 structures lost, 9 lives lost.

Napa and Sonoma Counties:

Tubbs Fire (October 2017): Second most destructive and fourth deadliest California wildfire.
36,807 acres, 5,636 structures lost, 22 lives lost.

Shasta and Trinity Counties:

Carr Fire (July 2018): Eighth most destructive and fourteenth deadliest California wildfire.
229,651 acres, 1,604 structures lost, 8 lives lost.

Sonoma County:

Nuns Fire (October 2017): Ninth most destructive California wildfire. 54,382 acres, 1,355 structures lost, 3 lives lost.

Napa and Solano Counties:

Atlas Fire (October 2017): Fourteenth most destructive and fifteenth deadliest California wildfire.
51,624 acres, 783 structures lost, 6 lives lost.

Wildland-Urban Interface (WUI): The zone where structures and other human developments meet, or intermingle with, undeveloped wildlands.

¹ CAL FIRE Incident Information. (2018) Retrieved from http://cdfdata.fire.ca.gov/incidents/incidents_statsevents

² 2018 Strategic Fire Plan for California. (2018). [PDF]. Retrieved from <http://cdfdata.fire.ca.gov/pub/fireplan/fpupload/fpppdf1614.pdf>

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during times of high fire danger in Humboldt County, a large portion of local and state firefighting resources are committed to other incidents throughout the state. A wildfire ignition during one of these periods, when resources are stretched thin, could potentially spread quickly, threatening citizens' lives, as well as homes, schools, and businesses.

Humboldt County attracts residents and visitors with its natural assets such as beaches, redwoods, rivers, mountains, forests, oak woodlands, and high prairies. Over the years, many homes have been built here, often intermixed with these beautiful wildlands. Every year, these homes and natural assets are increasingly vulnerable to damage or loss from wildfire.

This CWPP is intended to raise awareness about this increasing risk and provide guidance for addressing it. The level of risk varies from one area of the county to another and each community's relationship with wildfire is different. An enhanced understanding of wildfire's role in the environment will help distinguish situations where wildfire is undesirable due to unacceptable risks and situations where fire can be beneficial for reducing fuel loads and creating more fire-resilient landscapes.

Through the risk analysis and identification of action steps intended to minimize risks to communities, this CWPP will be a useful tool for residents, local Fire Safe Councils, tribes, wildfire management and protection agencies, county policy makers and planners, and other partners. Working together, Humboldt County can prepare for wildfire so it is not a disaster for communities or the environment.

What This CWPP Is Not:

While there is a supportive relationship between this CWPP and other plans, it is important to be clear that this CWPP is not intended to replace or be a substitute for any of the following plans or plan types:

- The Humboldt County Emergency Operations Plan or Disaster Contingency Plans,
- An incident-specific, local, or countywide evacuation plan,
- The Humboldt Operational Area Hazard Mitigation Plan,
- The Humboldt County General Plan Safety Element,
- A pre-fire attack plan intended to be used as one of many tools to guide emergency responders during wildfire suppression efforts, and/or
- A fuels or forest management plan.

1.1.1 PLAN CONTEXT

This plan meets the three minimum requirements of Community Wildfire Protection Plans as set forth in the federal Healthy Forests Restoration Act of 2003. This CWPP:

1. Is developed through a collaborative process,
2. Prioritizes areas for hazardous-fuel reduction, and
3. Identifies actions to reduce structural ignitability.

For a detailed description of the federal CWPP requirements, see Appendix A.

1.1.2 CWPP PURPOSE, GOALS, AND OBJECTIVES

Purpose

This Humboldt County Community Wildfire Protection Plan (CWPP) is intended to inspire and guide actions that will help mitigate the potential for wildfire loss in all vulnerable communities within the boundaries of Humboldt County.

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Goals

With the implementation of the actions identified in this CWPP, the Humboldt County Fire Safe Council and its collaborators are working towards the following goals for 2018–2023:

1. **WILDFIRE IGNITION PREVENTION:** REDUCE HUMAN-CAUSED WILDFIRE IGNITIONS.
2. **WILDFIRE PREPAREDNESS:** INCREASE COMMUNITY RESILIENCE AND ADAPTATION TO WILDFIRE.
3. **DISASTER PREPAREDNESS:** INCREASE RESIDENTS' ABILITY TO EFFECTIVELY PREPARE FOR AND SURVIVE WILDFIRE.
4. **FIRE PROTECTION:** SUPPORT FIRE-PROTECTION SERVICES FOR PEOPLE, PROPERTY, COMMUNITIES, AND NATURAL RESOURCES.
5. **RESTORATION OF BENEFICIAL FIRE:** RESTORE BENEFICIAL FIRE AT THE LANDSCAPE SCALE.
6. **INTEGRATED PLANNING:** MAXIMIZE INTEGRATION OF PLANNING EFFORTS TO IMPROVE COMMUNITY AND ECOSYSTEM RESILIENCE TO WILDFIRE.

Objectives

Objectives are statements of desired future activity and conditions in pursuit of the above goals. The Humboldt County Fire Safe Council is working towards the following core objectives to be achieved by 2023:

OBJECTIVE 1

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL SUPPORT EFFORTS TO REDUCE THE RATE OF HUMAN-CAUSED WILDFIRE IGNITIONS THROUGH EDUCATIONAL OUTREACH AND OTHER COLLABORATIVE PROJECTS.

OBJECTIVE 2

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL FACILITATE COMMUNITY WILDFIRE PREPAREDNESS, RESILIENCE, AND ADAPTATION TO WILDFIRE BY SUPPORTING AND PROMOTING FIRE SAFE COUNCILS, FIREWISE® AND FIRE ADAPTED COMMUNITIES, AND OTHER ACTIVITIES TO REDUCE STRUCTURAL IGNITABILITY AND HAZARDOUS FUELS.

OBJECTIVE 3

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL ASSIST ITS COLLABORATORS IN DEVELOPING AND IMPLEMENTING STRATEGIES TO HELP RESIDENTS EFFECTIVELY PREPARE FOR AND SURVIVE WILDFIRE.

OBJECTIVE 4

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL SUPPORT ITS COLLABORATORS IN INCREASING FIRE AGENCIES' CAPACITY TO PROVIDE FIRE-PROTECTION SERVICES FOR ALL PEOPLE, PROPERTY, COMMUNITIES, AND NATURAL RESOURCES.

OBJECTIVE 5

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL FOSTER WILDFIRE RESILIENCE THROUGH EDUCATION AND PROMOTION OF ECOSYSTEM-RESTORATION ACTIVITIES, INCLUDING HAZARDOUS-FUEL REDUCTION, PRESCRIBED FIRE, AND MANAGED WILDFIRE WHERE APPROPRIATE.

OBJECTIVE 6

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL COOPERATE TO IMPROVE COMMUNITY AND ECOSYSTEM RESILIENCE TO WILDFIRE BY COORDINATING PLANNING EFFORTS AMONG LOCAL, STATE, REGIONAL, TRIBAL, AND FEDERAL STAKEHOLDERS, INCLUDING THOSE IDENTIFIED IN THIS CWPP.

1.1.3 PLAN ORGANIZATION

This CWPP is organized into the following six parts.

Part 1: Background and Introduction

WHAT: *Part 1* provides an overview of what a CWPP is, why it's necessary, and its audience. It describes the process used to develop this edition of Humboldt County's CWPP and delivers a progress report on the actions implemented since the 2013 CWPP.

AUDIENCE: *Part 1* is for everyone. Anyone who picks up this CWPP as a resource to support wildfire preparedness should read *Part 1* to understand the purpose of this plan; its place in the context of wildfire planning, mitigation, and resiliency; and which parts of the plan will provide them with what they need to prepare themselves and their families, homes, and communities for wildfire.

Part 2: Risk-Assessment Summary

WHAT: *Part 2* is a summary of the risk assessment detailed in *Part 5*, including a table of identified issues and priority needs for each of the four chapters of *Part 5*. The issues and needs identified in the risk assessment informed the priority actions in *Part 3*. It is assumed that a basic understanding of local wildfire risks and hazards will inspire Humboldt County residents to prepare for the eventuality of wildfire.

AUDIENCE: *Part 2* is recommended for anyone who is interested in an overview of the wildfire risks and hazards for Humboldt County communities. It is written as an introduction and summary for concerned residents who want a better understanding of local wildfire issues. It is also written as a summary for decision makers, both locally and beyond, regarding the factors that affect wildfire preparedness and response in Humboldt County.

Part 3: Countywide Action Plan

WHAT: *Part 3* is divided into six chapters based on the goals in *section 1.1.2* above. Each chapter identifies a set of metrics and priority actions to meet the goals and objectives of the HCFSC over the next five years. It is designed as the five year, strategic work plan for the HCFSC to guide its actions and measure its success. A more detailed version of each action plan, including potential action steps, is found in *Appendix O*. The implementation of *Part 3* is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action. It is also important to note that any vegetation treatment recommended in this CWPP must be undertaken with the consent and involvement of the property owner, and under observance of all applicable local, Tribal, state, and federal laws and/or regulations.

Part 3 is made up of the following chapters:

- | | |
|----------------------------------|------------------------------------|
| 3.1 Wildfire Ignition Prevention | 3.4 Fire Protection |
| 3.2 Wildfire Preparedness | 3.5 Restoration of Beneficial Fire |
| 3.3 Disaster Preparedness | 3.6 Integrated Planning |

AUDIENCE: *Part 3* is for the members of the HCFSC and their potential implementation partners. The HCFSC's involvement in the implementation of each priority action ranges from supporting the efforts of other agencies and organizations that have primary responsibility, to leading the action implementation. All are welcome to join the HCFSC as it further evaluates action item recommendations, develops more detailed work plans, secures funding, and implements the **Countywide Action Plan**.

Part 4: Planning Unit Action Plans

WHAT: *Part 4* contains information on local fire risks and preparedness for each of the 14 planning units within Humboldt County, functioning as a “mini-CWPP” for each. Each **Planning Unit Action Plan** includes a brief introduction to the planning area, discusses its wildfire environment, community preparedness, wildfire-protection capabilities, and evacuation issues and options, concluding with a list of *Priority Action Recommendations*. Additionally, potential actions organized under the CWPP goals identified in *section 1.1.2* above are included in an *Action Catalogue* for each. The feasibility analysis and implementation of the action recommendations made by these plans will be subject to the availability of funds and other resources, and the willingness and ability of community members and plan partners to take action. It is also important to note that any vegetation treatment recommended in this CWPP must be undertaken with the consent and involvement of the property owner, and under observance of all applicable local, Tribal, state, and federal laws and/or regulations.

Part 4 is made up of the following chapters:

- | | | | |
|-----|-------------------------|------|----------------------|
| 4.1 | Orick–Redwood Park | 4.8 | Humboldt Bay Area |
| 4.2 | Upper Yurok Reservation | 4.9 | Kneeland–Maple Creek |
| 4.3 | Mid Klamath | 4.10 | Eel |
| 4.4 | Hoopa | 4.11 | Mad–Van Duzen |
| 4.5 | Trinidad | 4.12 | Mattole–Lost Coast |
| 4.6 | Redwood Creek | 4.13 | Southern Humboldt |
| 4.7 | Willow Creek Area | 4.14 | Avenue of the Giants |

AUDIENCE: Each *Planning Unit Action Plan* contained in *Part 4* is a resource for local residents that can be used as a strategic action plan for community-based wildfire preparedness. These plans are intended for use by community members, organizations, and agencies working and living within each unit. It is the intention of the HCFSC that one or more local groups be sustained within each planning unit to lead local action. It is understood that some units have more capacity than others. The HCFSC, with individual members from higher-capacity areas, can provide guidance for building capacity where needed. Anyone who is developing projects and/or seeking funding can use their area’s *Planning Unit Action Plan* as a resource for grant applications.

Part 5: Risk-Assessment Detail

WHAT: *Part 5* describes the planning-area context in a qualitative assessment of the factors that contribute to wildfire in Humboldt County. It explores issues such as structural ignitability, marijuana production, sudden oak death, and climate change, and their impact to local wildfire risk. It includes detailed information on what is at risk, fire history and behavior, response capacity, and community preparedness in the face of wildfire.

Part 5 is made up of the following chapters:

- | | | | |
|-----|---------------------------|-----|----------------------------------|
| 5.1 | Assets and Values at Risk | 5.3 | Wildfire-Protection Capabilities |
| 5.2 | Wildfire Environment | 5.4 | Community Preparedness |

AUDIENCE: Anyone interested in a more thorough understanding of the factors contributing to wildfire risk and hazard in Humboldt County is encouraged to read *Part 5*. The detailed information and references in *Part 5* are a resource for grant writing and community preparedness project development.

Part 6: Appendices

WHAT: *Part 6* contains background and supporting information for the rest of the plan. The main body of the CWPP was streamlined as part of this latest update to make it more user-friendly and accessible to a wider audience. However, there are details that the HCFSC did not want to lose; those are now found in the appendices.

Of particular note is *Appendix H, Living with Wildfire*, which is a stand-alone guide that can be used independent of the rest of the CWPP. It contains resources for enhancing fire-safety awareness, reducing structural ignitability, and advice on how to meet local and state legal standards while preparing your home and property for the eventuality of wildfire.

Part 6 is made up of the following chapters:

- A CWPP Requirements
- B Planning Process Details
- C Accomplishments Since Last Plan
- D Background Information for Assets and Values at Risk
- E Background for Wildfire Environment
- F Climate Research Summary
- G Background for Wildfire Protection
- H Living with Wildfire
- I Regulations and Compliance
- J Humboldt County SRA Fire-Safe Regulations
- K Public Resource Code (PRC) 4291
- L Acronyms
- M Glossary
- N References
- O Countywide Action Plan Detail

PARTICULARLY IMPORTANT READING FOR HUMBOLDT RESIDENTS

Part 4: Planning Unit Action Plans contains information on local fire risks and preparedness for each of the 14 planning units within Humboldt County. Each *Planning Unit Action Plan* is a resource for local residents that can be used as a strategic action plan for community-based wildfire preparedness.

Appendix H, Living with Wildfire is an excellent resource for residents and property owners. It is a stand-alone guide, which can be used independent of the rest of the CWPP. It serves as a useful handbook for homeowners who want to take action to prepare their families, homes, and surrounding landscapes to successfully co-exist with wildfire. It contains resources for enhancing fire-safety awareness, and advice on how to meet local and state legal standards while preparing your family, home, and property for the eventuality of wildfire.

AUDIENCE: The appendices contained in *Part 6* can be used by anyone who is interested in the details behind the main body of the CWPP. It is intended to serve as a reference for grant writing and project development. *Appendix H, Living with Wildfire* is a resource for residents and property owners who want to take action to prepare their families, homes, and surrounding landscapes to successfully co-exist with wildfire. *Appendix O* is designed to facilitate easier implementation of the priority actions of *Part 3*.

PARTICULARLY IMPORTANT READING FOR ANYONE PLANNING A HAZARDOUS FUELS REDUCTION PROJECT

Before engaging in wildfire hazard-reduction activities such as clearing vegetation, consult *Appendix I, Regulations and Compliance*. Performing fuel-reduction projects or other wildfire-protection activities, although advisable and sometimes required, can have an adverse impact on the environment. It is important to be aware of federal, state, and local laws to safeguard the environment. The most important relevant policies and regulations are described in this appendix.

1.1.4 CWPP HISTORY

This CWPP is the second update, or third version of the Humboldt County Community Wildfire Protection Plan.

2006 Humboldt County Master Fire Protection Plan

The original Humboldt County CWPP was called the *Humboldt County Master Fire Protection Plan* (MFPP). The need for a countywide fire plan was born out of the Humboldt County General Plan update (GPU) process. During the GPU community-scoping meetings, members of the Humboldt County Board of Supervisors and county planners heard from community members that there were serious challenges in rural areas related to local fire protection. In addition, the destructive wildfire season of 2002 led to a statewide mobilization encouraging all Californians to make their homes, neighborhoods, and communities fire safe. These factors, combined with the availability of outside funding, provided the motivation for the county to draft its first fire plan under the guidance of the Humboldt County Fire Safe Council, which was formed for this purpose. The effort brought together for the first time local Fire Safe Councils (FSCs), fire departments, and other key players in wildfire management and community protection at the countywide scale.

2006 MFPP Highlights:

- ❖ The MFPP was intended to serve as a guiding document for reducing the risk of wildfire to local communities, to support local fire service, and to develop policy recommendations to be integrated into the General Plan update.
- ❖ Consultant services for the initial development of the plan were provided by Plan West Partners and RNB Special Data Inc.
- ❖ Public outreach facilitation and completion of the plan were provided by ForEverGreen Forestry.
- ❖ The risk-assessment portion of the MFPP was prepared using a quantitative Risk Assessment and Mitigation Strategies (RAMS) model, which divided the county into 11 planning compartments for analysis.
- ❖ Twenty-four community workshops were held around the county in 2004 and 2005 to educate residents on fire-safety issues, using a mapping process to understand local issues and identify risks, hazards, and priority actions from the community perspective.
- ❖ The MFPP process surveyed local fire service to document their resources and needs.

2013 CWPP

The first update of the Humboldt County CWPP began in 2012 and was completed in 2013. The significant changes in that CWPP included:

- ❖ The MFPP title was changed to CWPP to align with the guidelines of the Healthy Forest Restoration Act.
- ❖ ForEverGreen Forestry provided consultant services to draft the updated plan based on a style developed through statewide experience.
- ❖ The RAMS risk assessment was replaced by a more qualitative analysis based on California Department of Forestry and Fire Protection (CAL FIRE) data and local knowledge and experience.
- ❖ The 11 RAMS planning compartments were reorganized into 13 planning units more reflective of local FSC boundaries and local fire agency jurisdictions.
- ❖ Thirteen *Planning Unit Action Plans* were developed to be used by local communities as the functional equivalent of their local CWPP.
- ❖ Sixteen community meetings were held in 2012 to share information and to update the previously identified risks, hazards, values, assets, and priority projects using a similar community mapping exercise.
- ❖ The format was changed to be more user-friendly to encourage the Plan's use by local FSCs and other community members.

2019 CWPP

This CWPP is the second update, or third version of the Humboldt County plan. The major revisions to the 2013 plan include:

- ❖ A focus on further streamlining the document and making it more useful to support local fire safety and fire protection practitioners and other plan partners.
- ❖ Planning units were increased to 14; the northern part of the Southern Humboldt unit was carved out to create the new Avenue of the Giants unit.
- ❖ An online wildfire-preparedness survey was provided on Open Humboldt.
- ❖ Fourteen community workshops were held in 2017 to share information and further update the risks, hazards, values, assets, and priority projects identified in the two previous planning efforts of 2004-2005 and 2012.
- ❖ Laptops were available at most workshops for reviewing the CWPP geographic information system (GIS) data on the Humboldt GIS Portal, to register with Humboldt Alert emergency notification system, and to complete the Open Humboldt survey.
- ❖ The County Office of Emergency Services (OES) was an active participant in all the community workshops, providing an emphasis on evacuation preparedness.
- ❖ Several local Fire Safe Councils and fire departments used the workshops as a fundraising opportunity and provided meals for purchase or donation.
- ❖ Background information was included specifically for plan partners to use in funding applications.
- ❖ Metrics were added to the Action Plans, and potential implementation steps and outcomes were defined for each priority action to facilitate their successful completion over the next five years.

1.2 COLLABORATIVE PLANNING PROCESS

This plan is an update to the 2013 Humboldt County CWPP. It was guided by the Humboldt County Fire Safe Council, with staff support provided by the Humboldt County Department of Public Works, Environmental Services and consultant services provided by ForEverGreen Forestry.³

1.2.1 HUMBOLDT COUNTY FIRE SAFE COUNCIL'S ROLE

The Humboldt County Fire Safe Council, or HCFSC as it is referred to in this plan, provided overall guidance for this CWPP update. The CWPP was the main focus of the HCFSC's efforts from its quarterly meeting in April 2017 through plan approval in early 2019. Background information on the HCFSC can be found on its website <https://humboldtgov.org/FireSafeCouncil>, the "Humboldt County Fire Safe Council" Facebook page, and *section 5.4.1 of Chapter 5.4 Community Preparedness*.

CWPP Update Committee

The CWPP Update Committee, comprised of HCFSC members, provided guidance for the CWPP update and made relevant decisions between the quarterly HCFSC meetings, as necessary. The Committee met three times between May and September 2017 to begin this process. At these meetings, the Committee discussed:

- What worked and didn't work with the 2013 CWPP,
- What the HCFSC needed from this updated CWPP, and
- Any changes they thought would make this CWPP a more useful strategic plan for the HCFSC and its partners.

The Update Committee provided guidance in the development of the table of contents, purpose, goals, and objectives (later approved by the entire HCFSC), and the community-outreach process (*see*

³ ForEverGreen Forestry: www.forevergreenforestry.com

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section 1.2.2 Community-Outreach Process below). For more information on the Update Committee, see *Appendix B.1*.

Finally, the Update Committee reviewed the planning units used in the 2013 CWPP and proposed the division of *Planning Unit 13, Southern Humboldt*, into two units, adding *Planning Unit 14, Avenue of the Giants*. The list of planning units is shown in the table below. These are also illustrated on *Map 1.2.1, CWPP Planning Units* (below).

FIGURE 1.2.1 CWPP PLANNING UNITS	
1. Orick–Redwood Park	8. Humboldt Bay Area
2. Upper Yurok Reservation	9. Kneeland–Maple Creek
3. Mid Klamath	10. Eel
4. Hoopa	11. Mad–Van Duzen
5. Trinidad	12. Mattole–Lost Coast
6. Redwood Creek	13. Southern Humboldt
7. Willow Creek Area	14. Avenue of the Giants

Community Project Team

The Community Project Team was an informal group of technical experts and community representatives who were consulted on a case-by-case basis as needed. Their role was more advisory in nature, while final decisions were the responsibility of the CWPP Update Committee and/or the HCFSC. Members of this group provided advice during the development of the Open Humboldt wildfire-preparedness survey, the community-outreach strategy, the risk-assessment approach and content, and the countywide action plan.

CWPP Work Groups

At the HCFSC's October 2017 meeting, the six new goal areas (*see section 1.1.2 above*) were approved and Work Groups formed around each of these goals to replace the existing HCFSC committee structure. (*For a list of current HCFSC Work Groups and previous HCFSC committees, see Figure 5.4.2 in Chapter 5.4, Community Preparedness.*)

From October 2017 through July 2018, the six Work Groups met via conference calls and email to flesh out the details of the Goals and Objectives language shown earlier in this chapter. They then identified a set of metrics to meet the objectives of each goal. Finally, the Work Groups identified at least one priority action for the HCFSC to undertake over the next five years to achieve each metric, with a list of other potential projects to meet the metric, objective, and goal.

See Appendix B.2 for more information on the Work Group membership and process, and Part 3, Countywide Action Plan for the results of that process.

The following map shows the 14 CWPP fire-planning units, as well as the 2017 workshop locations. See *Community Workshops* below for more information on the workshops.

Map 1.2.1 CWPP Planning Units



1.2.2 COMMUNITY-OUTREACH PROCESS

To ensure maximum public involvement in this planning process, this CWPP update incorporated several elements of a community-outreach strategy, including:

- Collaborative Planning Teams
- Stakeholder Outreach
- Community Workshops and Outreach
- Review of Draft Documents

Collaborative Planning Teams

As discussed above, the CWPP Update Committee oversaw the initial review of the 2013 CWPP and this update, and the Community Project Team provided technical advice as needed. The HCFSC Work Groups were later formed to support the detailed tasks of developing the CWPP goals, objectives, metrics, and priority actions.

Stakeholder Outreach

Any member of the Humboldt County public interested in the CWPP is considered a project stakeholder. Stakeholders were invited to participate in a variety of ways:

- Stakeholders from each of the planning units had opportunities to help plan and host community workshops and/or to participate in helping update their *Planning Unit Action Plan*.
- Targeted outreach to specific stakeholder groups was made via email, phone calls, and in some cases presentations to stakeholder groups at their meetings.
- Targeted outreach to particular individual stakeholders was made when specific technical assistance was needed.

Community Workshops

The Humboldt CWPP is known for its intensive community-based process. Between September 2004 and March 2005, 24 meetings were held around the county to learn from residents what they perceived to be high wildfire hazard and risk areas in their neighborhoods, and what they wanted to do (proposed projects) to address these wildfire threats to their communities. Between March and June 2012, 16 more meetings were held to facilitate the first CWPP update and ensure that each of the 13 CWPP planning units hosted at least one meeting.

As discussed above, the CWPP Update Committee added one more planning unit at its April 2017 meeting, to bring the current total to 14 fire-planning units. Hence, between October and December 2017, 14 workshops were held—one in each planning unit—throughout the county to review and update the information gathered in the previous two planning processes. These community workshops were well attended by local Fire Safe Councils, Firewise® Communities, volunteer firefighters, public agencies, private industry, and other interested community members, with personnel from the County and CAL FIRE facilitating the process.

The 14 workshops held throughout the county are shown above in *Map 1.2.1, CWPP Planning Units*. Workshop locations are indicated on the map with a red star. A list of the workshop dates and locations is available in *section B.4 Community Workshops, in Appendix B*.

The focus of the workshops, and one of the main objectives of the CWPP process, was to engage in meaningful discussions at the community level in order to determine priorities and strategies to address the threat of wildfire to local communities. At each workshop, local residents worked with firefighters and agency partners to identify projects to help prepare their homes, neighborhoods, and communities for wildfire. Local fire experts also shared information regarding how to prepare a property for fire and what to do before, during, and after a wildfire. *See the following table for more information.*

FIGURE 1.2.2 OVERALL PURPOSE AND DESIRED OUTCOMES OF THE WORKSHOPS

PURPOSE	
PROVIDE INFORMATION	<ul style="list-style-type: none"> ❖ Fire protection capabilities and needs. ❖ Prevention of unplanned human-caused wildfires. ❖ Wildfire and emergency preparedness. ❖ The role of wildfire in our local environment. ❖ The Humboldt County Community Wildfire Protection Plan (CWPP).
SEEK INFORMATION	<ul style="list-style-type: none"> ❖ Obtain local knowledge and concerns to include in the updated CWPP. ❖ Provide an opportunity for direct input into priorities for community fire safety.
DESIRED OUTCOMES	
1. INCREASE UNDERSTANDING OF:	<ul style="list-style-type: none"> ❖ How to reduce unplanned, human-caused wildfire ignitions. ❖ What to do before, during, and after a wildfire to reduce potential losses (Ready Set Go! Evacuation). ❖ How to help your community become more adapted to a wildfire environment. ❖ Local fire department needs, successes, and challenges. ❖ The positive role wildfire plays in ecosystem and landscape resiliency.
2. SPARK ENTHUSIASM TO PARTICIPATE IN LOCAL GROUPS WORKING TOGETHER TO ADDRESS WILDFIRE ISSUES (E.G. FIRE SAFE COUNCILS AND FIREWISE® COMMUNITIES) AND LOCAL FIRE DEPARTMENTS.	
3. REFINEMENT AND PRIORITIZATION OF LOCAL CONCERNS AND PROJECTS (ON MAPS AND RECORDED FOR ACTION PLANS) TO INSPIRE FUTURE ACTION AND INCREASE COMPETITIVE ADVANTAGE FOR FUNDING.	

The community mapping methodology used to capture public input at these workshops utilized large-format maps and markers for a typically one-hour process, to identify the following attributes based on local knowledge and information:

- Assets and values at risk,
- High fire hazard and risk areas,
- Safety resources for fire protection (e.g. water, equipment, evacuation routes),
- Updated road conditions,
- Existing fire-safety and fuel-reduction projects, and
- Proposed projects.

*For more information on the community-outreach process, the workshops, and/or the mapping process, see Appendix B, **Planning Process Details**. For the results of the mapping exercise at each workshop, see the respective **Planning Unit Action Plan** in Part 4.*

See the following page for a sample workshop poster.

Figure 1.2.3 Sample Community Workshop Poster



The poster features a background image of a wildfire with thick smoke and orange flames against a dark sky. The main title is in large, bold, sans-serif font, with 'IS YOUR COMMUNITY' in red and 'PREPARED FOR WILDFIRE?' in yellow. Below the title is a subtitle in yellow. The main text is in white, and the call to action is in yellow. There are three small inset photos showing wildfire scenes. The event details are in a yellow box, and the location and time are in a white box. The bottom section includes logos and a note about funding.

IS YOUR COMMUNITY PREPARED FOR WILDFIRE?

Are your home and neighborhood ready?

Come learn about the
**Humboldt County
Community Wildfire Protection Plan (CWPP),**
Fire Safe Councils and Firewise Communities, and
how you can prepare your home and community for the next wildfire.

Help identify priority projects in your community to survive the next fire.



**Lower Eel-Van Duzen
River Communities**
Including Carlotta, Ferndale, Fortuna, Hydesville,
Loleta, Rio Dell, Scotia, Stafford, Table Bluff, and
all residences in the surrounding area.

Monday, November 27th
5:00 pm – 8:00 pm
Fortuna Fire Hall
320 S. Fortuna Blvd.
5 pm: Open-House & Meal — 6 pm: Program

**Tri-tip sandwiches provided by the Fortuna Volunteer Fire Department Ladies Auxiliary.
Donations will benefit the Eel River Valley Fire Explorers.**

For more information on the CWPP, visit humboldt.gov.org/FireSafeCouncil, email cimmitt@co.humboldt.ca.us or call 707-267-9542.



Support for this project provided by the State Responsibility Area Fire Prevention Fund.

Online Survey

An online survey for Humboldt County residents was shared on Open Humboldt from October 2017 through January 2018, titled *Are You Ready for Wildfire? Help us understand what your wildfire concerns and priorities are.* The survey was based in part on the work of, and in cooperation with, Dr. Sarah

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McCaffrey and the Santa Clara County CWPP.⁴ It included 24 questions ranging from level of preparedness and challenges and barriers to increasing preparedness, to priorities for countywide actions and participation in local Fire Safe Councils and fire departments. There were 364 people who visited the survey and 165 responses from most areas of the county, generating 8.3 hours of public comment.

In general, respondents were overwhelmingly concerned about wildfire in Humboldt County and believed the county is minimally prepared to address it. Nearly forty percent of respondents indicated that their property and family are prepared, many having completed fire-safe actions within the last six months. Over ninety percent supported prescribed burning as a tool to reduce fuels in the county. Evacuation planning was another priority issue. Approximately forty percent were interested in being contacted by local volunteer fire departments and/or Fire Safe Councils.

To see the complete survey and results, including demographic breakdowns, visit https://www.opentownhall.com/portals/131/Issue_5560/survey_responses.

CWPP Review

Several opportunities were provided for stakeholder and public review of the CWPP, beginning with the Administrative Review in May and June 2018. The public review followed from mid-August to early-October 2018. Finally the signatories were provided an opportunity to review and certify the plan as meeting the requirements of a CWPP from early November through early-February. Specific parts of the CWPP were completed, reviewed, and finalized on a separate schedule as described below.

Administrative Draft

Based on the information collected during the process described above, an *Administrative Draft* of the CWPP was circulated in May 2018. The plan was presented to the HCFSC at its May 10, 2018 meeting to launch the internal review period. The *Humboldt County CWPP Administrative Draft* was provided for review and feedback to members of the HCFSC, key stakeholders and planning partners, and members of the Community Project Team.

The review focused on plan content, providing reviewers an opportunity to help fill information gaps and offer guidance on the feasibility and appropriateness of recommended actions. Reviewers had six weeks to review the document, with comments due on June 15, 2018.

The results of this Administrative Review were incorporated into the public review draft of the CWPP in June and July 2018.

Public Review Draft

A public review version of this CWPP was presented to the HCFSC at its August 16, 2018 quarterly meeting and officially released to the public for review on August 17, 2018. Between the release date and the final closure of public review on October 12, 2018, the public had eight weeks to review the document and submit comments. *Part 4, Planning Unit Action Plans* followed its own public review process with staggered postings to the web and rolling deadlines, depending on the area of the county. Public comments were reviewed, and where appropriate, incorporated into this final version.

Final Review and Approval

This final version of the Humboldt County CWPP was reviewed and certified in late 2018 and early 2019 by the four key signatories: County of Humboldt Board of Supervisors, Humboldt County Fire Chiefs' Association, CAL FIRE, and the HCFSC.

⁴ SWCA Environmental Consultants: prepared for Santa Clara County. (2016). Santa Clara County Community Wildfire Protection Plan. Retrieved from <http://www.sccfd.org/santa-clara-county-community-wildfire-protection-plan>.

1.3 ACCOMPLISHMENTS SINCE LAST PLAN

The HCFSC, its members, and partners collaborated over the last five years to implement the 2013 CWPP. Implementation committees were formed to focus efforts on successful completion of items identified in the *2013 Countywide Action Plan*. Action items were grouped into categories, and committee members pursued implementation as resources were secured and opportunities arose. (For a list of previous HCFSC committees and current Work Groups, see Figure 5.4.2 in Chapter 5.4, *Community Preparedness*.) This section contains a summary of committee accomplishments over the last five years using the previous committee structure:

FIGURE 1.3.4 CWPP IMPLEMENTATION COMMITTEES, 2013-2017	
➤	Helping Firefighters Help You
➤	Ensuring Adequate Water Supplies for Fighting Fire
➤	Managing Hazardous Fuels
➤	Maintaining Air Quality
➤	Firewise Communities
➤	Planning for Safe Evacuation

The following is a summary of the work completed by the HCFSC committees from 2013-2018.

1.3.1 HELPING FIREFIGHTERS HELP YOU

This committee provided support to mitigate challenges that have been impacting the sustainable provision of fire and rescue services throughout the county. As part of this effort, committee members, the Humboldt County Fire Chiefs' Association (HCFCA), the Local Agency Formation Commission (LAFCo), and County staff collaborated to provide technical assistance to local fire and rescue service providers. The committee supported them to better understand the root causes of their challenges, identify strategies for improvement, and take action to sustain services into the future.

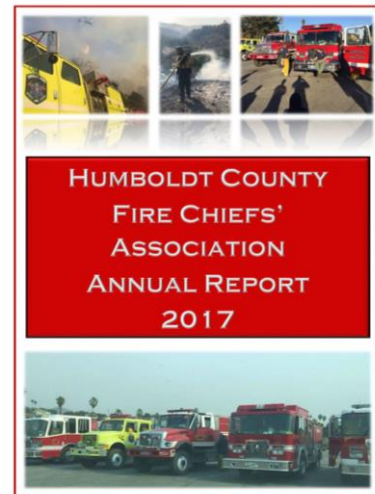
Since the publication of the 2013 CWPP, the following was accomplished:

- Technical assistance and funding supported a planning effort to address the mismatch between fire-related district boundaries and where fire service regularly provided emergency response, putting a strain on already limited resources, including:
 - Formation of the Fruitland Ridge Fire Protection District and a voter-approved special tax that generates much-needed reliable revenue for the new district.
 - Boundary expansions for the Telegraph Ridge Fire Protection District and the Fieldbrook Community Services District (for fire services only) through a formal annexation process. The annexed areas are now contributing revenue to support the fire services they receive.
- Technical assistance to address sustainable fire service issues in key areas of the county: Avenue of the Giants, Garberville, Redway, Honeydew, Petrolia, Rio Dell, Scotia, and Shelter Cove. This also included the area referred to as the "Mad River/Redwood Creek Study Area," including fire and rescue response from the Willow Creek, Blue Lake, and Kneeland fire districts. This work is ongoing; the appropriate solution for each area is complex and could take years to resolve.
- Measure Z, the Public Safety and Essential Services half-cent sales tax passed by Humboldt County voters in 2014, helped greatly to overcome some of the challenges faced by the local fire service. Measure Z was intended to create funds to be used to maintain and improve essential services for public safety. Over the three years of Measure Z funding, over \$5.5 million was contributed to support local fire services to purchase equipment, pay dispatch fees, and continue a multiyear sustainable fire-services planning effort. These purchases and activities

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have directly affected and benefitted local fire and rescue agencies and organizations; sustaining and improving the Level of Service throughout the county.

- The feasibility of various sustainable-revenue sources to support fire and rescue services continues to be analyzed, including:
 - Implementing voter-approved special taxes or benefit assessments (new district formations or annexations).
 - Ensuring that fire-related districts with special taxes or benefit assessments are maximizing revenue recovery.
 - Maximizing cost recovery from all potential sources, including insurance billing for services rendered (out-of-district or non-district resident incidents).
 - Using Impact Fees.
 - Saving costs through sharing resources or consolidation.
 - Evaluating existing and potential new revenue-sharing agreements between the County and local fire service.
- A strategy to support critical volunteer recruitment and retention efforts.
- County staff, HCFSC members, and Humboldt State University interns assisted in the production of the *Humboldt County Fire Chiefs' Association Annual Report*.⁵ The *Annual Report* provides up-to-date details about local fire and rescue service. It functions as a directory of associated agencies and organizations. This annual documentation helps demonstrate the importance of the services provided by local volunteer fire departments and their significant, invaluable contribution to upholding public safety in Humboldt communities.



1.3.2 ENSURING ADEQUATE WATER SUPPLIES FOR FIGHTING FIRE

This committee explored ideas to increase firefighting water sources and expand the public's understanding of how to ensure easy access to water sources. Detailed instructions for how to properly equip water tanks and clearly mark them for firefighters were included in the two published editions of *Living with Wildfire in Northwestern California*,⁶ and widely distributed throughout the county. The committee began developing a poster and a sample water-tank fittings model to display at hardware stores. Funding to support this effort was sought but not secured within this planning period. Work in this area of need is ongoing.

1.3.3 MANAGING HAZARDOUS FUELS

This committee tracked fuel-reduction efforts and supported County staff pursuits of project funding to mitigate hazardous fuels. To assist homeowners with recommendations for reducing wildfire hazards around their structures and along access routes, the Humboldt County Fire Safe Council created the Fire-adapted Landscapes and Safe Homes (FLASH) program—a cost-share program designed to help property owners reduce their vulnerability to loss from wildfire. Since 2010, four grants have been awarded to the County of Humboldt through the California Fire Safe Council Grants Clearinghouse to

⁵ Humboldt County Fire Safe Council. (2018). Humboldt County Fire Chiefs' Association Annual Report, 2017. Retrieved from <https://humboldtqov.org/Archive.aspx?AMID=75>

⁶ Living with Wildfire in Northwestern California, 2nd edition. [PDF] Retrieved from <https://humboldtqov.org/livingwithwildfire>

support FLASH. Between all four grant rounds, nearly 900 acres of fuel reduction was completed by 300 property owners, 247 home-risk assessments were completed, and 782 site visits were conducted.

FLASH has been a very successful program. Each interaction between property owners and FLASH representatives provides an opportunity to discuss topics such as local fire history, forest health, wildlife habitat, homestead fire preparedness, thinning techniques, and disposal of materials. It serves as a means to widely share the fire-safety message. Some landowners have followed through with additional fire-safety measures recommended during the home-risk assessments, supplementing their fuel reduction work (e.g. hardening homes and developing water sources).

Local Fire Safe Councils, Tribes, community organizations, private landowners, and CAL FIRE have also completed other important hazardous fuel-reduction projects throughout the county. Projects include shaded fuel breaks, roadside vegetation management, prescribed fire and cultural burns, defensible space maintenance, and chipper programs. More detail about these efforts can be found in the *Planning Unit Action Plans* in *Part 4* of this CWPP.

1.3.4 MAINTAINING AIR QUALITY

A dedicated representative of the North Coast Unified Air Quality Management District (NCUAQMD) was an active participant in HCFSC efforts, facilitating the activities of this committee, and initiating meetings and discussions as needed by the HCFSC. For example, discussions at HCFSC meetings and case-specific coordination enabled a deeper understanding of the air-quality considerations necessary when planning prescribed burns.

Community education and outreach were a focus of this committee, including air-quality information and regulations in the first and second editions of *Living with Wildfire in Northwestern California*. NCUAQMD developed Twitter and Facebook accounts to educate the public about open burning, burn regulations, and how to obtain a burn permit. These new educational methods are in addition to NCUAQMD's website, which is an established communication point for wildfire information.⁷ The need for additional fire-monitoring equipment over the last few wildfire seasons was identified as a priority. Due to terrain, meteorological conditions, and numerous wildfires in the region, smoke tends to stay localized for extended periods of time. In response, additional monitors were purchased and placed in Redding, to be deployed in Humboldt County as needed. The placement of monitors in and around fires and population centers provides real-time, hourly information to NCUAQMD and Air Resource Advisors assigned to fires. This information, along with weather data provided by National Oceanic and Atmospheric Administration and the Incident Meteorologist, assists in the production of timely air quality advisories, alerts, and notifications.

1.3.5 FIREWISE® COMMUNITIES

In 2013 the HCFSC began assisting communities pursuing recognition as Firewise® Communities. The Firewise® Communities/USA Recognition Program empowers communities to work together in reducing their wildfire risk. Redwood Valley/Chezem (2014), Shelter Cove (2014), Hydesville (2015), and Kneeland (2015) successfully earned Firewise® recognition and joined the existing list of Humboldt County's Firewise® Communities. Additionally, the HCFSC helped ensure that existing Firewise® Communities were able to fulfill the requirements necessary to maintain their Firewise® status from year to year. There is now a total of ten Firewise® Communities in Humboldt County, *see section 5.4.2 for a list of all local Firewise® Communities*.

Funds from the Title III Secure Rural Schools Act in the amount of \$130,000 were invested in a small grant program to support Firewise® activities throughout the county. Types of Firewise® projects included:

- Creation of Firewise® Community Assessments and Action Plans.
- Firewise® Day events.

⁷ North Coast Air Quality Management District: www.ncuaqmd.org

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- Demonstration projects to model defensible space and fuel breaks.
- Community chipping programs.
- Public education on home hardening, creating defensible space, and general emergency preparedness.
- Documentation of the Firewise® mini-grant projects, including before-and-after photographs, and summarizing project activities for widespread community education.

Title III funds were also used, in collaboration with the Six Rivers National Forest (SRNF) and CAL FIRE, to develop the first and second editions of *Living with Wildfire in Northwestern California*. This widely distributed free publication covered a range of topics intended to educate residents on the importance of personal fire safety and preparedness and how communities can adapt to living in a wildfire environment. It listed information on local resources, including fire-protection agencies and community fire-safety organizations, such as Fire Safe Councils and Firewise® Communities.

1.3.6 PLANNING FOR SAFE EVACUATION

This committee provided support to the Humboldt County Office of Emergency Services (OES) to review and provide content for Operational Area⁸ emergency plans, and enhance effective communication among all fire agencies, emergency medical services, allied agencies, and the public. These partnerships are critical to the health and safety of local residents and emergency services personnel. With this goal in mind, HCFSC members were involved in OES' efforts to create a county evacuation plan. Incident-specific evacuation planning forms were created; the Humboldt County Emergency Evacuation Plan was begun. This group began the process of identifying Community Liaisons to help with community resource and needs profiles, and to assist as local points of contact during incidents. This group also supported increasing awareness about the importance of registering with the Humboldt Alert system, to notify registered residents of evacuation alerts and other public-safety notifications.

*See Appendix C, **Accomplishments Since Last Plan** and each of the 14 **Planning Unit Action Plans** for more details on HCFSC and partner accomplishments since the 2013 CWPP.*

1.4 MAINTAINING THIS PLAN

This plan was written to be the five-year strategic plan for the Humboldt County Fire Safe Council from 2019 to 2023. Each of the six *Countywide Action Plan* chapters in *Part 3* and *Appendix O* includes Metrics, Priority Actions, and Potential Action Steps to facilitate execution of this CWPP over the next five years. Work Groups will review and report on their progress at each quarterly HCFSC meeting. Funding will need to be secured to support plan maintenance and to update the plan again within the five-year planning horizon.

⁸ An "operational area" is an intermediate level of the state emergency services organization, consisting of a county and all political subdivisions within the county area.

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PART 2—RISK-ASSESSMENT SUMMARY

Weather and fire patterns, together with Humboldt County’s rugged topography and dense fuel loads, combine to create a generally high fire risk during dry parts of the year. Coastal areas are not immune from this risk, even with a cooler and moister climate than inland areas. Large wildfire conflagrations with significant damages are highly likely in coming decades, if not years. All Humboldt residents, organizations, and government entities share this risk, as well as the responsibility to minimize this risk and prepare their families, homes, and communities for the eventuality of wildfire.

This document is a summary of each risk assessment chapter in *Part 5* of this Community Wildfire Protection Plan (CWPP). This analysis is based on a qualitative scale from “low” to “very high,” with “very high” signifying the highest risk. In the case of *Wildfire Protection Capabilities* and *Community Preparedness*, a lower rating means a higher risk. This is because when fire-protection organizations have inadequate capacity and communities are unprepared, the risk of a wildfire damage and loss is higher.

2.1 COMMUNITY-IDENTIFIED RISKS, HAZARDS, ASSETS, AND RESOURCES

Through this CWPP process, a series of 14 community workshops were held throughout Humboldt County in late 2017. At those meetings, residents were given the opportunity to review previously identified local risks, hazards, fire-protection resources, and assets from the community meetings held in both 2004-2005 and 2012 for the previous versions of this CWPP. (A summary of the data gathered at each meeting is provided in each *Planning Unit Action Plan* document in *Part 4* of this CWPP.) This broad public process has led to the development of an extensive database of community-identified information. This information is available for public review and use at the Humboldt County Web GIS Portal, https://webgis.co.humboldt.ca.us/HCEGIS2.6_CWPP.

2.2 HUMBOLDT COUNTY ASSETS AND VALUES AT RISK

2.2.1 COMMUNITY AND ECONOMIC



Wildland-urban interface, Willow Creek.

The Humboldt County population was 136,754 in July 2017, representing a 1.6% increase since the 2010 Census.¹ The countywide average annual growth rate has been approximately 0.75% per year over the last thirty-five years.² About one-third of the population lives in the Humboldt Bay area of Eureka and Arcata and about half live in the county’s seven cities. Over half of the residents live in unincorporated areas, (*see Map D.1, Population and Communities at Risk in Appendix D*). Per capita income was \$24,038 in 2016, and the median household income was \$42,685.³

Property values range from moderate to moderately high. Prices are continuing to rise as people leave warmer

¹ U.S. Census Bureau (2016). Quick Facts, Humboldt County, California. Retrieved from <https://www.census.gov/quickfacts/fact/table/humboldtcountycalifornia/PST045216>

² Humboldt County. Department of Planning & Building. (2017). Humboldt County General Plan – Revised Draft Environmental Impact Report. Section 2.1: Project Location and Setting, Tables 2.1-1 and 2.1-2. (pp. 2-2 and 2-3). Retrieved from <https://humboldtqov.org/DocumentCenter/View/58838>

³ US Census Quick Facts Humboldt. (2016).

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areas for the cool coastal climate. Although real estate prices peaked in the first quarter of 2017 following recreational marijuana legalization and are now declining, they are still high in rural areas, with urban values consistently climbing.⁴ **On a statewide scale, real estate values in Humboldt County are considered moderate.**

Older wooden homes—commonly made of redwood or Douglas fir—generally have much higher structural ignitability than newer homes, unless those older homes have been retrofitted to current wildland-urban interface, or WUI, building standards (which is uncommon). Flammable siding and potential for ember incursion is especially high. Relatively few homes and structures have been lost to wildfire in Humboldt County to date, although this is more likely due to few wildfires burning close to urban areas, rather than a reflection of local fire-safe construction. There has been an increase in structure fires from faulty wiring and explosions from indoor marijuana grows and extraction labs. Although these are not technically wildfires, they do in some cases threaten nearby wildlands and neighborhoods.



Interface within the city of Eureka; there are at least four homes in this picture.

Generally, **structural ignitability of homes in Humboldt County is very high**, with most homes made of wood and built before the 2007 WUI Building Codes (California Building Code Chapter 7A) came into effect.

For information on structural ignitability, see section 5.1.2 and Appendix H, Living with Wildfire.

Humboldt County has a fairly diversified local economy. Management, business, science, arts, and service make up over half of measurable employment. However, natural resources still contribute significantly to the economy, whether through tourism, forestry, fishing, agriculture, or marijuana cultivation. The county is in the middle of a rapid economic shift with the legalization of marijuana; some areas of the local economy are growing, and others—most notably retail businesses in rural areas—are declining rapidly, presumably with less cash availability in the hands of local residents.



Low-intensity understory fire.

Any of these natural resource-based local economies could be severely impacted by wildfire, putting them at a very high risk to wildfire. *For more information on community and economic assets, see section 5.1.2.*

2.2.2 NATURAL

Humboldt County is known for its natural beauty—redwood forests, beaches, clean, cool watercourses, and diverse wildlife habitat—as well as its wealth of natural resources, from timber to fisheries. This wellspring of ecological diversity and beauty is valued and treasured highly, locally to internationally. It is an important tourism and retirement destination, especially with warming weather elsewhere.

Forest lands are very vulnerable to wildfire, given nearly a

⁴ Kyla and Charlie Tripodi, The Land Man Office, “Rural land valuation trends: cannabis and timber,” University of California Cooperative Extension: Redwood Region Forest Management and Market Trends workshop, April 4, 2018.

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century of fire suppression and intensive timber management leading to very dense and highly flammable forest stands. Although this is slowly changing with active fuel reduction and the introduction of prescribed fire throughout the county, in general **Humboldt County's forests remain at a high or very high risk to wildfire.**

Of note is the loss of native oak woodlands with the vigorous suppression of fire and the resultant invasion of Douglas fir and other conifers. New statewide management options and the active introduction of prescribed fire are expected to help reverse this trend.

While agricultural lands are generally at a lower risk to wildfire because of often-higher moisture levels, the economic impacts to them from wildfire could be devastating to local farmers.



Marijuana greenhouse sites in Southern Humboldt.

The legal marijuana industry is still in its infancy in Humboldt County. Historically, production and extraction both have had a high potential for fire ignition. Regulations provide the opportunity to reduce fire risks and hazards associated with the industry. Reducing ignitions in this sector is targeted in this CWPP's **Countywide Action Plan, Chapter 3.1, Wildfire Ignition Prevention.**

The risk to local wildlife from wildfire is difficult to define; some species are better adapted than others, while some prefer post-fire habitat. Humboldt County has a high degree of wildlife diversity, presumably among the highest in the state; local wildlife, especially vulnerable species, would likely be harmed by wildfire. Clearly, valuable old-growth forest habitat is not quickly replaced if destroyed by fire, although these forests tend to be more fire-resilient than younger or denser forests.

Vulnerable salmonid populations are at significant risk to sediment and erosion following wildfires, yet inversion layers created from smoke in late summer and fall can cool streams and help those same populations. Riparian areas are highly vulnerable to wildfire disturbance. Erosion can cause large sediment loads in streams, which can be transported and deposited into rivers and damage aquatic habitat. Humboldt County has an abundance of clean water that could be at great risk from wildfire.

Humboldt County generally has very good air quality, but it's often impacted by fires from elsewhere in the state and beyond. Research showing the differences between air quality impacts from prescribed fire versus wildfire is educating residents on the need for more prescribed fire to improve long-term air quality. *For more information, see Air Quality and Figure 5.1.2, Orleans Smoke Impacts, in Chapter 5.1.*

In general, the value of Humboldt County's natural assets is ranked very high, most of which could be severely impacted by wildfire. *For more information on natural assets, see section 5.1.3.*



The community of Orleans after the 2013 fire. Photo: T. Dunklin.

2.2.3 CULTURAL

More than a thousand sites of cultural significance have been surveyed and officially designated as cultural resources in Humboldt County, including archaeological sites, historic architecture, industrial relics, artifacts, cultural landscapes, spiritual places, and historic districts. Although fire can impact all of these, some are more threatened by wildfire than others, such as historical architecture and sites often made of very flammable, old redwood.

As the home of over a dozen Native American tribes, Humboldt County has a rich native cultural history, including actively using fire as a land-management tool. These cultures evolved with fire, and some—like the Karuk, Yurok, and Hoopa—are reclaiming that cultural heritage to coexist with wildfire.



Prescribed fire in the Hoopa Valley.

Given the rich Native American culture in Humboldt, cultural assets are very high. In general, tribal lands are considered to be at a very high risk to wildfire, with active efforts to reduce that risk in several communities.

*For more information on cultural assets, see section 5.1.4. For more information on local native burning practices, see **Native American Fire History** in section 5.2.5.*

In summary, the Assets and Values at risk for Humboldt County are given a high to very high rating.
*For more information on assets and values at risk, see Chapter 5.1, **Assets and Values at Risk**.*



Fire in Southern Humboldt.

2.2.4 ASSETS AND VALUES AT RISK SIGNIFICANT FINDINGS

The following were identified in *Chapter 5.1, Assets and Values at Risk* and informed the development of the *Countywide Action Plan* chapters of *Part 3* of this CWPP, which will be used to guide action over the next five years. Relevant community-specific needs and related priority actions can be found in the *Planning Unit Action Plans* located in *Part 4*.

FIGURE 2.2.1 ASSETS AND VALUES AT RISK SIGNIFICANT FINDINGS

❖	Low per-capita income affects residents' ability to fire-safe their homes and properties.
❖	Increased seasonal occupation during fire season from tourism and marijuana cultivation increases fire risk.
❖	High levels of structural ignitability exist throughout the county, especially in unincorporated areas.
❖	Future growth is expected to occur in areas that are more vulnerable to wildfire risk.
❖	Dispersed development patterns in many areas of the county (particularly Southern Humboldt) result in a high number of homes spread across a wildfire-prone landscape.
❖	Resurgence of fire as a land-management tool is occurring in local rangeland and timber management, especially in prairies and oak woodlands.
❖	Many dense, overstocked timber stands result from decades of clearcutting, fire suppression, public-lands management budget reductions, and finally, landscape fragmentation of forestlands to private ownerships with limited management resources.
❖	Public and private service and retail sectors are less vulnerable to impacts from wildfire. However, tourism, recreation, and most of the natural resource-based sectors of the local economy could be significantly impacted by a large wildfire, including deterioration of air quality from excessive smoke.
❖	Erosion and landslides following damaging wildfires pose a significant threat to transportation infrastructure, homes, natural resources, and special-status species.
❖	Rapid changes are happening in the legal marijuana industry, with unclear effects on local economies and fire risks and hazards.
❖	Marijuana producers and processors need to become familiar with the NFPA Fire Code 1, Chapter 38.
❖	Legal and illegal marijuana operations continue to pose an increased risk for firefighters.
❖	There is a high diversity of wildlife species, many designated threatened or endangered.
❖	Significant potential to deteriorate water quality following wildfire conflagrations, could negatively affect salmonid populations.
❖	Ongoing air quality issues occur during fire season.
❖	Local tribes' efforts are bringing prescribed fire back onto the landscape in their traditional lands and beyond.

2.3 HUMBOLDT COUNTY WILDFIRE ENVIRONMENT

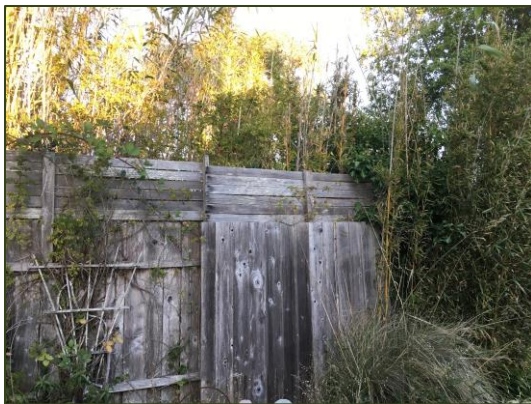
2.3.1 WILDFIRE ENVIRONMENT

The environs of Humboldt County evolved with fire, hence this is a fire-dependent environment. Local topography and fuels contribute to a very high fire risk, especially with the influence of sudden oak death killing large numbers of trees. However, local weather patterns generally reduce wildfire risk, especially with the marine influence along coastal areas. Thunderstorms inland can lead to very high wildfire risk in summer and late fall. In general, **Humboldt County's wildfire environment is ranked as high risk.**

For more information on the factors that contribute to wildfire in Humboldt County, see section 5.2.2, General Wildfire Environment Description.

2.3.2 WILDFIRE HAZARD

A location's fire-hazard ranking shows the expected behavior of fire in severe weather. Fire Hazard Severity Zones (FHSZs) are used by the State to assess and define fuel hazards, ranging from Moderate to High to Very High. *(See Map 2.3.1 on the following page for FHSZ designations.)* Local (urban or suburban) areas of Humboldt County (LRA⁵) are not classified in this system but are generally considered to have Moderate ratings. Generally, **Humboldt County's coastal areas and river valleys with fog influence are rated Moderate, the western side of the county is rated High, and the eastern side of the county is rated Very High Fire Hazard Severity.** Forty-five percent of Humboldt County is classified Very High, 48% high, and only 4% Moderate, the remainder being unclassified as unzoned or water, etc. *For more information on fire hazard severity, see section 5.2.3, Wildfire Hazard.*



Urban fuels near the coast in Manila.

Interface fuels, also known as urban fuels in this risk assessment, generally refer to anything that can burn. This includes ornamental vegetation or the items found around homes, such as patio furniture, located near a structure, and often directly adjacent to and including homes. **There are commonly very heavy interface fuels surrounding homes in the coastal zones, likely resulting from a false sense of security from the prevailing climate and a lack of local understanding of fire hazards.** Throughout the county, there are heavy fuels surrounding homes, whether these homes are rural homesteads with firewood and outbuildings, or urban/suburban homes with an abundance of highly flammable vegetation. **Therefore,**

interface fuels throughout Humboldt County are ranked as high to very high risk.

For information on interface fuels, see Part 4, Planning Unit Action Plans and Appendix H, Living with Wildfire.

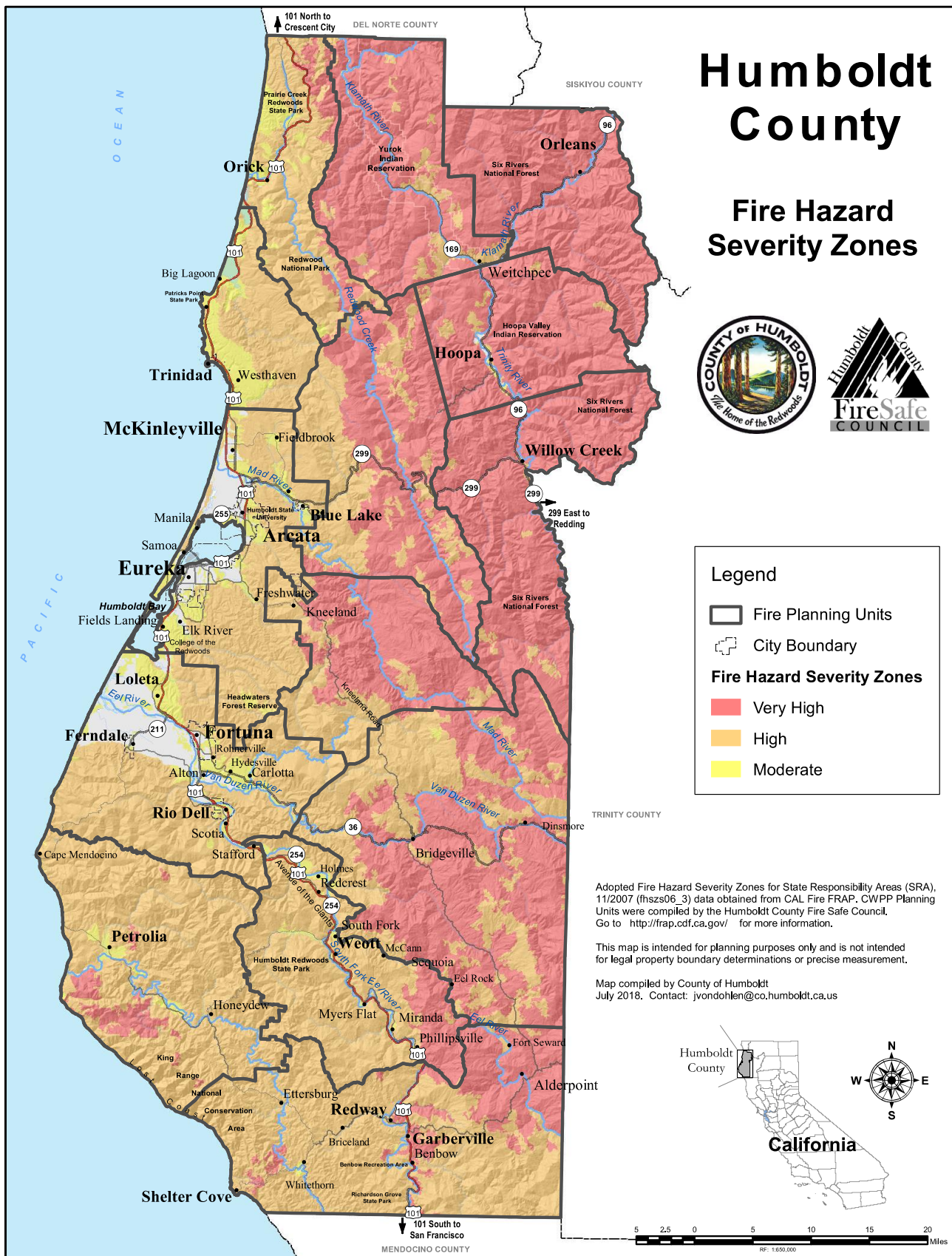


Forest fuels in Redwood Valley.

⁵ Local Responsibility Area (LRA).

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

Map 2.3.1 Fire Hazard Severity Zones



2.3.3 WILDFIRE RISK AND FIRE HISTORY

“Risk of wildfire occurrence” refers to the possibility of a wildfire occurring based on factors such as fire history and ignition potential. It is derived from historic evidence of wildfire starts and the presence of ignition sources such as frequent lightning storms, occupied residential properties, camping areas, power lines, heavily traveled roads, arson, and logging operations.

The county has a strong presence of ignition sources with a prevalence of homes sprinkled throughout wildland-urban interface (WUI) areas, power lines crisscrossing the landscape, and a massive network of well-traveled rural roads. Although it is difficult to precisely measure, marijuana production can also contribute to an increased risk of both structure fire and wildfire.

Lightning fire ignitions are generally less prevalent in Humboldt County than in other areas of the state, but they do occur, especially in the northeastern area of the county. Most recent extensive lightning ignitions were in 2003, 2008, and 2015.

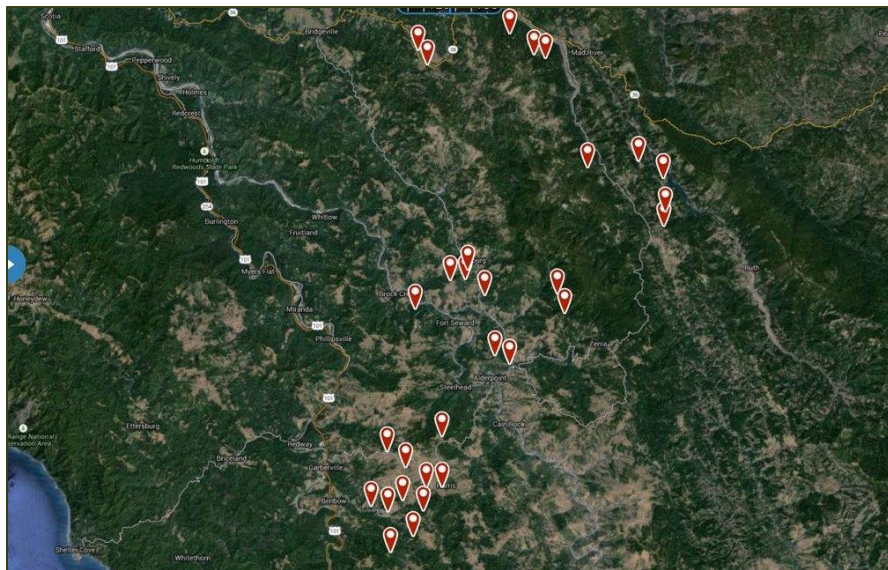
The number of large wildfires reached 22 in 2015, close to the maximum annual number of 24 fires in both 1998 and 1929. Fire has been a significant factor in Humboldt County’s history. Studies suggest an historical fire return interval of 12 to 50 years.⁶

*See Map 5.2.2, **Wildfire Starts** in section 5.2.4, **Wildfire Risk and Ignition Sources** for a display of where fires start in Humboldt County. Map 2.3.2, **Fire History 1908-2017** on the following page, illustrates local fire history.*

Native American fire history indicates very frequent burning throughout the area. These cultural practices are now being actively reintroduced through local tribal efforts, especially in the Klamath Region. The use of fire to achieve fuel reduction and other landscape benefits is also increasing among federal and state agencies as well as private land managers and property owners.

The county is divided into two distinct areas of wildfire risk. **The northeast and extreme southwest parts of the county have a high risk of wildfire occurrence, while the coastal areas and river valleys have moderate risk and generally better fire-protection access, which increases initial attack success.**

*For more information on wildfire risk, see section 5.2.4, **Wildfire Risk and Ignition Sources** and section 5.2.5, **Fire History**. Section 5.1.3 contains a discussion on the cultivation of marijuana and its potential impacts to fire risk.*

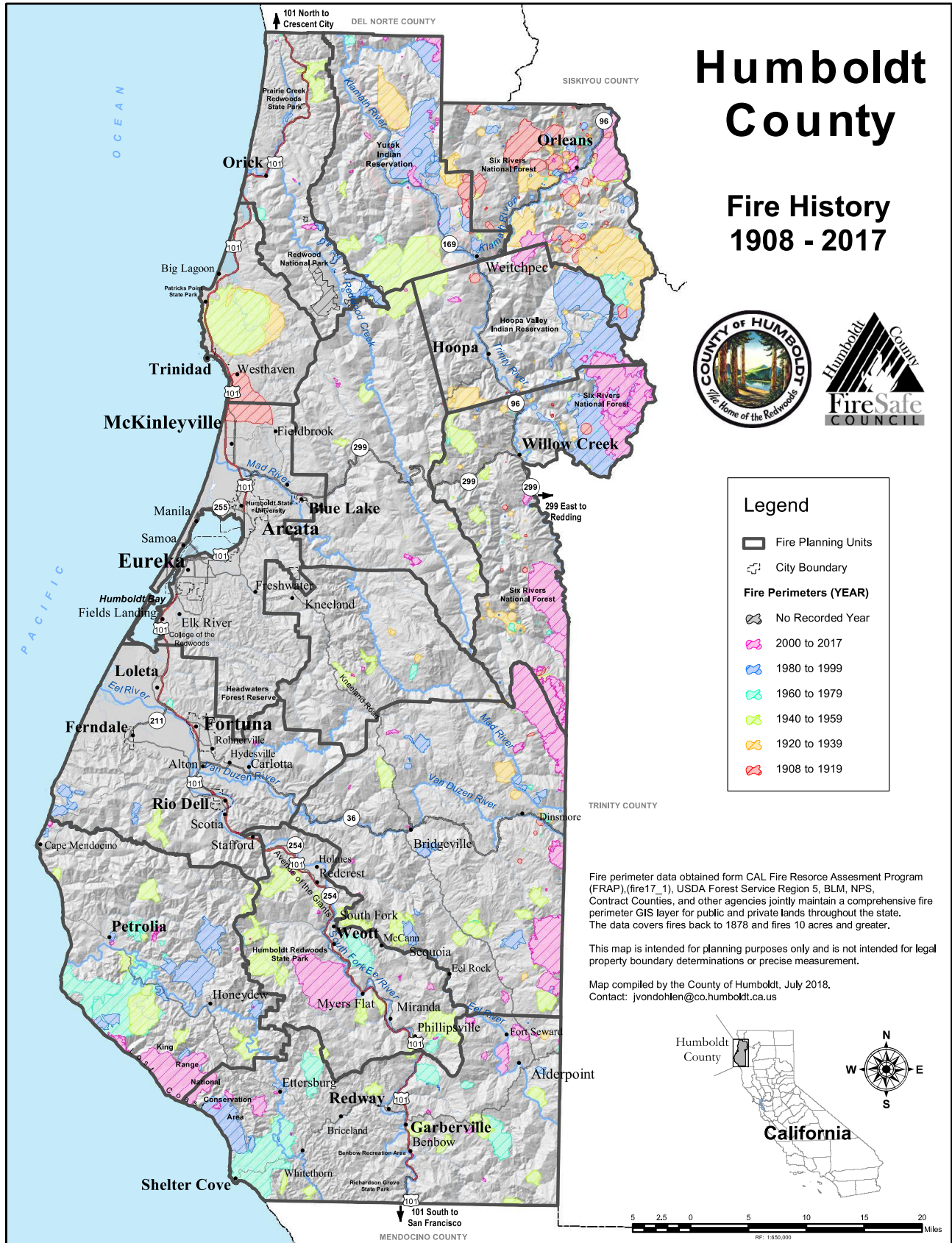


Confirmed lightning fires for CAL FIRE Humboldt. Estimated 44 fires, 37 have control lines, 7 to locate. Photo: CAL FIRE HUU, Twitter, July 31, 2015.

⁶ CAL FIRE: Humboldt – Del Norte Unit (HUU). (2017). Strategic Fire Plan Humboldt – Del Norte Unit 2017. (p. 9). Retrieved from http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans_details?plan_id=270

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

Map 2.3.2 Fire History 1908-2017



2.3.4 CLIMATE CHANGE AND WILDFIRE

It is not clear exactly how climate change will impact wildfire risk and behavior in Humboldt County. The North Coast Resource Partnership recently commissioned a study that predicts “an approximately 40% increase in probability of fire across the region by end-century....”⁷ The US Forest Service has found that local mean minimum nighttime temperatures have risen in some areas of the county by almost 4% from 1931-2014.⁸ Perhaps most significant for wildfire is the trend toward lower *snowmelt water equivalent* and earlier snowmelt,⁹ which means less water flow and availability in summer and fall. Recent research shows that precipitation levels at the time of ignition is an increasingly important factor in terms of fire activity and area.¹⁰ That said, it is expected that “forested systems in northwestern California will burn under favorable weather conditions, and it is logical to expect more and larger fires under future climate change scenarios.”¹¹

Temperatures, precipitation, and fire frequency and severity are changing in Humboldt County and throughout California. What that could mean regarding wildfire in Humboldt County is less predictable fire behavior. There may be more frequent and more erratic fires inland, perhaps with a decrease of wildfire risk along the coastal areas of the county. **Such changes in fire behavior lead to increased fire risk for Humboldt County.** Many scientists now agree that carefully managing wildfires and an active use of prescribed fire are important tools in creating *adaptive resiliency* in the face of climate change.¹²

For more information, see Section 5.2.6, Climate Change and Wildfire in Humboldt County.

2.3.5 WILDFIRE ENVIRONMENT SIGNIFICANT FINDINGS

The following were identified in *Chapter 5.2, Wildfire Environment* and informed the development of the *Countywide Action Plan* chapters of *Part 3* of this CWPP, which will be used to guide action over the next five years. Relevant community-specific priority actions are found in the *Planning Unit Action Plans* located in *Part 4*.

FIGURE 2.3.1 HUMBOLDT COUNTY WILDFIRE ENVIRONMENT SIGNIFICANT FINDINGS

- | | |
|---|---|
| ❖ | Humboldt County landscapes have adapted to and evolved with fire; fire will continue to shape them. Exclusion of wildfire is not an option. |
| ❖ | A pressing challenge is how to reduce high levels of fuel, using methods that minimize carbon emissions and maintain and/or restore ecosystem functions, processes, and health. |
| ❖ | Due to the remoteness and steepness of slopes within the county, fire equipment and personnel can be limited in their access to suppress wildfires as well as to mitigate them. |
| ❖ | A challenge for coastal communities is the denial or lack of understanding about the potential for wildfire to affect these areas and the subsequent lack of wildfire preparedness. |

⁷ Micheli, E., Dodge, C. Pepperwood, T. & Flint, L. (2018). Climate and Natural Resources Analysis and Planning for the North Coast Resource Partnership: A Technical Memorandum Summarizing Data Products. Final Technical Report. USGS, January 2018. (p. 26).

⁸ Butz, R.J., Sawyer, S., & Safford, H. (2015). A summary of current trends and probable future trends in climate and climate-driven processes for the Six Rivers National Forest and surrounding lands. USDA Forest Service Pacific Southwest Region. (p. 3). Retrieved from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd490216.pdf

⁹ Butz, R.J., Sawyer, S. & Safford, H. (2015). (p. 16).

¹⁰ Miller, J.D., Skinner, C.N., Safford, H.D., Knapp, E.E., & Ramirez, C.M. (2012). Trends and causes of severity, size, and number of fires in northwestern California, USA. *Ecological Applications* 22(1): 184-203, quote on pp. 194-195.

¹¹ Miller, J.D. et al. (2012). (p. 201).

¹² Schoennagel, T., Balch, J.K., Brenkert-Smith, H., Dennison, P.E., Harvey, B.J., Krawchuk, M.A., Mietkiewicz, N., Morgan, P., Moritz, M.A., Rasker, R., & Turner, M.G. (2017). Adapt to more wildfire in western North American forests as climate changes. *Proceedings of the National Academy of Sciences* 114(18), and Miller J.D. et al. (2012).

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

FIGURE 2.3.1 HUMBOLDT COUNTY WILDFIRE ENVIRONMENT SIGNIFICANT FINDINGS

- ❖ The potential effect of sudden oak death on the local wildfire environment is significant. The disease and its ramifications in local ecosystems must be considered in fuel-reduction and other ground-disturbing activities to minimize its negative effects.
- ❖ Most fire ignitions in Humboldt County are started by people; most large wildfires occur when multiple fire ignitions happen on the same day, such as lightning strikes.
- ❖ Most local fire ignitions happen in July, while the largest wildfires have occurred in September.
- ❖ The number of fires started by marijuana operations is not tracked, so it is difficult to document the extent of this impact. It is also unclear how the legalization and regulation of this industry will impact associated wildfire risks. More research is needed on this topic.
- ❖ The *California Strategic Fire Plan* describes the changing fire conditions that have led to an increase in wildfire and its resulting damage throughout California. These trends are expected to reach areas within Humboldt County. Residents and stakeholders here must consider how to adapt and respond locally to this emerging problem.
- ❖ Recent and historic wildfire events in Humboldt County and the surrounding region have shown the potential for hazardous burning conditions, which can threaten life, health, and property.
- ❖ The history of effective fire suppression in Humboldt County is one of the factors contributing to a buildup of hazardous wildfire fuels in both wildlands and WUI areas.
- ❖ Considering the probability of significant increased wildfire threats, it is important that Humboldt County residents are increasingly vigilant regarding reducing wildfire risks and hazards in their homes and communities to improve their fire safety.
- ❖ There are still many unknowns to living with wildfire within a changing climate and continued research and modeling are necessary to better understand the impacts of climate change on the fire environment throughout Humboldt County and to inform adaptation strategies.
- ❖ The probability of fire is projected to increase up to 40% across the North Coast region with climate change.
- ❖ Mean minimum (i.e., nighttime) temperatures have risen in some local areas by almost 4° F, and there is a trend toward lower snow water equivalent and earlier snowmelt, which is leading to drier summer and fall conditions.
- ❖ Although fire frequency is expected to increase with climate change, fire severity may not.
- ❖ Prescribed fire and cultural burning have seen a resurgence in use. These practices have been utilized in recent decades by tribes, federal and state agencies, local ranchers, logging companies, and other private property owners for fuel reduction and other landscape benefits.
- ❖ The active use of fire is at the forefront of current management discussions in both Humboldt County and the state.
- ❖ Landscape-level fuel treatments are best focused on building forest resiliency to wildfire and need to be designed to minimize impacts to sensitive wildlife and plant species.
- ❖ Community-preparedness mitigations to reduce fuels are most effectively focused around WUI communities, or landscape features to protect these communities from fast-moving wildfires.



Community fuel reduction in the Mattole watershed.

2.4 HUMBOLDT COUNTY WILDFIRE-PROTECTION CAPABILITIES

2.4.1 FIRE-PROTECTION ORGANIZATIONS AND LEVEL OF SERVICE

Due to the highly diverse range of community characteristics and fire-protection needs throughout Humboldt County, each local fire department 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 forty different local and tribal fire-protection organizations, a coordinated approach to response is crucial in Humboldt 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 Humboldt County Fire Chiefs' Association (HCFA) 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.

Humboldt County has one local-government, Type-3 Engine Strike Team composed of members from several local fire organizations. This experience increases the ability of local firefighters to quickly and efficiently organize resources, should a large wildfire event happen here.

Improvements have been made since the publication of the 2013 CWPP in the ability of local and tribal fire-protection organizations to efficiently, effectively, and safely deploy fire-protection resources. This is due in part to Public Safety and Essential Services Sales tax (Measure Z) funding. **Local fire organizations still experience a high degree of variability in their training levels, the amount and quality of their equipment, and the number of firefighting personnel at their disposal.**

Many local and tribal fire departments are faced with a myriad of challenges related to: the high cost of insurance and workers' compensation, ever-increasing mandatory requirements and standards, a lack of capital for the replacement of safety equipment, barriers to seamless coordination and communication, and access to appropriate levels of training. One of the many lessons learned through this CWPP effort has been the need for a more robust and ongoing volunteer recruitment and retention strategy. **All local and some tribal fire departments here depend fully or partially on volunteers; nearly**

all agree that recruiting and retaining these volunteers is their biggest challenge. As firefighter numbers fall, services suffer in local communities. In recent years, some fire companies have closed their doors; neighboring departments have been impacted as they try to provide coverage for these affected areas.

One new fire district was formed and two others expanded their boundaries since the 2013 CWPP. However, there are still many areas outside the boundaries of an established district, where local residents may receive fire protection from district resources responding outside the district's jurisdiction. Fire departments and companies provide services to these areas without being under obligation to do so, and



Forest fuels in an urban area. Photo: Humboldt Bay Fire.



Fortuna Volunteer Fire Department, March 2018. Photo: J. Mills.

receive no compensation, other than grants and donations. (See Map 5.3.1, *Local Fire Protection in Chapter 5.3 for jurisdictional response areas.*)

Regarding dispatch issues in Humboldt County, if the annual rate of calls for service continues to increase, options for expanding service capabilities will need to be explored.

Seasonality strongly affects federal and state fire-protection capacity in Humboldt County. These agencies are currently fully staffed and stable, but they could be pulled away at any time for disaster response elsewhere. This usually means that local fire-protection resources are spread thin, and often during the highest times of fire danger, as was the case several times in recent years.

Fire-protection capability has improved overall since the 2013 CWPP. However, sustainability of some smaller, rural volunteer fire departments is now more tenuous. This is due to a lack of volunteers and funding; increased training, regulations, and unfunded mandates; and liability issues. Complete, year-round community protection coverage for developed areas is also a significant challenge.

Overall, **fire-protection capability for Humboldt County is moderate.** *For more information on fire protection, see Chapter 5.3, **Wildfire Protection Capabilities.***

2.4.2 FIRE-PROTECTION SUPPORT

Fire-protection support is based on the ease of fire-engine access to homes, adequate water supply and pressure, and community support both financially and via volunteers. It is dependent upon sufficient *hardened homes* and *defensible space* around structures, and timely evacuations by local residents. Access is related to fire codes at the time of development, terrain, and the potential for road blockage.

Adequate defensible space allows firefighters the ability to protect a home safely. Timely evacuation allows firefighters to focus solely on structure protection, instead of saving lives. Local agencies have a high capacity for providing fire protection when timely notice and evacuation occur and good access, water, and defensible space are present. There are communities in Humboldt that enjoy strong community support for local fire services. However, achieving the support described above is highly challenging in the county as a whole, **making support for fire protection in Humboldt County generally low and even lower during extreme fire weather events.**

*For more information on how residents can prepare their access, water supply, defensible space, and evacuation, see Appendix H, **Living with Wildfire**; for more information on how local communities prepare for emergencies, see Chapter 5.4, **Community Preparedness.** Finally, for more information on local fire protection and support issues, see the **Planning Unit Action Plans** in Part 4.*

2.4.3 WILDFIRE DISASTER RESPONSE AND EVACUATION VULNERABILITY

Rural communities in Humboldt County face a number of challenges when wildfire forces evacuation of residents, including rugged terrain, the poor condition of many rural roads, and the limited availability of resources in remote areas. In many places, there are no secondary escape routes, only narrow, dead-



Classic Humboldt County evacuation challenges, Shelter Cove.

end roads between residences and major evacuation arteries. Many roads are not well maintained, and numerous are unpaved, requiring very slow speeds and 4x4 vehicles. There are many low-weight-bearing bridges, gated roads, and unmarked roads and addresses.

Due to the additional time required for remote communities to safely evacuate, early and effective notification of fire information and evacuation orders is critical. The vulnerability of many remote Humboldt communities is increased by inadequate communications infrastructure. Some areas don't have cellular coverage, land

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

lines, and/or broadband internet, and are dependent on neighborhood-level phone trees and radio communications.

Given the additional time it can take to notify and evacuate some remote communities, evacuations may be ordered earlier by law enforcement and fire personnel than for other areas. Rural residents with fewer available evacuation routes are often advised to evacuate before a *Voluntary Evacuation Advisory* escalates to a *Mandatory Evacuation Order*. Residents requiring more time to evacuate individuals with medical needs or other special considerations, and/or households with animals, are advised to evacuate early, when a *Voluntary Evacuation Advisory* is issued. Many residents with horses and small livestock do not have the equipment needed to evacuate animals and will require assistance.

Given these conditions and resources, **evacuation vulnerability is considered very high for Humboldt County.**

In addition to evacuation planning, County OES is completing community profiles for high-risk, populated rural areas, in coordination with local volunteer fire departments, community volunteers, and planning partners. Community profiles assess available resources and gaps in WUI communities to pre-identify needs and more efficiently order and assign resources during and following disasters.

*For more information on evacuation, see **Wildfire Disaster Response** in section 5.3.3, **Evacuation Preparedness** in section 5.4.6, and the **Evacuation** section of each **Planning Unit Action Plan** in Part 4.*

2.4.4 WILDFIRE PROTECTION IDENTIFIED NEEDS 2018–2023

The following items have been identified in *Chapter 5.3, Wildfire-Protection Capabilities*, as collective priority needs for fire-service organizations in Humboldt County. They are based on the experience of fire-protection organizations operating here and on information gleaned during this CWPP process.

*The following list of identified needs are addressed in Part 3, **Countywide Action Plan**, particularly in Chapter 3.4, **Fire Protection**. More specific needs for each local fire organization can be found in their respective **Planning Unit Action Plan** in Part 4.*

FIGURE 2.4.1 WILDFIRE PROTECTION PRIORITY NEEDS 2018–2023

❖	Volunteers for local fire organizations.
❖	Repairs and maintenance of local fire equipment and funding for the 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.
❖	Strategies to address the high cost of insurance and workers' compensation; coordination to meet the associated training and medical-screening requirements.
❖	A baseline for identifying local Level of Service standards.
❖	Strategies to improve Level of Service to boost ISO Fire Suppression Rating Schedules.
❖	Options for expanding service capabilities to support the ever-increasing demand for service.
❖	Additional funding, staffing, and expanded facilities for dispatch centers if demand for services continues to increase.
❖	Consistent and sustainable funding sources for all fire-service organizations and agencies.
❖	Resolution to the mismatch between service demands and jurisdictional boundaries.
❖	Response-area maps for all local agencies.
❖	Pre-fire attack planning resources for all local agencies.
❖	A well-supported website for the Humboldt County Fire Chiefs' Association and sub-county chapters.
❖	Multi-jurisdictional evacuation mapping.

FIGURE 2.4.1 WILDFIRE PROTECTION PRIORITY NEEDS 2018–2023

- ❖ Evacuation support incorporated into local fire-service training programs.
- ❖ Continued improvement in coordination and pre-incident planning between law enforcement/OES and CAL FIRE field personnel (Incident Commander) to facilitate seamless communication and quick response during an evacuation.

2.5 HUMBOLDT COUNTY COMMUNITY PREPAREDNESS

2.5.1 COMMUNITY FIRE-SAFETY EFFORTS

Multiple opportunities exist for community members in Humboldt County ready to take responsibility for preparing their communities for wildfire. Forming or collaborating with a local Fire Safe Council (FSC), or being designated a Firewise® Community, are significant steps that residents can take towards improving their fire safety. These volunteer organizations collaborate to enhance fire protection and minimize potential losses to wildfire. Through them, neighbors identify local wildfire issues and develop projects to address local risks and hazards.

Six local FSCs exist in Humboldt County, and ten Firewise® Communities; four Firewise® Communities are new since the 2013 CWPP. The Humboldt County FSC (HCFSC) provides support and technical assistance to these entities in a variety of ways and at varying levels. Many local Fire Safe Councils need sustainable funding sources to manage their organization, organize volunteers, and educate their neighbors. The most effective FSCs in the county are those umbrellaed by a local non-profit organization, and usually with substantial social capital.

Most of the remaining FSCs and Firewise® Communities depend on dedicated individual volunteers, several of whom are over sixty years old and—like their volunteer fire department counterparts—need a new cadre of younger replacements to continue their efforts to lead these vital community activities.



Southern Humboldt Fire Safe Council fuel reduction activities.

There is new momentum gathering via the Humboldt County Prescribed Burn Association to bring together landowners to cooperatively implement prescribed burns on private lands throughout the county. This will be an important model to follow locally and beyond.

There are nine Community Emergency Response Teams (CERTs) operating here, in addition to the Humboldt CERT Coalition, which provides coordination and trainings.

Although a number of communities have taken initiative to increase their fire preparedness, many more Communities at Risk¹³ have multiple unmet hazard-mitigation needs. Therefore, community preparedness through fire-safety efforts is moderate in Humboldt County.

*For more information on community fire-safety efforts, see Chapter 5.4, **Community Preparedness**, and the **Planning Unit Action Plans** in Part 4.*

¹³ See section 5.1.2 for more information on designated Communities at Risk from wildfire in Humboldt County.

2.5.2 FIRE PREVENTION AND EDUCATION



Honeydew Volunteer Fire Company, CWPP meeting announcement.

Many fire-service entities and fire-management jurisdictions in Humboldt County devote time and resources to promoting fire education and prevention programs within local communities. These educational programs stress the importance of citizen involvement in local hazard mitigation and fire planning to help protect communities from wildfire. Generally, these programs are underfunded and understaffed, which means there are few resources to dedicate to wildfire prevention education.

While public understanding of fire prevention and fire safety is increasing in Humboldt County, education is still needed, especially among the smaller, more remote Communities at Risk. Therefore, community preparedness through fire prevention and education is moderate in Humboldt County.

*For more information on fire prevention and education, see Chapter 5.4, **Community Preparedness**.*

2.5.3 COMMUNITY PREPAREDNESS IDENTIFIED NEEDS 2018–2023

The agencies and organizations introduced in *Chapter 5.4*, are making significant contributions towards community preparedness in Humboldt County. To expand on their efforts and continue to build local wildfire preparedness and community wildfire-adaptation capacity, the following items have been identified in *Chapter 5.4, Community Preparedness*, as the priority community-preparedness needs in Humboldt County over the next five years.

*The following list of identified needs are addressed in the **Countywide Action Plan** chapters of Part 3 of this CWPP. Community-specific needs and related priority actions are found in the **Planning Unit Action Plans** located in Part 4.*

FIGURE 2.5.1 COMMUNITY-PREPAREDNESS PRIORITY NEEDS 2018–2023

- ❖ Find sustainable funding sources to support the coordinators of the HCFSC and local FSCs.
- ❖ Build capacity for FSCs, including identification of healthy and appropriate host organizations for those that are not associated with an existing organizational umbrella.
- ❖ Increase coordination and collaboration between FSCs and local tribes.
- ❖ Support formation of new FSCs where there is a need and potential for success. Underserved areas include:
 - Avenue of the Giants (Planning Unit 14)
 - Eel (Planning Unit 10)
 - Humboldt Bay Area (Planning Unit 8), specifically the WUI areas around Arcata, Blue Lake, Eureka, Fieldbrook, and McKinleyville
- ❖ Support the continued work of existing Firewise® Community sites and assist with the recognition of new sites where needed, Including:

<ul style="list-style-type: none"> ➤ Alderpoint ➤ Avenue of the Giants individual communities ➤ Blue Lake and greater area ➤ Blue Lake Rancheria ➤ Briceland ➤ Ettersburg 	<ul style="list-style-type: none"> ➤ Garberville/Redway area ➤ Hoopa ➤ Orick ➤ Westhaven/Trinidad ➤ Whitethorn
---	---
- ❖ Maintain existing Community Emergency Response Teams (CERTs) and identify agencies to support new local CERTs. Train more members through Humboldt CERT Coalition to join teams throughout the county. Form a countywide CERT for all unincorporated areas and areas that do not have existing CERTs.

FIGURE 2.5.1 COMMUNITY-PREPAREDNESS PRIORITY NEEDS 2018–2023

- ❖ Expand local fire-agency prevention and preparedness programs to more departments throughout the county; include wildfire-preparedness programs.
- ❖ Create information and other resources to help residents understand how to use prescribed fire to reduce fuels on their properties.
- ❖ Complete the County Evacuation Plan, community profiles for each identified isolated community or CWPP Fire Planning Unit, and identify Community Liaisons.
- ❖ Develop and/or strengthen outreach programs to prepare communities to evacuate safely and effectively.
- ❖ Work with community members to identify and map potential evacuation routes, potentially safe public escape areas, and known evacuation barriers. Ensure these are communicated to both first responders and residents.

2.6 FURTHERING RISK ASSESSMENT IN HUMBOLDT COUNTY

The risk assessment undertaken for this CWPP was done at a very coarse scale. As shown in *Parts 4* and *5* of this plan, more detailed local CWPPs and Firewise® Assessments have been completed for some areas of the county. However, a more detailed assessment of risks (home-by-home, or at least at the neighborhood level) is still needed for most areas.

A significant amount of community-identified fire-planning information has been collected and mapped over the fifteen years of fire-safe planning by the Humboldt County Fire Safe Council. As will be explored in the implementation of the *Countywide Action Plan, (Chapter 3.6, Integrated Planning)*, these community-generated data need to be evaluated—sometimes on the ground—and integrated as appropriate into fire-agency and local Fire Safe Council planning datasets to facilitate effective wildfire mitigation in Humboldt County. Managing these datasets is a significant task.

To fully assess local fire risk as systematically and comprehensively as possible is a substantial undertaking. **Humboldt County residents—especially through local FSCs, Firewise® Communities, and other neighborhood or community organizations—are encouraged to use the resources in this CWPP to better understand the fire hazards and risks where they live.** In addition, the County of Humboldt and the HCFSC, will need to **track evolving climate change research and modeling as it pertains to wildfire risk and incorporate findings into wildfire adaptation strategies** as this CWPP is implemented and maintained. In this way, Humboldt County can continue to improve its community fire safety and hence reduce its risk of catastrophic wildfire damage.

The following chapters in *Part 3, Countywide Action Plan*, are the HCFSC and its collaborators’ proposed actions to address the issues identified in this risk assessment.



Smoke from the 2015 fires in and around Humboldt County.

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PART 3—COUNTYWIDE ACTION PLAN, INTRODUCTION

The following six chapters make up the *Countywide Action Plan* for this Humboldt County Community Wildfire Protection Plan (CWPP). The chapters delineate the six goal areas defined by the Humboldt County Fire Safe Council (HCFSC) in 2017:

1. **WILDFIRE IGNITION PREVENTION:** REDUCE HUMAN-CAUSED WILDFIRE IGNITIONS.
2. **WILDFIRE PREPAREDNESS:** INCREASE COMMUNITY RESILIENCE AND ADAPTATION TO WILDFIRE.
3. **DISASTER PREPAREDNESS:** INCREASE RESIDENTS' ABILITY TO EFFECTIVELY PREPARE FOR AND SURVIVE WILDFIRE.
4. **FIRE PROTECTION:** SUPPORT FIRE-PROTECTION SERVICES FOR PEOPLE, PROPERTY, COMMUNITIES, AND NATURAL RESOURCES.
5. **RESTORATION OF BENEFICIAL FIRE:** RESTORE BENEFICIAL FIRE AT THE LANDSCAPE SCALE.
6. **INTEGRATED PLANNING:** MAXIMIZE INTEGRATION OF PLANNING EFFORTS TO IMPROVE COMMUNITY AND ECOSYSTEM RESILIENCE TO WILDFIRE.

The HCFSC and its partners formed Work Groups focused on each of these goals to identify a set of *Objectives*, *Metrics*, and *Priority Actions* to meet each *Goal* over the next five years. The six *Countywide Action Plan* chapters are the result of that collaboration. *(For more information on the Work Group process, see a summary in section 1.2.1 and details in Appendix B.2.)*

Each of the following chapters contains:

GOALS: Listed above, these are the focus areas for what the HCFSC wants to achieve over the next five years. Each *Goal* has an identified *Objective*.

OBJECTIVES: Statements of desired future activity and conditions in pursuit of each *Goal*. In other words, what it will look like if the HCFSC achieves its *Goals*. Each *Objective* has a set of *Metrics*.

METRICS: A set of measurable desired future conditions that the Work Groups have identified to achieve by 2023 as a result of the implementation of this CWPP. The *Metrics* identify how the HCFSC can measure the achievement of *Objectives* in a realistic way and ensure its own internal accountability and success. Each *Metric* has a set of associated *Priority Actions*.

PRIORITY ACTION: One or more actions that the Work Group will help facilitate to achieve the *Metric* by 2023.

DESCRIPTION: A brief introduction to the issue and action.

RESPONSIBLE PARTY: The agency or organization, often the Work Group, who will be responsible for leading the implementation of the action item.

ADDITIONAL PARTNERS: Other agencies or partners with whom the *Responsible Party* could collaborate for the successful implementation of the action. All *partners* are highlighted in green throughout the implementation tables for easier identification.

DESIRED OUTCOME: What the Work Group intends to achieve after implementing the *Action Steps*.

Finally, a list of *Potential Projects* is included in addition to the *Priority Actions*. The *Potential Projects* are those supported by this CWPP as having a positive benefit toward meeting the *Goals* of this CWPP. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout the *Countywide Action Plan* as resources are available.

A more detailed version of each Countywide Action Plan chapter, with a list of detailed Potential Action Steps for each of the Priority Actions, can be found in Appendix O.

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3.1 WILDFIRE IGNITION PREVENTION

GOAL 1: REDUCE HUMAN-CAUSED WILDFIRE IGNITIONS.

OBJECTIVE 1

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL SUPPORT EFFORTS TO REDUCE THE RATE OF HUMAN-CAUSED WILDFIRE IGNITIONS THROUGH EDUCATIONAL OUTREACH AND OTHER COLLABORATIVE PROJECTS.

The following metrics and priority actions have been identified by the Humboldt County Fire Safe Council towards meeting the goal of reducing human-caused wildfire ignitions throughout the county.

*For more information on fire prevention in Humboldt County, see Chapter 5.4, **Community Preparedness**.*

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

3.1.1 METRIC: IGNITION DATA AND REPORTING

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL ANNUALLY REVIEW FIRE AGENCY DATA ON WILDFIRE IGNITION PATTERNS TO IDENTIFY TRENDS.

PRIORITY ACTION 3.1.1-1	
CREATE A COUNTYWIDE IGNITIONS REPORT, WITH INFORMATION ON CURRENT TRENDS IN WILDFIRE IGNITIONS.	
DESCRIPTION	<p>Through the Fortuna Interagency Command Center (FICC) dispatch, wildfire-ignition data are collected on all fire response in the county, whether local, state, tribal, or federal. CAL FIRE dispatches and collects data for most local fire departments. Humboldt Bay, Arcata, Hoopa, and Fortuna Fire Departments track their own dispatch and ignition data, which are then summarized into the Humboldt County Fire Chiefs' Association (HCFCA) Annual Report. Six Rivers National Forest (SRNF) and Redwood National Park (RNP) also track their own ignitions. Bureau of Land Management (BLM) ignition data are tracked through CAL FIRE. The US Department of Interior (DOI) also tracks BLM and Hoopa ignition data.</p> <p>The Humboldt County Fire Safe Council (HCFSC) Wildfire Ignition Prevention Work Group will request wildfire-ignition data (not including medical calls) from these cooperating agencies and then review it to identify trends in local ignitions, including rates, new ignition causes, and geographical hot spots. From this data the HCFSC will explore identifying acceptable levels of ignitions and a target ignition-rate change, to compare it with population changes in a given area.</p> <p>A report will be created to be presented annually to the HCFSC and then to the County Board of Supervisors (BOS), ideally at the same time as the annual HCFCA report presentation.</p> <p>The report will display the information in an easy-to-understand format. It will be shared via existing networks, including HCFSC and HCFCA contacts, social media, and local media outlets.</p> <p>As part of this process, the HCFSC Wildfire Ignition Prevention Work Group will identify data issues, such as the level of detail that would be useful for tracking and understanding local ignition sources—for example, tracking ignitions related to the marijuana industry and homeless camps. Identifying data issues to track at the state level (e.g. marijuana) could also be an outcome of this action.</p>

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	The information generated in these reports would then assist the HCFSC and its partners in identifying future priority actions to reduce unplanned ignitions. It would also be useful in funding applications, especially to support local volunteer fire departments.
RESPONSIBLE PARTY	HCFSC Wildfire Ignition Prevention Work Group
ADDITIONAL PARTNERS	CAL FIRE, HCFA, SRNF, BLM, RNP, fire departments, County Planning and Building, PG&E.
DESIRED OUTCOME	ANNUAL REPORT ON COUNTYWIDE IGNITIONS AND TRENDS PRESENTED TO THE BOARD OF SUPERVISORS AND SHARED PUBLICLY.

The following Potential Projects are supported by this CWPP as having a positive benefit towards meeting this metric, objective, and goal. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Develop an administrative support structure to assist local fire organizations with incident reporting.

3.1.2 METRIC: IGNITION PREVENTION

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL ANNUALLY ACCOMPLISH AT LEAST ONE COLLABORATIVE PROJECT TO REDUCE HUMAN-CAUSED WILDFIRE IGNITIONS.

PRIORITY ACTION 3.1.2-1	
PROVIDE INFORMATION AND OUTREACH TO MARIJUANA CULTIVATORS AND PROCESSORS TO REDUCE IGNITIONS IN THAT INDUSTRY.	
DESCRIPTION	<p>The HCFSC Ignition Prevention Work Group will identify one priority collaborative ignition prevention project annually. Topics could include fire ignitions related to recreation, utilities, power-tool use, and more (<i>see Potential Projects below</i>).</p> <p>Beginning in 2019 with outreach to the newly legalized marijuana industry, the Work Group will explore various ways to communicate the need to be careful and safe to reduce ignitions, and how to prepare marijuana-growing and -processing properties to reduce hazards.</p> <p>Information will be included about the new National Fire Protection Association (NFPA) <i>Marijuana Standards, NFPA 1, Chapter 38: Marijuana Growing, Processing, or Extraction Facilities</i>,¹ which applies to the growing and processing of marijuana within new and existing buildings. Further information on potential risks and hazards from the marijuana industry is available in <i>NFPA's Hazards of the Trade</i>.²</p> <p>Messaging ideas include a "So you want to grow?" poster and a "Don't let your smoke go up in smoke!" campaign.</p> <p>Outreach could include a contest to give away a standpipe kit for attachment to a water tank as a way to promote quick and efficient connections for local fire departments. Marijuana cultivation supply stores and dispensaries would be approached as sponsors.</p> <p>Information would be shared via County Planning and Building during the permit process, at local events (e.g. Roll on the Mattole or County Fair), through all relevant social</p>

¹ Marijuana Grow & Extraction Facilities [Webpage]. *National Fire Protection Association Journal*. Retrieved from <https://www.nfpa.org/Public-Education/By-topic/Property-type-and-vehicles/Marijuana-grow-and-extraction-facilities>

² Roman, J. (2016). Hazards of the Trade. *National Fire Protection Association Journal*. Retrieved from <https://www.nfpa.org/News-and-Research/Publications/NFPA-Journal/2016/September-October-2016/Features/Growing-Pains/Hazards-of-the-Trade>

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	<p>media and local media outlets, and through local cannabis trade organizations and consultants.</p> <p>The handout could include information about impacts on water, conservation, and the need to have water for fire suppression. County fire-safe regulations regarding water storage are available at https://humboldtgov.org/1812/Fire-Safe.</p> <p>Due to the large number of cultivators and the attention to the newly legalized industry, this action could increase the visibility of the HCFSC and its work around the county.</p>
RESPONSIBLE PARTY	HCFSC Wildfire Ignition Prevention Work Group
ADDITIONAL PARTNERS	Fire departments, cannabis organizations and consultants, supply stores, dispensaries, HCFCA, CAL FIRE, SRNF, BLM, RNP.
DESIRED OUTCOME	OUTREACH TO ASSIST THE CANNABIS INDUSTRY IN REDUCING IGNITIONS, AND IDENTIFICATION OF TARGET SECTOR FOR NEXT YEAR'S PROGRAM.

POTENTIAL PROJECTS

- Reduce ignitions from recreation.
 - Target areas with historic or high ignitions, including the King Range National Recreation Area (especially Spanish Flat), and other areas with frequent ignitions.
 - Visit campgrounds and do fire-prevention education with kids around the campfire.
- Work with **PG&E** to reduce the risk of ignitions caused by power lines, by:
 - Identifying opportunities and plans for relocating or burying power lines, and
 - Initiating effective communication and coordination regarding **PG&E** plans to turn off lines during high wind or Red Flag conditions.
- Use the *One Less Spark/One Less Wildfire* educational campaign, <http://www.readyforwildfire.org/One-Less-Spark-Campaign>.
- Explore actions targeted to homesteaders, railroads, real estate professionals, hunters, and/or other sectors.
- Support prevention programs in the schools with fire trucks, e.g. **Humboldt Bay Fire's** program.
- Support the *Big Red Truck* program, where fire trucks go to rural homes to demonstrate ingress and egress issues. Tie this to Defensible Space Inspections. These visits could be used as a fundraising source and/or to get volunteers for local fire departments.
- Inform residents about the importance of vigilance and caution during Red Flag conditions when a small ignition has a higher probability of growing into a large fire, especially in coastal areas where residents may be less prepared for wildfire.

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3.2 WILDFIRE PREPAREDNESS

GOAL 2: INCREASE COMMUNITY RESILIENCE AND ADAPTATION TO WILDFIRE.

OBJECTIVE 2

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL FACILITATE COMMUNITY WILDFIRE PREPAREDNESS, RESILIENCE, AND ADAPTATION TO WILDFIRE BY SUPPORTING AND PROMOTING FIRE SAFE COUNCILS, FIREWISE® AND FIRE ADAPTED COMMUNITIES, AND OTHER ACTIVITIES TO REDUCE STRUCTURAL IGNITABILITY AND HAZARDOUS FUELS.

The following metrics and priority actions have been identified by the Humboldt County Fire Safe Council towards meeting the goal of increasing community resilience and adaptation to wildfire. This goal is focused on community preparedness throughout the year. *Goal 3: Disaster Preparedness* addresses what do before, during, and after an emergency event, i.e. *Ready, Set, Go*. *Goal 5: Restoration of Beneficial Fire* addresses ecosystem resilience and the landscape scale.

For more information on community preparedness, see Chapter 5.4, Community Preparedness. For more information on Humboldt County's wildfire environment, see Chapter 5.2, Wildfire Environment.

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

AROUND THE HOME

3.2.1 METRIC: HARDENED HOMES

A MAJORITY OF RESIDENTS WILL HAVE A WORKING FAMILIARITY WITH THE CONCEPT OF HARDENED HOMES, TO BE ABLE TO FIRE-SAFE THEIR HOUSES AND OTHER STRUCTURES TO MAKE THEM RESILIENT TO WILDFIRE.

PRIORITY ACTION 3.2.1-1 CREATE AND DISTRIBUTE A BROCHURE HOW TO FIRE-SAFE (OR HARDEN) YOUR HUMBOLDT-COUNTY HOME.	
DESCRIPTION	<p>New information continues to come forward regarding the most effective ways to prepare one's home and property to survive wildfire. This is especially true after the recent fire seasons during which unprecedented numbers of homes were lost. Many of these homes were ignited by embers—small burning pieces that were flying through the air at high speeds—being forced into ventilation systems, cracks, under eaves and roofs, or anywhere else they could find to land and smolder until igniting. Other homes were lost from home-to-home combustion; the heat from one house being so great that it caused nearby homes to ignite.</p> <p>Given this experience, it's more important than ever to provide current information to Humboldt County residents to prepare their homes for the eventuality of wildfire, especially the home and the first five feet out from it. This information is needed in many rural parts of the county where homes are scattered among the wildlands. It is also needed in the urban areas of the county, where redwoods and the cooler climate create the ambience</p>

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	<p>that so many enjoy, while giving a false sense of minimal wildfire risk. <i>Hardening</i>¹ or fire-safing homes and outbuildings can increase wildfire safety for those living among the redwoods and other <i>urban fuels</i>².</p> <p>This action item will create local materials and share them broadly throughout the county. In addition to the usual outlets, they will be shared with the homebuilding, insurance, real estate, landscaping, and building-supply industries. Materials will discuss where to site new homes to maximize fire safety and how to build a hardened home. It will use photos of Humboldt County homes, and include the following information:</p> <ul style="list-style-type: none"> ○ Siting away from steep slopes, wind tunnels and draws. ○ Non-combustible roof coverings, and the importance of replacing unrated, untreated, wood-shake roofs with highly rated roofs, kept in good condition, and free of combustible debris. ○ Keeping the first five feet around a home free of all combustible materials. ○ Learning about fire behavior from existing vegetation and fire history. ○ Graphically depicting current WUI building standards in a user-friendly format. <p>These materials could be used to support Priority Action 3.2.3-2.</p>
RESPONSIBLE PARTY	Humboldt County Fire Safe Council (HCFSC) Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	County Public Works, County Planning and Building, Fire Safe Councils (FSCs) and Firewise® Communities, University of California Cooperative Extension (UCCE), California Fire Science Consortium, real estate, building, and development industries.
DESIRED OUTCOME	PRINTING, DISTRIBUTION, AND PUBLICITY OF THE BROCHURE ENTITLED <i>HOW TO FIRE-SAFE (OR HARDEN) YOUR HUMBOLDT-COUNTY HOME.</i>

The following lists of Potential Projects are those supported by this CWPP as having a positive benefit towards meeting this Metric, Objective, and Goal. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Explore parallel incentive programs that can finance upgrading homes to current WUI-building standards, including replacing untreated wood-shake roofs.
- Create and implement educational programs on hardening homes, including the possibility of a WUI-building products fair.
- Work with State Fire Marshal-approved WUI building-product vendors to create discounted wholesale purchases and installation of products to harden homes at the neighborhood or community scale.
- Have an HCFSC booth at local events and fairs to share information about hardened homes and defensible space.

¹ Hardened Homes: This term refers to improving a building's resistance to fire, such as updating a roof with non-combustible roofing material; the goal is to make the structure survivable in a fire.

² Urban Fuels: Any flammable materials within a landscape as a result of urban development. Examples include urban structures, landscaping, and urban debris such as wood piles, trash dumps along roadsides, and die-back from weedy invaders.

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3.2.2 METRIC: DEFENSIBLE-SPACE EDUCATION

A MAJORITY OF RESIDENTS IN HIGH FIRE-HAZARD AREAS WILL HAVE A WORKING FAMILIARITY WITH HAZARDOUS FUEL-REDUCTION PRACTICES, INCLUDING DEFENSIBLE SPACE, TO BE ABLE TO IMPLEMENT THESE ON THEIR PROPERTIES.

PRIORITY ACTION 3.2.2-1 UPDATE LIVING WITH WILDFIRE IN NORTHWESTERN CALIFORNIA AND DISTRIBUTE WIDELY.	
DESCRIPTION	<p>The second edition of <i>Living with Wildfire in Northwestern California</i> was published and distributed in 2017 and very well received. It was produced by the HCFSC and supported by the County of Humboldt, CAL FIRE, and the US Forest Service (Six Rivers National Forest, SRNF). It will be updated at least once in the next five years. The 2017 edition is available online via: https://humboldt.gov.org/livingwithwildfire or via CAL FIRE³ and SRNF⁴ websites.</p> <p>A smaller Humboldt County version of <i>Living with Wildfire</i> is included in <i>Appendix H</i> of this CWPP.</p>
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	County of Humboldt, Six Rivers National Forest (SRNF), Redwood National Park (RNP), CAL FIRE, Bureau of Land Management (BLM), tribes, FSCs, Firewise® Communities.
DESIRED OUTCOME	LIVING WITH WILDFIRE IN NORTHWESTERN CALIFORNIA, UPDATED AND DISTRIBUTED WIDELY, INCLUDING TO ALL RURAL POST OFFICE BOXES.

PRIORITY ACTION 3.2.2-2 CREATE A LOCAL VIDEO ABOUT DEFENSIBLE SPACE AND HARDENED HOMES.	
DESCRIPTION	<p>Videos are an effective way to reach the uninitiated, especially when used in social media and in schools. This would build on the information in <i>Priority Actions 3.2.1-1</i> and <i>3.2.2-1</i>, and share it in an easily accessible format.</p> <p>See Orleans/Somes Bar FSC <i>Lifestyles of the Rural and Fire Safe</i> for an entertaining local fire safety video example: https://www.youtube.com/watch?v=0hmFABXAojA</p>
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, tribes, local media partners (e.g. Access Humboldt, Ink People, Klamath-Salmon Media Collaborative), CAL FIRE, North Coast Unified Air Quality Management District (NCUAQMD), SRNF, RNP, BLM.
DESIRED OUTCOME	CREATE A LOCAL VIDEO ABOUT DEFENSIBLE SPACE AND HARDENED HOMES.

³ Living with Wildfire in Northwestern California, 2nd edition. [PDF] Retrieved from CAL FIRE website http://www.fire.ca.gov/HUU/downloads/Living_w-Wildfire_NW_CAL_April2017.pdf

⁴ Living with Wildfire in Northwestern California, 2nd edition. Retrieved from SRNF website <https://www.fs.usda.gov/main/srnf/maps-pubs>

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PRIORITY ACTION 3.2.2-3 CONTINUALLY BUILD A PHOTO AND GRAPHIC LIBRARY OF HARDENED HOMES, DEFENSIBLE SPACE, AND FUEL HAZARD-REDUCTION PROJECTS IN HUMBOLDT COUNTY.	
DESCRIPTION	There was a need for local images for the second edition of <i>Living with Wildfire in Northwestern California</i> and for this CWPP. These images and graphics are needed for ongoing education and outreach materials, as are identified in several priority actions. This action would also explore the possibility of a local fire-safety photo contest.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, fire departments, CAL FIRE, other state and federal partners, photography and journalism students and professionals.
DESIRED OUTCOME	AN EXTENSIVE PHOTO LIBRARY DEMONSTRATING EXAMPLES OF COMMUNITY WILDFIRE PREPAREDNESS IN HUMBOLDT COUNTY.

POTENTIAL PROJECTS

- Develop curriculum for use in schools (high school in particular). Curriculum to include fire ecology, wildfire hazard, fire-safe practices, defensible space, etc.
- Work with the local-insurance industry to provide education on appropriate local fuel-reduction practices, and materials for them to share with policyholders.
 - Incentivize insurance industry to work with customers.
- Develop Humboldt County fire-safety posters and displays to use at public events; take advantage of all possible opportunities to display them at local events.
- Work with 4-H chapters to develop local fire-safety educational programs.
- Fund and develop a service-learning program in local high schools focused on fire safety and defensible space.
- Target fire-safety educational efforts to new residents, especially those coming from urban areas and others with little experience with fire in the WUI.
 - Develop a welcome-neighbor program, offering a welcome basket with fire-safety information for new residents.
 - Distribute fire-safety information through realtors, water districts and other utilities, fire departments, chambers of commerce, insurance industry, and other interested partners.
 - Work with realtors to provide forms for new buyers that 1) provide information about fire protections, obligations, and services; and 2) procure for firefighters information such as the presence/absence of disabled and elderly persons, livestock, new gates, etc.
- Coordinate conservation and fire-safety objectives in educational programs, including promoting options for conserving water, and incentives to replace exotic plants with native species.
 - Offer public workshops to educate and train residents in how to manage their vegetation to reduce their wildfire hazard while protecting ecological health and/or economic productivity.
- Provide education to residents connecting fire-safe forests, timber production, and ecological restoration efforts.

3.2.3 METRIC: DEFENSIBLE-SPACE COMPLIANCE

A MAJORITY OF HABITABLE STRUCTURES IN THE STATE RESPONSIBILITY AREA WILL BE TARGETED FOR INSPECTION FOR DEFENSIBLE SPACE, WITH NINETY PERCENT COMPLIANCE OF THOSE INSPECTED AS DEFINED BY CALIFORNIA LAWS.

PRIORITY ACTION 3.2.3-1 COLLABORATE TO CREATE DEFENSIBLE SPACE FOR ELDERLY AND DISABLED RESIDENTS WHO ARE NOT ABLE TO DO THIS FOR THEMSELVES.	
DESCRIPTION	There are many success stories from around the county and elsewhere in the state of assisting those who are unable to do their own defensible space work. Fire Safe Councils (FSCs) often target these populations for grant-funded projects and tie them into local

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	chipping programs, such as exist with the Lower Mattole, Willow Creek, and Orleans-Somes Bar FSCs . Systematizing assistance for elderly and disabled residents in each community who need this support, and ensuring getting the work done—especially with volunteers, will create numerous public benefits to neighborhoods and communities. Although state inmate crews are not able to work directly around homes due to liability issues, using well-supervised crews of local youth could be explored. These activities would ideally be tied into local chipper programs.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, tribes, CAL FIRE, Area One Agency on Aging, Tri-County Independent Living, County Department of Health and Human Services, Dreamquest Agents of Change, Senior Centers, Family Resource Centers, Community Service Districts, community centers and Granges.
DESIRED OUTCOME	FIFTY HOMES ANNUALLY TREATED FOR DEFENSIBLE SPACE FOR ELDERLY AND DISABLED RESIDENTS THROUGHOUT THE COUNTY.

PRIORITY ACTION 3.2.3-2 IDENTIFY PRIORITY-INTERFACE AREAS FOR IMPLEMENTATION OF DEFENSIBLE SPACE AND HARDENED HOMES ON PRIVATE PROPERTIES.	
DESCRIPTION	Following catastrophic fires, FEMA makes funding available through various programs to eligible entities throughout California. Eligible-funded activities can include defensible-space measures and ignition-resistant construction. FEMA is interested in funding projects to create defensible space and hardened homes on properties that will have a strategic, positive impact on their community. The County of Humboldt can explore applying for one of these grants for strategic WUI areas.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	County Planning and Building, County Public Works, County OES, local entities with successful FEMA grants.
DESIRED OUTCOME	KEY INTERFACE NEIGHBORHOODS ALONG THE EDGE OF DENSELY-POPULATED AREAS WOULD HAVE HARDENED HOMES AND DEFENSIBLE SPACE IMPLEMENTED.

POTENTIAL PROJECTS

- Seek continued funding for the FLASH program.
- Support [CAL FIRE](#) funding for Defensible Space Inspections.
- [County](#) offer a defensible space advisory visit. Could serve as an independent verification for insurance or escrow companies.
- Explore other incentive programs to help residents create defensible space around their homes and in their neighborhoods.
- Provide a portal for the public to access information about possible grant funding, permitting information, and chipper program availability.
- Potentially develop a list of contractors/individuals with the ability to burn/chip/work for private property owners (especially those physically unable to implement defensible space requirements).
- Share information about County *SRA Fire-Safe Regulations* (see *Metric 3.6.6 and Appendix J*): <https://humboldtqov.org/documentcenter/view/278>.
- Contact local hardware stores and distributors about offering firefighting tools such as McLeods and Pulaskis at a discounted price to local volunteer fire fighters, Fire Safe Councils, and other related groups.

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AROUND THE NEIGHBORHOOD AND COMMUNITY

3.2.4 METRIC: COMMUNITY WILDFIRE-PREPAREDNESS ORGANIZATIONS

ALL RESIDENTS WILL HAVE ACCESS TO FIRE SAFE COUNCILS, FIREWISE® COMMUNITIES, LOCAL FIRE DEPARTMENTS, AND/OR OTHER SIMILAR COMMUNITY WILDFIRE-PREPAREDNESS ORGANIZATIONS WHERE THEY LIVE.

PRIORITY ACTION 3.2.4-1 SUPPORT THE FORMATION OF NEW FIRE SAFE COUNCILS OR FIREWISE® COMMUNITIES TO COORDINATE LOCAL COMMUNITY WILDFIRE-PREPAREDNESS EFFORTS.	
DESCRIPTION	<p>Several communities around the county have expressed an interest in creating a local <i>Fire Safe Council (FSC)</i> or <i>Firewise® Community</i>. These were confirmed at the 2017 CWPP workshops. This project would provide assistance to those communities to help them get started, potentially connecting them with a mentor from another community in the county.</p> <p>This action would support formation of new FSCs where there is a need and potential for success. Underserved areas include:</p> <ul style="list-style-type: none"> ○ Avenue of the Giants (Planning Unit 14), ○ Eel (Planning Unit 10), and ○ Humboldt Bay Area (Planning Unit 8), specifically the WUI areas around McKinleyville, Fieldbrook, Arcata, Blue Lake, and Eureka. <p>Assistance may also be provided for the recognition of new Firewise® Community sites where needed, including:</p> <ul style="list-style-type: none"> ○ Alderpoint ○ Avenue of the Giants individual communities ○ Blue Lake and greater area ○ Blue Lake Rancheria ○ Briceland ○ Ettersburg ○ Fieldbrook ○ Garberville/Redway area ○ Hoopa ○ Orick ○ Table Bluff Rancheria ○ Westhaven/Trinidad ○ Whitethorn ○ Neighborhoods thought the county in high wildfire risk areas where there are interested residents.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	County Public Works, CAL FIRE, Firewise® USA, SRNF/RNP, National Fire Protection Association (NFPA)/Firewise® Communities, tribes, FSCs, watershed groups and other community organizations, road associations, community centers, Neighborhood Watch.
DESIRED OUTCOME	FIVE NEW AND FUNCTIONAL FIRE SAFE COUNCILS AND/OR FIREWISE® COMMUNITIES FORMED.

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PRIORITY ACTION 3.2.4-2 HELP ORGANIZE A REGIONAL FIRE SAFE COUNCIL (FSC) CAPACITY-BUILDING GATHERING TO HELP INSPIRE NEW FSCs AND SUSTAIN EXISTING ONES.	
DESCRIPTION	In the early days of <i>Fire Safe Councils</i> in the region, several annual workshops were held to share successes and challenges. These were rewarding events for all involved. Funding was secured between the <i>California Fire Safe Council</i> , insurance companies, and agencies to cover food and inexpensive lodging, as well as mileage for one vehicle from each participating <i>FSC</i> . Several <i>FSCs</i> from throughout northern California have begun discussions about holding another regional meeting, tentatively scheduled for early 2019 in Sonoma County.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group with the <i>Fire Adapted Communities Learning Network</i>
ADDITIONAL PARTNERS	Other Northern California <i>FSCs</i> (including Sonoma, Santa Clara, and Nevada Counties), California Fire Safe Council (CFSC), local <i>FSCs</i> , local Firewise® Communities, NFPA, CAL FIRE, SRNF, Northern California Prescribed Fire Council, Fire Learning Network.
DESIRED OUTCOME	A REGIONAL FIRE SAFE COUNCIL GATHERING.

POTENTIAL PROJECTS

- Encourage Humboldt County organizations working towards community fire safety to join the *Fire Adapted Communities Learning Network*.
- Support creation of neighborhood associations to advance volunteerism in fire-safe activities.
- Work with local *FSCs* to develop ongoing financial and in-kind support (including organizational development, technical support, grant writing support, fundraising, and training) to ensure their long-term sustainability and autonomy.
- Encourage and facilitate collaboration on grant proposals, *see Metric 3.6.11*.
- Maintain a current list of funding sources and contact information for interested partners; provide example applications of successful proposals.
- Share fire-safety education and activities with homeowner associations.

IN THE WILDLAND-URBAN INTERFACE

3.2.5 METRIC: ROADSIDE HAZARDOUS-FUEL REDUCTION

HAZARDOUS FUELS WILL BE TREATED ALONG TEN PERCENT OF PRIMARY AND SECONDARY ROADS WITH ADJACENT FLAMMABLE VEGETATION AT LEVELS THAT COULD POSE A THREAT TO SAFE INGRESS AND EGRESS AND PROVIDE STRATEGIC FUEL BREAKS.

PRIORITY ACTION 3.2.5-1 SUPPORT FUNDING AND COLLABORATION OPPORTUNITIES TO HELP COUNTY ROAD MAINTENANCE IMPLEMENT FUEL-REDUCTION PROJECTS FOR SAFE INGRESS AND EGRESS, AND TO SERVE AS STRATEGIC FUEL BREAKS.	
DESCRIPTION	<p>There are many public roads throughout the county that have unsafe levels of roadside fuels (flammable vegetation). These fuels need to be managed for both wildfire evacuation (ingress and egress) and general visibility for driver safety. Roads treated for fuel reduction can also act as important fuel breaks for fire protection. <i>County Public Works, Road Maintenance (County Roads)</i> routinely maintains all County roads, including hazardous-roadside vegetation. However, due to funding and staffing cuts over recent decades, many key evacuation routes are overgrown.</p> <p><i>County Roads</i> hires CAL FIRE inmate crews to help with roadside hazardous-fuel reduction. They have also partnered with CAL FIRE on roadside shaded-fuel breaks beyond the County right-of-way. The amount and type of work that these crews can do is limited by County staff supervision and support equipment. With more equipment and staff to lead</p>

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	<p>projects, County Roads estimate they could employ crews for five months/year to complete approximately two-hundred miles of roadside fuel breaks over the next five years. To achieve this, the County would need three new employees, two more equipment trailers with porta-potties, and two more chippers.</p> <p>Developing County agreements with the California Conservation Corps (CCC) for their crews to assist with this work, as well as collaborating on projects with local FSCs and others doing fuel-hazard reduction is a beneficial step to explore in this action. Expanding these partnerships could be especially helpful when CAL FIRE crews are unavailable, and for projects beyond the County right-of-way. Finally, these partnership agreements would facilitate identification of best practices for treatment prescriptions as strategic fuel breaks. Building partnerships with local FSCs would also support FSC work along county roads, such as waivers for encroachment permits and the sharing equipment (e.g. roadwork signs).</p> <p>This action would also explore options to develop agreements with Caltrans, PG&E, and the Shelter Cove Resort Improvement District (RID) to support work along each other's easements. These agreements would improve efficiency, allowing work to be completed by one jurisdiction within the easement of another when it is adjacent to an active project area. Currently, adjacent vegetation remains untreated until the other jurisdiction can address it. The ability of County Roads to fully participate in this priority action would be contingent on both securing grant funds to support specific tasks, as well as sustainable funding from sources such as California Senate Bill 1, <i>Road Repair and Accountability Act</i>.</p> <p>HCFSC will support County Roads to identify funding and collaboration opportunities to increase the Division's capacity to keep up with roadside-vegetation management, to expand work beyond the County right-of-way, and explore various effective fuel-treatment methods.</p>
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group with County Public Works Road Maintenance
ADDITIONAL PARTNERS	County Board of Supervisors (BOS), County OES, California Conservation Corps (CCC), Cal Trans, CAL FIRE, FSCs, Shelter Cove Resort Improvement District, Redwood Community Action Agency (RCAA), Humboldt Area Foundation.
DESIRED OUTCOME	TREATMENT OF TWO-HUNDRED MILES OF COUNTY ROADS AND EXPANDED PARTNERSHIPS TO SUPPORT ROADSIDE VEGETATION MAINTENANCE.

POTENTIAL PROJECTS

- Secure funding and other resources to repair, maintain, and/or upgrade priority ingress and egress sites.

PRIORITY ACTION 3.2.5-2 WORK WITH CAL TRANS TO DEFINE A PROCESS TO FACILITATE FUEL REDUCTION TO REDUCE FUEL HAZARDS ALONG PRIORITIZED PRINCIPAL ROADS THROUGHOUT THE COUNTY.	
DESCRIPTION	Coordination is needed with Cal Trans at the local and state levels to ensure maintenance and roadside-fuel reduction of priority evacuation routes throughout the county. Identifying a landscape-scale network of treated roads will also help facilitate implementation of prescribed fire treatments, as described in <i>Chapter 3.5, Restoration of Beneficial Fire</i> and <i>Priority Action 3.5.3-1</i> .
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group with Cal Trans
ADDITIONAL PARTNERS	County Roads, BOS, County OES, CCC, CAL FIRE, FSCs, State elected officials.
DESIRED OUTCOME	COORDINATION PROCESS IN PLACE WITH CAL TRANS TO IMPLEMENT HAZARDOUS-FUEL REDUCTION ALONG PUBLIC ROADS.

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POTENTIAL PROJECTS

- Work collaboratively to pool resources to create shaded-fuel breaks along key access roads, especially those identified at community workshops, to improve safety for evacuation as well as for firefighters responding to a wildfire.
- Continue to identify priority areas along roadways to reduce hazardous fuels.
- Identify priority roads as a **CAL FIRE** or **Forest Service** hazard, to reduce permitting issues.

3.2.6 METRIC: COMMUNITY FUEL REDUCTION

EVERY PLANNING UNIT AS DEFINED IN THIS CWPP WILL HAVE AT LEAST ONE PRIORITY FUEL-REDUCTION PROJECT COMPLETED.

PRIORITY ACTION 3.2.6-1 WORK WITH LEADERS IN EACH PLANNING UNIT TO SUPPORT PROJECT DEVELOPMENT, INCLUDING IDENTIFICATION OF NEEDED RESOURCES AND POTENTIAL OBSTACLES TO FACILITATE FUEL-HAZARD REDUCTION PROJECT IMPLEMENTATION AND MAINTENANCE.	
DESCRIPTION	<p>Community fuel breaks between homes and wildland areas are an important component to creating fire-safe communities. Often, these areas are along public lands, or larger private lands such as industrial timber lands. Priority treatment areas are identified in the <i>Planning Unit Action Plans</i> of this CWPP. Local fire departments, Fire Safe Councils, Firewise® Communities, and state and federal agency representatives can work together to design and implement priority projects.</p> <p>Compliance and permitting issues can slow down projects. Therefore, it is important to identify projects early and begin the planning process to facilitate timely implementation. This is especially true for projects on federal lands or supported by federal funding.</p> <p>The goals of this action are to facilitate community-scale fuel reduction-project implementation and maintenance in each Planning Unit throughout the county; collaborate to ensure projects are properly permitted through the required process; and employ methods that minimize carbon emissions and maintain and/or restore ecosystem function, process, and health.</p> <p>Ideally these community-scale fuel-reduction projects will tie into the collaborative processes identified in <i>Metrics 3.5.3</i> and <i>3.5.7</i> regarding creation of larger, landscape-scale fuel treatments and where to manage wildfire.</p>
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	SRNF, BLM, RNP, CAL FIRE, CCC, Cal Trans, tribes, FSCs, Firewise® Communities, fire departments, timber industry, watershed councils and other community organizations, Resource Conservation Districts, Community Service Districts.
DESIRED OUTCOME	AT LEAST ONE FUEL-HAZARD REDUCTION OR MAINTENANCE PROJECT COMPLETED OR IN DEVELOPMENT IN EACH PLANNING UNIT.

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PRIORITY ACTION 3.2.6-2 ENGAGE PG&E TO ACTIVELY REDUCE FUELS AND POTENTIAL IGNITIONS ALONG POWER LINES THROUGH COLLABORATIVE EFFORTS TO IMPLEMENT RISK-REDUCTION PROJECTS.	
DESCRIPTION	The number of fires related to power lines appears to be increasing, especially with more extreme weather events. PG&E's active participation in risk reduction is needed in Humboldt County. This action would explore options with PG&E to ensure fuels are reduced along priority easements throughout the county. This could include using its community-investment program to support a local FSC to undertake supplemental-fuel reduction to occur in between the regular maintenance times of PG&E's contracted crews. Collaborating to alter PG&E's vegetation management policies and specifications would also be explored.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group with PG&E
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, County OES, fuel-reduction crews and tree-trimming contractors, CCC, volunteer fire departments, Shelter Cove Resort Improvement District, CAL FIRE.
DESIRED OUTCOME	ACTIVE RELATIONSHIPS WITH PG&E AT LOCAL AND STATE LEVELS TO ADDRESS PRIORITY AREAS FOR REDUCING FUEL HAZARDS ALONG PG&E EASEMENTS.

POTENTIAL PROJECTS

- Develop an "Adopt a Fuelbreak" program for maintenance of fuelbreaks and employ appropriate maintenance practices.
- Support creation of local goat herds for fuel reduction and maintenance.

3.2.7 METRIC: UTILIZING EXCESS FUELS

MATERIALS RESULTING FROM HAZARDOUS FUEL-REDUCTION ACTIVITIES WILL BE UTILIZED LOCALLY.

PRIORITY ACTION 3.2.7-1 SUPPORT AND CREATE COMMUNITY CHIPPING PROGRAMS TO ASSIST RESIDENTS IN DISPOSING OF THINNED MATERIALS.	
DESCRIPTION	Chipping programs have a credible history of encouraging fuel reduction around homes and neighborhoods. Such programs offer free or low-cost chipping for landowners who reduce fuels and need to dispose of the excess materials. Local Fire Safe Councils, such as the Willow Creek, Lower Mattole, and Orleans/Somes Bar Fire Safe Councils have had effective chipping programs in place for years. Additionally, CAL FIRE has chippers (sometimes with crews) that can work with local FSCs and Firewise® Communities to chip thinned materials. The timber industry can also partner with neighboring communities to offer free chipping services.
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, CAL FIRE, SRNF, BLM, RNP, NCUAQMD, timber industry, watershed councils, Resource Conservation Districts, CCC, volunteer fire departments.
DESIRED OUTCOME	COUNTYWIDE AND/OR NEW LOCAL COMMUNITY-CHIPPING PROGRAM IS IN PLACE AND AVAILABLE TO COLLABORATING ORGANIZATIONS.

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PRIORITY ACTION 3.2.7-2 FOLLOW AND SHARE THE LATEST RESEARCH ON OPTIONS FOR UTILIZING AND DISPOSING OF WOODY MATERIALS GENERATED FROM FUEL-REDUCTION ACTIVITIES.	
DESCRIPTION	<p>Information and education are needed for both practitioners and the public regarding the options available for locally disposing of and/or utilizing materials resulting from fuel reduction and related activities. This comparison would 1) examine the ultimate fate of woody materials and its effectiveness in reducing fuels or other project objectives, and 2) where utilization options (e.g. fuel wood, biochar, energy, etc.) can be achieved, an evaluation of emissions, community exposure to pollutants, and substitution for fossil fuels.</p> <p>The comparison would address economic, ecological, and social considerations including community exposure to smoke and other emissions from wildfire or fuel-reduction activities, ecological benefits and impacts, and economic feasibility of the following options:</p> <ul style="list-style-type: none"> ○ Wildfire, ○ Pile and burn in forest, ○ Prescribed fire, ○ Lop and scatter, ○ Mastication ○ Chipping, ○ Large-scale composting facilities, ○ Mycological products, ○ Firewood for wood stoves, ○ Value-added wood products, ○ Other wood products (e.g. round logs, biochar, biofuels, etc.) ○ As feedstock for biomass power plants. <p>Initial review of applicable research would include:</p> <ul style="list-style-type: none"> ○ The research cited in <i>Figure 5.1.1, 2017 Orleans Smoke Impacts</i>, in the <i>Air Quality</i> section of <i>Chapter 5.1, Assets and Values at Risk</i>, comparing the smoke impacts from wildfire versus prescribed fire. ○ NCUAQMD materials regarding wood-burning stoves and the importance of correctly seasoning wood, including identifying and communicating practical alternatives to using unseasoned or wet wood to regulate stove temperature, and NCUAQMD's <i>Woodstove Replacement Program</i>.⁵ ○ Education about the differences in wood stove designs and fuel types. ○ The federal Environmental Protection Agency's (EPA) <i>Strategies for Reducing Residential Wood Smoke</i>⁶ materials. ○ Current relevant research of the <i>Schatz Energy Research Center</i>.⁷ <p>Finally, evaluate disposal/utilization options from the perspective of those living with respiratory issues or other smoke sensitive health conditions and explore options for protecting them; this could result in using alternative methods near sensitive populations or employing mitigation measures to reduce smoke impacts.</p>
RESPONSIBLE PARTY	HCFSC Wildfire Preparedness Work Group with Schatz Energy Research Center
ADDITIONAL PARTNERS	University of California Cooperative Extension, NCUAQMD, community organizations, FSCs, Firewise® Communities, Hayfork Watershed Research and Training Center and other regional partners working on biomass, timber industry.
DESIRED OUTCOME	INCREASED AWARENESS OF THE OPTIONS, AND SUPPORT FOR, BEST PRACTICES OF LOCAL WOODY MATERIAL UTILIZATION.

⁵ NCUAQMD. Wood Stove Replacement Program [Webpage]. Retrieved from

<http://www.ncuaqmd.org/index.php?page=wood.stove>

⁶ Environmental Protection Agency. (2013). Strategies for Reducing Residential Wood Smoke. (pp. 16-21).

Retrieved from <https://www.epa.gov/burnwise/strategies-reducing-residential-wood-smoke>

⁷ Available from: <http://www.schatzlab.org/projects/bioenergy.html>

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POTENTIAL PROJECTS

- Invest in the development of clear, concise, and well-cited facts regarding ecological impacts associated with wildfire, controlled burning, and other options.
- Summarize air quality data from the North Coast Air Basin to describe the relative impact of different pollutant sources that contribute to Humboldt's non-attainment. Describe measures that would mitigate each emission source and its relative cost.
- Communicate to local government the break-even costs for bringing local residues to local markets (differentiated by residue-quality classes and end-products).

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3.3 DISASTER PREPAREDNESS

GOAL 3: INCREASE RESIDENTS' ABILITY TO EFFECTIVELY PREPARE FOR AND SURVIVE WILDFIRE DISASTERS.

OBJECTIVE 3

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL ASSIST ITS COLLABORATORS IN DEVELOPING AND IMPLEMENTING STRATEGIES TO HELP RESIDENTS EFFECTIVELY PREPARE FOR AND SURVIVE WILDFIRE.

The following Metrics and Priority Actions have been identified by the Humboldt County Fire Safe Council to be accomplished over the next five years towards meeting the goal of increasing Humboldt County residents' ability to effectively prepare for and survive wildfire. This goal is focused on what to do before, during, and after a wildfire event. *Goal 2: Wildfire Preparedness* addresses community preparedness throughout the year.

For more information on fire protection and emergency response in Humboldt County, see Chapter 5.3, Wildfire Protection. For more information on community preparedness, see Chapter 5.4, Community Preparedness.

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

3.3.1 METRIC: EDUCATION

A MAJORITY OF RESIDENTS WILL BE PROVIDED INFORMATION ON HOW TO PREPARE THEIR HOMES AND FAMILIES IN THE EVENT OF AN ONCOMING WILDFIRE AND HOW TO SAFELY EVACUATE.

PRIORITY ACTION 3.3.1-1 DEVELOP AND IMPLEMENT COLLABORATIVE OUTREACH STRATEGIES REGARDING FAMILY AND COMMUNITY DISASTER PREPAREDNESS FOR WILDFIRE.	
DESCRIPTION	<p>Collaborating across agencies to create and share disaster preparedness information and outreach strategies will help to educate residents about how to prepare for an emergency and evacuate safely when needed. Special emphasis will be placed on the importance of creating family disaster and evacuation plans. Recent megafires illuminated the importance of residents being prepared to evacuate with very little notice. This action will share outreach materials including <i>Ready, Set, Go!</i> through direct channels and media, with the possibility of finding funding to mail materials to every post office box in rural areas.</p> <p>Information will include:</p> <ul style="list-style-type: none"> ○ Personal and household preparedness. ○ Family Disaster Plan and Family Evacuation Plan templates. ○ <i>Ready, Set, Go!</i> ○ Messaging to evacuate early when notified to do so and to be ready to go quickly; importance of listening for and heeding information from local law enforcement. ○ Recommended two weeks of emergency supplies in Humboldt County (vs. the 72-hour national recommendation). ○ Preparing Go Bags and Survival Kits, with valuables and emergency supplies. ○ The difference between <i>Voluntary Evacuation Advisories</i> and <i>Mandatory Evacuation Orders</i>. ○ Safe evacuation during a wildfire event, including planning for multiple escape routes for a variety of different wildfire scenarios. ○ Having easily passable, unlocked gates during emergencies.

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	<ul style="list-style-type: none"> ○ Protective measures to take when Mandatory Evacuation is not elected or possible, and the risks of sheltering in place. <p>This action could target the business community at some point.</p>
RESPONSIBLE PARTY	Humboldt County Fire Safe Council (HCFSC) Disaster Preparedness Work Group
ADDITIONAL PARTNERS	County Office of Emergency Services (OES), County Sheriff, CAL FIRE, tribes, fire departments, local law enforcement, local media.
DESIRED OUTCOME	IMPLEMENTATION OF AT LEAST ONE WILDFIRE DISASTER-PREPAREDNESS CAMPAIGN.

3.3.2 METRIC: EVACUATION

A MAJORITY OF RESPONSE PARTNERS WILL BE INVITED TO PARTICIPATE IN THE COMPILATION, REVIEW, TRAINING, AND EXERCISE OF THE COUNTY EVACUATION PLAN.

PRIORITY ACTION 3.3.2-1 COLLABORATE WITH KEY RESPONSE PARTNERS TO COMPLETE AND EXERCISE THE COUNTYWIDE EVACUATION PLAN.	
DESCRIPTION	<p>The <i>Humboldt County Evacuation Plan</i> is being developed by County OES and will cover all hazards, including wildfire.</p> <p>Safe, coordinated evacuation requires the participation and collaborative training of law enforcement and fire agencies with jurisdictional responsibility, social services, volunteer organizations, and other community groups.</p>
RESPONSIBLE PARTY	County OES with HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	Law enforcement agencies, CAL FIRE, Humboldt County Fire Chiefs' Association (HCFCA), fire departments, Six Rivers National Forest (SRNF), Redwood National Park (RNP), Bureau of Land Management (BLM), County Department of Health and Human Services (DHHS), Community Emergency Response Teams (CERTs), American Red Cross, Voluntary Organizations Active in Disasters (VOAD), Humboldt transit agencies, and interested public.
DESIRED OUTCOME	FINALIZATION AND EXERCISE OF THE COUNTYWIDE EVACUATION PLAN.

The following lists of Potential Projects are those supported by this CWPP as having a positive benefit towards meeting this Metric, Objective, and Goal. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Review the community-identified evacuation information generated through this planning process for development as incident-specific evacuation areas and routes.
- Identify existing options for local pet and livestock emergency evacuation. Create a local **Disaster Animal Response Team**. Work with feed stores, veterinarians, boarding facilities, and animal associations to identify needs and resources, and educate residents on options.
 - Collaborate to develop local horse and livestock evacuation plans.
 - Emphasize the importance of having a plan in place to evacuate horses, especially if residents don't have a trailer. Trailer-train horses to safely evacuate. Identify areas where residents have large animals and no means of evacuating them.
 - Distribute existing pet and large-animal evacuation literature.

3.3.3 METRIC: EVACUATION SITES AND SHELTERS

EVERY COMMUNITY WILL HAVE POTENTIAL EVACUATION SITES AND SHELTERS IDENTIFIED AND EVALUATED, WITH AGREEMENTS IN PLACE.

PRIORITY ACTION 3.3.3-1 COLLABORATE TO UPDATE OPTIONS FOR EVACUATION SITES AND SHELTERS.	
DESCRIPTION	HCFSC Disaster Preparedness Work Group will work with County OES to identify local evacuation sites and temporary shelter areas. Appropriate sites will be evaluated for accessibility (including those identified at community meetings) and ability to function as evacuation sites and/or assistance centers during emergency situations.
RESPONSIBLE PARTY	County OES
ADDITIONAL PARTNERS	County Health and Human Services (DHHS, including Public Health, Social Services, and Mental Health), HCFSC Disaster Preparedness Work Group, American Red Cross, fire departments, HCFA, municipalities, Fire Safe Councils (FSCs) and Firewise® Communities, schools, County Office of Education, County Chief Administrative Officer, County Americans with Disabilities (ADA) Coordinator, other community partners.
DESIRED OUTCOME	MAINTENANCE OF A CURRENT LIST OF EVACUATION SITES AND SHELTER SITES.

3.3.4 METRIC: WATER SOURCES

RESIDENTS WILL BE PROVIDED INFORMATION ON DEVELOPING AND IDENTIFYING WATER SOURCES FOR FIRE SUPPRESSION, AND SHARING THAT INFORMATION WITH LOCAL FIRE-PROTECTION AGENCIES.

PRIORITY ACTION 3.3.4-1 DEVELOP AND IMPLEMENT AN OUTREACH STRATEGY TO INFORM RESIDENTS OF THE NEED TO HAVE ACCESSIBLE, MAPPED, AND IDENTIFIABLE WATER FOR FIRE SUPPRESSION, AND HOW TO SHARE INFORMATION WITH LOCAL FIRE AGENCIES.	
DESCRIPTION	<p>Design a program to educate residents about how to properly set up water tanks and sources for use by firefighters. Include the following information:</p> <ul style="list-style-type: none"> ○ Make sure existing and future water tanks have proper fittings for fire hoses. ○ Fill water tanks in winter. (Use the Sanctuary Forest Storage and Forbearance Program¹ as a model.) ○ Include signage about where the water is located, e.g. a Blue Dot program with blue reflective markers.² <p>This information would then be shared with local fire departments and included in local map books. (See Metric 3.4.8.)</p>
RESPONSIBLE PARTY	HCFSC Disaster Preparedness Work Group with HCFA
ADDITIONAL PARTNERS	Fire departments, County OES, CAL FIRE, tribes, FSCs and Firewise® Communities, hardware/garden supply stores, SRNF, BLM, RNP, County Planning and Building (GIS).
DESIRED OUTCOME	IDENTIFICATION OF AVAILABLE WATER FOR FIRE SUPPRESSION FOR LOCAL FIRE AGENCIES.

¹ Storage and Forbearance Program. Sanctuary Forest. Retrieved from <http://www.sanctuaryforest.org/programs/water-stewardship/tanks-forbearance-program>

² Blue Reflective Hydrant Markers. (2001). FireHydrant.org. Retrieved from <http://www.firehydrant.org/info/bluedot.html>

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POTENTIAL PROJECTS

Residents:

- Develop incentive-based programs for residents to acquire, develop, and/or maintain extra water sources for firefighting.
- Create a handout similar to Mendocino County FSC “Developing Water Supplies for Fire Protection” and Humboldt #1 Fire Protection District handouts.
- Identify barriers to installing water tanks, ponds, and water bladders for fire-suppression efforts (permit costs, increased taxes, etc.).

Fire Suppression:

- Secure funding to design and implement a countywide Blue Dot program, providing information and materials for installing reflective blue dots and signs identifying the location of water for use by firefighters, especially in high-risk areas or those not served by a community water system.
- Encourage RAC-funded programs to place water storage tanks for fire protection on lands adjacent to federal lands, especially in the areas of Orleans, Weitchpec, Willow Creek, Titlow Hill, and Dinsmore (Forest Service adjacency) and Redwood Valley, Whitethorn, Shelter Cove, Honeydew, and Prosper Ridge (Bureau of Land Management (BLM) adjacency).
- Explore funding for a water storage program (tanks, ponds, water bladders, and/or water tenders) for rural areas, especially on private lands not adjacent to federal lands, in all communities in the State Responsibility Area (SRA) not mentioned above and not already on a public or private community water system. Prioritize zones of High and Very High Fire Hazard Severity.

3.3.5 METRIC: SIGNAGE

A MAJORITY OF RESIDENTS WILL MEET LOCAL AUTHORITY AND/OR HUMBOLDT COUNTY REGULATIONS³ FOR ROAD AND HOME SIGNAGE.

PRIORITY ACTION 3.3.5-1 DEVELOP AND IMPLEMENT AN OUTREACH PROGRAM TO INFORM RESIDENTS REGARDING CURRENT ROAD AND HOME SIGNAGE REQUIREMENTS AND HOW TO ECONOMICALLY MEET THEM.	
DESCRIPTION	This action item would develop a program that promotes and provides resources for installing road name signs and home address signs, with a particular emphasis on educating residents about the importance of posting and maintaining such signage. This is critical for rapid response of emergency responders. This action could include creating a handout for residents (with photos) regarding the importance of, and how to effectively post signs, including how to confirm a resident’s legal, physical address. It could be distributed with building permits and at community events. Finally, it would encourage work with hardware stores and other places that sell reflective signage to develop promotional displays for public education.
RESPONSIBLE PARTY	HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	Fire departments, tribes, County OES, CAL FIRE, ambulance service, law enforcement, Law Enforcement Chiefs Association (LECA), Neighborhood Watch groups, community volunteer organizations (e.g. Rotary, Scouts), hardware stores.
DESIRED OUTCOME	IMPLEMENTED OUTREACH STRATEGY REGARDING THE IMPORTANCE OF ADEQUATE SIGNAGE.

³ County of Humboldt, Department of Planning & Building. Resource Library: Fire Safe. Retrieved from <https://humboldtgov.org/1812/Fire-Safe>

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POTENTIAL PROJECTS

- Explore incentives for private road and address signage conformance.
- Standardize county mile-markers along rural roads to assist emergency responders' ability to locate incident sites quickly and efficiently.
- Standardize road signs and road numbers in rural areas where it is an issue, such as Hoopa.

3.3.6 METRIC: COMMUNITY EMERGENCY RESPONSE TEAMS

SUPPORT AND IMPROVE EXISTING COMMUNITY EMERGENCY RESPONSE TEAM (CERT) CAPACITY.

PRIORITY ACTION 3.3.6-1 FACILITATE COLLABORATION AND STRENGTHEN RELATIONSHIPS BETWEEN THE HUMBOLDT CERT COALITION AND FIRE DEPARTMENTS AND OTHER RESPONSE AGENCIES BEFORE EMERGENCIES.	
DESCRIPTION	<p>HCFSC Disaster Preparedness Work Group will collaborate with the Humboldt CERT Coalition (HCC), County OES, and the Humboldt County Fire Chiefs' Association (HCFA) to facilitate better collaboration and communication between CERTs and fire departments, including educating departments on the benefits of working with CERTs. This collaboration will help to:</p> <ul style="list-style-type: none"> ○ Build strong CERT team leaders. ○ Establish clear lines of communication before emergency events. ○ Promote opportunities for collaboration in advance of emergencies. ○ Identify projects to utilize CERT teams in between emergencies, e.g. traffic control in parades, etc. This will also serve as ongoing training for CERTs. <ul style="list-style-type: none"> ○ Submit these voluntary events or trainings to State Training Office⁴ to ensure state compensation fund insurance coverage.
RESPONSIBLE PARTY	HCFSC Disaster Preparedness Work Group with Humboldt CERT Coalition
ADDITIONAL PARTNERS	Local CERTs, County OES, fire departments, local law enforcement, LECA.
DESIRED OUTCOME	INCREASED CERT PARTICIPATION WITH LOCAL FIRE DEPARTMENTS AND OTHER RESPONSE AGENCIES.

PRIORITY ACTION 3.3.6-2 COLLABORATE WITH OTHER EMERGENCY RESPONDERS TO CREATE A COUNTYWIDE CERT.	
DESCRIPTION	<p>In many areas throughout the county, there are not enough volunteers to create a local CERT. A countywide CERT could function in these areas and be housed under the County Sheriff's Office. Project partners could also identify volunteers who may be numerous enough in some areas to create a community-specific team under a local fire department. Funding for training countywide CERT members is already budgeted through County OES.</p>
RESPONSIBLE PARTY	County OES with HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	Humboldt CERT Coalition, local CERTs, County OES, HCFA, fire departments, local law enforcement, LECA.
DESIRED OUTCOME	CREATION OF A COUNTYWIDE CERT.

⁴ Cal OES. Disaster Service Worker Volunteer Program. Retrieved from <http://www.caloes.ca.gov/cal-oes-divisions/planning-preparedness/disaster-service-worker-volunteer-program>

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PRIORITY ACTION 3.3.6-3 IDENTIFY AND TRAIN ADDITIONAL CERT INSTRUCTORS.	
DESCRIPTION	There is community interest in getting trained to become a CERT member. However, there is a shortage of qualified trainers in Humboldt County. Getting more trainers trained, whether locally or out of the area, will facilitate the involvement of more CERT members around the county. It would be more cost-effective to send interested trainers out of town for trainings initially, with the goal of generating enough interest locally to bring a <i>Train the Trainer (T3)</i> course to Humboldt. Humboldt CERT Coalition (HCC) and County OES are currently sending students to CERT T3 trainings out of the area.
RESPONSIBLE PARTY	County OES, Humboldt CERT Coalition, and HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	Local CERTs, County OES, fire departments, local law enforcement, LECA, HCFA.
DESIRED OUTCOME	ADDITIONAL INSTRUCTORS TRAINED TO PROVIDE MORE CERT TRAINING LOCALLY.

POTENTIAL PROJECTS

- Secure funding for community CERT trainings from local philanthropic organizations and businesses.

3.3.7 METRIC: COMMUNITY LIAISONS

FIVE NEW COMMUNITY LIAISONS ACTIVELY COLLABORATING WITH EMERGENCY RESPONDERS.

PRIORITY ACTION 3.3.7-1 COLLABORATE WITH COUNTY OES TO IDENTIFY FIVE NEW COMMUNITY LIAISONS.	
DESCRIPTION	More local community volunteers are needed to act as liaisons with agency and emergency personnel. In responding to fire and law enforcement agencies they provide invaluable information about community concerns, needs, resources, evacuation routes, and access and functional needs. Such a program would be most effective in areas with very high vulnerability and community receptiveness.
RESPONSIBLE PARTY	County OES with HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	FSCs and Firewise® Communities, fire departments, Community Service Districts, community groups and nonprofits.
DESIRED OUTCOME	FIVE NEW COMMUNITY LIAISONS IDENTIFIED.

PRIORITY ACTION 3.3.7-2 COMPLETE COMMUNITY PROFILES FOR EVACUATION PLANNING.	
DESCRIPTION	Community Profiles provide critical information regarding what a particular community looks like, who lives there, their specific needs and concerns, and what resources they have available. These profiles will provide key information to County OES and response partners in advance of an emergency to better prepare for and respond during an emergency, especially in wildland-urban interface (WUI) communities.
RESPONSIBLE PARTY	County OES and HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	FSCs and Firewise® Communities, fire departments, local elected officials, community health resources, businesses, County DHHS, Family Resource Centers, medical providers.
DESIRED OUTCOME	COMMUNITY PROFILES COMPLETED FOR ALL WUI COMMUNITIES.

3.3.8 METRIC: NOTIFICATION

A MAJORITY OF RESIDENTS WILL RECEIVE TIMELY NOTIFICATION OF AN APPROACHING WILDFIRE AND OTHER RELEVANT PUBLIC INFORMATION.

PRIORITY ACTION 3.3.8-1 COLLABORATE TO DEVELOP INDIVIDUAL EMERGENCY COMMUNICATION PLANS FOR COMMUNITIES WHERE NOTIFICATION ISSUES ARE IDENTIFIED AS A PRIORITY IN THEIR PLANNING UNIT ACTION PLAN.	
DESCRIPTION	<p>This action will facilitate emergency notifications at the neighborhood level, where <i>Humboldt Alert</i> notifications may not reach residents, by developing local communication plans.</p> <p>Several communities have specific needs, not always met by <i>Humboldt Alert</i>. Petrolia identified this issue at their CWPP workshop because of limited cellular coverage and other communication issues.</p>
RESPONSIBLE PARTY	County OES with HCFSC Disaster Preparedness Work Group
ADDITIONAL PARTNERS	Fire departments, FSCs and Firewise® Communities, local law enforcement representatives, schools, community centers.
DESIRED OUTCOME	EMERGENCY COMMUNICATION PLANS IN PLACE FOR THOSE COMMUNITIES WITH IDENTIFIED EMERGENCY NOTIFICATION ISSUES.

PRIORITY ACTION 3.3.8-2 WORK WITH FIRE AGENCIES TO EDUCATE THEM ON HUMBOLDT ALERT AND HOW THEY CAN USE IT IN THE EVENT OF AN EMERGENCY.	
DESCRIPTION	<p><i>Humboldt Alert</i> is a county resource that local fire departments can use to notify residents in their communities of wildfire activity and other public safety information. This action would train fire departments and other agencies in how to access and best use <i>Humboldt Alert</i>.</p>
RESPONSIBLE PARTY	County OES with HCFA
ADDITIONAL PARTNERS	HCFSC Disaster Preparedness Work Group, fire departments.
DESIRED OUTCOME	LOCAL AND TRIBAL FIRE DEPARTMENTS KNOW HOW TO REQUEST NOTIFICATIONS VIA HUMBOLDT ALERT.

POTENTIAL PROJECTS

- Set up network of HAM radios to communicate where appropriate out of the local area and to CB radios. This could assist local communications in rural isolated communities.
- Elevate awareness and use of existing notification systems such as KHSU and KMUD radio and other local FM and AM radio stations.
- Improve coordination and communications between wildfire managers, North Coast Unified Air Quality Management District, and local radio and news organizations.
- Collaborate to explore additional measures for alerting residents to pending emergencies, including social networks, popular blogs, and local radio broadcasts.
- Contact cellular providers regarding maintaining existing equipment and exploring additional cellular tower locations.

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3.4 FIRE PROTECTION

GOAL 4: SUPPORT FIRE-PROTECTION SERVICES FOR PEOPLE, PROPERTY, COMMUNITIES, AND NATURAL RESOURCES.

OBJECTIVE 4

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL SUPPORT ITS COLLABORATORS IN INCREASING FIRE AGENCIES' CAPACITY TO PROVIDE FIRE-PROTECTION SERVICES FOR ALL PEOPLE, PROPERTY, COMMUNITIES, AND NATURAL RESOURCES.

The following Metrics and Priority Actions have been identified by the Humboldt County Fire Safe Council to be accomplished over the next five years towards meeting the goal of supporting fire protection services for people, property, communities, and natural resources in Humboldt County.

For more information on Humboldt County's fire-protection resources and needs, see Chapter 5.3, Wildfire Protection.

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

3.4.1 METRIC: STAFFING

ALL FIRE-PROTECTION AGENCIES WILL MAINTAIN LEVEL OF SERVICE STAFFING AS PER NFPA 1710 OR 1720, AS IS APPLICABLE TO THEIR AGENCY, AND GIVEN TRAVEL-TIME CONSTRAINTS.

PRIORITY ACTION 3.4.1-1 INCREASE COMMUNITY AWARENESS OF VOLUNTEER STAFFING AND OTHER FIRE-SERVICE NEEDS BY SUPPORTING THE DEVELOPMENT AND MAINTENANCE OF A WEBSITE.	
DESCRIPTION	The Humboldt County Fire Safe Council (HCFSC) Fire Protection Work Group will support the Humboldt County Fire Chiefs' Association (HCFCA) to create a website to share information with residents about volunteer staffing issues and other current needs. The website's purpose will be to educate community members regarding how they can support their local fire department, including helping with fundraisers, grant writing, reporting, paperwork, and/or becoming a volunteer firefighter. The site will include links to individual fire department websites and how community members can volunteer and join their local department.
RESPONSIBLE PARTY	Humboldt County Fire Chiefs' Association (HCFCA) with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Local fire departments, County of Humboldt, Fire Safe Councils (FSCs), local media, student volunteers or interns.
DESIRED OUTCOME	WEBSITE WITH CURRENT INFORMATION REGARDING VOLUNTEER STAFFING AND OTHER FIRE-SERVICE NEEDS.

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PRIORITY ACTION 3.4.1-2 COLLABORATE WITH HUMBOLDT COUNTY FIRE CHIEFS' ASSOCIATION TO DEVELOP A PROGRAM TO INCREASE COMMUNITY AWARENESS OF VOLUNTEER STAFFING AND OTHER FIRE-SERVICE NEEDS.	
DESCRIPTION	<p>The HCFSC Fire Protection Work Group will work with information developed for the website in <i>Priority Action 3.4.1-1</i> above and identify other avenues to share this information with the public. This could include traditional media outlets (e.g. TV, radio, newspapers), social media, local blogs, and other avenues, including trader magazines. The outreach program could include:</p> <ul style="list-style-type: none"> ○ Creating a series of articles to share about local fire-protection needs, including one on each local fire department. ○ Exploring writing a regular column about local fire department needs in area newspapers and/or blogs. ○ Sharing the website, updates, and articles on social media, through HCFSC, HCFCA, local fire departments, and other supporters. ○ Coordinate with the successful annual media work of the Fire Academy.
RESPONSIBLE PARTY	HCFSC Fire Protection Work Group with HCFCA
ADDITIONAL PARTNERS	Local fire departments, local media, local bloggers, County of Humboldt.
DESIRED OUTCOME	ONGOING AND CONSISTENT SOCIAL-MEDIA POSTINGS, QUARTERLY RADIO ANNOUNCEMENTS, AND ONE OR MORE NEWSPAPER ARTICLES ANNUALLY.

The following lists of Potential Projects are those supported by this CWPP as having a positive benefit towards meeting this Metric, Objective, and Goal. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Identify process whereby mutual aid partners can help fill minimum staffing requirements in remote areas.
- Explore solutions to staffing issues throughout the day because of volunteers who work during the day, etc.

3.4.2 METRIC: FUNDING

A MAJORITY OF FIRE-PROTECTION AGENCIES WILL HAVE ADEQUATE AND SUSTAINABLE FUNDING.

PRIORITY ACTION 3.4.2-1 SUPPORT HUMBOLDT COUNTY FIRE CHIEFS' ASSOCIATION EFFORTS TO PARTICIPATE IN FUNDING OPPORTUNITIES AND ALLOCATIONS TO LOCAL FIRE-SERVICE AGENCIES.	
DESCRIPTION	<p>Nearly every fire department in Humboldt County needs additional funding to perform the services expected of them by their citizenry to ensure adequate and sustainable community fire protection for all county residents. There is a lack of resources available to dedicate to raising more funds.</p> <p>Via this action item, the HCFSC will support HCFCA to explore options for sustainable and reliable sources of ongoing funding for fire-protection districts and departments. Funding sources could include:</p> <ul style="list-style-type: none"> ○ Revenue exchange agreements, ○ Special taxes, ○ Benefit assessments,

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	<ul style="list-style-type: none"> ○ Mitigation fees, ○ User fees, ○ Impact fees, ○ Insurance billing, ○ Grant funding, ○ Revenue sharing agreements for Proposition 172, funding measures such as the Marijuana Excise Tax and Public Safety Sales Tax, and others, and ○ Funding bills passed through state legislation (legislation could also take the form of tax credits and/or discounts). <p>Funding would help cover costs, including but not limited to the following:</p> <ul style="list-style-type: none"> ○ Dispatch fees and planning, ○ Insurance and workers compensation expenses, ○ Training programs, both local and countywide, ○ Regional coordinators to support: logistics, collaborative efforts, administrative tasks, capacity building, fundraising, recruitment and retention programs, training programs, and more, ○ Sustained services to all places where there is demand, ○ Maintaining operable and up-to-date equipment, and ○ Structures to protect and secure equipment. <p>Defining a cost per firefighter, or a local actual cost per unit of population could help departments to educate their populace regarding the basic funds needed to support a volunteer department. (<i>Fortuna Fire</i> has a display of what it costs to fully outfit a volunteer firefighter.) This information could be useful to understand if it is more expensive to outfit a firefighter and/or cover basic expenses in rural areas, and/or if there is there an economy of scale to funding local fire protection.</p> <p>Finally, this action item would support all local fire departments in having access to quality materials for handing out at fundraising events, to support their local fundraising efforts.</p>
RESPONSIBLE PARTY	HCFA with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Fire departments, County of Humboldt, Fire Safe Councils and Firewise® Communities, Humboldt Area Foundation, community organizations.
DESIRED OUTCOME	LOCAL FIRE SERVICE RECEIVES AN INCREASED RATE OF FUNDING.

3.4.3 METRIC: EQUIPMENT

75% OF FIRE-PROTECTION AGENCIES WILL HAVE SAFE AND ADEQUATE EQUIPMENT.

PRIORITY ACTION 3.4.3-1 PROVIDE EDUCATION AND SUPPORT FOR MEETING EXISTING MAINTENANCE AND REPAIR STANDARDS.	
DESCRIPTION	Many local fire departments are operating with old equipment that require constant maintenance, especially water tenders. This action item would assist departments in meetings existing maintenance and repair standards with proper forms, inspection templates, and general education regarding these standards.
RESPONSIBLE PARTY	HCFA with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Fire departments, state and federal fire protection agencies.
DESIRED OUTCOME	ALL LOCAL FIRE-SERVICE PROVIDERS WILL HAVE ACCESS TO INFORMATION ABOUT, AND GUIDANCE MATERIALS TO, MEET MAINTENANCE AND REPAIR STANDARDS.

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PRIORITY ACTION 3.4.3-2 EXPLORE AGREEMENTS WITH COUNTY, STATE, OR PRIVATE ENTITIES THAT HAVE EXISTING FACILITIES TO PROVIDE AFFORDABLE EMERGENCY APPARATUS MAINTENANCE AND REPAIR.	
DESCRIPTION	<p>As described above, much firefighting apparatus is in need of maintenance and repair. This action item explores creative options to keep equipment maintained, and to help meet the standard of the previous action.</p> <p>Historically, the timber industry and others who maintained heavy equipment helped with local fire-department equipment maintenance. This action item focuses on exploring potential cooperation opportunities. It does not commit agency partners to provide equipment or maintenance.</p>
RESPONSIBLE PARTY	HCFA with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Local fire departments, CAL FIRE, SRNF, BLM, timber and other natural-resource industries, county, state, or private entities that have existing facilities, including County Motor Pool, school districts.
DESIRED OUTCOME	AGREEMENTS IN PLACE WITH ENTITIES TO ASSIST WITH REPAIRS AND MAINTENANCE OF LOCAL FIRE APPARATUS.

3.4.4 METRIC: TRAINING

NFPA 1403 STRUCTURAL AND NWCG FFT2 WILDLAND TRAININGS WILL BE AVAILABLE AT THE LOCAL LEVEL FOR ALL FIRE-PROTECTION AGENCIES.

PRIORITY ACTION 3.4.4-1 ESTABLISH REGULAR FIRE-TRAINING PROGRAMS AND CLASSES AT THE LOCAL LEVEL TO SERVE ALL REGIONS THROUGHOUT THE COUNTY.	
DESCRIPTION	<p>As previously stated in this CWPP, consistent and local training opportunities for local fire departments is a priority need for local firefighters. Given the remote nature of many areas, trainings are needed regionally, in the southern, north-eastern, and northern areas of the county, as well as in the existing facilities in the Eel River Valley and Humboldt Bay.</p> <p>HCFA is currently using Public Safety Sales Tax funding for training facilities. There is now a need to establish structured and coordinated training <u>programs</u>, as well as individual courses. This action would create a standard curriculum and course materials.</p> <p>These trainings would promote <u>National Fire Protection Association (NFPA) 1403¹</u> as a goal to achieve for structural trainings, and <u>National Wildfire Coordinating Group (NWCG) Firefighter Type 2²</u> for wildland fire training.</p>
RESPONSIBLE PARTY	Humboldt County Fire Instructors Association (under the guidance of HCFA) with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Local fire departments, CAL FIRE, SRNF, BLM, County Office of Emergency Services (OES), College of the Redwoods.
DESIRED OUTCOME	REGULAR FIRE-TRAINING PROGRAMS IN THE SOUTHERN, CENTRAL, AND NORTHERN REGIONS OF THE COUNTY.

¹ NFPA 1403: Standard on Live Fire Training Evolutions. (2018). National Fire Protection Association. Retrieved from <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1403>

² Firefighter Type 2 (Crewmember), FFTS. (2018). National Wildfire Coordinating Group. Retrieved from <https://www.nwcg.gov/fft2-firefighter-type2>

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3.4.5 METRIC: DISPATCH

EFFICIENT AND EFFECTIVE EMERGENCY DISPATCH SERVICES WILL BE IMPROVED AND MAINTAINED THROUGHOUT THE COUNTY, INCLUDING INCREASING COVERAGE AREA TO 80%.

PRIORITY ACTION 3.4.5-1 EVALUATE CURRENT DISPATCH COVERAGE AREAS TO IDENTIFY AREAS OF DEFICIENCY.	
DESCRIPTION	Given the rural nature of Humboldt County, it is no surprise that there are several areas around the county where one does not have cellular service, let alone radio dispatch capacity. These dispatch “hole” areas include Miranda, Myers Flat, Weott, Whitethorn, Ettersburg, Honeydew, and nearby Whale Gulch, among others. This action item would identify these exact areas of dispatch deficiency so they can be addressed in future actions.
RESPONSIBLE PARTY	HCFCA Communications Committee with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Fortuna Interagency Command Center (FICC), CAL FIRE, County OES, additional Public Safety Access Points (PSAP) including Eureka, Fortuna, County Sheriff, local fire agencies—especially those in areas without radio coverage, County of Humboldt Communications, Bureau of Land Management, local communications equipment and service vendors.
DESIRED OUTCOME	IDENTIFICATION OF AREAS OF DISPATCH COVERAGE DEFICIENCY.

POTENTIAL PROJECTS

- Secure funding to expand the program of outfitting emergency response vehicles with on-board computers that enhance dispatch and aid firefighters in their efforts to locate incidents.

3.4.6 METRIC: LEVEL OF SERVICE

ALL FIRE AGENCIES WILL DEVELOP AND ADOPT LEVEL OF SERVICE STANDARDS FOR THE NEEDS OF THEIR COMMUNITY.

PRIORITY ACTION 3.4.6-1 PROVIDE EDUCATION AND SUPPORT TO ASSIST FIRE AGENCIES IN IDENTIFYING OPPORTUNITIES TO MEET NFPA 1710 OR 1720 STANDARDS, AS PER AGENCY NEED.	
DESCRIPTION	There are aspects of the National Fire Protection Association (NFPA) response standards that are challenging for rural fire departments. Specifically, response-time expectations cannot consistently be met in many areas due to terrain and roadway limitations. Hence, fire departments either decline to adopt the standards, or ignore the specific expectations as “not applicable.” Additionally, education is needed regarding NFPA 1710 and 1720 standards for many local fire departments in order to support them in meeting the applicable standard.
RESPONSIBLE PARTY	HCFCA with HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	Fire departments, CAL FIRE, County Roads, Southern Humboldt Fire Chiefs.
DESIRED OUTCOME	ALL LOCAL FIRE AGENCIES WILL UNDERSTAND AND MOVE TOWARDS MEETING NFPA 1710 OR 1720.

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PRIORITY ACTION 3.4.6-2 SUPPORT AND ASSIST LOCAL FIRE AGENCIES IN REPORTING LEVEL OF SERVICE IMPROVEMENTS TO ISO TO IMPROVE LOCAL RATINGS.	
DESCRIPTION	Local fire agencies, such as the <i>Westhaven Fire Company</i> , have been successful in improving their <i>Insurance Service Office (ISO)</i> ratings, which has resulted in the lowering of insurance rates for local residents. This action item would help local fire agencies to understand and facilitate the reporting process to <i>ISO</i> , and back to their community, to help improve ratings and ideally lower local insurance premiums.
RESPONSIBLE PARTY	HCFSC Fire Protection Work Group with HCFA
ADDITIONAL PARTNERS	Local fire agencies, ISO, insurance companies.
DESIRED OUTCOME	IMPROVEMENT OF ISO RATINGS IN COMMUNITIES WHERE LEVEL OF SERVICE HAS IMPROVED.

3.4.7 METRIC: ENVIRONMENTAL IMPACTS

IDENTIFY AND PLAN TO MINIMIZE NEGATIVE IMPACTS OF FIRE-RESPONSE OPERATIONS TO ECOSYSTEM PROCESSES AND FUNCTIONS.

PRIORITY ACTION 3.4.7-1 COLLABORATE WITH LOCAL FISHERIES RESTORATION ORGANIZATIONS TO MINIMIZE NEGATIVE IMPACTS TO CRITICAL FISH HABITAT.	
DESCRIPTION	There is increasing interest and need to ensure that fire-suppression efforts in the county do not threaten or harm already vulnerable salmonid populations. Several tangible steps can be taken toward this end, beginning with supporting and encouraging communications between fisheries-restoration organizations and fire-suppression agencies. These conversations are already happening in several of the more remote areas where fisheries habitat restoration occurs, such as Southern Humboldt and the Mid-Klamath. Representatives from these communities can help spread this message to other fire departments, as well as to state and federal fire-protection agencies. This collaboration is critical during large fires when firefighters are here from outside of the county. This information would also be beneficial to add to pre-fire attack plans (<i>see Metric 3.4.8 below</i>).
RESPONSIBLE PARTY	HCFSC Fire Protection Work Group
ADDITIONAL PARTNERS	HCFA, Salmonid Restoration Federation, watershed organizations, CAL FIRE, SRNF, fire departments.
DESIRED OUTCOME	STANDARD OPERATING PROCEDURES TO MINIMIZE NEGATIVE IMPACTS TO FISH HABITAT.

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3.4.8 METRIC: PRE-FIRE ATTACK PLANS

DEVELOP PRE-FIRE ATTACK PLANS FOR FIVE LOCAL FIRE AGENCIES.

PRIORITY ACTION 3.4.8-1 CREATE AND PROVIDE RESPONSE-AREA MAPS FOR EACH LOCAL FIRE AGENCY.	
DESCRIPTION	There are several local fire organizations who do not have a detailed map of their response area. These “Response-Area Maps” detail the boundaries where each fire agency is committed to responding with fire protection services. Through HCFA, the County of Humboldt, CAL FIRE, and SRNF, coverage-area maps will be created and shared with every local fire agency that does not already have this data resource. Maps are currently available to local fire departments for purchase at County Planning and Building/GIS.
RESPONSIBLE PARTY	HCFSC Fire Protection Work Group with HCFA
ADDITIONAL PARTNERS	Fire departments, CAL FIRE, SRNF, County Planning and Building GIS.
DESIRED OUTCOME	RESPONSE-AREA MAPS CREATED FOR EACH LOCAL FIRE AGENCY.

PRIORITY ACTION 3.4.8-2 CREATE A COUNTY MAP BOOK OF FIRE-PROTECTION RESPONSE AREAS AND RESOURCES.	
DESCRIPTION	<p>Use the maps created in <i>Priority Action 3.4.8-1</i>, combined with existing response-area maps, protection values as identified in this CWPP process, and other data layers as deemed available and appropriate, to create a county-wide map book for fire protection. This map book could include:</p> <ul style="list-style-type: none"> ○ Home addresses, water sources, access routes, safety zones, and other resource information that can be gathered, ○ Road ingress and egress issues that could increase emergency response times, ○ Local water sites identified at community workshops, including water sources identified for fire suppression; share this information with local fire agencies (<i>see Metric 3.3.4</i>).
RESPONSIBLE PARTY	HCFSC Fire Protection Work Group with HCFA and County OES
ADDITIONAL PARTNERS	Fire departments, CAL FIRE, SRNF, County of Humboldt Planning and Building GIS.
DESIRED OUTCOME	PROVIDE ALL LOCAL FIRE AGENCIES WITH A COUNTY MAP BOOK OF FIRE-PROTECTION RESPONSE AREAS AND RESOURCES.

PRIORITY ACTION 3.4.8-3 SUPPORT CREATION OF OPERATIONAL AREA PRE-ATTACK MAPS FOR AT LEAST FIVE LOCAL AGENCIES.	
DESCRIPTION	<p>The creation of pre-fire attack maps can facilitate pre-fire strategic planning at a variety of levels. These maps can build on the data in the county map books from the <i>Priority Action 3.4.8-2</i>, to include strategic data such as possible areas for fire breaks, evacuation sites, and more.</p> <p>Data sets would include CWPP priorities, such as:</p> <ul style="list-style-type: none"> ○ Current or recent fuel-hazard reduction treatments and/or fuel breaks—both landscape-level strategic fuel treatments and fuel reduction around communities and in the interface—including treatment date and where possible target maintenance dates, especially for prescribed fire re-entry.

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	<ul style="list-style-type: none"> Where to use managed wildfire on the landscape, and other landscape-scale actions identified in <i>Chapter 3.5 Restoration of Beneficial Fire</i>. Habitat protection, including salmonids, as per <i>Metric 3.4.7</i> above. Information gathered at community meetings, ideally with cross-checking and/or ground truthing. Current and potential water supply sites. <p>HCFA, County OES, and CAL FIRE would collaborate to identify five local areas for creating pre-fire attack plans. More information and examples of this planning effort in other communities include:</p> <ul style="list-style-type: none"> The Western Klamath Restoration Partnership (WKRP) creation of pre-attack map books for the Orleans-Somes Bar area in coordination with SRNF, Orleans/Somes Bar FSC, Karuk Tribe, and Orleans Volunteer Fire Department. CAL FIRE and San Luis Obispo County Fire, http://www.calfireslo.org/PreAttack.html West Metro Fire and Rescue of Lakewood, Colorado's set of initial maps for their two-county area, available at: http://wildland.westmetrofire.org
RESPONSIBLE PARTY	HCFA Fire Protection Work Group with HCFA
ADDITIONAL PARTNERS	Fire departments, CAL FIRE, SRNF, County OES, County Planning and Building, BLM.
DESIRED OUTCOME	PRE-FIRE ATTACK MAPS CREATED FOR FIVE LOCAL FIRE-PROTECTION ORGANIZATIONS WITH A TEMPLATE FOR COUNTYWIDE IMPLEMENTATION.

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3.5. RESTORATION OF BENEFICIAL FIRE

GOAL 5: RESTORE BENEFICIAL FIRE AT THE LANDSCAPE SCALE.

OBJECTIVE 5

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL FOSTER WILDFIRE RESILIENCE THROUGH EDUCATION AND PROMOTION OF ECOSYSTEM-RESTORATION ACTIVITIES, INCLUDING HAZARDOUS-FUEL REDUCTION, PRESCRIBED FIRE, AND MANAGED WILDFIRE WHERE APPROPRIATE.

The following Metrics and Priority Actions have been identified by the Humboldt County Fire Safe Council to be accomplished over the next five years towards meeting the goal of restoring beneficial fire at the landscape scale. *Goal 2: Wildfire Preparedness* addresses resiliency at the community scale, where fuel-reduction projects around homes, neighborhoods, and communities are identified.

*For more information on Humboldt County’s wildfire environment, including its fire regime and fire history, see Chapter 5.2, **Wildfire Environment**.*

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

3.5.1 METRIC: PRESCRIBED-FIRE EDUCATION

INCREASE THE AVAILABILITY OF RESOURCES RELATED TO THE BENEFICIAL USES OF FIRE.

PRIORITY ACTION 3.5.1-1 COORDINATE A SERIES OF EDUCATIONAL EVENTS PROMOTING THE BENEFICIAL USES OF FIRE.	
DESCRIPTION	<p>Public acceptance regarding using fire to prepare communities for wildfire is increasing. In the online survey used in this CWPP process, 59% of respondents strongly agreed, and another 30% agreed that “prescribed fire and/or controlled burning is an important tool in Humboldt County to reduce the risk of larger wildfires.”¹ More educational events, such as those put on by the University of California Cooperative Extension (UCCE) and others, targeting both practitioners and the general public will advance this needed public acceptance for restoring the beneficial uses of fire in Humboldt County.</p> <p>Over the next five years, the Humboldt County Fire Safe Council (HCFSC) Restoration of Beneficial Fire Work Group will collaborate to develop a series of educational events and materials to increase public acceptance and understanding of prescribed fire as a tool for improving community fire safety, forest health, and ecological diversity.</p> <p>Outreach efforts will also target local media and decision makers to increase their understanding of the use of fire as a tool. This will help get the message out to the general public, especially in terms of public acceptance of some smoke in the air now to avoid catastrophic smoke conditions later. In this way, the media and decision makers will be informed about proactive practices that they can share later during wildfire events.</p> <p>The educational events in this action item could include workshops or field tours. An example would be offering classroom trainings on fire behavior and burn planning, followed by a live-fire training event in the field, in conjunction with the Humboldt County Prescribed Burn Association (HCPBA). These training opportunities would target various types of landowners and land managers.</p>

¹ For more information on the Open Humboldt Wildfire Preparedness Survey, see *Chapter 1* and *Appendix B*, or visit https://www.opentownhall.com/portals/131/Issue_5560/survey_responses.

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RESPONSIBLE PARTY	University of California Cooperative Extension (UCCE) with HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	HCPBA, Fire Safe Councils (FSCs), Firewise® Communities, watershed organizations, councils, and other community organizations, North Coast Unified Air Quality Management District (NCUAQMD), CAL FIRE, tribes, fire departments, Humboldt County Fire Chiefs' Association (HCFCA), California Forest Management Task Force (FMTF) Prescribed Fire Work Group.
DESIRED OUTCOME	COMPLETION OF A SERIES OF EDUCATIONAL WORKSHOPS FOCUSING ON THE BENEFICIAL USES OF FIRE.

PRIORITY ACTION 3.5.1-2 CREATE AND/OR DISSEMINATE MATERIALS PROMOTING THE BENEFICIAL USES OF FIRE.	
DESCRIPTION	<p>There is a clear need for more public information regarding the beneficial uses of fire. Such information could be developed for the general public, media, decision makers, landowners, conservation organizations, urban and rural residents, and others.</p> <p>Partners need to be ready to talk about prescribed fire when burning is happening, during wildfire events, and/or when an escaped fire makes the news. Information will be developed in advance to be available to share when these events occur.</p> <p>There are many ways to disseminate this information. As described throughout this chapter, there are several private and public organizations interested in prescribed fire that could use these materials in their work. Handouts could be shared through utility or tax bills; videos could be shared on social media or local cable channels, etc. Some materials could be tailored to specific local communities, taking into consideration such differences as, for example, landowner education and receptivity regarding prescribed fire in the mid-Klamath area, where there is a solid history of local burning, versus Southern Humboldt, where little burning has taken place in decades.</p>
RESPONSIBLE PARTY	UCCE with HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, HCPBA, FMTF Prescribed Fire Work Group, watershed organizations, councils, and other community organizations, NCUAQMD, CAL FIRE, local tribes, fire departments, HCFCA.
DESIRED OUTCOME	CREATION AND/OR DISSEMINATION OF MATERIALS PROMOTING THE BENEFICIAL USES OF FIRE.

PRIORITY ACTION 3.5.1-3 CREATE A RESOURCE GUIDE FOR THE STEPS INVOLVED IN IMPLEMENTING A SUCCESSFUL PRESCRIBED BURN IN HUMBOLDT COUNTY.	
DESCRIPTION	<p>There is a growing interest in applying prescribed fire on private lands, along with valid concerns about how to actually do it. UCCE, HCFSC, HCPBA, and their partners will create a resource guide for people who want to burn. Materials could include information on:</p> <ul style="list-style-type: none"> ○ Agency requirements, regulations, and permits, including the importance of compliance and how to obtain burn permits prior to burning, from: <ul style="list-style-type: none"> ○ North Coast Unified Air Quality Management District (NCUAQMD) ○ CAL FIRE ○ US Forest Service, or ○ Bureau of Land Management. ○ How to develop burn plans and smoke management plans. ○ How to burn safely. ○ The benefits of using prescribed fire as a tool. ○ Where to access resources.

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	<ul style="list-style-type: none"> ○ A list of contractors that can provide prescribed fire-related services, including burn planning, burn bossing, etc. ○ Suggestions for working with media to talk about prescribed fire, (<i>see 3.5.1-2 above</i>). ○ California liability myths vs. reality. ○ Health effects of smoke and how to minimize them for burners, neighbors, and the general public. Share information from agencies regarding smoke effects of wildfire vs. prescribed fire, and how they release different kinds of smoke and under different conditions. This could be shared with neighbors and other concerned community members. ○ Local groups and resources such as the HCPBA, Indigenous Peoples Burning Network, Orleans/Somes Bar Fire Safe Council, and UCCE.
RESPONSIBLE PARTY	UCCE with HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	HCPBA, NCUAQMD, CAL FIRE, FMTF Prescribed Fire Work Group, watershed organizations, councils, and other community organizations, local tribes, fire departments, FSCs, Firewise® Communities, HCFCA.
DESIRED OUTCOME	RESOURCE GUIDE FOR HOW TO IMPLEMENT A SUCCESSFUL PRESCRIBED BURN IN HUMBOLDT COUNTY.

The following lists of Potential Projects are those supported by this CWPP as having a positive benefit towards meeting this Metric, Objective, and Goal. The Humboldt County Fire Safe Council and its collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Database for tracking prescribed-fire projects (*see work of FMTF Prescribed Fire Work Group*).
- Documenting mini-burns (e.g. under 1 acre) and how to use those as examples and inspiration for other landowners.
- Identify areas that have not had any prescribed fire in a long time and research why.
- Stay abreast of statewide efforts to address liability and insurance issues, including with the *FMTF Prescribed Fire Work Group*.
- Introduce concept of Fire-Dependent Communities.
- Encourage the public to use ncuaqmd.org, call 1-866 BURN DAY, or listen to local radio stations for burn-day status information.
- Research regarding if public perception of wildfire and prescribed fire has changed since the 2017 and 2018 wind-driven wildfires.

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3.5.2. METRIC: SHARED VISION FOR WILDLAND FIRE

SUPPORT AND INCREASE COLLABORATIVE EFFORTS TO CREATE A SHARED VISION FOR MANAGING FIRE ON THE LANDSCAPE.

PRIORITY ACTION 3.5.2-1 INVITE PRESENTERS TO FSC MEETINGS TO SHARE THEIR EXPERIENCES REGARDING SUCCESSES, FAILURES, AND CHALLENGES OF COLLABORATIVE EFFORTS TO MANAGE FIRE AT THE LANDSCAPE SCALE.	
DESCRIPTION	The HCFSC and its partners would benefit from learning in more detail about efforts locally, regionally, and beyond to manage fire on the landscape. Recent publications show the value of learning from failures as well as successes, as in the <i>Fire Adapted Communities Learning Network's Fantastic Failures</i> ² series. Speakers would be invited to provide a short presentation and background materials on their experiences using prescribed fire and managed wildfire, to facilitate discussions about how to apply these experiences in Humboldt County.
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	HCFSC members and staff, tribes, UCCE, CAL FIRE, Six Rivers National Forest (SRNF), Bureau of Land Management (BLM), Redwood National Park (RNP), State Parks, HCPBA, FSCs, prescribed-fire practitioners, FMTF Prescribed Fire Work Group, Western Klamath Restoration Partnership (WGRP), Fire Adapted Communities' Learning Network (FAC Net).
DESIRED OUTCOME	PRESENTATION SERIES AT HCFSC MEETINGS ON THE SUCCESSES, FAILURES, AND CHALLENGES OF MANAGING FIRE ON THE LANDSCAPE.

PRIORITY ACTION 3.5.2-2 SUPPORT AND DEVELOP UNIFIED MESSAGING FOR PRESCRIBED FIRE AND MANAGED WILDFIRE.	
DESCRIPTION	<p>Clear messaging about beneficial fire is lacking from the highest levels of some public agencies, both federal and state. Communication teams can be lagging many years behind the scientific and local-community consensus regarding the need for putting more prescribed fire and managed fire on the landscape.</p> <p>This action would support and advocate for coordinated messaging that aligns with the current understanding of the beneficial role of fire in local ecosystems.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	Northern California Prescribed Fire Council (NCPFC), Public Information Officers (PIOs) and other communication staff from state and federal fire agencies, UCCE, WGRP, Karuk Tribe Department of Natural Resources (Karuk DNR), FMTF Prescribed Fire and Technical Education, Outreach, & Workforce Development Committees, Western Regional Strategy Committee, FAC Net, and Fire Learning Network (FLN).
DESIRED OUTCOME	PROVIDE GOVERNMENT AGENCIES AND PARTNERS EDUCATED RECOMMENDATIONS TOWARDS A UNIFIED MESSAGE FOR THE NEED FOR BENEFICIAL FIRE ON THE LANDSCAPE.

² Fire Adapted Communities Learning Network. Fantastic Failures. [Web log series]. Retrieved from <https://fireadaptednetwork.org/blog-type/fantastic-failure>

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PRIORITY ACTION 3.5.2-3 SUPPORT STATE AND NATIONAL POLICY AND LEGISLATIVE PLATFORMS REGARDING INCREASING PRESCRIBED FIRE AND MANAGED WILDFIRE.	
DESCRIPTION	<p>There has been noticeable recent legislative effort and interest regarding prescribed fire and how to make it easier to implement in California. In 2018, there were several bills addressing this issue, including topics such as mandated training, and better support and capacity building for prescribed fire.</p> <p>The FMTF Prescribed Fire Work Group is tasked to:</p> <ul style="list-style-type: none"> ○ Increase the opportunities for prescribed fire projects through coordinating staff and equipment availability, accelerate prescribed fire projects that are permit-ready, identify weather conditions suitable for prescribed fire, and institute a real-time air-quality and smoke-monitoring program for prescribed and wildland fires. ○ Develop a publicly available online clearinghouse for permitting of prescribed fire projects on all non-federal lands, which shall include an automated system for prescribed fire project permit submission and approval. <p>Additionally, the Little Hoover Commission Report,³ Tree Mortality Task Force,⁴ and the Fire MOU⁵ (see Metric 3.5.7 below) are other statewide efforts tackling these issues.</p> <p>This action would include reaching out to state representatives and lending the HCFSC's support to any statewide or regional collaboratives or policy groups forwarding positive policy changes regarding beneficial fire.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	NCPFC, County Board of Supervisors, WKRP, FMTF Prescribed Fire Work Group, Fire Learning Network, legislative partners, Pacific Forest Trust and other conservation organizations, FAC Net, UCCE.
DESIRED OUTCOME	HUMBOLDT COUNTY SUPPORT FOR LEGISLATIVE AND POLICY EFFORTS TOWARDS USING BENEFICIAL FIRE.

³ Little Hoover Commission. (2018). Report #242: Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada. Retrieved from <http://www.lhc.ca.gov/report/fire-mountain-rethinking-forest-management-sierra-nevada>

⁴ State of California. Tree Mortality Task Force. Retrieved from <http://www.fire.ca.gov/treetaskforce/index>

⁵ Sierra Forest Legacy. [California] Fire MOU Partnership. Retrieved from https://www.sierraforestlegacy.org/CF_ManagingFire/FireMOU.php

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3.5.3. METRIC: COLLABORATION TOWARDS LANDSCAPE-SCALE FUEL BREAKS

COLLABORATIVELY DEVELOP LANDSCAPE-SCALE FUEL BREAKS TO FACILITATE THE INCREASED USE OF FIRE.

PRIORITY ACTION 3.5.3-1 ORGANIZE REGIONAL MEETINGS TO BRING TOGETHER STAKEHOLDERS TO DISCUSS, IDENTIFY, AND COORDINATE POTENTIAL LANDSCAPE-SCALE FUEL BREAKS TO FACILITATE THE INCREASED USE OF FIRE.	
DESCRIPTION	<p>Identifying a network of strategic fuel breaks around communities will facilitate landscape-scale fuel-reduction efforts. Such a network would compartmentalize the landscape into manageable units to enable more effective use of prescribed fire and/or managed wildfire, reducing the risk of spread. Clear lines for stopping fire's spread would also facilitate public buy-in for using fire as a tool around communities. Additionally, it would be valuable for pre-fire attack plans and overall fire-protection efforts. That said, the reality of implementing and maintaining a system of identified fuel breaks requires significant effort and resources, which should not be understated.</p> <p>Natural or existing fuel breaks such as roads, rivers, and ridges, even power-line corridors, are fundamental components of landscape-scale fuel breaks. Therefore, Cal Trans, County Roads, and PG&E would need to be active partners, along with federal and state-agency land managers. The fuel breaks around communities as identified in <i>Metric 3.2.6, Community Fuel Reduction</i> would also be an important component.</p> <p>The Western Klamath Restoration Partnership (WKRP) and Trinity Collaborative are both excellent nearby models for how to approach such an effort in Humboldt County. These models could be explored for setting up similar collaboratives in Southern, Eastern, and Northern Humboldt. Participants would be able to share their own projects and work together to identify potential projects, especially those that cross ownerships.</p> <p>This action could include conducting a series of workshops using the Open Standards process to reach agreement on landscape-scale treatments throughout the county (engaging local, county, state, and federal agencies, tribes, industry, FSCs, and community organizations). It could also include specifically engaging Humboldt County fire-management agencies in this process to plan at the county level where managed wildfire would be appropriate, and where fuels and prescribed-fire work is needed.</p> <p>Finally, it would involve researching where strategic fuel breaks have been previously identified and/or implemented and creating a map showing this at the county scale.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group with Local Fire Safe Councils
ADDITIONAL PARTNERS	SRNF, BLM, RNP, State Parks, CAL FIRE, UCCE, Cal Trans, County Roads, PG&E, tribes, private land managers and timber industry, fire departments, FSCs, Firewise® Communities, Fire Adapted Communities Learning Network, watershed organizations and other community groups, NCPFC, NCUAQMD, US Fish and Wildlife Service, Water Quality, FMTF.
DESIRED OUTCOME	ESTABLISHMENT OF ONE OR MORE REGIONAL COOPERATIVES AROUND THE COUNTY, WITH INITIAL IDENTIFICATION OF ONE TO THREE LANDSCAPE-SCALE FUEL BREAKS.

POTENTIAL PROJECTS

- Explore the Western Klamath Restoration Partnership (WKRP) model for how to manage fire on 1.2 million acres as a collaborative model for the rest of the county. If desired, seek funding to implement Open Standards planning in other regions of Humboldt County to improve collaborative efforts to manage fire at the landscape scale across diverse ownerships. See WKRP Plan (2014): <https://www.wkrp.network/publications>
- Do a review, assessment, and synthesis of the WKRP model and share this with other rural communities.

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3.5.4. METRIC: PRIVATE LANDS PRESCRIBED FIRE

TREAT 5,000 STRATEGIC ACRES EVERY YEAR ON PRIVATE LANDS BY PRESCRIBED FIRE.

PRIORITY ACTION 3.5.4-1 SUPPORT HUMBOLDT COUNTY PRESCRIBED BURN ASSOCIATION, PRESCRIBED FIRE TRAINING EXCHANGE, INDIGENOUS PEOPLES BURNING NETWORK, AND OTHER COOPERATIVE-BURNING MODELS.	
DESCRIPTION	<p>There are several training opportunities now offered for landowners and members of the general public wanting to learn more about prescribed fire and how to use it. These include:</p> <ul style="list-style-type: none"> ○ Humboldt County Prescribed Burn Association (HCPBA), a group of local landowners and others interested in working together to apply prescribed fire on the ground. ○ Prescribed Fire Training Exchange (TREX) offering intensive, hands-on trainings that incorporate prescribed-fire outreach, implementation, and skill-building. ○ Indigenous Peoples Burning Network (IPBN) working to revitalize the implementation of cultural burns in native communities through the cultivation of an intertribal support system in which traditional ecological knowledge is shared and rights are protected.⁶ <p>The Work Group will support these existing organizations and models to get more people trained in using prescribed fire, in an effort to treat more private lands in Humboldt County.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group with UCCE
ADDITIONAL PARTNERS	HCPBA, TREX, IPBN, fire departments, FSCs, Firewise® Communities, local tribes, watershed councils and other community organizations, NCUAQMD, CAL FIRE, HCFCA, NCPFC, California Conservation Corps (CCC).
DESIRED OUTCOME	TREATMENT OF 5,000 ACRES EVERY YEAR ON PRIVATE LANDS BY PRESCRIBED FIRE.

PRIORITY ACTION 3.5.4-2 BUILD CAPACITY FOR PRESCRIBED FIRE ON PRIVATE LANDS.	
DESCRIPTION	<p>As stated in <i>Metric 3.5.1</i>, there is a growing interest in training in prescribed fire. Working with the groups identified in the <i>Priority Action 3.5.4-1</i>, UCCE, HCFSC and their partners will collaborate to ensure that regular prescribed-fire trainings are held throughout Humboldt County. The Work Group will support UCCE to identify the specific training needs for various sectors of the prescribed-fire community, including volunteer fire departments, landowners, conservation organizations, agencies, and others. There is a specific need and request for prescribed-fire trainings in Southern Humboldt.</p>
RESPONSIBLE PARTY	UCCE with HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	HCPBA, TREX, IPBN, fire departments, FSCs, Firewise® Communities, tribes, watershed councils and other community organizations, NCUAQMD, CAL FIRE, HCFCA and Humboldt County Fire Instructors Association, NCPFC, timber industry.
DESIRED OUTCOME	20 TRAINING DAYS AND 150 INDIVIDUALS RECEIVING PRESCRIBED-FIRE TRAINING ANNUALLY.

⁶ For more information on IPBN in Humboldt County, see <http://conservationgateway.org/ConservationPractices/FireLandscapes/FireLearningNetwork/Pages/PERFACT-Report-Aug-2018.aspx>

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3.5.5. METRIC: PUBLIC LANDS PRESCRIBED FIRE

TREAT 6,000 STRATEGIC ACRES EVERY YEAR ON PUBLIC LANDS BY PRESCRIBED FIRE.

PRIORITY ACTION 3.5.5-1 FACILITATE PUBLIC UNDERSTANDING AND SUPPORT OF PUBLIC LAND PRESCRIBED BURNING.	
DESCRIPTION	<p>The HCFSC will work with the media to build public acceptance and support of prescribed burning on public lands. This will include sharing the complexity of the steps that agencies must take and the requirements that must be met before public-land managers are allowed to burn, to help the public understand an agency's level of preparedness and investment of time and resources. Public acceptance will help with engaging public-land managers to do more collaborative burning. Public land managers are also benefitting from TREX events that allow multi-agency participants to implement public lands burns. Points to emphasize with the media and the public include:</p> <ul style="list-style-type: none"> ○ National Environmental Policy Act (NEPA) complexities and requirements that agencies must observe before burning. ○ Projects on tribal lands through Yurok and Klamath TREX events. ○ Success stories from public-lands prescribed burns. <p>The HCFSC will also strive to:</p> <ul style="list-style-type: none"> ○ Help public agencies with public engagement prior to burns. ○ Work directly with Public Information Officers to support their educational efforts.
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	Public Information Officers, SRNF, BLM, RNP, State Parks, CAL FIRE, National Wildlife Refuge, NCUAQMD, IPBN, tribes, WKRP, fire departments, HCFA, UCCE, NCPFC, CCC, FMTF Prescribed Fire Work Group.
DESIRED OUTCOME	PUBLIC SUPPORT FOR PRESCRIBED-FIRE USE ON PUBLIC LANDS IN HUMBOLDT COUNTY.

PRIORITY ACTION 3.5.5-2 ENGAGE AND SUPPORT PUBLIC LAND MANAGERS IN USING PRESCRIBED FIRE.	
DESCRIPTION	<p>In addition to the need for public support for using prescribed fire on public lands, public-land managers face a myriad of challenges to burning. These include but are not limited to NEPA, liability, budgets, risk aversion, tight burn windows, and agency culture and attitude. There are several concrete ways HCFSC can support public-land managers in using prescribed fire, including getting funding for projects that have local buy-in, finding attorneys to talk to them about the real vs. perceived risk of burn bosses, and providing funds and incentives for acres treated. There is a need to inspire individuals to take this risk and get fire on the ground in Humboldt County and beyond.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	SRNF, BLM, RNP, State Parks, CAL FIRE, National Wildlife Refuge, US Fish and Wildlife Service, NCUAQMD, tribes, fire departments, UCCE, HCFA, NCPFC, CCC, Public Information Officers, FMTF Prescribed Fire Work Group, WKRP.
DESIRED OUTCOME	TREATMENT OF 6,000 ACRES EVERY YEAR ON PUBLIC LANDS BY PRESCRIBED FIRE.

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POTENTIAL PROJECTS

- Put up signage in areas where prescribed fire has been used, explaining what was done and why, such as in state or federal park lands. Encourage agencies to do this, perhaps including language such as “supported by the Humboldt County Fire Safe Council” or “Here’s another example of a successful prescribed-fire project in Humboldt County. For more information on prescribed fire and fuel-hazard reduction, visit the Humboldt County Fire Safe Council webpage....”
- Encourage public lands managers to engage multiple organizations in burn implementation and planning to increase public acceptance and ownership.

3.5.6. METRIC: TRIBAL PRESCRIBED AND CULTURAL FIRE USE

TRIBAL PARTICIPATION IN 25% OF STRATEGIC BURNS EVERY YEAR.

PRIORITY ACTION 3.5.6-1 SUPPORT TRIBAL PARTICIPATION AND LEADERSHIP IN PRESCRIBED FIRE AND RESTORING CULTURAL BURNING PRACTICES.	
DESCRIPTION	<p>Prescribed fire has been used for generations by local tribes as a sophisticated land-management tool. They are now leading efforts to bring fire back to the landscape locally, nationally, and even internationally. Projects of the Karuk, Yurok, and Hoopa tribes, as well as the Cultural Fire Management Council (CFMC) and the Indigenous Peoples Burning Network (IPBN), are resulting in the active use of prescribed fire in their indigenous territories and as a model beyond those areas.</p> <p>Prescribed-fire activities are occurring on lands identified for treatment by means of a tribal equivalent to a CWPP, which is up to each tribe to define. For example, the Karuk are using their <i>Eco-Cultural Resources Management Plan</i>⁷ as a guide for burning in the Orleans/Somes Bar area, and in and adjacent to the Katimiin Cultural Management Area.</p> <p>Participants in the Yurok-Hoopa-Karuk landscape completed a <i>Healthy Country Plan</i> in 2017. The plan outlines their priorities for revitalizing fire culture over the next three to five years. It is an All-Lands plan (regardless of ownership) with its own objectives, acres, and activities identified.</p> <p>All burners need to be cognizant that tribes are not subject to local and state laws; being a sovereign nation means only federal law applies. This distinction needs to be clearly established to ensure that burns outside tribal lands maintain regulatory compliance. It is crucial to support collaboration and communication among all burners and tribal entities to build and strengthen local burn programs.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group with Local Tribes
ADDITIONAL PARTNERS	IPBN, CFMC, WKRP, UCCE, HCPBA, TREX, fire departments, FSCs, Firewise® Communities, watershed councils and other community organizations, NCUAQMD, CAL FIRE, HCFCA, SRNF, BLM, RNP, State Parks, National Wildlife Refuge, CCC.
DESIRED OUTCOME	ACTIVE TRIBAL PARTICIPATION IN PRESCRIBED-FIRE ACTIVITIES THROUGHOUT HUMBOLDT COUNTY.

⁷ Karuk Tribe, Department of Natural Resources. (2010). Draft Eco-Cultural Resources Management Plan. [PDF]. Retrieved from http://www.karuk.us/images/docs/dnr/ECRMP_6-15-10_doc.pdf

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3.5.7. METRIC: MANAGED WILDFIRE

INCREASE NUMBER OF JURISDICTIONAL AGENCIES AND PRIVATE LANDOWNERS WHO AGREE TO USE MANAGED WILDFIRE AS A FIRE-MANAGEMENT TACTIC.

PRIORITY ACTION 3.5.7-1 FACILITATE CONVERSATIONS TO IDENTIFY OPPORTUNITIES FOR UTILIZING MANAGED WILDFIRE.	
DESCRIPTION	<p>Building on the collaborative processes identified in <i>Metric 3.5.3</i>, discussions can continue regarding where and when to use managed wildfire as a tool.</p> <p>“Our results suggest that, under certain conditions, wildfires could be more extensively used to achieve ecological and management objectives in northwestern California.”⁸</p> <p>The <i>Memorandum of Understanding for the Purpose of Increasing the Use of Fire to Meet Ecological and Other Management Objectives</i> (a.k.a. the “Fire MOU”⁹) between CAL FIRE, federal land managers, conservation organizations, and others “documents the cooperation between the parties to increase the use of fire to meet ecological and other management objectives.”¹⁰ This MOU provides political support and a shared vision and commitment for identifying opportunities for beneficial fire, including utilizing managed wildfire.</p> <p>Some of the points to address in these discussions would include:</p> <ul style="list-style-type: none"> ○ Identifying options for using fire in pre-fire attack plans. ○ Hosting local workshops with neighboring public to ask where, and under what conditions, they would be comfortable letting a fire burn in order to create the social license to burn. ○ Identifying the number of potential acres allowed to burn in a given area for fire to perform its natural dynamics on the landscape. ○ Defining the line for which side to manage wildfire versus suppress it (<i>see WKRFP</i>). ○ Identifying the restrictions to utilizing managed wildfire in Humboldt County. ○ Understanding the NEPA process to be able to allow fire to burn, as BLM is currently doing. This has been an approximately five-year effort. ○ Exploring managing wildfire as part of the SRNF Forest Plan update. ○ Evaluating the experience of SRNF Orleans Ranger District and the 2017 Orleans Complex Fire managing wildfire at Blue Creek. ○ Developing guidelines, restrictions, and influences regarding when and where to accept managed wildfire. ○ A wildfire management amendment to federal forest plans so agencies can publicly use this tool. ○ Ensuring the planning work (e.g. NEPA, decision-support strategy) is completed and all relevant management plans are amended over the next five years to allow for managed wildfire implementation. ○ The need for clear communication about burns and wildfire status in the initial stages of a fire, to allow cooperators to get in front of a situation, instead of responding to rumors on social media.
RESPONSIBLE PARTY	HCFSC Restoration Beneficial Fire Work Group
ADDITIONAL PARTNERS	CAL FIRE, SRNF, BLM, RNP, NCUAQMD, NCPFC, fire departments, FSCs and Firewise® Communities, watershed councils, conservation organizations, Resource Conservation Districts (RCDs), UCCE, FMTF.

⁸ Miller, J.D., Skinner, C.N., Safford, H.D., Knapp, E.E., & Ramirez, C.M. (2012). Trends and causes of severity, size, and number of fires in northwestern California, USA. *Ecological Applications* 22(1): 184-203.

⁹ Sierra Forest Legacy. (2018). [California] Fire MOU Partnership. Retrieved from https://www.sierraforestlegacy.org/CF_ManagingFire/FireMOU.php

¹⁰ Memorandum of Understanding between U.S. Forest Service and various entities. (2015). [PDF]. Retrieved from Sierra Forest Legacy website <https://www.sierraforestlegacy.org/Resources/Community/PrescribedFire/FireMOUSigned.pdf>

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DESIRED OUTCOME	COLLABORATIVELY IDENTIFIED AREAS WHERE MANAGING WILDFIRE FOR RESOURCE OBJECTIVES WILL BE CONSIDERED.
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PRIORITY ACTION 3.5.7-2 SUPPORT FIRE-PROTECTION AGENCIES' UNDERSTANDING OF WILDFIRE MANAGEMENT STANDARD OPERATING GUIDELINES.	
DESCRIPTION	Based on the opportunities identified above and the <i>Fire MOU</i> , local fire departments in Humboldt County would review guidelines that include how to manage wildland fires under specific conditions. This will provide an opportunity to educate volunteer fire departments in using this as a pre-fire tactic in coordination with state and federal fire agencies.
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group with Humboldt County Fire Chiefs' Association (HCFCA)
ADDITIONAL PARTNERS	Fire departments, CAL FIRE, SRNF, BLM, RNP.
DESIRED OUTCOME	INCREASED UNDERSTANDING OF WILDFIRE MANAGEMENT AS AN OPTION IN STANDARD OPERATING GUIDELINES.

3.5.8. METRIC: POST-FIRE RECOVERY

CREATE A SHARED VISION FOR WILDLAND POST-FIRE MANAGEMENT.

PRIORITY ACTION 3.5.8-1 FACILITATE A DISCUSSION REGARDING THE TRADEOFFS OF POST-FIRE LAND-MANAGEMENT OPTIONS.	
DESCRIPTION	<p>How to restore and manage landscapes following fire can be controversial. Salvage logging remains a contentious issue throughout the Pacific Northwest. Replanting burned areas with seedlings that require intensive management and the exclusion of fire continues the same destructive cycle that this action plan is addressing. This is especially true on private lands where replanting is mandated to meet stocking requirements.</p> <p>Private landowners can access state and federal funding sources to assist in post-fire recovery, such as the <i>California Forest Improvement Program (CFIP)</i>, and funds available through the <i>Natural Resource Conservation Service</i>.</p> <p>This discussion is needed throughout the county to facilitate appropriate, ecologically-based post-fire restoration and recovery.</p>
RESPONSIBLE PARTY	HCFSC Restoration of Beneficial Fire Work Group
ADDITIONAL PARTNERS	SRNF, BLM, RNP, State Parks, CAL FIRE, UCCE, WKRP, tribes, private land managers and timber industry, consulting foresters, fire departments, FSCs, Firewise® Communities, watershed organizations and other community groups, NCPFC, state and federal regulatory agencies including Fish and Wildlife and Water Quality.
DESIRED OUTCOME	AGREEMENT ON A SHARED VISION FOR POST-FIRE MANAGEMENT OF WILDLANDS.

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Priority Action 3.6.9-1: Facilitate HCFSC participation in the creation of any federal fire or land-management public-planning processes to encourage coordination with this CWPP.	3.6-9
3.6.10 Metric: CWPP UPDATE	3.6-10

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Priority Action 3.6.10-1: Regularly track and celebrate accomplishments of the Humboldt County Fire Safe Council and its partners.	3.6-10
Priority Action 3.6.10-2: Set up a process to review new and existing local CWPPs and identify where integration is necessary.	3.6-10
3.6.11 Metric: CWPP IMPLEMENTATION AND FUNDING	3.6-11
Priority Action 3.6.11-1: Reach out to federal, state, and county partners and foundations to identify potential funding sources to facilitate implementation of this Plan.	3.6-11
Priority Action 3.6.11-2: Set up a regional fund at the Humboldt Area Foundation to collect donations locally to support implementation of this CWPP.	3.6-11
3.6.12 Metric: HUMBOLDT COUNTY FIRE SAFE COUNCIL FUNDING	3.6-12
Priority Action 3.6.12-1: Create ongoing funding for basic Humboldt County Fire Safe Council operations and coordination.	3.6-12

3.6 INTEGRATED PLANNING

GOAL: MAXIMIZE INTEGRATION OF PLANNING EFFORTS TO IMPROVE COMMUNITY AND ECOSYSTEM RESILIENCE TO WILDFIRE.

OBJECTIVE 6

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS COLLABORATORS WILL COOPERATE TO IMPROVE COMMUNITY AND ECOSYSTEM RESILIENCE TO WILDFIRE BY COORDINATING PLANNING EFFORTS AMONG LOCAL, STATE, REGIONAL, TRIBAL, AND FEDERAL STAKEHOLDERS, INCLUDING THOSE IDENTIFIED IN THIS CWPP.

The following metrics and priority actions have been identified by the Humboldt County Fire Safe Council towards meeting the goal of maximizing integration of planning efforts to improve community and ecosystem resilience to wildfire. Background information regarding the need for integrated planning related to wildfire preparedness is found throughout the *Risk Assessment* chapters in *Part 5* of this CWPP. Information regarding local planning issues can be found in the various *Planning Unit Action Plans* in *Part 4* of this CWPP.

It is the intention of the collaborators of this CWPP that everything recommended in this Action Plan be implemented expeditiously over the next five years. That said, implementation is subject to the availability of funds and other resources, and the willingness and ability of community members and CWPP collaborators to take action.

A list of detailed Potential Action Steps for each of the following Priority Actions can be found in Appendix O.

3.6.1 METRIC: LOCAL WILDFIRE-PREPAREDNESS CAPACITY

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS PARTNERS WILL IDENTIFY AT LEAST ONE COMMUNITY LEADER OR ORGANIZATION IN EACH PLANNING UNIT TO FACILITATE A WORKING FAMILIARITY WITH THEIR PLANNING UNIT ACTION PLAN, PRIORITIZING AREAS WITHOUT A COMMUNITY-LEVEL CWPP OR FIREWISE® COMMUNITY DESIGNATION.

PRIORITY ACTION 3.6.1-1	
OUTREACH TO COMMUNITIES TO GUIDE RESIDENTS REGARDING THEIR EXISTING PLANNING UNIT ACTION PLAN AND HOW TO USE IT TO IMPROVE WILDFIRE PREPAREDNESS IN THEIR COMMUNITY.	
DESCRIPTION	<p>The <i>Planning Unit Action Plans</i> in Part 4 can function as the equivalent of a local CWPP for each of the 14 planning units of this countywide CWPP and their included communities. Residents can use the <i>Planning Unit Action Plans</i> as a source of direction and inspiration for taking action at the neighborhood and community levels.</p> <p>This action would reach out to interested individuals and organizations in each planning unit to identify those who are good candidates to move projects forward (spark plugs) and begin implementing them.</p>
RESPONSIBLE PARTY	Humboldt County Fire Safe Council (HCFSC) Integrated Planning Work Group
ADDITIONAL PARTNERS	Fire Safe Councils (FSCs) and Firewise® Communities, County of Humboldt, CAL FIRE, Six Rivers National Forest (SRNF), Bureau of Land Management (BLM), watershed councils, other conservation organizations, California Conservation Corps (CCC), Humboldt County Resource Conservation District (HCRCD), and other interested community organizations.
DESIRED OUTCOME	A COMMUNITY LEADER OR COORDINATION POINT IDENTIFIED IN EACH PLANNING UNIT WITH A PROJECT IDENTIFIED IN THEIR PLANNING UNIT ACTION PLAN UNDERWAY.

The following lists of Potential Projects are those supported by this CWPP as having a positive benefit towards meeting this Metric, Objective, and Goal. The Humboldt County Fire Safe Council and its

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collaborators support and encourage implementation of the potential projects listed throughout this Action Plan.

POTENTIAL PROJECTS

- Facilitate supportive language in the County General Plan and local CWPPs to aid local project implementation fundraising. Identify how to share this information with local practitioners to help their funding competitiveness.
- Support local FSCs, Firewise® Communities, and other community leaders in assuming and developing their role as mentors to support new communities coming into the FSC and/or Firewise processes.

3.6.2 METRIC: LOCAL WILDFIRE-PREPAREDNESS PLANNING

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS PARTNERS WILL SUPPORT LOCAL COMMUNITIES IN THE DEVELOPMENT OF AT LEAST THREE FIREWISE® ASSESSMENTS, CWPPs, OR OTHER LOCAL PLANS.

(For formation of new Fire Safe Councils or Firewise® Communities, see Metric 3.2.4.)

PRIORITY ACTION 3.6.2-1 FACILITATE FIREWISE® COMMUNITY ASSESSMENTS THROUGHOUT HUMBOLDT COUNTY.	
DESCRIPTION	<p>The Firewise® Communities/USA Recognition Program teaches people living within the wildland-urban interface (WUI) how to adapt to living with wildfire by preparing for a fire before it occurs. This program empowers communities with tools and resources for reducing their wildfire risk and encourages neighbors to work together to take action to minimize losses from wildfire. Some preparedness actions include creating and maintaining defensible space around structures by reducing vegetation and removing debris, and hardening homes with fire-resistant construction materials and landscaping techniques.</p> <p>This action will encourage communities to use the <i>Planning Unit Action Plans</i> of this CWPP as the basis for the development of a <i>Firewise Community Wildfire Risk Assessment</i> and direct them to technical support that may be available via the HCFSC and its members.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	National Fire Protection Association (NFPA)/Firewise® USA, CAL FIRE, Local Firewise® Communities, fire departments, tribes, community organizations, watershed groups, neighborhood associations, road associations.
DESIRED OUTCOME	THREE FIREWISE® COMMUNITY ASSESSMENTS WILL BE COMPLETED.

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3.6.3 METRIC: CWPP CONSIDERATION BY LOCAL AND TRIBAL GOVERNMENTS

THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL ADVOCATE FOR THE CONSIDERATION OF THIS CWPP IN ALL RELEVANT LOCAL COMMUNITY, TRIBAL, OR GOVERNMENT FIRE AND EMERGENCY PLANNING EFFORTS.

PRIORITY ACTION 3.6.3-1	
PROVIDE A COPY OF THIS CWPP TO ALL LOCAL AND TRIBAL GOVERNMENTS WITHIN THE COUNTY.	
DESCRIPTION	Local and tribal governments can benefit from the planning, background information, and identification of priority action items outlined in this CWPP. This action will inform them of the existence and goals of this CWPP and can include an offer to provide presentations about the CWPP. This CWPP can be used as a resource for any related fire-planning efforts within the county.
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	Local cities, tribal governments, relevant County departments, fire departments, Coastal Commission, Humboldt County Association of Governments.
DESIRED OUTCOME	ALL LOCAL AND TRIBAL GOVERNMENTS WILL RECEIVE A COPY OF THIS CWPP, WITH GUIDANCE ON HOW TO USE IT TO INFORM COMMUNITY WILDFIRE PREPAREDNESS.

3.6.4 METRIC: FIRE-PLANNING DATA MANAGEMENT

THE MAJORITY OF THE DATA COLLECTED THROUGH THIS CWPP AND OTHER RELATED PLANNING PROCESSES WILL BE SHARED AND COOPERATIVELY MANAGED AMONG ALL INTERESTED PARTIES.

PRIORITY ACTION 3.6.4-1	
SET UP A SYSTEM TO MANAGE THE DATA GENERATED THROUGH THIS PLANNING PROCESS AND OTHER RELEVANT PARTNER DATA. ENSURE THE CONTINUED SHARING OF DATA SETS AS PROGRESS IS MADE ON PROJECTS AND NEW PRIORITIES ARE IDENTIFIED.	
DESCRIPTION	<p>Using the community mapping exercise for this planning process (<i>see Appendix B.5 for a description of the exercise</i>), beginning with the 24 meetings in 2004-2005, then the review and updates at the 16 meetings in 2012, and again in 2017 with 14 workshops around the county, the County has collected a significant amount of data on community-identified values, risks, hazards, resources, evacuation, and projects. The data are currently housed on the County WebGIS Portal (https://webgis.co.humboldt.ca.us/HCEGIS2.6_CWPP) where this information is made available to the public. In addition, the County provides GIS data sets for download and use, including some data relevant to fire planning: https://humboldtgov.org/276/GIS-Data-Download.</p> <p>CAL FIRE and other agencies and organizations also develop and maintain data layers for fuel reduction and other projects they implement. The goal of this action is to share data sets, keep data layers updated, and integrate the community-identified information with completed projects and other ground-truthed information, with a constant feedback loop. Finally, data sets from other relevant planning efforts would be integrated or referenced, such as state data sets on habitable structures.</p> <p>Eventually, data-sharing partners would explore the best place to house all this data, whether that be with the County, CAL FIRE, or another entity.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	County Planning and Building, CAL FIRE, County OES, Cal OES, SRNF/Redwood National Park (RNP), BLM, FEMA, FSCs, Firewise® Communities, HCRCD, watershed councils and other community organizations, fire departments, emergency medical service (EMS).
DESIRED OUTCOME	A SYSTEM IN PLACE TO MANAGE, SHARE, AND REGULARLY UPDATE FIRE-PLANNING DATA.

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PRIORITY ACTION 3.6.4-2	
ENSURE THAT THE EXISTENCE OF THE HUMBOLDT COUNTY WEB GIS PORTAL IS WELL KNOWN, AND THAT RESIDENTS AND FIRE DEPARTMENTS UNDERSTAND THE BENEFITS OF THE COMMUNITY FIRE MAPPING PROJECT LAYERS.	
DESCRIPTION	As described above, the <i>Humboldt County Web GIS Portal</i> contains the community-identified fire-planning data associated with this and previous planning processes. It's a valuable resource for anyone wanting to implement projects and/or understand local fire-related concerns. This action will share relevant GIS data with existing and emerging FSCs and other local entities to aid in their wildfire-mitigation planning efforts. It can also be a valuable information source for fire departments. Finally, this information can be used to outreach to residents to help them understand their vulnerability to wildfire.
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group with County Planning and Building
ADDITIONAL PARTNERS	Fire departments, Humboldt County Fire Chiefs' Association (HCFCA), FSCs and Firewise® Communities, other local organizational partners.
DESIRED OUTCOME	INCREASED AWARENESS AND USE OF THE WEBGIS PORTAL BY LOCAL FIRE DEPARTMENTS, FIRE SAFE COUNCILS, FIREWISE® COMMUNITIES, OTHER COMMUNITY ORGANIZATIONS WORKING ON WILDFIRE PREPAREDNESS, AND INTERESTED RESIDENTS.

3.6.5 METRIC: INTEGRATION WITH COUNTY GENERAL PLAN

THIS CWPP WILL SUPPORT AND COMPLEMENT THE HUMBOLDT COUNTY GENERAL PLAN.

PRIORITY ACTION 3.6.5-1	
COLLABORATE WITH COUNTY PLANNERS TO REALIZE ADOPTED GENERAL PLAN POLICIES, STANDARDS, AND IMPLEMENTATION MEASURES AND DEVELOP IMPLEMENTING REGULATIONS RELATING TO THIS CWPP.	
DESCRIPTION	<p>The <i>Humboldt County General Plan (GP)</i> and this CWPP are inexorably linked. Active integration will lead to successful implementation of both plans, which will benefit the entire county. The CWPP is cited and referenced multiple times in the <i>General Plan</i>. The <i>GP Safety Element (S-IM6)</i> directs the <i>County</i> to actively support and pursue the implementation recommendations in, and to periodically update, this CWPP. Coordinated CWPP and GP implementation will be informed by current and evolving science, best practices, and climate adaptation strategies.</p> <p>This <i>Work Group</i> and representatives from the <i>Humboldt County Planning and Building Department</i> will work together, with the support of the additional partners mentioned below, to ensure the deliberate integration of the <i>GP</i> and this CWPP.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group and County Planning and Building
ADDITIONAL PARTNERS	County of Humboldt, FSCs, fire departments, CAL FIRE Pre-Fire Planning Battalion.
DESIRED OUTCOME	COUNTY GENERAL PLAN IMPLEMENTATION AND ASSOCIATED ORDINANCES WILL REFLECT THE FINDINGS AND RECOMMENDED ACTIONS OF THIS CWPP.

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3.6.6 METRIC: INTEGRATION WITH COUNTYWIDE REGULATORY UPDATES AND PLANNING EFFORTS

THIS CWPP WILL SUPPORT AND COMPLEMENT THE DEVELOPMENT AND UPDATE OF RELEVANT COUNTYWIDE REGULATIONS, POLICIES, AND PLANS. THE HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL INFORM AND MAKE RECOMMENDATIONS TO THE BOARD OF SUPERVISORS IN THESE MATTERS.

PRIORITY ACTION 3.6.6-1	
HCFSC WILL SUPPORT COUNTY PLANNERS TO UPDATE THE COUNTY “SRA FIRE SAFE REGULATIONS” AND OTHER REGULATIONS AS APPROPRIATE TO INCORPORATE CURRENT WILDFIRE-MITIGATION SCIENCE AND BEST PRACTICES.	
DESCRIPTION	<p>The County <i>SRA Fire Safe Regulations</i>¹ constitute the basic wildland fire-protection standards for new building, construction, and development in State Responsibility Areas (SRA). The <i>County SRA Regulations</i> must meet the intent of or exceed state standards. The County <i>General Plan</i> directs the update of the <i>SRA Fire Safe Regulations</i> to ensure that fire mitigation is proportional to risk as identified in <i>State Fire Hazard Severity Maps</i>. This CWPP further specifies updating the <i>SRA Fire Safe Regulations</i> to identify specific local hazard areas based on past fire history, weather, location on the slope, and other local characteristics that influence fire behavior. The requirement for specific fire-safe measures for those identified areas should be evaluated to address structural ignitability, road conditions and evacuation considerations, vegetation setbacks, ongoing fuel management, and improved enforcement.</p> <p>It is anticipated that the State will soon revise regulations to reflect recent catastrophic fires, and the County will have a specific period of time in which to bring the local regulations into compliance. This will be an important time to ensure that the most current fire-safe techniques and best practices are incorporated into county regulations, and that the enforcement of these regulations is well coordinated in local jurisdictions throughout the county. This work must be completed to ensure that existing and new development has the best possible chance of surviving wildfire, to allow for effective and safe fire response and community evacuation, and be designed to minimize contribution to wildfire ignition risk and intensity.</p> <p>This Work Group will participate on an advisory basis. The effort would be led by County Planning and Building.</p>
RESPONSIBLE PARTY	County Planning and Building with HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	HCFA, CAL FIRE, FSCs, conservation organizations, watershed councils.
DESIRED OUTCOME	UPDATED COUNTY SRA FIRE SAFE REGULATIONS AND OTHER REGULATIONS AS APPROPRIATE, INTEGRATING BEST AVAILABLE WILDFIRE-MITIGATION SCIENCE AND PRACTICES, AND THE FINDINGS AND RECOMMENDED ACTIONS OF THIS CWPP.

¹ County of Humboldt, Department of Planning & Building. Fire Safe Regulations, Ord. No. 2540. Retrieved from <https://humboldt.gov/1812/Fire-Safe>

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PRIORITY ACTION 3.6.6-2

HCFSC WILL SUPPORT COUNTY PLANNERS TO INCORPORATE ECOLOGICALLY BASED FUEL-REDUCTION OPTIONS IN THE UPDATE OF THE STREAMSIDE MANAGEMENT AREA ORDINANCE AND APPLICABLE ZONING REGULATIONS.

DESCRIPTION	<p>Within two years of the adoption of the County <i>General Plan</i> (adopted on October 23, 2017), the <i>Streamside Management Ordinance of Humboldt County (SMAO)</i> must be updated to ensure consistency with the <i>General Plan</i>. The <i>SMAO</i> provides:</p> <p>“...minimum standards pertaining to the use and development of land located within Streamside Management Areas (SMAs) and other wet areas such as: natural ponds, springs, vernal pools, marshes, and wet meadows (exhibiting standing water year-long or riparian vegetation).”²</p> <p>The California Department of Fish and Wildlife (CDFW) will also likely require a permit (1600 permit) under these conditions. In addition, the clearing of vegetation around a home beyond thirty feet to comply with the California state standard of one-hundred feet for fire safety could trigger the need for a special permit from County Planning and Building in <i>Residential Zones</i>, including the <i>Rural Residential Agriculture Zone</i>. Under current county and state laws, vegetation management to reduce wildfire hazards within SMAs and certain zoning districts could trigger a potentially cost-prohibitive site evaluation and special permit. These regulations could be a disincentive for active wildfire hazard reduction, potentially resulting in unnecessary losses and unintended damage to sensitive riparian ecosystems.</p> <p>The <i>Work Group</i> will collaborate with the partners listed below to encourage the incorporation of wildfire-hazard reduction considerations into the updated <i>SMAO</i> and applicable zoning regulations, seeking solutions to avoid this disincentive.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	County Planning and Building, CDFW, CAL FIRE, University of California Cooperative Extension (UCCE), FSCs, Salmonid Restoration Federation, watershed councils, conservation organizations.
DESIRED OUTCOME	UPDATED SMAO INCORPORATING BEST AVAILABLE SCIENCE AND PRACTICES, AND THE FINDINGS AND RECOMMENDED ACTIONS OF THIS CWPP, FOR ECOLOGICALLY BASED FUEL REDUCTION.

POTENTIAL PROJECTS

- Integrate wildfire preparedness into new cannabis regulations (*see Metric 3.1.2*).
- Make sure there is reference to this CWPP and associated action items in the *Humboldt Operational Area Hazard Mitigation Plan* and any future updates.
- Continue to improve notifications to local fire departments about property ownership transactions and new building permits.
- Sudden Oak Death (SOD):
 - Support policy development and permit streamlining to facilitate rapid and effective response to protect resources at risk from SOD.
 - Advocate for restrictions on selling SOD-infected plants and soil within the county.

² Humboldt County Code. Title III Land Use and Development, Division 1 Planning, Chapter 6 Regulations. Section 314-61.1: Streamside Management Area Ordinance. Retrieved from <https://humboldt.gov/1680/Development-Regulations>

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3.6.7 METRIC: INTEGRATION WITH STATE WILDFIRE-PLANNING EFFORTS

THIS CWPP WILL SUPPORT COMPLIANCE WITH RELEVANT AIR AND WATER QUALITY STANDARDS AND OTHER STATEWIDE REGULATIONS, POLICIES, AND PLANNING EFFORTS.

PRIORITY ACTION 3.6.7-1	
ENCOURAGE AND SUPPORT RESIDENTS AND ORGANIZATIONS CONDUCTING PRESCRIBED BURNS TO DO DUE DILIGENCE REGARDING PERMITTING, SMOKE MANAGEMENT PLANS, AND COMPLIANCE ISSUES TO PROTECT PUBLIC HEALTH FROM SMOKE IMPACTS.	
DESCRIPTION	<p>This action will provide, promote, and explore new technologies, information, and methods to track, treat, and aid in protecting public health from smoke (i.e., modeling, Personal Protective Equipment, personal air sensors, etc.). It will include sharing links on weather conditions, such as the <i>Area Forecast Discussion</i> and <i>Fire Weather Planning Discussion</i>.³</p> <p>Outreach to support and implement due diligence is detailed in <i>Metric 3.5.1</i>.</p>
RESPONSIBLE PARTY	HCFS Integrated Planning Work Group and North Coast Unified Air Quality Management District (NCUAQMD)
ADDITIONAL PARTNERS	CAL FIRE, UCCE, Humboldt County Prescribed Burn Association, Mid-Klamath Watershed Council, FSCs, fire departments.
DESIRED OUTCOME	ALL PRESCRIBED FIRE PROJECTS WILL BE IN COMPLIANCE WITH ALL AIR QUALITY REGULATORY AND PERMITTING REQUIREMENTS.

PRIORITY ACTION 3.6.7-2	
SUPPORT AND ENCOURAGE THE DISSEMINATION OF NORTH COAST UNIFIED AIR QUALITY MANAGEMENT DISTRICT INFORMATION DURING WILDFIRES.	
DESCRIPTION	<p>Public health effects from wildfire smoke are a vital concern among affected communities during wildfires. This action would 1) provide schools with the tools to respond to smoke impacts during wildfire events and 2) establish coordinated communication between the County Public Health Officer, County OES, and the NCUAQMD before and during wildfires.</p> <p>The NCUAQMD recently began to distribute a chart titled <i>Recommendations for Schools and Others Responsible for Children during a Wildfire Smoke Event</i>.⁴ This chart provides information regarding actions to be taken during certain air quality conditions. These actions are based on Air Quality Index values provided by the NCUAQMD and type of activity. This chart will be updated each year as needed, with distribution to schools occurring prior to the end of the school year and before the wildfire season.</p>
RESPONSIBLE PARTY	HCFS Integrated Planning Work Group and NCUAQMD
ADDITIONAL PARTNERS	County OES, County Public Health, County Office of Education, schools, tribes, FSCs, Firewise® Communities, fire departments, CAL FIRE, HCFA, Community Emergency Response Teams (CERTs).
DESIRED OUTCOME	TIMELY DISSEMINATION OF LOCAL AIR QUALITY INFORMATION DURING WILDFIRES.

³ National Weather Service. Fire Weather. Retrieved from <https://www.weather.gov/fire>

⁴ North Coast Air Quality Management District. Wildfire Activity Guide for Schools. Adapted from EPA Air Quality and Outdoor Activity Guidance for Schools. Retrieved from <http://www.ncuaqmd.org/files/Wildfire/EPA%20Wildfire%20air%20quality%20guide%20for%20schools,%20NCUAQMD%20rev%204-18.pdf>

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POTENTIAL PROJECTS

- Participation in the *Smoke Spotter Program*. The NCUAQMD continues to implement its ongoing *Spotter Program*. During smoke and wildfire events, interested individuals—known as smoke spotters—report visual information for their respective locations in various remote areas within the county throughout the day. This information is incorporated into the NCUAQMD notifications.
- Coordinate with *State Parks* to include HCFSC, local FSCs, and local fire departments in their planning and project development efforts.
- Explore the possible use of personal air sensors and other new technology.
- Stay informed regarding the California Carbon Plan implementation, specifically item D: “Explore opportunities for regulatory and policy changes and streamlining to advance the activities described in this Plan and implemented at the regional level.”⁵

3.6.8 METRIC: INTEGRATION WITH CAL FIRE HUMBOLDT–DEL NORTE UNIT FIRE PLAN

THIS CWPP WILL SUPPORT AND COMPLEMENT CAL FIRE’S HUMBOLDT–DEL NORTE UNIT FIRE PLAN.

PRIORITY ACTION 3.6.8-1 CAL FIRE ANNUALLY REVIEW THIS CWPP FOR GUIDANCE AND COMMUNITY INPUT ON PRIORITY PROJECTS AND VALUES AND ASSETS AT RISK.	
DESCRIPTION	CAL FIRE Humboldt–Del Norte Unit (HUU) updates its strategic <i>Unit Plan</i> ⁶ every year, submitting it to Sacramento annually in the late spring. This action would systematize integration of the planning efforts. CAL FIRE will annually review this CWPP for inclusion in the <i>HUU Unit Plan</i> . They will follow this review by presenting the draft <i>Unit Plan</i> at the HCFSC quarterly winter or spring meeting for input, including reviewing proposed priority projects for the next year in the HUU plan update process.
RESPONSIBLE PARTY	CAL FIRE, HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	FSCs, Firewise® Communities, others implementing fuel hazard reduction and community wildfire-preparedness projects.
DESIRED OUTCOME	PROJECT INTEGRATION BETWEEN THIS CWPP AND THE CAL FIRE HUMBOLDT–DEL NORTE UNIT FIRE PLAN.

⁵ Forest Climate Action Team. 2018. California Forest Carbon Plan: Managing Our Forest Landscapes in a Changing Climate. Sacramento, CA. (p. 6).

⁶ CAL FIRE: Humboldt – Del Norte Unit (HUU). (2017). Strategic Fire Plan Humboldt – Del Norte Unit 2017. Retrieved from http://cdfdata.fire.ca.gov/fire_er/fpp_planning_plans_details?plan_id=270

3.6.9 METRIC: INTEGRATION WITH FEDERAL WILDFIRE EFFORTS

THIS CWPP WILL SUPPORT COORDINATION WITH ALL RELEVANT FEDERAL REGULATIONS, POLICIES, AND PLANNING EFFORTS, INCLUDING THE IDENTIFICATION OF COMMUNITIES AT RISK AND THE WILDLAND-URBAN INTERFACE.

PRIORITY ACTION 3.6.9-1	
FACILITATE HCFSC PARTICIPATION IN THE CREATION OF ANY FEDERAL FIRE OR LAND-MANAGEMENT PUBLIC PLANNING PROCESSES TO ENCOURAGE COORDINATION WITH THIS CWPP.	
DESCRIPTION	<p>Most activities that occur on public lands, especially in terms of ground-disturbing activities, have their basis in a federal planning document or process. These can include a <i>Fire Management Plan</i>, <i>Land and Resource Management Plan</i>, and <i>Forest Management Plan</i> for the US Forest Service, and an <i>Integrated Area Management Plan</i> for the BLM. It is most effective to plan with federal partners up front to include community priorities such as fuel reduction and prescribed fire in locally relevant planning documents. HCFSC participation in related federal fire or land-management processes can facilitate this at the county scale.</p> <p>Additionally, HCFSC and its partners can work closely with federal partners to understand and help disseminate information about regulations and policies relevant to community wildfire preparedness and protection.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	US Forest Service, National Park Service, BLM, Bureau of Indian Affairs, tribes, US Fish and Wildlife Service.
DESIRED OUTCOME	HUMBOLDT COUNTY FIRE SAFE COUNCIL WILL PARTICIPATE IN AN ADVISORY ROLE IN RELEVANT FEDERAL PUBLIC PLANNING PROCESSES TO ENSURE CONSISTENCY WITH THIS CWPP.

POTENTIAL PROJECTS

- Accept those areas of the county already designated as WUI in local CWPPs and previous versions of this CWPP.
- Evaluate adding Redwood Valley and Titlow Hill to the federal Communities at Risk list.
- Explore Good Neighbor Authority opportunities.

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3.6.10 METRIC: CWPP UPDATE

THIS CWPP WILL BE UPDATED AND MAINTAINED BY THE HUMBOLDT COUNTY FIRE SAFE COUNCIL, WITH ITS NEXT UPDATE PLANNED FOR 2024, IN ACCORDANCE WITH ALL RELEVANT GUIDELINES.

PRIORITY ACTION 3.6.10-1	
REGULARLY TRACK AND CELEBRATE ACCOMPLISHMENTS OF THE HUMBOLDT COUNTY FIRE SAFE COUNCIL AND ITS PARTNERS.	
DESCRIPTION	This CWPP is updated every five years. This current version is the second update or third iteration of the Humboldt County fire plan. This CWPP has been written as a strategic plan for the HCFSC. Therefore, it is the intention of the HCFSC to actively use and update information in this plan over the next five years. Each priority action identified in these <i>Action Plans</i> has a final implementation step of writing a summary of the action to be included in the next CWPP Update. Additionally, <i>Work Groups</i> will report on their activities and accomplishments at every quarterly meeting, rotating between groups. As part of this updating process, HCFSC and partners will regularly celebrate and publicize accomplishments.
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	All CWPP collaborators.
DESIRED OUTCOME	THE ACCOMPLISHMENTS OF THE HCFSC AND ITS PARTNERS WILL BE TRACKED OVER THE COURSE OF THIS CWPP IMPLEMENTATION, TO BE INCLUDED IN THE 2024 SCHEDULED UPDATE.

PRIORITY ACTION 3.6.10-2	
SET UP A PROCESS TO REVIEW NEW AND EXISTING LOCAL CWPPs AND IDENTIFY WHERE INTEGRATION IS NECESSARY.	
DESCRIPTION	<p>The intention of this action is to increase HCFSC awareness of relevant, local fire-planning efforts and completed local plans to ensure their effective integration into countywide planning efforts. There are currently four local CWPPs in Humboldt County: Hoopa, Mattole, Orleans, and Willow Creek. The <i>Planning Unit Action Plans</i> in <i>Part 4</i> of this CWPP are integrally tied to these more formalized plans, referring readers to these localized CWPPs for more detail on local issues and priority actions.</p> <p>Any new information from newly developed CWPPs will be incorporated into future updates of this countywide CWPP and the <i>Planning Unit Action Plans</i>.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	Local CWPP authors, CAL FIRE, FSCs.
DESIRED OUTCOME	ALL LOCAL CWPPs IN HUMBOLDT COUNTY WILL BE REVIEWED FOR INTEGRATION INTO THE PLANNING UNIT ACTION PLANS AND THE NEXT UPDATE OF THIS CWPP.

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3.6.11 METRIC: CWPP IMPLEMENTATION AND FUNDING

SECURE FUNDING FOR IMPLEMENTING THE PRIORITY ACTIONS IDENTIFIED IN THIS CWPP OVER THE NEXT FIVE YEARS.

PRIORITY ACTION 3.6.11-1	
REACH OUT TO FEDERAL, STATE, AND COUNTY PARTNERS AND FOUNDATIONS TO IDENTIFY POTENTIAL FUNDING SOURCES TO FACILITATE IMPLEMENTATION OF THIS PLAN.	
DESCRIPTION	<p>As stated throughout these <i>Action Plans</i>, the priority actions will be implemented as resources are available. Successfully achieving the goals of this entire CWPP would require a significant level of money and manpower. To implement this plan funds are needed for both the HCFSC and its partners, especially local Fire Safe Councils, Firewise® Communities, and fire departments. There is also a clear need for support for local FSC administration, coordination, and active participation in the HCFSC.</p> <p>This action includes reaching out to all possible funding sources for CWPP implementation. <i>Metric 3.4.2</i> details specific actions for fire department funding.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	SRNF, BLM, CAL FIRE, state legislators, County Board of Supervisors, local and other foundations, FSCs and Firewise® Communities.
DESIRED OUTCOME	ADEQUATE FUNDING TO IMPLEMENT THE PRIORITY ACTIONS IDENTIFIED IN THIS CWPP.

PRIORITY ACTION 3.6.11-2	
SET UP A REGIONAL FUND AT THE HUMBOLDT AREA FOUNDATION TO COLLECT DONATIONS LOCALLY TO SUPPORT IMPLEMENTATION OF THIS CWPP.	
DESCRIPTION	<p>The Eureka-based Humboldt Area Foundation (HAF)⁷ can host funds for specific purposes or local organizations. HCFSC will work with HAF to set up a fund to receive donations to support the HCFSC in a variety of ways, including providing matching funds for grants. This fund could also facilitate local fundraising drives, as there would be a credible, tax-deductible entity to receive and disburse any funds raised.</p>
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group and Humboldt Area Foundation
ADDITIONAL PARTNERS	Local partners, including: FSCs, Firewise® Communities, fire departments, watershed organizations, media outlets, elected officials.
DESIRED OUTCOME	A HUMBOLDT COUNTY COMMUNITY WILDFIRE FUND ESTABLISHED WITH FUNDING AT THE HUMBOLDT AREA FOUNDATION.

POTENTIAL PROJECTS

- Support local community fundraising efforts for Firewise®.
- Identify an online workspace or other process for the HCFSC Work Groups to collaborate to implement this CWPP.

⁷ Humboldt Area Foundation: www.hafoundation.org

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

3.6.12 METRIC: HUMBOLDT COUNTY FIRE SAFE COUNCIL FUNDING

SECURE \$100,000 ANNUALLY AS AN ONGOING AND SUSTAINABLE FUNDING SOURCE FOR HUMBOLDT COUNTY FIRE SAFE COUNCIL COORDINATION AND ADMINISTRATION.

PRIORITY ACTION 3.6.12-1 CREATE ONGOING FUNDING FOR BASIC HUMBOLDT COUNTY FIRE SAFE COUNCIL OPERATIONS AND COORDINATION.	
DESCRIPTION	Securing funding for community wildfire-preparedness planning, implementation, and organizing is an ongoing challenge, often overwhelming local organizations. The HCFSC is no exception. Regular and stable funding is needed to facilitate and oversee project implementation, administration, and steady community outreach. Funded tasks could include organizing the HCFSC and its quarterly meetings, grant writing, lobbying to seek funds or comment on relevant legislation, and participating in national, state, and regional efforts, such as the <i>Fire Adapted Communities Learning Network</i> . Funding is also needed to support maintenance of the community fire-planning data in the <i>Web GIS</i> portal, as discussed in <i>Metric 3.6.4</i> above. Finally, discretionary funding is needed for materials, supplies, community outreach, emergency funding, equipment maintenance and/or replacement, and matching funds.
RESPONSIBLE PARTY	HCFSC Integrated Planning Work Group
ADDITIONAL PARTNERS	SRNF, BLM, CAL FIRE, County Board of Supervisors, foundations, FSCs, and Firewise® Communities.
DESIRED OUTCOME	A STABLE SOURCE OF FUNDING TO SUPPORT THE HUMBOLDT COUNTY FIRE SAFE COUNCIL.