

HUMBOLDT COUNTY COMMUNITY WILDFIRE PROTECTION PLAN, 2019

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APPENDIX 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.

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 that so many enjoy, while giving a false sense of minimal wildfire risk. <i>Hardening</i>¹ or fire-</p>

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.

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	<p>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>
<p>RESPONSIBLE PARTY</p>	<p>Humboldt County Fire Safe Council (HCFSC) Wildfire Preparedness Work Group</p>
<p>ADDITIONAL PARTNERS</p>	<p>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.</p>
<p>POTENTIAL ACTION STEPS</p>	<ul style="list-style-type: none"> ➤ Identify audience and objectives for the brochure. ➤ Set up committee to create the brochure. ➤ Gather relevant materials (text and graphics) and get permission to use them. ➤ Write text. ➤ Send text and general content for review to <i>Work Group</i>. ➤ Find any other needed graphics (or design and/or take photos). ➤ Design and do desktop production. ➤ <i>Work Group</i> review designed brochure. ➤ Identify distribution sources. ➤ Identity funding sources for printing (especially in-kind resources). ➤ Incorporate comments and create final draft. ➤ Distribute final draft to <i>HCFSC</i> for review. ➤ Incorporate final comments. ➤ Print. ➤ Distribute hard copies and online. ➤ Conduct outreach and work with local media to publicize the brochure. ➤ Share results with <i>HCFSC</i> and funders. ➤ Share materials on <i>HCFSC</i> website, social media, local media outlets, and other avenues, including those identified in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
<p>DESIRED OUTCOME</p>	<p>PRINTING, DISTRIBUTION, AND PUBLICITY OF THE BROCHURE ENTITLED <i>HOW TO FIRE-SAFE (OR HARDEN) YOUR HUMBOLDT-COUNTY HOME</i>.</p>

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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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.

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	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/livingwithwildfire or via CAL FIRE ³ and SRNF ⁴ websites. A smaller Humboldt County version of <i>Living with Wildfire</i> is included in <i>Appendix H</i> of this CWPP.
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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Invite other HCFSC members to join <i>Living with Wildfire</i> editorial committee. ➤ Identify sponsors to fund production, and timeline. ➤ Identify text updates needed. ➤ Identify new content to add, including: Sudden Oak Death, shaded fuel breaks, local and state environmental and other relevant planning laws and regulations. (<i>See Chapter 5.2 and the Appendices of this CWPP for some of these materials</i>). ➤ Identify graphics needed, including local hardened homes with defensible space. ➤ Find funding to print and distribute to all rural Post Office boxes, following SRNF distribution in 2017 and 2018. ➤ Identify people to write text and create graphics and/or take photos. ➤ Edit new text and graphics. ➤ Design new publication.

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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	<ul style="list-style-type: none"> ➤ Committee review draft, share with sponsoring agencies. ➤ Finalize text and graphics. ➤ Print. ➤ Distribute. ➤ Monitor results. ➤ Share results with HCFSC and funders. ➤ Share materials on HCFSC and other sponsor’s websites, social media, local media outlets, and other avenues. ➤ Write up a summary for next CWPP Update.
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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Identify main topics and draft outline. ➤ Identify local homes and landscapes to use for visuals. ➤ Draft budget and look for funding and/or in-kind support. ➤ Identify avenues for distribution, especially to local schools ➤ Create storyboard outline and review with partners. ➤ Film, edit, and create video. ➤ Promote via social media. ➤ Distribute to local schools. ➤ Invite federal and state agencies to help with distribution. ➤ Monitor results. ➤ Share results with HCFSC and funders. ➤ Share materials on HCFSC website, social media, local media outlets, and other avenues, such as those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	CREATE A LOCAL VIDEO ABOUT DEFENSIBLE SPACE AND HARDENED HOMES.

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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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Build an online database to house current and future images. ➤ Identify main subject areas needed. ➤ Identify sources to request photos. ➤ Outreach to existing networks. ➤ Outreach via social media and local media outlets. ➤ Explore possibility of a photo contest, including online options. ➤ Share results with HCFSC. ➤ Share materials on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
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.

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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	<p>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 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.</p>
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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Identify project targets regarding number of homes, which communities, types of assistance, etc. ➤ Talk to local FSCs who have implemented similar projects about what has worked and not with their projects. ➤ Identify compliance issues and begin permitting process. ➤ Identify funding needs and secure funding and in-kind donations (i.e. labor, chippers, pick-up trucks, etc.). ➤ Explore possibility of a countywide cost-share program. ➤ Meet with state legislators to explore incentivizing fire safe practices such as defensible space through tax breaks or other measures. ➤ Prioritize how many homes to treat each year. ➤ Contact community spark plugs, fire departments, and elected officials for recommendations for priority homes to treat. ➤ Identify and organize volunteers to help, such as service groups, Boy Scouts, university clubs, church congregations, road and neighborhood associations, etc. ➤ Share project with partners and practitioners to help identify other potential participants. ➤ Identify priority homes to treat in each community and around the county. ➤ Identify applicable laws and regulations. Develop compliance plans and apply measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary. ➤ Approach landowners and invite to participate. ➤ Develop and sign landowner agreements. ➤ Implement defensible-space treatments. ➤ Document the project with photos and videos. ➤ Monitor results. ➤ Share results with HCFSC and project partners.

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	<ul style="list-style-type: none"> ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
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.
POTENTIAL ACTION STEPS	➤ Review current FEMA funding guidelines and monitor for project application solicitations.
	➤ Review history of local FEMA-funded pre-disaster projects.
	➤ Identify project partners.
	➤ Identify priority areas.
	➤ Develop basic project concepts and treatment prescriptions. Look for examples from other successfully funded communities.
	➤ Draft preliminary budget.
	➤ Draft pre-proposal.
	➤ If accepted, seek funding to create full proposal.
	➤ Create full proposal.
	➤ Identify permitting and compliance issues, applicable laws, and regulations. Develop compliance plans and incorporate measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary.
	➤ Implement project
	➤ Monitor results.
	➤ Share results with HCFSC and project partners.
➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i> .	
➤ Write up a summary for next CWPP Update.	
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.

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- 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.

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 Fire Safe Council (FSC) or Firewise® Community. 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> <table style="width: 100%; border: none;"> <tr> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ○ Alderpoint ○ Avenue of the Giants individual communities ○ Blue Lake and greater area ○ Blue Lake Rancheria ○ Briceland ○ Ettersburg ○ Fieldbrook </td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> ○ 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. </td> </tr> </table>	<ul style="list-style-type: none"> ○ Alderpoint ○ Avenue of the Giants individual communities ○ Blue Lake and greater area ○ Blue Lake Rancheria ○ Briceland ○ Ettersburg ○ Fieldbrook 	<ul style="list-style-type: none"> ○ 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.
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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.		
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Review <i>Planning Unit Action Plans</i> in this CWPP to identify which communities have expressed interest. ➤ Reach out to representatives from these target communities. ➤ Invite interested community members to attend a local or county Fire Safe Council or Firewise® Community meeting to see how they work. ➤ Work one-on-one with target communities to assess their needs. ➤ Hold a countywide workshop to share experience between existing and potential FSCs and Firewise® communities. 		

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	<ul style="list-style-type: none"> ➤ Identify local FSC and Firewise® mentors and find support for their participation. ➤ Share the steps to becoming recognized as Firewise® with interested communities: <ul style="list-style-type: none"> ○ Form a board or committee and create an Action Plan based on the <i>Community Wildfire Risk Assessment</i>. This can be a duty added to an already existing board or committee. ○ Conduct one wildfire risk-reduction educational outreach event. ○ At a minimum, invest the equivalent of one volunteer hour (valued at \$24.14) per dwelling unit in wildfire risk-reduction actions. ○ Submit an electronic application. ➤ Share results with HCFSC and project partners. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	FIVE NEW AND FUNCTIONAL FIRE SAFE COUNCILS AND/OR FIREWISE® COMMUNITIES FORMED.

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 Fire Safe Councils 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 California Fire Safe Council, insurance companies, and agencies to cover food and inexpensive lodging, as well as mileage for one vehicle from each participating FSC. Several FSCs 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 Fire Adapted Communities Learning Network
ADDITIONAL PARTNERS	Other Northern California FSCs (including Sonoma, Santa Clara, and Nevada Counties), California Fire Safe Council (CFSC), local FSCs, local Firewise® Communities, NFPA, CAL FIRE, SRNF, Northern California Prescribed Fire Council, Fire Learning Network.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Establish or contact existing organizing committee to support. ➤ Contact Fire Adapted Communities Learning Network, CFSC, NFPA, and others for organizing and financial support. ➤ Confirm dates and location. ➤ Draft a save-the-date announcement and share with appropriate networks. ➤ Identify facility, caterers, and budget. ➤ Secure funding. ➤ Draft agenda and circulate. ➤ Confirm presenters and/or workshops. ➤ Send out invitations, including funding for one vehicle from each county FSC. ➤ Share invitation with existing networks ➤ Identify volunteers to help with tasks at the event. ➤ Hold event. ➤ Document event with photos and videos. ➤ Share results with HCFSC, project partners, and funders. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	A REGIONAL FIRE SAFE COUNCIL GATHERING.

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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. County Public Works, Road Maintenance (County Roads) 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>County Roads 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 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, Road Repair and Accountability Act.</p>

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	HCFSC will support <i>County Roads</i> 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.
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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Meet with <i>County Roads</i> to confirm staffing and equipment needs, calculate associated funding needs, and identify how to support the establishment and maintenance of roadside-fuel breaks. ➤ Work with <i>County Roads</i> staff and local FSCs to refine and confirm the target number of miles for treatment and prescription goals under for the five-year period. ➤ Identify priority evacuation routes needing treatment from <i>Planning Unit Action Plans</i> and other sources. Provide a list to <i>County Roads</i> with potential collaborative partners in each area, where applicable. ➤ Identify applicable laws and regulations. Develop compliance plans and apply measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary. ➤ Develop partnerships and funding plans to secure the necessary resources for the work identified above. ➤ Brainstorm potential matching funding sources. ➤ Brainstorm talking points to share with potential funders, legislators, and the BOS. ➤ Provide support to <i>County Roads</i> when road-maintenance funding legislation and policy opportunities arise. The success of larger funding initiatives for <i>County Roads</i> could provide additional support for and/or matching funding. ➤ Review progress with <i>County Roads</i> staff. ➤ Monitor results. ➤ Share results with HCFSC, BOS, funders, and project partners. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
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.

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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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Identify priority evacuation routes needing treatment from <i>Planning Unit Action Plans</i>. ➤ Looks for examples of how other communities or counties have developed successful cooperative relationships with Cal Trans. ➤ Prioritize public roads for treatment. ➤ Identify applicable laws and regulations. Develop compliance plans and apply measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary. ➤ Identify areas where prescribed fire could be used along principal roads. ➤ Schedule initial meeting with local Cal Trans office. ➤ Meet with Cal Trans. ➤ Evaluate if assistance is needed from statewide elected officials or agency partners. ➤ Monitor results. ➤ Share results with HCFSC and project partners. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	COORDINATION PROCESS IN PLACE WITH CAL TRANS TO IMPLEMENT HAZARDOUS-FUEL REDUCTION ALONG PUBLIC ROADS.

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.

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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's important to identify projects early and begin the planning process to facilitate timely implementation. This is especially true for projects on federal lands or with 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 properly permit projects through the required process; and employ methods that minimize carbon emissions and maintain and/or restore ecosystem function, process, and health. 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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Identify a process for identification of initial communities in each Planning Unit. ➤ Identify community spark plugs and agency leaders in targeted communities. ➤ Share priority projects from <i>Planning Unit Action Plan</i>. ➤ Identify project mentors if needed. ➤ Convene meetings to identify priority fuel reduction, shaded fuel breaks, and/or maintenance project areas. ➤ Evaluate options for fuels reduction methods with consideration of associated carbon emissions and ecosystem impacts and strive for a balance between potential impacts and expected benefits. ➤ Identify applicable laws and regulations. Develop compliance plans and apply measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary. ➤ Dovetail fuel treatments along roads with fisheries concerns to enhance project efficiency and funding opportunities. ➤ Brainstorm regarding implementation funding, lead agency, and other details. ➤ Begin planning and permitting process. ➤ Direct communities to resources such as CAL FIRE and CCC crews, and other potential in-kind resources. Look for local matching funds. ➤ Apply for funding. ➤ Secure funding, identify contractors. ➤ Begin project implementation. ➤ Monitor results. ➤ Share results with HCFSC, project partners, and funders.

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	<ul style="list-style-type: none"> ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	AT LEAST ONE FUEL-HAZARD REDUCTION OR MAINTENANCE PROJECT COMPLETED OR IN DEVELOPMENT IN EACH PLANNING UNIT.

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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Identify priority-powerline easements for fuel reduction, using the <i>Planning Unit Action Plans</i> of this CWPP. ➤ Identify PG&E point person in each management area for efficient project implementation. ➤ Work at local and state levels with PG&E to discuss project implementation and funding options. ➤ Explore opportunities for local fuel-reduction crews to work on PG&E maintenance along power lines. ➤ Identify applicable laws and regulations. Develop compliance plans and apply measures to avoid the potential spread of invasive species. Review existing compliance resources and best management practices to determine if additional guidance materials are necessary. ➤ Work with PG&E to share relevant maintenance information to document lines being treated and/or maintained. ➤ Set up meetings to discuss standards and vegetation-management protocol. ➤ Identify a process to work with PG&E and landowners regarding PG&E easements through their properties. ➤ Monitor results. ➤ Share results with HCFSC and project partners. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
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.

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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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Review existing chipping programs to learn what works and doesn't. ➤ Explore creating a countywide and/or local chipping programs. ➤ Research insurance and maintenance issues and options. ➤ Draft a project proposal and budget. ➤ Seek funding. Air Quality Districts have funded similar programs in other counties. ➤ Create outreach materials to share throughout the county. ➤ Implement through HCFSC, local FSCs, Firewise® Communities, non-profit/watershed council and/or Resource Conservation District partners. ➤ Monitor results. ➤ Share results with HCFSC, project partners, and funders. ➤ Share success stories on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	COUNTYWIDE AND/OR NEW LOCAL COMMUNITY-CHIPPING PROGRAM IS IN PLACE AND AVAILABLE TO COLLABORATING ORGANIZATIONS.

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. 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,

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	<ul style="list-style-type: none"> ○ 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 Schatz Energy Research Center.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.
POTENTIAL ACTION STEPS	<ul style="list-style-type: none"> ➤ Establish project committee. ➤ Identify current research and review, including local information from Schatz Energy Research Center. ➤ Review existing programs and materials by EPA, NCUAQMD, and others. ➤ Identify and review current projects being implemented, and support positive projects. ➤ Share current information with HCFSC partners and networks, including inviting speakers to quarterly meetings. ➤ Outreach to conservation groups on the importance of utilizing fuels locally. ➤ Share results with HCFSC and project partners. ➤ Share information on HCFSC website, social media, local media outlets, and other avenues, including those detailed in <i>Metric 3.4.1</i>. ➤ Write up a summary for next CWPP Update.
DESIRED OUTCOME	INCREASED AWARENESS OF THE OPTIONS, AND SUPPORT FOR, BEST PRACTICES OF LOCAL WOODY MATERIAL UTILIZATION.

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).

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>