NORTH COAST RESOURCE PARTNERSHIP

EXHIBIT A
PROPOSAL COVER PAGE

Proposal Type

[x] Concept Proposal for Demonstration Projects and Processes

Organization Name (Lead Applicant)

Humboldt Redwood Company, LLC

Organization Type

[ ] Federally recognized Indian Tribe

[ ] California State Indian Tribe

[ ] Public agency

[ ] Local or state agency/special district

[ ] Resource Conservation District

[ ] Non-profit organization

[ ] Public utility

[x] Other: Private Business (Timberland Owner)

Contact Name/Title

Name: Hayley Ross

Title: Natural Resources Writer

Email: HRoss@mendoco.com

Phone Number (include area code): 707-962-2814

Organization Address (City, County, State, Zip Code):

169 Main St, Scotia, CA 95565

Authorized Representative (if different from the contact name)

Name: Mike Miles

Title: Director, Forestry Operations

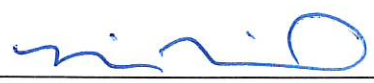
Email: mmiles@hrcllc.com

Phone Number (include area code): 707-764-4173

Certification of Authority

By signing below, the person executing the certificate on behalf of the proposer affirmatively represents that s/he has the requisite legal authority to do so on behalf of the proposer. Both the person executing this proposal on behalf of the proposer and proposer understand that the NCRP is relying on this representation in receiving and considering this proposal. The person signing below hereby acknowledges that s/he has read the entire Request for Proposals document and has complied with all requirements listed therein.

Official Authorized to Sign for Proposal



Signature

5/21/2020

Date

Description of organization

Humboldt Redwood Company (HRC) manages over 200,000 acres of privately owned forestland in Humboldt County. Our commitment is to manage these productive timberlands with a high standard of environmental stewardship while operating a successful business beneficial to the economic vitality of the region. The company is staffed with professional foresters, botanists, wildlife and fisheries biologists, hydrologists, and geologists with substantial experience in forest management for multiple benefits.

HRC is active in fuel hazard reduction and reduced fire risk projects. This activity has increased in recent years in response to rising climate change concerns and the trend of larger and more damaging wildfires throughout the state. Recent projects include forest thinning for the reduction of vertical and horizontal fuels in young forest stands (i.e. shaded fuel-breaks) and a partnership with CAL FIRE for the prescribed burn of approximately 150 acres in the upper Yager Creek drainage for the benefit of black and white oak woodland restoration and forest fuels reduction near public roads.

Key personnel

Mike Miles
Director, Forest Operations
Registered Professional Forester (RPF)
Past California State Board of Forestry and Fire Protection Member
BA Environmental Science – UC Santa Cruz

Brian Broznitsky
RPF
Silviculture Manager
BS Forestry, University of British Columbia
UBC Diploma in Advanced Silviculture

Deakon Duey
RPF
Forest Manager, Southern Operations
BS Forestry, Humboldt State University

Connor Kennedy
Reforestation Forester
BS Forestry, Humboldt State University

Contractors (Licensed Timber Operators)

Miller Timber Services
https://www.millertimber.com/our-services/logging-harvesting/
Preferred contractor (small diameter harvest system specialist)

Contributing consultants for harvest considerations/model development:

Yana Valachovic
RPF
County Director- Forest Advisor University of California Cooperative Extension
Helped create special prescription/oak woodland regulatory playbook
Collaborated on Mountain View Burn

Chris Ramey
RPF, Cal Fire, Battalion Chief
Head of burning
Collaborated on Mountain View, led burn under same permitting structure as this proposal

Lathrop Leonard
Head of State Parks in Humboldt/Del Norte
10 Years of experience in prairie recovery and small diameter timber treatments
Contributing Consultant to help model approach for future collaboration with the parks, e.g. replicability, scalability

Dr. Lucy Kerhoulas
HSU Forestry Professor
Mountain View Researcher
Collaborating consultant to ensure project is conducted with maximum future research value/apply findings of mountain view research to this treatment.

Dr. Jeff Kane
HSU Forestry Professor
Mountain View Researcher
Collaborating consultant to ensure project is conducted with maximum future research value/apply findings of mountain view research to this treatment.

Dr. Hunter Harrill
HSU Forestry Professor
Collaborating consultant to ensure project is conducted with optimal use of modern equipment and that the time study is structured to be scalable and replicable across future projects for comparative data.

Work Examples and Links

Extensive information about Humboldt Redwood Company can be found at https://www.hrcllc.com/

NCRP DEMONSTRATION PROJECT AND PROCESSES CONCEPT PROPOSAL BUDGET AND SCHEDULE

Project Name: Forest Fuel Hazard Reduction and Utilization/Oak Woodland Restoration

Major Tasks	Task Description	NCRP Task Budget	Funding Match *	Total Task Budget	Scaled NCRP Budget **	Start Date	End Date
Project Administration	Registered Professional Forester (RPF) - site selection with CAL FIRE and HumCo Fire Safe Council, project design, CAL FIRE harvest exemption permit prepaparation, Contracting cut-to-length operator, Project supervision, Public Field Trip, Final Inspection with CAL FIRE (120 hours)	$0.00	$14,400.00	$14,400.00	$0.00	1/1/21	7/30/21
Reporting: Data Collection and Report Summary	HRC Forestry Staff - collecting, analyzing, and preparing final written report (80 hours)	$0.00	$8,000.00	$8,000.00	$0.00	1/1/21	7/30/21
Project Implementation : Mechanized harvest/fuel hazard reduction	Mechanized Cut-to-Length or equivalent harvest and fuel hazard reduction for 160 acre area	$100,000.00	$100,000.00	$200,000.00	$0.00	3/1/21	6/30/21
Project Implementation: Manual Labor	Manual (by hand) post mechanical harvest and fuel hazard reduction lop and scatter of remaining slash and too small DF for mechanized treatment (160 hours)	$8,800.00	$0.00	$8,800.00	$0.00	7/1/21	7/30/21
Total NCRP 2020 Demonstration Project Request		**$108,800.00**	**$122,400.00**	**$231,200.00**	**$0.00**		

*** List the sources and status of matching funds:**
Humboldt Redwood Company

**** Is Requested Budget scalable? If yes, indicate scaled totals; if no leave as $0.**

Project scalability information for the reviewers (optional): The proposed project size and scale is designed to fit the grant parameters including completion by July 30, 2021. Number of acres treated cannot be feasibly reduced without significantly diminishing both fire hazard reduction and ecological benefits while increasing operational unit costs of treatment (i.e. $/acre). The proposed HRC funding match (>50% of the total project budget) is the maximum amount the company is able to offer.

Forest Fuel Hazard Reduction and Utilization / Oak Woodland Restoration

1. Project Abstract

The proposed project treats extreme fire hazard forest conditions and improves forest health by thinning overstocked stands using a mechanized harvesting system and removing encroaching conifers from adjacent oak woodlands. Approximately 50 to 75 percent of the stems are removed from the overstocked stands while retaining the healthiest trees in a free-to-grow stand condition. Hazardous horizontal and vertical fuel loading resulting from intermingling crowns and stand mortality will be reduced, resulting in resilient, fire-resistant stand conditions and reduced rate of fire spread in the event of a wildfire. Conifers are removed from areas surrounding true oaks to maintain open oak woodlands in which prescribed fire can be safely introduced, further reducing wildfire hazard while improving forage and herbaceous ground cover.

Treatment of this stand type is cost prohibitive without funding assistance. The return, in addition to improved forest health and fire resilience, is data describing the economics and true costs of the proposed treatment and merchantable wood product recovery, for broader distribution and review, benefiting public agencies, public lands, tribal lands, and industrial and non-industrial private timberlands.

2. Project Location and Area Served

The proposed project is in Humboldt county, on Humboldt Redwood Company (HRC) forestlands on areas identified as potential high fire hazard by HRC's 2018 Fire Hazard Assessment. Areas served include HRC properties as well as adjacent properties and communities such as Shively, Holmes, McCann/Fruitland Ridge, Redcrest, and adjacent public lands such as Humboldt Redwood State Park (HRSP).

3. Project Description

INTENDED PURPOSE OF THE PROJECT

This on-the-ground project intends to improve forest health, increase fire resiliency, and reduce fire hazard on approximately 160 acres of privately owned wild and working forests. The attained benefits are both local, at the forest stand level, and regional, with surrounding areas benefitting from reduced fire hazard and improved forest health and forage. The project will demonstrate current mechanized cut-to-length or equivalent technology and be open for scheduled public viewing of active operations. A fact sheet detailing project description and costs will be generated to assist other landowners and managers in planning similar projects.

PROBLEM STATEMENT: WHY THE PROJECT IS NEEDED

The project targets a specific forest stand type – densely stocked 30 to 35-year-old Douglas-fir and redwood resulting from past intensive reforestation efforts and natural regeneration. This current stand condition is characterized by tightly spaced trees, 6 to 16-inch diameter at breast height (dbh), with intermingling crowns and interlocking limbs. Die-off (mortality) of individual trees within these overstocked stands is often observed as trees compete for light, water, and nutrients. This combination of stand characteristics results in both horizontal and vertical fuel loading and extreme fire hazard in the event of wildfire, meaning the entire stand is likely to be engulfed (die) and the rate of fire spread will be rapid. Occasionally, these stand types encroach into true oak woodland which historically provide open oak savannah beneficial for

wildlife and forage. Conifer encroachment into oak woodland reduces forest diversity and endangers the true oaks which are eventually shaded out or susceptible to catastrophic wildfire when surround by overstocked conifer stands.

Tens of thousands of acres of similar stand conditions exist across Humboldt County.

In the face of climate change-related increasing fire danger, managing these young, overstocked, marginally commercial forest stands in an effective and economical manner needs to be explored and demonstrated to determine feasibility and true costs of application at a larger scale across a range of ownerships including industrial, non-industrial, tribal, and public lands.

SETTING AND BACKGROUND

The setting of the proposed project is on private timberlands with a long history of forest management. As a result, there is a wide range of stand conditions present across the 209,000 acre ownership from young stands to old-growth. These wild and working forests have been managed under a federal- and state-approved multi-species habitat conservation plan (HCP) since 1999. Since 2008, these forests have been managed using predominantly uneven-age single tree and group selection management. The specific young overstocked stands targeted by the proposed project are the result of even-age clearcut management applied by a previous landowner approximately 25-35 years ago.

The young age and small size of these stands makes them uneconomical to treat/manage at present without grant funding assistance in which case management will be postponed approximately 10 years until the timber in these stands becomes economically viable to harvest.

Conserving oak woodland is a well-documented ecological goal for landowners and resource managers throughout the region.

Mechanical cut-to-length harvesting technology is somewhat new technology to northern California and had never been used on HRC's property before. Grant funding of this project would assist the landowner in experimenting with this new or alternative equivalent technology in treating these young overstocked stands exhibiting extreme fire hazard characteristics and would provide opportunity for broader demonstration to other interested parties.

MAJOR COMPONENTS OF THE PROJECT

- Treatment of approximately 160 acres cumulatively of overstocked young forest located in one or more settings using mechanized cut to length or equivalent logging technology
- Harvest of small diameter (<18" dbh) commercial logs
- Piling and burning or chipping/grinding of non-merchantable trees and slash selected for removal to reduce fire hazard improve forest health
- Retention and spacing of the healthiest trees present in the stand at approximately 16 to 24 feet from one another to promote stand growth and carbon sequestration and eliminate vertical and horizontal fuel loading (reduced fire hazard)
- Removal of conifers encroaching upon true oaks (black and white oak)
- Scheduled field trips for public viewing of active operations
- Project data summary preparation and distribution

DESCRIPTION OF HOW THE PROJECT WILL BE IMPLEMENTED

The landowner will consult with CAL FIRE regarding potential sites for project implementation. Final site determination will be based upon assessed fire hazard and proximity/benefit to rural communities and sub-divisions and true oak woodland.

CAL FIRE harvest exemption for the selected sites will be designed and attained by a registered professional forester (RPF) in consultation with CAL FIRE.

A qualified professional specialized cut-to-length or equivalent mechanized logging contractor will be contracted for work to be performed. Project design and objectives will be reviewed with this hired contractor on-site prior to commencement of operations.

Contractor will implement project under RPF supervision. Small diameter merchantable logs will be delivered to local milling facilities. Non-merchantable trees and slash will be chipped on site and either reintroduced to the forest floor for long term soil development, sold as soil amendment, or used as hogfuel for local energy-producing co-generation plants.

Post mechanical treatment, a hand crew will be utilized to eliminate any remaining vertical or horizontal fuel loading that could not be addressed by mechanized operations and to remove any very small diameter Douglas-fir remaining that is encroaching upon true oak woodlands. The site will be left in a condition advantageous for future low-intensity prescribed fire.

At least one open-to-the-public field trip will be scheduled and advertised to allow observation of active operations. Private forest landowners, public and tribal land managers, and other interested resource specialists will be invited to attend along with general interested public.

Operational project summary including economic breakdown of costs will be prepared and distributed.

SUMMARY OF THE EXPECTED BENEFITS

- Reduced fire hazard at the stand and regional level through reduction and elimination of vertical and horizontal fuel loading and removal of dead wood
- Improved forest health and productivity through the careful retention and spacing of the most vigorous and healthy trees on site (free-to-grow condition)
- Maintenance and restoration of true oak woodlands
- Public information and awareness on preventative and restorative forestry practices and current technologies including costs
- Utilization of woody materials (i.e. small dimension lumber/molding, chips, hogfuel) that would otherwise simply be wasted by-product (e.g. all materials piled and burned or chipped) of a similar treatment that did not include a commercial utilization element

4. Specific Project Goals/Objectives

Goals and objectives include 1) increase fire security by reducing stand density and contiguous fuel loading, 2) maintaining and restoring oak woodland/oak savannah, 3) improving forage and sheltering habitat and native grass and forb associations, and 4) public demonstration that this important on-the-ground work can be done through private-public partnerships.

5. How the project addresses the NCRP Goals and Objectives and the intent of the NCRP Regional Forest and Fire Capacity Program Block Grant

The project as described above exemplifies the RFFC's goal of supporting demonstrable, on-the-ground projects that effectively manage for fuel load reduction and forest health in a manner which can be scaled up regionally, regardless of ownership, to address these common young forest stand conditions found throughout Humboldt County and surrounding vicinity. HRC brings forestry expertise and significant matching dollars as well as privately owned wild and working lands. Commercial utilization of the byproducts of the proposed treatment supports local infrastructure, benefits local jobs and revenue, and enhances capacity. Making the project available for public viewing furthers its demonstration benefit and brings awareness to both the NCRP and the RFFC program.

6. How the project is scalable, replicable, measurable, innovative and results in outcomes that will increase the scope and scale of multi-benefit forest management in the North Coast

There are thousands of acres of young overstocked conifer stands exhibiting extreme fire hazard and/or encroaching upon true oak woodlands across our region located on private industrial/non-industrial, tribal, and public lands. The proposed project can be replicated on these other ownerships and scaled up or down depending on management objectives, ownership size, and available funding.

Multiple aspects of this project can be quantified through monitoring, including pre- and post-harvest stems per acre, degree of vertical and horizontal fuel hazard loading, ecological response, and importantly utilization and economic cost-revenue comparisons.

The results of the treatments can be considered and applied innovatively, such as adjusting the ratio of mechanical to manual labor or including the use of prescribed fire to achieve similar objectives in future projects. Advancements in mechanized harvesting, most recently tethered harvesting allowing for similar management to occur on steeper slopes, is ongoing. The more projects utilizing these safe and efficient mechanical approaches, the greater the market for innovation in accomplishing and accelerating fuel hazard reduction treatments on a larger scale.

Prescribed fire as a management tool, a practice that predates European settlement in California, is gaining popularity but is still underutilized. This component of the stand treatment presents an opportunity to incorporate traditional ecological knowledge for multiple forest benefits.

7. Need for the project and how it addresses forest health and climate change/extreme event resiliency

The need for increasing pace and scale of fire hazard reduction in the face of climate change and increasing catastrophic fire behavior is well documented. The project is intended to demonstrate a result-oriented on-the-ground activity that can be scaled up regionally. Repeated on a larger scale, these treatments reduce risk of large-scale stand-replacing fire, ensuring the long-term carbon storage capacity of our forests, thus contributing to combating climate change. Maintaining and restoring oak woodland provides the additional benefit of enhancing natural communities and conserving biodiversity, critical for ecosystem resiliency in the face of changing climate.

8. Location and size of the project and the communities served

The proposed project will address approximately 160 acres of young, overstocked, primarily Douglas-fir forest and conifer/oak woodland interface located on HRC timberlands in areas identified as high fire risk by HRC's 2018 Fire Risk Assessment. Potential High Fire risk areas on HRC ownership occur in the Mad River, Van Duzen, Eel River, Bear River, and Mattole watersheds. Small rural communities including rural subdivisions such as Kneeland, Redcrest, Holmes, Shively, McCann/Fruitland Ridge, and Petrolia, along with ingress and egress would benefit from increased fire security depending on exactly where the project is located. Humboldt Redwood State Park (HRSP), an adjacent ownership to HRC in the Eel and Bear River watersheds could also benefit from increased fire security depending on final site selection. Final determination of location will be made in consultation with CAL FIRE and Humboldt County Fire Safe Council.

9. Local support for the project

Support for the project has been communicated by CAL FIRE, UC Cooperative Extension, and Humboldt State University.

10. List of quantifiable, measurable benefits expected to result from the proposed project

- 160 acres of forest fuel hazard reduction including a minimum of 20 acres of true oak woodland restoration
- Distributed project summary including cost-revenue assessment
- Opportunity for public viewing and education of this demonstration project

11. Scientific studies relevant to the project

- Cocking et al. 2012. California black oak response to fire severity and native conifer encroachment in the Klamath Mountains. Forest Ecology and Management.
- Tenyah, Thomas. 2009. Environmental Impact of Different Logging Methods in the Bankhead National Forest, Alabama: A Comparative Analysis. Alabama A&M Master of Science Thesis.
- Lambert and Howard. 1990. Cost and Productivity of New Technology for Harvesting and In-Woods Processing Small Diameter Trees. Research Paper 430. USDA Forest Service PNW Research Station.

12. Approach to data collection, performance measures, and project reporting of outcomes/lessons learned

- HRC forestry staff will collect pre- and post-treatment stand data including basal area, stems per acre, timber volume (MBF), and estimates of non-merchantable woody material fuel hazard reduction/green tons (i.e. chips, slash).
- HRC forestry staff will prepare project performance requirements in addition to CAL FIRE harvest exemption requirements
- HRC forestry staff will track cost/revenue
- This information will be assembled in a final project report along with lessons learned
- Humboldt State University (HSU) and UC Cooperative Extensions will be invited to design studies around the project if and as they see beneficial