California Forest Conservation Foundation Facilitating Shaded Fuel Break Implementation and Wildfire Readiness in Coastal Sonoma County

California Forest Conservation Foundation in Partnership with the Coast Ridge Community Forest and Matt Greene Forestry and Biological Consulting

Abstract

The California Forest Conservation Foundation (CFCF) was founded in 2020 to help improve the overall health, sustainability, and climate resilience of California's private non-industrial forests. CFCF recently made a significant non-competitive grant to the Coast Ridge Community Forest so that its consulting forester, Matt Greene Forestry and Biological Consulting, could develop a pilot program to conduct community level planning to help with the various regulatory frameworks in place today. Included in the pilot program is a simple ArcGIS Survey 123 webapp with GIS mapping abilities that landowners can use to request inclusion in landscape-scale shaded fuel break projects. The app will also provide up-to-date geographic information that is tactically important to wildfire responders, and it will identify community fire escape routes.

The Project

The Coast Ridge Community Forest is an established organization and has been designing and implementing shaded fuel breaks and other fuel reduction projects in Sonoma County.

Figure 1: Fred Euphrat, a forester who works with the Coast Ridge Community Forest, provides mapping assistance to a landowner at a meeting.

Matt Greene, members of the Timber Cove Fire Protection District, and the CALFIRE Battalion Chief have worked together to identify, and document needed treatments to protect their community in coastal Sonoma County from changing conditions.

This pilot project, in association with Mark Tukman, has developed an "app" for the Coast Ridge Community Forest. This app will help fill an information gap: how to identify and contact local non-industrial forest landowners, so they can be offered voluntary participation in landscape-scale groups which the state government favors for fuel reduction/wildfire mitigation support. CFCF provided a significant upfront grant to support Matt Greene Forestry and Biological Consulting and the Coast Ridge Community Forest (CRCF). The app will support CRCF outreach to landowners, fire protection districts and other entities across the landscape. These efforts will allow landowners to request to be included in landscape scale shaded fuel break projects that will be implemented under various regulatory programs.

Governor Newsom's March 2025 Executive Order for Fire Resiliency created a path that landowners and land managers to request to be exempted from CEQA for various types of landscape treatments that align with the order's intent. These projects must still follow a series of Best Management Practices which are discussed in the Statewide Fuels Reduction Environmental Protection Plan (EPP). Funds for these projects are available only for a short period through various grant programs, which increased CRCF's urgent need for funding to be able to reach as many people as possible as quickly as possible. These grants are highly competitive and permitting being in place is a big leg up for ranking a project.

CRCF's work to develop shaded fuel breaks at landscape level will help control the spread of wildfires and protect escape routes for residents. Using funds provided by CFCF, Matt Greene has led local resource professionals to create a strategy for prioritizing projects and obtaining needed information for the application. A series of landowner workshops and outreach has begun through the Coast Ridge Community Forest that both allows landowners a simple way to request shaded fuel break implementation on their lands, and provides information that will be used for a regional fire prevention database. Even more critical: this information helps build applications for grant submissions so project proponents can bunch groups of owners together to work at a larger scale and compete against other competitive projects.

Results

The simple webapp is based on the off-the-shelf ESRI extension Survey 123. It is used to collect and organize information provided by landowners on geographic data such as roads, trails, water utility hookups, natural water sources, bridges, crossings, gate locations, power lines, power poles, Knox boxes, and landowner contact information.
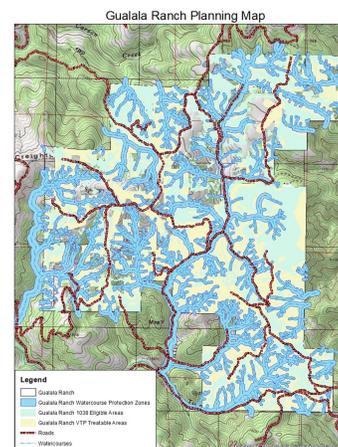

Figure 2: Gualala Planning Map, showing areas identified as WLPZ, 1038 Eligible, or VTP Treatable. Gualala Ranch was the location of a project where a similar process was executed, and proof of concept established.

This data can be used to create 'run books' for local Fire Protection Districts and can be accessed by CALFIRE staff using Tablet Command, the department-wide in-vehicle command and control program. Many current 'run books' are decades old and are inaccurate to the point that they can hinder firefighting efforts. The new data collected as part of this project will improve an incident commander's situational awareness and provide tactically important location information that can improve response outcomes when emergencies occur.

The app creates a simple process for landowners to opt-in to participating in landscape level fire prevention and mitigation projects while also improving first responder's situational awareness within their areas of responsibility. Links to the app can also be sent via email, eliminating the need for hard copy mailings which are often discarded as junk by landowners.

The app will be available for use by other organizations in California such as Resource Conservation Districts or local fire protection districts upon request and can be easily modified for each unique project or location.

Figure 3: Coast Ridge Community Forest personnel climbing a tree.

Points of Contact:
Coast Ridge Community Forest
P.O. Box 139; Cazadero, CA 95421
info@coastridgecommunityforest.org

California Forest Conservation Foundation
3620 American River Drive, Suite 230
Sacramento, CA 95864
info@caforestconservation.org

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