

COASTAL CONSERVANCY

Staff Recommendation
June 1, 2023

SANTA CRUZ MOUNTAINS FOREST HEALTH AND BIOMASS PROCESSING PILOT

Project No. 23-013-01
Project Manager: Erin Gravley

RECOMMENDED ACTION: Authorization to disburse up to \$1,150,000 to remove dead and dying trees along a ten mile stretch of road that is also a fuel break and for processing the wood into a charcoal product at the San Vicente Redwoods Preserve, Santa Cruz County.

LOCATION: San Vicente Redwoods Preserve, Santa Cruz Mountains, Unincorporated Santa Cruz County

EXHIBITS

Exhibit 1: [Project Location Maps](#)

Exhibit 2: [Photos](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed one million one hundred fifty thousand dollars (\$1,150,000) to the Peninsula Open Space Trust (“the grantee”) to remove dead and dying trees along a ten mile stretch of road that is also a fuel break and for processing the wood into a charcoal product at the San Vicente Redwoods property, in the Santa Cruz Mountains, northern Santa Cruz County.

Prior to commencement of the project, the grantee shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following:

1. A detailed work program, schedule, and budget.
2. Names and qualifications of any contractors to be retained in carrying out the project.
3. A plan for acknowledgement of Conservancy funding.

4. Evidence that all permits and approvals required to implement the project have been obtained.

Findings:

Based on the accompanying staff recommendation and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with Chapter 3, Section 31113, of Division 21 of the Public Resources Code regarding the Climate Ready Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.
3. The Peninsula Open Space Trust is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of \$1,150,000 to the Peninsula Open Space Trust (POST) to remove dead and dying trees burned by the 2020 CZU Lightning Complex Fire along a 10-mile stretch of Warrenella Road, and converting the cut wood into charcoal (referred to as “biochar”) using a mobile carbonator. (Exhibit 1) The project is within POST’s San Vicente Redwoods preserve (SVR).

The project consists of cutting 10,000 tons of dead, flammable woody biomass spread across 524 acres, transporting the wood to carbonator staging areas in the SRV, and using a mobile carbonator to pyrolyze (a cleaner method than incineration) the cut wood. The carbonator incinerates the wood at a very high heat under controlled oxygen conditions that greatly reduce air pollution and carbon dioxide emissions, as compared to open burning or other disposal methods. The contractor operating the mobile carbonator will be responsible for managing the biochar and will be expected to identify potential end users through existing relationships with agricultural industry representatives and researchers. Biomass processing technology continues to improve. If POST proposes to use a newer technology than a carbonator, SCC staff will allow its use in the project if the benefits exceed those of the carbonator, such as it has the same emissions but uses less water and if the costs are the same or less than a carbonator.

The project also includes treatment of 6,000 tons of dead wood by pile burning and mastication. Some of pile burning and mastication treatments will be part of San Jose State University and University of California Santa Cruz research which will study how standard fuel reduction treatments affect forest health, species diversity, and carbon dynamics. As part of the project, POST will share lessons learned about the project through workshops and field trips organized by the Santa Cruz Mountains Stewardship Network - a region-wide and cross-sector collaboration between 24 large public and private landowners and other land managers.

The project will create a 400-foot-wide shaded fuel-break along a 10-mile long stretch of Warrenella Road, which is a critical fire defense road (See project location maps in Exhibit 1)

that is part of a network of new fire breaks designed to better protect the region during future wildfires. The goals of the project are to reduce the risk of catastrophic wildfire, reduce air pollution and greenhouse gas emissions in the treatment of downed wood, and protect natural resources.

Site Description: The 2020 CZU Lightning Complex Fire burned over 86,509 acres across the Santa Cruz Mountains. Over much of the fire footprint, thousands of trees were killed or severely damaged but not fully consumed (Exhibit 2). What remains at SVR and across the region are enormous quantities of standing dead tree biomass surrounded by post-fire regrowth. These conditions pose a greater fire risk relative to before the fire. These excessive fuel levels throughout most of the burn perimeter create significant threats to the unique ecosystems of the Santa Cruz Mountains and the public safety of surrounding local communities, such as Bonny Doon, Davenport, Boulder Creek, and Pescadero, among others. This increased threat makes the creation and maintenance of regionally significant fuel breaks such as the Warrenella Fire Street a critical fire and forest health management action.

Grant Applicant Qualifications: POST has received over a dozen state grants in the past 20 years, including several from the Coastal Conservancy that support both land protection and stewardship projects. SVR is co-owned by Peninsula Open Space Trust (POST) and Sempervirens Fund (Sempervirens). POST, Sempervirens, Save The Redwoods League (the League), and the Land Trust of Santa Cruz County (LTSCC) collaboratively manage SVR as the SVR Conservation Partners. Since the CZU Fire, the SVR Conservation Partners and Bonny Doon Fire Council have secured \$14.7 million in public funds to implement improvement projects on SVR, ranging from invasive plant control, to restorative forest thinning, and dam removal. Of these funds, \$3.7 million is allocated to forest health work and fuel reduction work. POST and SVR Conservation partners have a successful track record securing funds, designing achievable projects, effectively implementing projects, and accurately tracking and reporting expenses and accomplishments to funders. Additionally, POST's collaborator, the Bonny Doon Fire Safe Council, has successfully completed a pilot project using a similar piece of equipment called an Air Curtain Burner.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on September 23, 2021, in the following respects:

Selection Criteria

1. Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.

See the "Consistency with Conservancy's Strategic Plan" section below.

2. Project is a good investment of state resources.

This project is beneficial to California because it will help facilitate the removal of trees that were destroyed by a catastrophic wildfire, which will reduce wildfire hazard and increase forest and ecosystem health. Processing the woody biomass in a carbonator will reduce greenhouse gas emissions while potentially providing a beneficial soil amendment to the forest and

farmland. Approximately 10,000 tons of woody biomass will be removed and processed. This project will avoid the expense and environmental impact of transportation to landfill. The central coast, and California in general, desperately need case studies and demonstration projects that reduce the environmental impacts of processing plant waste from forest and fuel management projects.

Data and lessons learned from this project will be shared with practitioners and others who are considering similar management of woody biomass. The use of carbonator technology is fairly new and not widely available. However, this project builds on previous experience that POST has using an air-curtain burner which greatly adds to the knowledge base for area land managers and partners.

The proposed project is consistent with several state plans, and specifically with the following:

- California's Wildfire and Forest Resilience Action Plan (Governor's Forest Management Task Force, January 2021), which calls for activities such as fuels reduction, forest thinning, vegetation management, prescribed fire, shaded fuel breaks, defensible space, and enhancement of fire-prone habitats to reduce fire risk.
- The California Forest Carbon Plan (California Natural Resources Agency, 2018), which calls for restoration of natural fire regime and forest composition through a multitude of approaches including thinning, prescribed burns, invasive vegetation management, and shaded fuel breaks.
- The Community Wildfire Prevention & Mitigation Report (CalFire, 2019), which urges state and local agencies to implement the goals of the Carbon Forest Plan and lays out recommendations to agencies to increase the scale and pace of management and mitigation actions to improve forest health and resiliency.

3. Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.

Though the SVR partners actively engage Tribal members in CEQA review, research, and stewardship on the property, implementation of this particular fuel reduction project does not involve tribal members. On-going conversations with tribal representatives, particularly Amah Mutsun Tribal Band members, have made clear that one of their primary goals is bringing good fire back to the landscape. This project is a critical step towards creating a fire resilient landscape that can support prescribed and cultural burning, in line with the Tribal stewardship goals.

4. Project benefits will be sustainable or resilient over the project lifespan.

The proposed project will help increase fire resiliency in the context of anticipated climate change. Fire resilience is a critical issue due to increased average temperatures, reduced marine fog, and longer and more severe droughts. California is facing unprecedented fire risk due to climate change and a growing populace. Both the 2020 and 2021 fire seasons broke numerous records. Charcoal is expected to be very stable after production with potential

benefits such as increased water holding capacity, enhanced microbial activity, enhanced nutrient availability and similar long-lasting effects.

5. Project delivers multiple benefits and significant positive impact.

The project will remove and process 10,000 tons of woody biomass, which will reduce the risk and severity of future wildfires, help promote a healthier and more resilient forest in the Santa Cruz Mountains and create a regionally significant shaded fuel break to protect neighboring communities.

6. Project planned with meaningful community engagement and broad community support.

The San Vicente Redwoods co-owners (POST and Sempervirens Fund) collaboratively manage the property with the conservation easement holder, Save the Redwoods League. These organizations are collectively known as the SVR Conservation partners and have jointly managed the property since 2011 to meet established conservation goals and collaboratively seek funding to design and implement forest enhancing restoration projects. The SVR Conservation Partners work with the Land Trust of Santa Cruz County to manage public access at the property. The group has worked with several collaborators throughout the region to meet various objectives, such as the Santa Cruz Resource Conservation District, CAL FIRE, Bonny Doon Fire Safe Council, Swanton Ranch, Cotoni-Coast Dairies, Big Creek Lumber, the Amah Mutsun Land Trust, biological consultants and researchers, and numerous grading and forestry contractors. The partnership has also worked closely with CAL FIRE in the management of fuel projects. As a member of the Santa Cruz Mountains Stewardship Network, POST will share lessons learned with members as well as interested groups, individuals, and local, state, or federal decision makers.

PROJECT FINANCING

Coastal Conservancy	\$1,150,000
Peninsula Open Space Trust	\$2,640,000
Project Total	\$3,790,000

The anticipated source of funding for this project is a grant to the Coastal Conservancy from the Department of Conservation’s (DOC) Regional Forest and Fire Capacity Program (RFFCP). The Conservancy is one of the subregional recipients of RFFCP block grants. The goal of the RFFCP is to increase regional capacity to prioritize, develop, and implement projects that improve forest health and fire resiliency, facilitate greenhouse gas emissions reductions, and increase carbon sequestration in forests throughout California. The project is consistent with the funding source because it will address the increased fire risk caused by a catastrophic wildfire, create a regionally significant fuel break and use a carbonator, which could provide a model for efficiently processing plant waste produced by fuel management activities.

Unless specifically identified as “Required Match,” the other sources of funding are estimates. The Conservancy does not typically require matching funds or in-kind services, nor does it require documentation of expenditures from other funders or of in-kind services. Typical grant conditions require grantees to provide any funds needed to complete a project.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The recommended project would be undertaken pursuant to Section 31113 of Chapter 3 of Division 21 of the Public Resources Code, which authorizes the Conservancy to address the impacts and potential impacts of climate change on resources within the Conservancy's jurisdiction (Section 31113(a)).

Pursuant to Section 31113(b) and (c), the Conservancy is authorized to award grants to nonprofit organizations and public agencies to undertake projects that include reducing greenhouse gas emissions and addressing extreme weather events, sea level rise, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.

Pursuant to Section 31113(c), the Conservancy must prioritize grants for projects that maximize public benefits and have one of several specified purposes, including reducing greenhouse gas emissions.

Consistent with these sections, the proposed project reduces wildfire risk presented by a post-fire landscape that contains a huge quantity of dead and dying trees, improves ecological health of natural resources and reduces greenhouse gas emissions from processing biomass through use of a carbonator.

The project is within the Conservancy's jurisdiction because it will occur within the coastal zone of Santa Cruz County.

CONSISTENCY WITH CONSERVANCY'S [2023-2027 STRATEGIC PLAN](#) GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 4.2 Wildfire Resilience**, the project improves ecological health of natural lands and reduces the risk of catastrophic fire by implementing a wildfire resilience project on 524 acres.

CEQA COMPLIANCE:

The project is statutorily exempt from the California Environmental Quality Act (CEQA) in accordance with the CEQA Guidelines at 14 Cal. Code of Regs. Section 15269(a), which identifies the statutory exemption for emergency projects. The scope of the exemption includes projects to demolish and restore property damaged or destroyed as a result of a disaster in a disaster-stricken area in which a state of emergency has been declared by the Governor pursuant to the California Emergency Service Act. The project will demolish destroyed trees and restore property damaged by the CZU Lightning Complex Fire, which started on August 16, 2020. On August 18, 2020, the Governor signed a Proclamation of a State of Emergency due to the extreme heat event that included lightning strikes that caused multiple fires, including the CZU Lightning Complex Fire. Accordingly, the proposed project, which involves demolition and restoration to address property damage caused by the CZU Lightning Complex Fire, is within the scope of the emergency project exemption.

Upon approval of the project, Conservancy staff will file a Notice of Exemption.

