

COASTAL CONSERVANCY

Staff Recommendation
November 30, 2017

CLIMATE-SMART RESTORATION FOR RESILIENT SONOMA COUNTY CITIES

Project No.17-034-01
Project Manager: Anna Schneider

RECOMMENDED ACTION: Consideration and authorization to disburse up to \$429,471 to the Point Reyes Bird Observatory, Inc. to restore approximately 0.83 linear miles of degraded riparian habitat at four sites in Sonoma County.

LOCATION: Glenn Ranch, McNear School, Petaluma; Taylor Mountain Regional Park, Crane Creek Regional Park, all in County of Sonoma. (Exhibit 1)

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: [Project Location Maps](#)

Exhibit 2: [Project Site Maps](#)

Exhibit 3: [STRAW Participating Schools \(DAC\)](#)

Exhibit 4: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed \$429,471.00 (four hundred twenty-nine thousand four hundred seventy one dollars) to Point Reyes Bird Observatory, Inc., (Point Blue) to restore approximately 0.83 linear miles of degraded riparian habitat at Taylor Mountain Regional Park, Crane Creek Regional Park, Glenn Ranch, and McNear Elementary School, all in Sonoma County. The authorization is subject to the following conditions:

1. No Conservancy funds shall be disbursed until the Executive Officer of the Conservancy has reviewed and approved in writing:
 - a. A work program, budget, and schedule;
 - b. Any contractors or subcontractors to be used;
 - c. A plan for acknowledging Conservancy funding;

- d. Written evidence that all permits and approvals necessary for the implementation and completion of the project under applicable local, state, federal laws and regulations have been obtained.”
2. Point Blue shall obtain an agreement with each landowner of property on which restoration project-work will occur protecting the public investment, permitting the work to be undertaken, and allowing for access to the property for the purposes of subsequent monitoring and maintenance.”

Staff further recommends that the Conservancy adopt the following findings:

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

1. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, regarding the Conservancy’s authority to undertake projects to restore natural habitats and watersheds within the nine Bay Area counties surrounding San Francisco Bay.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. Point Blue is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code.”

PROJECT SUMMARY:

Staff recommends the Conservancy authorize the disbursement of \$429,471 to Point Reyes Bird Observatory, Inc. (Point Blue) to restore approximately 0.83 linear miles of degraded riparian habitat in Sonoma County (Exhibit 1). The project sites are located at McNear Elementary School, Glenn Ranch, Taylor Mountain Regional Park, and Crane Creek Regional Park (Exhibit 2). All of these sites are located adjacent to disadvantaged communities in Petaluma, Santa Rosa, and Rohnert Park. The proposed restoration work will help create greener, more environmentally sustainable communities, while engaging local youth and their communities to improve watershed health and increase climate change resiliency.

Climate change is expected to increase drought and to strain groundwater availability, the latter of which may be especially problematic in Sonoma County. The Sonoma Valley relies on groundwater and imported surface water to meet domestic, agricultural, and urban demands. By sustainably managing its water resources, Sonoma County can minimize negative impacts from lowered groundwater levels and degraded water quality, and maintain groundwater for residents. The restored urban rivers adjacent to these project locations provide habitat for fish and wildlife, and surface water for the communities surrounding them.

This multi-benefit urban greening project will restore degraded riparian habitat in Petaluma and Santa Rosa. Point Blue will use its “Climate-Smart Restoration Toolkit” to ensure that planning and design of the projects will consider future conditions and to ensure that restored habitat will better withstand extremes in heat, drought, flooding, and changes in wildlife lifecycle timing.

The restoration projects will be implemented through Point Blue's hands-on environmental education program: Students and Teachers Restoring a Watershed program (STRAW). STRAW engages students, teachers, and their families in planting trees, shrubs, grasses, and forbes, and learning about the watershed in which they live. Many of STRAW's existing school partners are in disadvantaged communities in Sonoma County's urban areas (see Exhibit 3).

This project has two goals: (1) to enhance ecological function of San Francisco Bay Area creeks and watersheds, and (2) to engage the community in conservation and improvement of local urban green spaces.

In pursuit of Goal 1 this project will increase deep-rooted vegetation and canopy cover to reduce surface water evaporation and increase groundwater infiltration. Soil erosion is a primary contributor to poor water quality, and excess sediment in a river has numerous negative impacts, including increased fish mortality and reduced dissolved oxygen. Using native vegetation, this restoration project will trap excess sediment to improve water quality and storage. This project will increase riparian tree density to help sequester atmospheric carbon, clean the air of pollutants, provide shade, provide green buffers and ambiance to neighbors, reduce runoff and flooding, and provide habitat for wildlife.

Point Blue's planting plan will highlight a planting palette that meets climate-smart, project-specific restoration goals. The STRAW program has implemented these designs on multiple riparian restoration projects. The implementation of STRAW's "climate-smart" designs will ensure these projects will be as robust and resilient as possible and will provide the opportunity to educate land managers, public agencies, and the public about the importance of these projects as a successful and concrete means of adapting to climate change. STRAW projects have been evaluated for long-term success, and were found to be effective in "improving aquatic habitat and [the] riparian vegetation community and structure at the surveyed sites. This confirmation of long-term intended and beneficial outcomes supports these practices to improve watershed functions." In addition, a sub-set of STRAW sites are regularly monitored for changes in wildlife response over time, using birds as indicators that are sensitive to rapid environmental changes.

Enhancing ecological functions benefits wildlife by providing increased connectivity to refugia, protecting federally endangered and threatened species, and other wildlife from predation. The project will plant native trees, shrubs, grasses, and forbs, to increase canopy cover and reduce sedimentation, which will improve water quality and quantity benefiting regional wildlife and fish, specifically California Freshwater shrimp (*Syncaris pacifica*). The *US Fish and Wildlife Service's Recovery Plan for California Freshwater shrimp* identifies strategies for shrimp recovery that STRAW specifically will implement in the proposed restoration of San Antonio Creek at Glenn Ranch, Crane Creek at Crane Creek Regional Park, and Colgan Creek at Taylor Mountain Regional Park. Each creek is historic habitat for this endangered shrimp.

This project also supports two of the six conditions recommended for recovery of salmon and steelhead: suitable water temperatures and adequate quantities of clean spawning gravel. This restoration will help create a healthy riparian canopy, limiting solar radiation to streams and keeping water temperatures cool, reducing stress on these young fish. It will also install native vegetation on riparian riverbanks to trap and filter fine sediment from the water column. This will help ensure that gravel where these species spawn is free from fine sediment and can supply oxygen-rich water. Two of the streams restored in this project, Crane Creek and Colgan Creek,

are upper tributaries to the Russian River, which supports populations of Coho and steelhead. NOAA's Recovery Plan identifies the Russian River populations of these species as "essential" to their overall recovery.

In support of Goal 2, the STRAW program will design, implement, and maintain these climate-smart riparian habitat restoration projects adjacent to and supporting more than 9,338 households meeting the DWR definition of disadvantaged in Sonoma County, while educating and building a constituency of environmental supporters. The project mission consists of a three-fold approach to address climate change impacts now and in the future. STRAW will: (1) cast teachers, students and their families as ecological stakeholders—engaging them actively in the improvement of natural areas in their community, (2) increase resiliency of riparian habitat through critical restoration work, and (3) ensure long-term restoration success through monitoring and maintenance.

The STRAW program will focus on areas of degraded riparian habitat that are walkable and/or accessible from underserved schools to maximize the benefits to Sonoma County's most disadvantaged citizens. All sites are within 1.6 miles of a public school, and three of the four sites are within five miles of four or more public schools. The program will engage students in watershed science, culminating in a habitat restoration at the project sites. Restoration teams, including students, teachers and their families, will plant trees, shrubs, grasses, and forbs using best installation practices to restore a total of 0.83 linear miles of riparian habitat. Using Point Blue planning tools in completing these tasks, participants will increase climate resiliency for Sonoma County in the face of increased flooding, drought, and heat, while ensuring young students are inspired about and engaged in environmental stewardship.

At the end of the project, these specific objectives will have been met:

- Increase deep-rooted vegetation and canopy cover to (a) reduce surface water evaporation, (b) increase groundwater infiltration and retention, (c) reduce sedimentation, and (d) improve water quality and quantity.
- Increase riparian tree density across 0.83 linear miles in Sonoma County's urban forest.
- Improve 0.83 linear miles of wildlife habitat through increased connectivity to refugia that protect federally endangered and threatened species, and other wildlife, from predation.
- Sequester approximately 6,525 tons of CO_{2e} (1,104 tons of atmospheric carbon in soil and 5,421 tons in woody vegetation) over 45 years.
- Contribute to the beautification of Sonoma County by enhancing 0.42 linear miles of public green space.
- Engage 35 classes (approximately 1,030 students and 350 parents) in urban conservation.

The California Conservation Corps (CCC) was contacted as required for consultation review regarding Prop. 1 projects. The CCC reviewed the project and decided it was not feasible for them to participate in this project.

Site Description: Four restoration sites throughout Sonoma County are proposed for this project: Glenn Ranch, McNear School, Taylor Mountain Regional Park, and Crane Creek Regional Park (Exhibit 2). Each site is walkable and/or easily accessible to an underserved school (defined as

having 50% or more students who are eligible for the USDA free or reduced meal program), connects existing habitat or restoration projects to enhance plant and wildlife connectivity, requires minimal planning, and is approved and ready for restoration.

Glenn Ranch is under private ownership adjacent to downtown Petaluma. The site currently has minimal overstory and no understory vegetation, being primarily vegetated with exotic annual grasses. In addition, sections of drainage exhibit varying degrees of erosion, resulting in sediment inputs into the system due to multiple vertical banks and headcuts along the denuded channel banks.

McNear School is owned by the City of Petaluma and has healthy heritage overstory vegetation but a non-functioning understory, consisting of dense populations of non-native plants such as Himalayan Blackberry, English Ivy, Fennel, Periwinkle, and French Broom, which are of marginal habitat value.

Taylor Mountain Regional Park and *Crane Creek Regional Park* are owned and managed by Sonoma County Regional Parks. The proposed project areas have no woody over-story and consist mostly of exotic annual grasses. In addition, sections of the drainage exhibit varying degrees of erosion, resulting in sediment inputs at multiple vertical banks and headcuts along the denuded channel banks.

These four riparian sites will benefit from improved urban watershed health and water quality, as well as enhanced public green space. Additionally, these sites will contribute to increasing urban canopy cover to help expand urban Sonoma County's forest and increase groundwater recharge. Cumulatively, restoring these sites will offer increased ecological biodiversity to be enjoyed by local students, teachers, and their families, while also helping to safeguard the community from risks associated with accelerating climate change.

Project History: Since 1992, Point Blue's Students and Teachers Restoring A Watershed program (STRAW) has engaged students and teachers in professional restoration work. With long-standing partnerships with Petaluma, Rohnert Park and Santa Rosa schools, their record of accomplishment ensures that work is trusted to be of high caliber. The project builds on multiple previous Coastal Conservancy projects in the North Bay, through direct funding to STRAW and in partnership with agencies such as the Marin and Sonoma Resource Conservation Districts.

Point Blue has current and previous grants and partnerships with the Conservancy. One of the more recent projects the Conservancy funded was to provide Point Blue with \$150,000 grant as part of a larger grant for the Bay Area Ecosystems Climate Change Consortium, for climate-change research, specifically to coordinate science review, technical support, and mapping efforts. The Conservancy also provided \$100,000 in funding for the San Francisco Bay Wetland Mapping and Ecological Modeling project using and developing maps of the San Francisco Bay wetland habitats to model ecological changes in the habitats based on sea-level rise and salinity changes. Also funded by the Coastal Conservancy was a revegetation project to install native plants at the former Hamilton military airfield using Point Blue's STRAW program to facilitate a public education and outreach segment. STRAW has also received funding from Conservancy as part of "hands-on" restoration-focused environmental education grant rounds.

PROJECT FINANCING

Coastal Conservancy	\$429,471
Project Total	\$429,471

The anticipated source of Conservancy funds is an appropriation from the “Water Quality, Supply, and Infrastructure Improvement Act of 2014” (Proposition 1, Division 26.7 of the Water Code, § 79700 et seq.) for \$429,471 for the 2017/2018 fiscal year. Funds appropriated to the Conservancy derive from Chapter 6 (commencing with Section 79730) and may be used “for multi-benefit water quality, water supply, and watershed protection and restoration projects for the watersheds of the state” (Section 79731). Section 79732(a) identifies the specific purposes of Chapter 6, of which the following pertain to this project: subsections (a)(2): implement watershed adaptation projects in order to reduce the impacts of climate change on communities and ecosystems; (a)(9): protect and restore urban watershed health to improve watershed storage capacity, protection of life and property, stormwater resource management and greenhouse gas reduction and; (a)(11): reduce pollution or contamination of rivers and streams, and protect or restore natural system functions that contribute to water supply, water quality, or flood management.

As required by Proposition 1, the proposed project provides multiple benefits and will help achieve the above-referenced Chapter 6 purposes. By planting on project sites along riparian corridors with climate resilient plants and trees, and with participation from the nature-based STRAW program, the project areas will increase groundwater and retention, reduce sedimentation, improve water quality, and promote regional stewardship of these natural resources.

The proposed project was selected through the 7th-round competitive grant process under the Conservancy’s *Proposition 1 Grant Program Guidelines* adopted in June 2015 (“Prop 1 Guidelines”). The proposed project meets each of the evaluation criteria in the Proposition 1 Guidelines as described in further detail in this “Project Financing” section, the “Project Summary” section and in the “Consistency with Conservancy’s Project Selection Criteria & Guidelines” section of this report.

The project has a 50% match to Conservancy funding. Point Blue will provide in-kind services where the value is estimated to be \$235,649 for staff time, volunteer time, and donated materials.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, to address goals of the San Francisco Bay Area Conservancy Program. Under Section 31162 (b) the Conservancy may award grants to “...restore, and enhance natural habitats... of regional importance.” Consistent with this section, the project will restore segments of 0.83 linear miles of riparian and wildlife habitat in two regional parks. All four project sites will utilize climate-resilient plant palettes, increase tree-density and canopy cover.

Under Section 31162 (d) the Conservancy may award grants to “promote, assist, and enhance projects that provide open space and natural areas...to urban populations for recreational and educational purposes”. This project will enhance 0.42 linear miles of public green space for local residents and visitors in four sites that are in the proximity of disadvantaged communities of Petaluma, Rohnert Park, and Santa Rosa.

Consistent with Section 31163 (c), the proposed project meets the following criteria: 1) is supported by a number of regional plans such as the Bay Area Integrated Watershed Management Plan, Draft Petaluma Watershed Enhancement Plan, and the Russian River Integrated Coastal Watershed Management Plan; 2) involves multiple agencies since the four project sites are located in multiple Sonoma County cities on property owned by a variety of entities and involves students from multiple schools; 3) is ready to commence upon Conservancy board approval; 4) the project would be postponed, possibly indefinitely, without Conservancy funding; 5) the project includes matching funds to support project restoration and implementation (\$235,649).

Finally, under Section 31165 the Conservancy may award grants “...for activities that are compatible with the... restoration of watershed resources, or that facilitate environmental education related to these resources.” The project grantee will utilize its environmental education program “Students and Teachers Restoring a Watershed (STRAW) program involving local youth in watershed education, restoration, and stewardship activities.

**CONSISTENCY WITH CONSERVANCY’S 2013 STRATEGIC PLAN
GOAL(S) & OBJECTIVE(S), AS REVISED JUNE 25, 2015:**

Consistent with **Goal 7, Objective G** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will implement tree and vegetation plantings along 0.83 linear miles of riparian habitat using climate-resilient planting palettes.

Consistent with **Goal 11, Objective F** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will enhance 4.94 acres of riparian habitat benefiting wildlife through increased connectivity to refugia.

Consistent with **Goal 12, Objective M** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will fund an environmental education project focusing on climate-resilient restoration and watershed stewardship for local urban youth (STRAW).

Consistent with **Goal 13, Objective B** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will implement tree and vegetation plantings on one of the project sites, which is a working ranch (Glenn Ranch).

**CONSISTENCY WITH CONSERVANCY’S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy’s Project Selection Criteria and Guidelines, last updated on October 2, 2014, in the following respects:

Required Criteria

1. **Promotion of the Conservancy’s statutory programs and purposes:** See the “Consistency with Conservancy’s Enabling Legislation” section above.
2. **Consistency with purposes of the funding source:** See the “Project Financing” section above.
3. **Promotion and implementation of state plans and policies:**

California Water Action Plan: 1. Make conservation a California way of life through a) ...expanding agricultural and urban water conservation and efficiency... (b) increasing water sector energy efficiency and greenhouse gas reduction. The project will use a climate-resilient plants and trees which will conserve water, improve efficiency, and sequester carbon. 2. Increase regional self-reliance and integrated water management across all levels of government by assisting disadvantaged communities. The project sites are located near and serve disadvantaged communities and will involve the local youth in restoration activities. 4. Protect and restore important ecosystems by: b) restoring coastal riparian watersheds by planting native climate-resilient trees and plants.

California Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan. The project will improve habitat connectivity and protect climate refugia, promote nature-based solutions for adapting to climate risk, and promote public education and outreach on climate change impacts to biodiversity. The project will facilitate an environmental-education and -stewardship program which involves local youth in restoring and enhancing 0.84 linear miles of riparian watershed.

California Wildlife Action Plan: The project will create and enhance 4.94 acres of riparian habitat in the San Francisco Bay Area by planting watershed appropriate native plants, contributing to: Goal 1) Abundance and Richness (Objective 1.1-1.4): Maintain and increase ecosystem and native species distributions, while enhancing species abundance and richness through increased refugia; and Goal 2) Enhance Ecosystem Conditions: ...improve ecological conditions for sustaining ecosystems in California (Objectives 2.1-2.4) through planting drought resilient deep-rooted plant palettes and native trees along riparian corridors.

4. **Support of the public:** The project has broad regional support and is supported by City of Petaluma, Sonoma County Water Agency, Sonoma County Parks and Open Space District, Friends of Petaluma River, and Federated Indians of the Graton Rancheria and the student, teachers, and families participating in the STRAW program. See Exhibit 4 for project letters.
5. **Location:** The project sites are located in Sonoma County, one of nine Bay Area counties, and thus within the jurisdiction of the Conservancy’s San Francisco Bay Area Program. The project serves to bring urban SF Bay Area youth, many from disadvantaged communities, to a natural setting to participate in a climate-smart restoration project.
6. **Need:** Without the participation of the Coastal Conservancy, the restoration of 0.83 linear miles of critically needed riparian systems in Sonoma County will not be implemented, and approximately 1,380 students, family members, and teachers that will not be able to participate in an outdoor, environmental education-stewardship project.
7. **Greater-than-local interest:** This project serves four sites, two of which are located in Regional Parks, visited by local and regional residents as well as non-local visitors.

8. **Sea level rise vulnerability:** The proposed project sites are situated along Sonoma County rivers and will not be affected by sea level rise at both 16 and 55 inches of sea-level rise.

Additional Criteria

10. **Resolution of more than one issue:** The project addresses two issues: facilitating a natural climate-resilient restoration project involving urban conservation and stewardship for underserved Sonoma county residents.
14. **Readiness:** The proposed project is ready to commence upon Conservancy Board approval. Point Blue has worked with many of the schools in the project vicinity for the past 5-25 years and implemented the STRAW program for various projects in the North Bay.
15. **Realization of prior Conservancy goals:** See “Project History” section above.
17. **Cooperation:** See “Support of the Public” above.
18. **Vulnerability from climate change impacts other than sea level rise:** The planting of a climate-resilient plant palette will reduce surface water evaporation and increase groundwater infiltration, while decreasing soil erosion, supporting improved water quality, and watershed systems. The project is specifically designed to alleviate impacts of climate change.
19. **Minimization of greenhouse gas emissions:** The proposed project will restore 0.83 linear miles of habitat to sequester approximately 6,525 tons of atmospheric carbon over 45 years. Point Blue does not plan to seek carbon credits for this project. In addition, the restoration activities are primarily human-powered. Volunteer participants will be provided with hand tools and shovels to plant and clear weeds. Vehicle miles traveled will be minimal, since volunteers and contractors will be recruited from the local community.

COMPLIANCE WITH CEQA:

The proposed project is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code of Regulations Section 15333 Small Habitat Restoration Projects, which exempts habitat restoration projects that: (a) do not exceed five acres in size, (b) do not create a significant adverse impact on endangered, rare or threatened species or their habitat pursuant to section 15065, (c) are not located where there are hazardous materials that may be disturbed or removed, and (d) will not result in impacts that are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The proposed riparian restoration project does not exceed five acres in size and promotes the restoration and enhancement of riparian habitat adjacent to a creek, which will benefit both native plants as well as wildlife along the creek corridor which connects to the San Francisco Bay estuary. The proposed project meets each of the criteria of Section 15333. Accordingly, the proposed project is exempt from CEQA.

Following project approval, staff will file a Notice of Exemption.