

COASTAL CONSERVANCY

Staff Recommendation
May 24, 2018

NAPA RIVER OAKVILLE TO OAK KNOLL RESTORATION PROJECT: GROUP B

Project No.16-053-02
Project Manager: Jessica Davenport

RECOMMENDED ACTION: Authorization to disburse up to \$450,000 to the County of Napa to restore another reach of the Napa River to enhance long-term river and floodplain function, improve habitat and water quality, and reduce property damage through bank stabilization.

LOCATION: Between the Oakville Cross Road Bridge and the Oak Knoll Avenue Bridge, County of Napa

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location and Site Map](#)
- Exhibit 2: [Project Design](#)
- Exhibit 3: [Project Photographs](#)
- Exhibit 4: [February 2, 2017 Staff Recommendation](#)
- Exhibit 5: [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 disbursement of an amount not to exceed four hundred fifty thousand dollars (\$450,000) to the County of Napa to restore Group B (Sites 15-20) of the Oakville to Oak Knoll Restoration Project located along the Napa River, subject to the following conditions:

1. No Conservancy funds shall be disbursed for the project until the Executive Officer of the Conservancy has reviewed and approved in writing:
 - a. A final work plan, including a budget and schedule.
 - b. The name and qualifications of any contractors that the County of Napa intends to retain to carry out the project.
- a. A signage plan that acknowledges Conservancy funding.

- b. A written agreement between the County of Napa and the landowners allowing the project to be implemented, maintained, and monitored.
2. The County of Napa shall provide evidence that all necessary permits and approvals have been obtained.”

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:

2. The proposed authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, regarding the San Francisco Bay Area Conservancy Program.
3. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.”

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of up to four hundred and fifty thousand dollars (\$450,000) to the County of Napa to restore Group B within the Oakville to Oak Knoll (OVOK) Restoration Project, located along a 9-mile reach of the Napa River between the Oakville Cross Road Bridge and the Oak Knoll Avenue Bridge.

The overall objective of the OVOK Project is to restore habitat and water quality, including spawning and rearing habitat for Chinook salmon and steelhead. The collaborative effort among private landowners, the County of Napa, Napa County Flood Control and Water Conservation District, Napa County Resource Conservation District, and others is designed to meet multiple objectives. In addition to restoring important floodplain function to benefit steelhead and salmon, the project will stabilize the river’s banks, thus preventing additional erosion and associated water quality and property damage.

The 9-mile OVOK Project Reach has been divided into four Construction Groups A-D encompassing 23 distinct restoration sites (Exhibit 1). Implementing construction of the entire OVOK Project would restore up to 83 acres of transitional riparian and aquatic habitat and reduce fine sediment loading from channel erosion. Construction of Group A (Sites 21-23) was completed in 2017. Construction of Group C (Sites 12-14) is underway and was funded with \$1 million from the Conservancy in 2017. Group C is expected to be complete in 2018. Group D is currently in the design stage. This project would support implementation of Group B (Sites 15 and 17-20).

The restoration work is being carried out to reverse channel downcutting, bank erosion, and habitat degradation and to improve geomorphic processes. Implementation of Group B will create floodplain features and improve channel habitat to benefit anadromous salmonids and other native aquatic species and will also serve to expand the area and duration that off-channel habitats are available to aquatic species.

Approximately 20 instream aquatic large woody debris habitat structures will be installed along the channel margins, on floodplain benches, and along channel banks (Exhibit 2). The large

woody debris complexes create flow constrictions that scour and maintain pool features. As flows expand downstream of the large wood structures, channel velocity will decrease and deposit coarse sediment to form riffles. This undulating pattern of high and low velocity areas will create and maintain riffle-pool morphology and overall channel complexity to benefit adult and juvenile salmonids.

Areas near the low-flow channel will be graded to enable floodplain inundation to occur on average every other year for a duration of 14 days. These floodplain features will temporarily store water during winter flows and provide winter rearing habitat for salmonids.

Nature-based streambank stabilization elements will be installed along 1,800 linear feet. These stabilization measures will be installed along actively eroding streambanks and will be integrated with the floodplain restoration elements. They will consist of willow brush mattresses, vegetated soil lifts, erosion control blankets with native seeding, and willow pole planting.

Approximately four acres of vineyard will be removed and combined with six acres of additional land to create a riparian corridor totaling ten acres. Native riparian vegetation will be planted to establish a complex canopy that shades the channel, keeping the water cool, and reduces the likelihood of streambank failure. Reference sites within the project reach will be used to identify appropriate plant species for revegetation of the riparian corridor. Planting plans include a high density of pioneer species designed to quickly establish canopy cover. When fully established, the trees and shrubs will reduce flow velocities, create resting areas for native fish during high flow events, increase bank stability, and enhance habitat for other species that utilize the riparian corridor.

Habitat for terrestrial and aquatic biota will be enhanced through managing non-native invasive species and revegetating with native species. The removal of non-native invasive species such as *Arundo donax*, *Eucalyptus* spp., *Ailanthus altissima* (tree of heaven), and *Rubus armeniacus* (Himalayan blackberry) will be managed through the project reach during initial implementation and through the long-term maintenance program which will ensure establishment of desired native plant communities.

The County is qualified to undertake this project because the staff has implemented projects to protect, enhance, or restore the Napa River, its floodplain, and watershed since the 1990s. The County has extensive experience working collaboratively with landowners, stakeholders, project partners and consultants to successfully complete similar projects, such as the Rutherford Restoration Project, which was previously funded by the Conservancy and was completed in 2015. See “Project History” section below for details.

Site Description: The project is located in the mid-reaches of the Napa River, which is one of the few large watersheds in the San Francisco Bay Area which has not been significantly urbanized and supports a wide range of wildlife and habitats.

Prior to agriculture and development in the Napa Valley, the Napa River, its floodplain, and riparian corridor supported extensive upland forest and wetland habitats. Prior to the significant changes in land use in the valley, the Napa River was a broad, shallow river system with multiple channels and a complex network of riparian, floodplain, and upland habitats. The Napa River and its tributaries are now generally confined to single channels that are typically deeply incised, straightened, and physically separated. The Napa River is now 12-20 feet deeper and much narrower than its pre-development condition. Much of the river channel is trench-like with 20- to

25-foot vertical banks and limited connectivity to its floodplain (Exhibit 3). Many of the basic features needed to support salmonids—pools, riffles, gravel bars, off-channel pools, floodplains, and complex channel habitats—are missing from many reaches of the Napa River and its tributaries although recent restoration efforts are helping to bring back these features.

This channel shape results in high velocity flows and bank erosion which increases fine sediment levels in the river and tributaries. This process has degraded water quality and instream habitat, including salmonid spawning areas. Long, homogeneous sections dominate many reaches; and some areas have no gravel, which is needed for spawning. In addition, many sections of the channel do not have enough woody debris or sufficiently complex tree cover. The existing habitats in the unimproved sections of the river have low value to salmonids. Coho salmon were extirpated from the Napa River watershed in the 1960s. California's salmon and steelhead populations have experienced marked declines leading to listing of almost all of California's anadromous salmonids under the California Endangered Species Act and Federal Endangered Species Act. Limiting factors and stressors within the Napa River Watershed include excessive streambank erosion, degraded water quality from fine sediment; incision in the main stem river and tributary creeks; reduced instream habitat complexity; degraded spawning gravels; altered stream flows; fish migration barriers; and increased water temperature.

Channel downcutting through the reach is contributing to ongoing bank erosion that has disconnected the mainstem from historic floodplain and degraded instream aquatic habitat. The riparian corridor is degraded or non-existent in areas where streambank erosion is occurring. The unstable stream banks are prone to collapse, which causes property damage to the landowners.

Up and downstream of the streambank failures there is a moderately intact riparian forest composed of valley oak trees, buckeyes, willows, and alders, with understory being dominated by snowberry, elderberry, California rose, poison oak, and Santa Barbara sedge. Non-native plant species, such as Himalayan blackberry, vinca, arundo, black locust, tree of heaven, pokeweed and eucalyptus, are intermixed throughout the riparian corridor.

The OVOK Project Restoration Group B (Sites 15-20) encompasses 10 acres spanning 2,500 linear feet. All the sites are located on private property and are on agricultural parcels. There are two primary landowners Tom Gamble (Sites 17 and 20), and State Farm LLC. (Sites 15, 18 and 19). The State Farm parcel is leased by Treasury Wine Estates. The landowner of Site 16 will not be participating in the project, but the other entities confirmed their interest in proceeding in January 2018. The County recently completed additional archeological surveys at the Group B sites and identified some areas on Site 15 and 20 which will require additional evaluation. These evaluations may influence the orientation of the grading boundaries and restoration actions at these sites.

Project History: The Conservancy has had a long history of involvement in the restoration of the Napa River. In 1996, the Conservancy funded technical studies for the lower reach (between the City of Napa and the river mouth), which resulted in development of a multi-objective flood management plan that follows the “living river” principle. This plan replaced a US Army Corps of Engineers trapezoidal concrete channel design that regulatory agency staff and others contended would have no benefit to natural resources, and little benefit to the community other than flood control.

The Conservancy has since funded two property acquisitions to implement flood management and habitat improvements recommended in the plan, as well as several watershed assessments within the Napa River watershed that have led to projects on private lands to reduce erosion and sedimentation and improve instream and adjacent habitat. The Conservancy has also recently funded a study of high-priority fish passage barriers in the Napa River basin and a historical ecology assessment of the Napa Valley. Conservancy-funded restoration has included the Zinfandel Bridge Fish Passage Project, the Rutherford Restoration Project and the Greenwood Avenue Culvert and Fish Passage Project. Additionally, since the 1990s, the Conservancy has been involved with the acquisition and large-scale restoration of the Napa-Sonoma marshes at the mouth of the river.

The OVOK Project is located immediately downstream from the Rutherford Project and provides continuity with the upstream restoration efforts. In 2007, the California Land Stewardship Institute (CLSI) received funding from the California State Water Resources Control Board and the County of Napa (Measure A) to prepare an enhancement plan for the Oakville to Oak Knoll reach of the Napa River. The Napa River Restoration: Oakville to Oak Knoll Final Concept Plan (Concept Plan) was developed by CLSI in 2011. In 2012 the County of Napa hired a team led by ESA PWA to advance the conceptual design to final design. The design team considered the result of the Concept Plan’s project ranking and alternatives analysis and developed a Basis of Design (BOD) document to guide final design work for 23 restoration sites. The BOD provides the rationale, assumptions, and performance criteria for the OVOK Project restoration elements (channel widening, floodplain restoration, nature-based streambank stabilization, restoration, in-stream habitat features, gravel augmentation, etc.). It provides a series of hypotheses for how the design elements will function and meet the project goals, and a series of tests to measure whether this has occurred. In 2017, the Conservancy provided a grant of \$1,000,000 to support construction of Site 13 of the OVOK Project.

PROJECT FINANCING:

Coastal Conservancy	\$450,000
County of Napa Measure A Watershed Improvement Tax Fund	\$150,000
Wildlife Conservation Board	\$1,250,000
U.S. Environmental Protection Agency	\$200,000
Project Total	\$2,050,000

The expected source of Conservancy funds for this project is the fiscal year 2018/19 appropriation to the Conservancy from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code Section 79700 et seq.). 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 identifies specific purposes of Chapter 6, which include: protect and restore aquatic, wetland, and migratory bird ecosystems, including fish and wildlife corridors; protect and restore coastal watersheds, including, but not limited to bays, marine estuaries, and nearshore ecosystems; and assist in the recovery of endangered, threatened or migratory species by improving watershed health, instream flows, fish passage and coastal or inland wetland restoration.

The proposed project helps achieve the above-identified Chapter 6 purposes and provides multiple benefits. By restoring floodplain and channel form and function, the project will restore historic access to spawning and rearing habitat and improve water quality by reducing erosion.

The proposed project was selected through a competitive grant process under the Conservancy's Proposition 1 Grant Program Guidelines adopted in June 2015 ("Prop 1 Guidelines"). (See Section 79706(a)). The proposed project meets each of the evaluation criteria in the Prop 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 County of Napa and other funders are covering the cost of design and permitting-related tasks for Group B. The County of Napa is providing matching funds for implementation through its Measure A Watershed Improvement Tax Fund. OVOK landowners are voluntarily dedicating agricultural land for conversion to riparian habitat to allow the project to be constructed and are providing funds to support the long-term monitoring and maintenance of the project through the OVOK Community Facilities District.

The Wildlife Conservation Board is providing \$1,250,000 from its Habitat Enhancement and Restoration Program and the U.S. Environmental Protection Agency is providing \$200,000 from the San Francisco Bay Water Quality Improvement Fund.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, which authorizes the Conservancy to award grants in the nine-county San Francisco Bay Area to help achieve stated goals.

Consistent with Section 31162(b), the proposed project will help "to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance." The County of Napa intends to restore habitat and beneficial uses, including spawning and rearing habitat for Chinook salmon and steelhead trout.

Consistent with Section 31163(c), the project is 1) supported by adopted regional plans, including the Regional Water Quality Control Board's Napa River Sediment TMDL and the *San Francisco Estuary Watershed Evaluation: Identifying Promising Locations for Steelhead Restoration in Tributaries of the San Francisco Estuary* (CEMAR, 2007); 2) is regionally significant in terms of the riparian and riverine habitat restoration potential; 3) can be implemented in a timely way, as the funding for the restoration has been secured; 4) provides an opportunity to restore a significant property that could be lost if grant funding is not used; and 5) includes local matching funds from County of Napa's Measure A sales tax.

CONSISTENCY WITH CONSERVANCY'S 2018-2022 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 12, Objective 12F** of the Conservancy's 2018-2022 Strategic Plan, the project will enhance riparian and riverine habitat and other watershed functions and processes for the benefit of wildlife and water quality.

**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 4, 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:** The proposed acquisition project serves to promote and implement several state plans and policies, including:
 - *Safeguarding California: Reducing Climate Risk Plan* (California Natural Resources Agency, 2014). The OVOK Project is consistent with *Safeguarding California's* recommendation to improve habitat connectivity and protect climate refugia.
 - *California Water Action Plan* (California Natural Resources Agency, California Department of Food and Agriculture, and California Environmental Protection Agency, 2016). The OVOK Project is consistent with the action to protect and restore important ecosystems, including efforts to implement large-scale habitat projects along the California coast in strategic coastal estuaries to restore ecological health and natural system connectivity.
 - *Steelhead Restoration and Management Plan for California* (California Department of Fish and Game, 1996). The OVOK Project is consistent with strategies in the plan, including restoring degraded habitat.
4. **Support of the public:** Implementation of OVOK Project Group B is a collaborative effort between Napa County, Napa County Flood Control and Water Conservation District, Napa County Resource Conservation District, ESA PWA and Group B landowners, including State Farm LLC, Treasury Wine Estates, and Gamble Family. Collaborating public agencies included in the design review and development process are the Regional Water Quality Control Board, California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and U.S. Environmental Protection Agency. Elected officials supporting the project include Napa County Supervisor Diane Dillion, California State Senator Bill Dodd, and Congressman Mike Thompson (Exhibit 5).
5. **Location:** The project is in the County of Napa, within the jurisdiction of the nine-county San Francisco Bay Area Conservancy Program.
6. **Need:** Conservancy funds are needed to supplement dwindling local funds generated by the Measure A sales tax, which will expire in 2018.
7. **Greater-than-local interest:** The Napa River has been identified by the Center for Ecosystem Management and Restoration as one of eight "anchor watersheds" with the highest restoration potential for steelhead trout in the San Francisco Bay Area.

8. **Sea level rise vulnerability:** This project is not vulnerable to sea level rise because it is located far above the range of current and projected future tidal influence.

Additional Criteria

10. **Resolution of more than one issue:** In addition to restoring important floodplain function to benefit steelhead and salmon, the project will stabilize the river banks, thus preventing additional erosion and associated water quality and property damage.
11. **Leverage:** See the “Project Financing” section above.
13. **Innovation:** The project utilizes a range of innovative technical analyses and the latest developments in geomorphic science to reinstate physical and hydraulic processes that are linked to aquatic habitat complexity.
14. **Readiness:** The grantee has completed CEQA documentation, the project is at 65% design, local, state and federal funds are available to supplement Conservancy funds, and the grantee expects to have all necessary permits in time to start construction in 2019.
15. **Realization of prior Conservancy goals:** See “Project History” above.
16. **Return to Conservancy:** See the “Project Financing” section above.
17. **Cooperation:** This is a collaborative effort among private landowners, the County of Napa, Napa County Flood Control and Water Conservation District, Napa County Resource Conservation District, and others. As described above, OVOK landowners are providing funds to support the long-term monitoring and maintenance of the project through the OVOK Community Facilities District.
18. **Vulnerability from climate change impacts other than sea level rise:** The implementation of OVOK Group B will expand the river’s riparian corridor and enhance native species diversity (grasses, sedges, shrubs and trees), creating more resilience to a range of future hydrologic and temperature conditions for both riparian and aquatic species.
19. **Minimization of greenhouse gas emissions:** Through the installation of native riparian vegetation, the project will have the potential to sequester carbon at a higher rate than current site conditions allow. Mitigation Measure AQ-1, developed to reduce NOx emissions, would also reduce the project’s carbon emissions. This measure requires that equipment idling times shall be minimized and construction equipment shall be maintained and properly tuned in accordance with manufacturer’s specifications.

COMPLIANCE WITH CEQA:

Pursuant to the California Environmental Quality Act (CEQA), the County of Napa, as lead agency, prepared an IS/MND for the “*Napa River Restoration: Oakville to Oak Knoll Project*” (SCH # 2014012057). On April 16, 2015, the County of Napa adopted the IS/MND.

The IS/MND identified potentially significant impacts of the project in the areas of aesthetics, air quality, biological resources, cultural resources, transportation and traffic, and cumulative impacts. The IS/MND also identified mitigation measures that would avoid impacts, or reduce them below the level of significance, such that the project would not result in significant adverse impacts on the environment.

At its February 2, 2017 meeting, the Conservancy made findings pursuant to CEQA regarding the entire OVOK Project (Exhibit 4). The Group B project now proposed for funding remains consistent with the 2015 IS/MND and the 2017 Conservancy CEQA findings. No further analysis or findings are required under CEQA.