

COASTAL CONSERVANCY

Staff Recommendation
January 29, 2015

GREENWOOD AVENUE FISH PASSAGE PROJECT

Project No. 14-047-01
Project Manager: Betsy Wilson

RECOMMENDED ACTION: Authorization to disburse up to \$400,000 to Napa County to remove a fish passage barrier located at Greenwood Avenue at its intersection with the Napa River, north of the city of Calistoga, Napa County.

LOCATION: Greenwood Avenue at its intersection with the Napa River, north of the city of Calistoga, Napa County (Exhibit 1)

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

- Exhibit 1: [Project Location and Site Maps](#)
 - Exhibit 2: [Initial Study/Mitigated Negative Declaration](#)
 - Exhibit 3: [Project Design](#)
 - Exhibit 4: [Project Photographs](#)
 - Exhibit 5: [Project Letters](#)
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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 thousand dollars (\$400,000) to Napa County (“County”) to remove a fish passage barrier on the mainstem of Napa River, located at Greenwood Avenue north of the city of Calistoga, Napa County. This authorization is subject to the following conditions:

1. The project shall not commence and no Conservancy funds shall be disbursed for the project until the Executive Officer of the Conservancy has reviewed and approved in writing:
 - a. A project work program, budget, and timeline.
 - b. The name and qualifications of any contractors that the County intends to retain to carry out the project.
 - c. A signage plan that acknowledges Conservancy funding.

- d. Documentation that the County has obtained all permits and approvals required for the project under federal, state, and local law.
2. The County shall implement and monitor the mitigation measures provided for in the Mitigated Negative Declaration and Mitigation Monitoring Program adopted by the County under the California Environmental Quality Act (“CEQA”) and attached to the accompanying staff recommendation as Exhibit 2.”

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 San Francisco Bay Area Conservancy Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Conservancy has independently reviewed the Mitigated Negative Declaration and Mitigation Monitoring Program for the Greenwood Avenue Culvert Replacement Project adopted by the County of Napa Department of Public Works on November 19, 2014 (Exhibit 2) pursuant to CEQA, and finds that that the project as conditioned avoids, reduces, or mitigates the possible significant environmental effects to a level of insignificance and there is no substantial evidence that the project, as mitigated, will have a significant effect on the environment, as defined in 14 California Code of Regulations Section 15382.”

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize a grant of up to four hundred thousand dollars (\$400,000) to Napa County to remove a fish passage barrier on the mainstem of the Napa River, located at the river’s intersection with Greenwood Avenue, 1,214 feet west of Myrtledale Road north of the City of Calistoga (Exhibit 1). The existing road crossing/culvert at the Greenwood Avenue site is a complete fish passage barrier to steelhead and Chinook salmon during low and medium flow conditions and blocks access to approximately 3.0 miles of suitable anadromous fish habitat within the Napa River watershed. A 2007 regional study conducted by the Center for Ecosystem Management and Restoration and funded by the Conservancy identified the Napa River watershed as an "anchor watershed" in the San Francisco Bay Area for steelhead trout, making it a priority for conservation efforts. The project will have immediate benefits for Chinook salmon and steelhead trout, two special status species, and will also benefit approximately 14 other native freshwater fish species.

The proposed project will involve removing a 60-foot-long, 15-foot-diameter circular corrugated steel culvert and replacing it with a 70-foot-long, 22-foot-wide bridge. The project will also construct a step pool stream channel to remediate a severe fish passage barrier and improve geomorphic conditions on the mainstem of the Napa River. Features including step pools, native vegetation, and woody debris structures are incorporated into the design to provide instream aquatic habitat. Replacement of the culvert will also help remediate an area above the road

crossing/culvert that is subject to periodic flooding when water backs up and spills over the roadway during high flow events resulting in localized flooding and a sharp drop in the roadway from the southwest side of Greenwood Avenue road to the channel bottom, posing a potential hazard to vehicles and pedestrians.

Detailed geomorphic, hydrologic, and ecological assessments were conducted during the planning and design phase of this project with multiple regulatory agencies and partners. The group reviewed five design alternatives developed by Questa Engineering Corporation to achieve fish passage at the site and offset any impacts to California freshwater shrimp habitat. From this process, the preferred design plan/alternative (Exhibit 3) was selected based on technical merit and cost/complexity of implementation and permitting. The final construction design, permits and final construction documents will be completed in March 2015 and Napa County intends to replace the culvert in the summer of 2015.

Project monitoring will consist of pre- and post-project topographic channel surveys annotated with habitat measurements, a detailed review of as-built drawings and field inspections to ensure all construction specifications were met, and pre- and post-project fisheries monitoring. Following the winter flow season of hydrologic year 2015-2016, the project length will be field inspected for performance of fish passage, bank stability, and channel scour.

Napa County and its Department of Public Works provides for the construction, maintenance, and improvement of facilities and infrastructure within the unincorporated area of Napa County. With Conservancy funding, Napa County recently completed the repair of the fish passage at Zinfandel Lane at the upstream limit of the Rutherford Reach of the Napa River and the restoration of Reach 8 of Rutherford Reach. Napa County has also received grants and successfully managed grant projects from other state and federal agencies for natural resource related projects.

Site Description: The existing culvert at Greenwood Avenue is a deteriorating 15-foot diameter circular culvert constructed in the 1960s that is owned and maintained by Napa County Department of Public Works. Since construction, the channel bed downstream of the crossing has dramatically incised and the reach upstream the crossing has aggraded. The result is a 4-5 foot lowering of the historic channel profile at the downstream outlet of the culvert. Additionally, a large scour pool has formed immediately downstream of the culvert, with about 8 to 10 feet of total scour since the culvert was installed. See Exhibit 4 for photographs of the project area.

The site is on the mainstem on the Napa River and east and west river banks are relatively stable and have good holding habitat for fish and riparian canopy cover along the edges. The banks of the river over the first 500 feet of channel upstream of the culvert are relatively stable and contain significant pool habitat that has been documented to provide suitable habitat for the California freshwater shrimp

Currently the culvert is a complete migration barrier to steelhead and Chinook salmon during low to medium stream flow, which hinders fall emigration and spring out migration. During summer base flow conditions juvenile foraging and dispersal is also precluded for all native fish in the reach. During high flows the structure is also a velocity barrier due to the concentrated flow being forced through the undersized culvert. The proposed replacement of the culvert will provide immediate access to approximately 3 miles of stream habitat within the Napa River drainage.

Project History: This project is approximately 12 miles upstream of both the Zinfandel Lane Fish Passage Improvement Project and the Rutherford Reach Restoration Project (Rutherford project) which both received financial support for construction from the Conservancy. The Rutherford project spans 4.5 miles of the main stem Napa River immediately south of Zinfandel Lane Bridge. The Rutherford project is a collaborative effort among private landowners, Napa County, Napa County Flood Control and Water Conservation District, Napa County Resource Conservation District (NCRCD) and others to restore spawning and rearing habitat, reduce bank erosion, reduce sheer stress on the channel bottom, improve riparian habitat and cover, and provide flood management services. The Zinfandel Lane Fish Passage Project repaired a fish passage barrier at the base of the bridge and restored access to approximately 50% of suitable anadromous fisheries stream habitat within the Napa River watershed.

The proposed project is also related to a project of the NCRCD, funded by the Conservancy in 2008, to assess priority fish barrier sites in the Napa River basin and develop retrofit or removal plans. The culvert was not identified as a barrier to fish migration in this report, but only because the NCRCD was not aware of the barrier. When the California Department of Fish and Wildlife (CDFW) and Napa County staff brought the barrier to the NCRCD's attention, NCRCD staff assessed and ranked the culvert/road crossing as a "high priority" barrier. The CDFW has also requested Napa County consider remediation of the fish barrier as a high priority project.

PROJECT FINANCING

Coastal Conservancy	\$400,000
Napa County	550,000
U.S. Environmental Protection Agency	200,000
Project Total	\$1,150,000

That anticipated source of Conservancy funds is the "Water Security, Clean Drinking Water, Coastal and Beach Protection Fund of 2002" (Proposition 50), which allocates funding to the Conservancy for "grants for the purpose of protecting coastal watersheds...." Proposition 50 further allocates a portion of Conservancy funds "for the San Francisco Bay Conservancy Program for coastal watershed protection pursuant to Chapter 4.5 (commencing Section 31160) of Division 21 of the Public Resources Code." The consistency of the proposed project with PRC Chapter 4.5 is discussed below in "Consistency with the Conservancy's Enabling Legislation."

"Watershed protection activities" using Proposition 50 funds must be "consistent with the applicable adopted local watershed management plan and the applicable regional water quality control plan adopted by the regional water quality control board" (Water Code Section 79507.) The project is consistent with the Napa County General Plan (Conservation Element, Policy 11) which calls for the County to maintain and improve fisheries habitat through a variety of appropriate measures including the restoration sufficient flows and channel characteristics necessary for fish passage consistent with state and federal guidelines. The project is also consistent with the Napa River Sediment Reduction and Habitat Enhancement Plans included as Chapter 7.8.4 of the San Francisco Bay Basin (Region 2) Water Quality Control Plan. In particular, the project will reduce the number and significance of human-made structures in channels that block or impede fish passage.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

This project is undertaken pursuant to Chapter 4.5 of the Conservancy's enabling legislation, Public Resource Code Sections 31160-31165, to address resource goals in the San Francisco Bay Area.

Section 31162 of the Public Resources Code authorizes the Conservancy to undertake projects and award grants in the nine-county San Francisco Bay Area, including Napa County. All of the proposed project area is within Napa County.

Under Section 31162(b), the Conservancy may act to protect, restore, and enhance natural habitats and watersheds of regional significance. The proposed project would assist in the enhancement of some of the highest quality natural habitat of the Chinook salmon and steelhead trout in the Bay Area.

The proposed project satisfies all of the criteria for determining project priority under 31163(c), since the project: 1) is supported by adopted regional plans including the Napa River Sediment Total Maximum Daily Load and Habitat Enhancement Plan (Regional Water Quality Control Board, 2009; State Water Resources Control Board, 2010), the Napa County General Plan - Conservation Element (Napa County, 2008), the Steelhead Restoration and Management Plan for California (California Department of Fish and Wildlife, 1996, updates to Steelhead Tasks in 2013), and the Central California Coast Steelhead Recovery Plan (National Marine Fisheries Service, Draft Document); 2) serves a regional constituency by creating access to habitat for Chinook salmon and steelhead trout, two special status species; 3) can be implemented in a timely manner; 4) provides benefits to anadromous fish that would be lost if the project is not quickly implemented; and 5) will include significant matching funds from Napa County and the U.S. Environmental Protection Agency (EPA).

CONSISTENCY WITH CONSERVANCY'S 2013 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 11, Objective F** of the Conservancy's 2013-2018 Strategic Plan, the proposed project will eliminate fish passage barriers and will re-establish salmonid access to approximately 3 miles of spawning and rearing habitat along the mainstem of the Napa River.

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:** By removing a barrier to fish migration, the project serves to promote and implement several statewide plans and policies including:
 - *California Water Action Plan* (California Natural Resources Agency, California Environmental Protection Agency, and California Department of Food and Agriculture, 2014). Goal #4, “Protect and Restore Important Ecosystems”, identifies the elimination of barriers to fish migration as a priority action. The goal references coordinated efforts with CDFW to complete culvert and bridge improvement to provide provide anadromous fish species access to historic spawning and rearing habitat on smaller watershed around the state.
 - *Steelhead Restoration and Management Plan for California* (CDFW, February 1996, with updates to Steelhead Tasks in 2013). This CDFW document provides strategies to restore native and naturally produced (wild) stocks of steelhead, including restoring access to historic habitat that is presently blocked.
 - *Central California Coast Steelhead Recovery Plan* (U.S. National Marine Fisheries Service, 2007 Draft). This National Marine Fisheries Service document identifies priority actions to improve the potential for recovery for Central California Coast steelhead, including identification and removal of barriers to migration.
4. **Support of the public:** The project has widespread public support, including that of Congressman Mike Thompson, State Senator Noreen Evans, State Assembly member Bill Dodd, Napa County Supervisor Diane Dillon, Napa County Resource Conservation District, and Friends of the Napa River. Project letters are included as Exhibit 5.
5. **Location:** The project is located north of the city of Calistoga in Napa County, within the jurisdiction of the San Francisco Bay Area Conservancy Program.
6. **Need:** Without funds from the Conservancy, the project will continue to be delayed until sufficient funds are available to match Napa County and EPA funding. Further, EPA funding is contingent on the project being completed by November 2015 and if the County were unable to construct the project in 2015 this additional source of grant funding would be forfeited.
7. **Greater-than-local interest:** The recovery of California’s salmon populations is of regional significance. Moreover, sport and commercial fishing provides an important economic benefit to California.
8. **Sea level rise vulnerability:** The project is not located in an area close to a shoreline that is vulnerable to sea level rise.

Additional Criteria

9. **Urgency:** Until the barrier is removed, approximately 3 miles of high value habitat will remain unavailable to Chinook salmon and threatened steelhead trout. Given that the Napa River watershed is considered an "anchor watershed" for steelhead in the Bay Area and essential for protection of the species, delays are significant.
10. **Leverage:** See the “Project Financing” section above.

11. **Readiness:** The project is scheduled to be constructed in summer 2015 provided the necessary funding can be obtained.
12. **Realization of prior Conservancy goals:** See “Project History” above.
13. **Return to Conservancy:** See the “Project Financing” section above.
14. **Cooperation:** The conceptual plan for modifying the fish passage barrier was developed with significant input from many organizations, including the Napa County Flood Control and Water Conservation District, the Napa County Resource Conservation District, and the California Department of Fish and Wildlife.
15. **Vulnerability from climate change impacts other than sea level rise:** The project is designed to increase the resiliency of local native fish species by improving access to high quality habitat. In addition, when taken in combination with the downstream restoration projects that are improving channel habitat and providing for additional channel capacity, the overall condition of the area is becoming more resilient to the impacts that climate change might have in the region.
16. **Minimization of greenhouse gas emissions:** Greenhouse gas emissions generated from the project would only occur during construction from the operation of equipment. No project-level emissions would occur from operation of the fish passage. The majority of the emissions would come from worker trips, hauling of materials, and operation of excavators, trucks, backhoes, and cement trucks. Construction period emissions are estimated at 459 metric tons (per adopted CEQA document). A mitigation measure to control equipment exhaust is included in the CEQA document whereby the County shall require the contractor to implement the following air quality measures during construction as recommended by the Bay Area Air Quality Management District: 1) idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes, and 2) all construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. The impact on greenhouse gas emissions is considered less than significant.

COMPLIANCE WITH CEQA:

Pursuant to the California Environmental Quality Act (“CEQA”), Napa County, as lead agency, prepared an Initial Study and Mitigated Negative Declaration (“MND”) for the Greenwood Avenue Culvert Replacement Project. An Initial Study was prepared for the project and sent to the State Clearinghouse and interested agencies on October 14, 2014 for a 30-day agency and public review period. Napa County received a letter from the State Clearinghouse dated November 13, 2014 stating that no state agencies submitted comments on the document. Napa County did not receive any other letters regarding the project. On November 19, 2014, Napa County adopted the MND and a Mitigation Monitoring Program (“MMP”) to be implemented by the Napa County Public Works Department (collectively, Exhibit 2). The proposed Conservancy authorization calls for the county to implement and monitor the mitigation measures as provided for in these documents.

CEQA requires consideration of potential environmental effects of agency actions and approvals, unless exempt. The Initial Study and MND identified potentially significant impacts of the

proposed project in the areas of air quality, biological resources, cultural resources, geology/soils/seismicity, hazards and hazardous materials, and noise. Mitigation measures were adopted to ensure that these potential impacts are avoided or reduced to less-than-significant levels as follows:

Air Quality: The project's effects on air quality would be limited to temporary construction impacts. Air pollutants would be generated from construction equipment operations and fugitive dust caused by ground disturbance during project construction. To reduce the potential impact of construction-period fugitive dust and emissions to a less-than-significant level, the construction contractor will institute a dust control program prior to any construction activity. The dust control program will include watering exposed surfaces, covering loose material loads, limiting vehicle speeds on unpaved roads to 15 miles per hour, minimizing equipment idling times, properly maintaining construction equipment, and posting signs with contact information.

Biological Resources: The proposed project has the potential to affect several special-status species, including high potential to affect California freshwater shrimp and Steelhead and low to moderate potential to affect California red-legged frog, Burke's goldfield, Clara Hunt's milk-vetch, Chinook salmon, and Western pond turtle. Mitigation measures to minimize impacts to less-than-significant levels include: 1) restoration of California freshwater shrimp habitat on-site (60 linear feet of undercut bank and 90 feet of overhanging vegetation habitat), 2) protection of California freshwater shrimp during channel dewatering, 3) project design complies with all state and federal fish passage guidelines, 4) protection of fish during channel dewatering, 5) pre-construction surveys for adult Western pond turtle, 6) pre-construction surveys for special-status amphibians including California red-legged frog, and 7) project compliance with all state and federal permits.

The project will also have a temporary impact to approximately 0.42 acre of the riparian zone of the Napa River and involve the placement of fill in jurisdictional waters of the United States and removal of vegetation within areas that are potentially jurisdictional wetlands. To mitigate for impacts on riparian and wetland habitats, the County will restore 0.42 acre of riparian habitat on-site. The restoration includes planting within the rock slope protection to be placed on the channel banks and planting the channel terraces.

Cultural Resources: A cultural resource investigation completed in May 2014 indicated a low potential to uncover unknown archaeological resources at the project site. To mitigate for the low potential of encountering archaeological resources, an archaeological monitor will be present during initial ground disturbance to train workers to be aware of the possibility of encountering archaeological resources. If archaeological resources and/or human remains are discovered during project implementation, construction crews will stop all work within 100 feet of the discovery until a qualified archaeologist can assess the discovery.

Geology, Soils, and Seismicity: The clayey sand and silty sandy soils at the site have a low to moderate likelihood of liquefaction during earthquake-induced strong to violent ground motions. Mitigation measures to reduce the impact of seismic-related ground failure to less-than-significant include constructing stiffened concrete and steel rebar foundations capable of resisting deformation due to underlying liquefiable materials or constructing a deep pile foundation that would penetrate through potentially liquefiable sediments with the inclusion of a stiffened concrete and steel rebar pile cap.

In addition, the fill soils adjacent to the existing culvert and the soils adjacent to the project site include materials that may be prone to landslides in the form of stream bank instabilities. To mitigate this impact to less-than-significant, the County will install erosion control blankets on exposed stream banks, plant native plant species, and use silt fences, straw wattles, and other erosion control measures. The design and construction of a new bridge and engineered fill soils will mitigate hazards associated with failure of the existing culvert and associated fill soils.

Hazards and Hazardous Materials: The use of Greenwood Avenue will be interrupted during construction and would require the construction of a temporary access road for residents whose access will be restricted. To prevent impairment of emergency evacuation from these nearby residences in case of fire or other hazard, the County will notify affected residences at least two months prior to construction about the timing and duration of required use of the temporary access road and provide a 24-hour contact person should any access problems occur. In addition, the County will notify local police, fire, and sheriff departments about the construction of the temporary access road at least two weeks prior to implementation.

Noise: To reduce the potential for noise impacts resulting from project construction to a less-than-significant level, the following measures will be implemented during project construction: 1) equip all internal combustion engines with mufflers, 2) prohibit all unnecessary idling, 3) locate stationary noise-generating equipment as far as possible from adjacent residential land uses, 4) use “quiet” models of air compressors, generators, and other stationary noise sources, and 5) acoustically shield stationary equipment from adjacent residential land uses. These noise mitigation measures will be included in the construction contract specifications, a preconstruction meeting will be conducted to confirm all the noise mitigation measures and practices are in place, and the County will monitor compliance.

Conservancy staff has independently reviewed the County’s MND and MMP for the proposed project and recommends that the Conservancy find that the project as conditioned avoids, reduces, or mitigates the possible significant environmental effects to a level of insignificance and there is no substantial evidence that the project, as mitigated, will result in significant effect on the environment as defined in 14 California Code of Regulations Section 15382. Upon approval, staff will file a Notice of Determination for this project.