

COASTAL CONSERVANCY

Staff Recommendation
December 1, 2016

LOWER PUTAH CREEK SALMON SPAWNING HABITAT ENHANCEMENT

Project No. 16-041-01
Project Manager: Laura Cholodenko

RECOMMENDED ACTION: Authorization to disburse up to \$50,000 to the Solano County Water Agency to enhance salmon spawning habitat in Lower Putah Creek.

LOCATION: Lower Putah Creek, Solano County

PROGRAM CATEGORY: San Francisco Bay Area Conservancy

EXHIBITS

Exhibit 1: [Project Location](#)

Exhibit 2: [Photographs](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31000 et seq. of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of up to fifty thousand dollars (\$50,000) to the Solano County Water Agency (SCWA) to enhance salmon spawning habitat in Lower Putah Creek through mechanical scarification of 10,000 linear feet of cemented gravels, subject to the following condition:

Prior to the disbursement of funds, SCWA shall submit for the review and approval of the Executive Officer of the Conservancy a final work program, schedule and budget, copies of all project permits, landowner agreements, a plan for acknowledging Conservancy funding, and the roster of contractors to be retained for the project.

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.
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2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
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PROJECT SUMMARY:

Staff requests authorization to disburse up to \$50,000 to the Solano County Water Agency (SCWA) to enhance salmon spawning habitat in Lower Putah Creek through mechanical scarification of 10,000 linear feet of cemented gravels. Gravel in the creek has become embedded in fine silt, creating a cement-like surface that is unusable by spawning salmon. The cemented gravel also reduces the abundance and diversity of benthic macroinvertebrates that are the base of the food chain for riparian wildlife. Cementation occurs during prolonged intervals without scouring flows—an artifact of water storage at Lake Berryessa. Prior to the construction of Lake Berryessa, Lower Putah Creek had scouring flows nearly every year. After the Lake was constructed, scouring flows have occurred, on average, once every seven years. The last scouring flow was in January 2006, more than 10 years ago.

Operating from the top of the creek bank a small excavator fitted with a rake/claw attachment will scarify (which means to break up or loosen) or rake the creek bottom to a depth of 12-18 inches to loosen cemented gravels. A minor amount of vegetation may be cleared to create temporary construction access to the sites. These sites will be monitored to assess changes in gravel embeddedness, degree of cementation, changes in invertebrate density and diversity, and use of the scarified sites by spawning salmon and steelhead.

Solano County Water Agency (SCWA) is a public entity responsible for wholesale water supply to cities and agricultural districts in Solano County. The agency also performs flood management as well as habitat conservation activities. SCWA has managed over \$12 million in projects to assess and restore Lower Putah Creek since 2000. SCWA will implement the proposed project on behalf of the Lower Putah Creek Coordinating Committee, which includes members from Yolo and Solano Counties as well as local cities, UC Davis, and landowners along the creek.

Site Description: The project area consists of various locations along 13 river miles of Lower Putah Creek from Putah Diversion Dam to Pedrick Road (Exhibit 1). Lower Putah Creek is one of two perennially flowing tributaries to the Sacramento River in the eastern part of Solano County. The creek and adjacent riparian corridor support a variety of native fishes and riparian nesting birds.

Project History: The proposed project is being implemented consistent with the Lower Putah Creek Watershed Management Action Plan, which recommends several actions to enhance the lower Putah Creek watershed. The Action Plan was developed in response to a settlement agreement—the Putah Creek Accord—that ended ten years of litigation over flows in Lower Putah Creek. The Accord calls for establishment of the Lower Putah Creek Coordinating Committee, perennial flows to support anadromous fish, and perpetual funding for fish and wildlife monitoring.

Trials of mechanical scarification began in 2013 and were expanded in 2014. Salmon have been observed spawning intensively in the scarified test sites and record numbers of salmon have been

returning to Putah Creek (Exhibit 2). In 2014, 200 spawning salmon were observed, nearly three times the previous high of 70 spawners in 2003. In 2015, 600 spawners were observed, tripling the previous high.

PROJECT FINANCING

Coastal Conservancy	\$50,000
Solano County Water Agency	\$50,000
Project Total	\$100,000

The expected source of Conservancy funds for this project is the fiscal year 2016/17 appropriation to the Conservancy from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code § 79700 et seq.). Funds appropriated to the Conservancy derive from Chapter 6 (commencing with § 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 and includes: 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 will help achieve these purposes of Proposition 1 by restoring aquatic habitat that benefits native fish, birds, invertebrates, and other wildlife.

As required by Proposition 1, the proposed project provides multiple benefits. By restoring creek gravels, the project will restore historic access to salmon spawning and rearing habitat, and increase the abundance and diversity of aquatic insects that are the base of the food chain for all riparian associated wildlife.

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 § 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 the “Consistency with Conservancy’s Project Selection Criteria & Guidelines” section of this report.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

The proposed project will be undertaken pursuant to Chapter 4.5 of the Conservancy’s enabling legislation, Public Resources Code (PRC) Sections 31160-31165, to address resource goals in the San Francisco Bay Area. Pursuant to PRC Section 31162, the Conservancy may award grants in the nine-county San Francisco Bay Area to help achieve goals of the San Francisco Bay Area Conservancy Program. The proposed Project is located in Solano County within the nine-county Bay Area and will help achieve goals of the Bay Area Conservancy Program, as described below in “Consistency with The Conservancy’s Strategic Plan Goals and Objectives.”

Pursuant to PRC Section 31162(b), the Conservancy may award grants to enhance natural habitats of regional importance. The proposed project will enhance salmon spawning habitat, which is of regional importance in that it supports native freshwater and anadromous fish that have experienced significant population declines due to loss and degradation of habitat as a result of water diversion projects and other human activities.

Pursuant to PRC Section 31162(c), the Conservancy may award grants to assist in implementation of the policies and programs of the San Francisco Bay Plan and the adopted plans of local governments and special districts. Consistent with this section, the proposed project will assist in implementing the Lower Putah Creek Watershed Management Action Plan, which has been adopted by Solano and Yolo Counties.

This project is appropriate for prioritization under the selection criteria set forth in Section 31163(c) in that: (1) it is supported by adopted local or regional plans, as described above; (2) it will include multi-jurisdictional participation by interested local, state and federal resource and regulatory agencies, including the California Department of Fish and Wildlife; (3) SCWA is ready to commence work immediately upon award of Conservancy funding; (4) it will provide opportunities for benefits (salmon spawning habitat) that would be lost if not quickly implemented; and (5) SCWA is providing matching funds.

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

Consistent with **Goal 11, Objective 11F** of the Conservancy's 2013-2018 Strategic Plan, the proposed project will enhance riverine habitat for the benefit of fish and wildlife.

**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:** The project serves to promote and implement the following state plans:
 - *California Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan* (CA Natural Resources Agency, July 2014). Consistent with this plan, the project will implement a useful strategy for maintaining spawning habitat, especially during prolonged periods without scouring flows when gravels can become cemented.

- *California Central Valley Salmon and Steelhead Recovery Plan (July 2014):* The Plan identifies several recovery actions for Putah Creek to benefit Central Valley Steelhead. The project would specifically support the recovery action that calls for restoration of instream habitat in Putah Creek.
4. **Support of the public:** The proposed project is supported by the California Department of Fish and Wildlife, National Marine Fisheries Service, and Peter Moyle, a professor Emeritus at UC Davis and expert on native California fish. Project Letters are attached as Exhibit 3.
 5. **Location:** The project will enhance Lower Putah Creek in the northeastern part of the San Francisco Bay Area (Exhibit 1).
 6. **Need:** Without Conservancy funding, there is not sufficient funding to support continued enhancement of the creek in 2017.
 7. **Greater-than-local interest:** The project will enhance habitat that supports resident and migratory fish and wildlife that range throughout the Bay Delta estuary and Central Valley. The project will provide information that can help with management of all salmonid spawning sites downstream of dams that have similar issues due to a reduction in scouring flows.
 8. **Sea level rise vulnerability:** The project site is well inland along a freshwater stream at elevations that will not be vulnerable to the effects of sea level rise.

Additional Criteria

9. **Urgency:** The lack of sufficient spawning habitat presents a threat to the long-term viability of Chinook salmon in Putah Creek.
10. **Leverage:** See the “Project Financing” section above.
11. **Innovation:** The project implements an emerging new approach to managing viability of spawning gravels in the absence of natural scouring flows by mechanically scarifying cemented gravels with an excavator.
12. **Readiness:** The Solano County Water Agency has obtained all permits necessary to conduct the work and is ready to begin project implementation in the Fall 2017.

COMPLIANCE WITH CEQA:

The proposed project is exempt from the California Environmental Quality Act (CEQA) pursuant to 14 Cal. Code Regs. Section 15333, which exempts small habitat restoration projects that do not exceed five acres in size and that assure the maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife. The proposed project is less than five acres in size and will enhance fish habitat. The project will be undertaken outside of sensitive nesting and spawning periods, removal of vegetation will be minimized, and any riparian areas disturbed by equipment will be restored with native grasses, trees and shrubs. The project meets the conditions of section 15333 in that there will be no significant adverse impact on endangered, rare or threatened species or their habitat pursuant to CEQA Guidelines section 15065; there are

no hazardous materials at or around the sites; and the project will not result in significant impacts when viewed in connection with the effects of past, present, or probable future projects.

Staff will file a notice of exemption upon Board authorization.