COASTAL CONSERVANCY

Staff Recommendation
January 21, 2021

SCOTT RIVER DREDGE TAILINGS RESTORATION DESIGN

Project No. 20-040-01
Project Manager: Michael Bowen

RECOMMENDED ACTION: Authorization to disburse up to $279,491 to the Scott River Watershed Council to prepare environmental studies, designs and draft permit applications for restoration of a 2.27 mile reach of the Scott River near Callahan, Siskiyou County.

LOCATION: Callahan, Siskiyou County

EXHIBITS

Exhibit 1: Project Location Map and Graphics

Exhibit 2: Project Letters

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251 *et seq.* of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed two hundred seventy-nine thousand four hundred ninety-one dollars ($279,491) to the Scott River Watershed Council ("the Council") to prepare environmental studies, designs and draft permit applications for restoration of a 2.27 mile reach of the Scott River ("project") near Callahan, Siskiyou County.

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

1. A detailed work program, schedule, and budget.
2. The names and qualifications of any contractors to be retained in undertaking the project.
3. A plan for acknowledgment of Conservancy funding and Proposition 1 as the source of that funding."

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 6 of Division 21 of the Public Resources Code, regarding resource enhancement.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Scott River Watershed Council is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code."

PROJECT SUMMARY:

Staff is recommending the Conservancy authorize the disbursement of up to $279,491 to the Scott River Watershed Council ("the Council") to collect data, and prepare environmental studies, designs and draft permit applications for restoration of a 2.27 mile reach of the Scott River, including evaluation of 45 acres of adjacent floodplain, impacted by nineteenth-century mining activities (see Exhibit 1). The entire 2.27 mile reach of river and adjacent floodplain, now known as the Callahan Dredger Tailings, likely provided abundant habitat for salmon and steelhead until ravaged by industrial mining activities.

The data and designs will guide restoration of hydrologic and ecologic function including river-floodplain connectivity, and re-connection of two-acres of off-channel cold water habitat for salmon. The design work includes important due diligence to assess the potential for sediment and mercury contamination in the middle project reach to ensure no harm to human infrastructure or ecosystem function from restoration activities, and success of the restoration designs.

The proposed project will address three distinct but related components of the restoration of the 2.27-mile reach of the Scott River (Exhibit 1). The first and most downstream component consists of improving river connectivity through 1.1 miles of the tailings. This component, partially funded by the California Department of Fish and Wildlife (CDFW), is approximately 4,000' downstream of component 2, the upstream-most component, which will create two acres of cold water refugia between the Scott River and Sugar Creek. Component 3 lies between 1 and 2, and addresses two design constraints to be evaluated under this grant: a) possible mercury contamination in the mine tailings, and; b) an active water diversion that must be protected. Component 3 became a necessary opportunity when, as components 1 and 2 advanced through initial design, the hydrologic connection between the two became better appreciated. It was determined that analyzing the entire reach and all three components simultaneously is advisable. The Council seeks to ensure that the project in entirety will neither release mercury contamination nor adversely impact current diversion operations.

Project objectives include: 1) improve connectivity through 1.1 miles of the Callahan tailings for migrating anadromous fish (component 1), 2) offer slow, cold-water refugia for over-wintering and over-summering juvenile Coho Salmon by connecting off-channel habitat (all components), 3) decrease downstream transport of sediment, thereby addressing the Scott River's Sediment TMDL listing (all components), 4) connect ~45 acres of floodplain, creating seasonal wetland

habitat and increasing groundwater recharge (component 1), 5) model the stream temperature effects of the restoration interventions and engage the Thomas Harter Groundwater model in understanding the groundwater effects of restoration projects in the reach (all components), and 6) have Youth Environmental Summer Studies (YESS) interns participate in the environmental planning and design activities, increasing community awareness and support for restoration projects (all components).

The Council has received design funding from the CDFW Fisheries Restoration Grant Program for evaluation, planning and development of a restoration design for component 1. It has also secured funding from the Bureau of Reclamation for evaluation and design for the connection of a currently isolated cold-water off-channel pond lying adjacent to the river and upstream of the CDFW-funded project (component 2). However, analyses undertaken since submission of the two separate funding requests revealed new opportunities in the middle reach (component 3) and indicated that more engineering analysis was necessary; The reach is dynamic, lying in the mainstem of an undammed river, and includes significant human infrastructure consisting of an active gravel mining operation and a large diversion infrastructure. In addition, potential mercury contamination of sediments in the project reach creates an uncertain risk to the ecosystem if stored mercury is released during construction.

Component 3, located between component 1 and 2, comprises two parcels including a 4,000 ft. reach of river owned by the "Farmers Ditch Company". The Farmers Ditch Property consists of approximately 70 acres and 4,000 linear ft. of the Scott River and contains the aforementioned diversion infrastructure. To the west of The Farmers Ditch Company lies the Kalpin property, running side-by-side with the Farmers Ditch Company property. The Kalpin property is approximately 70 acres and contains multiple, isolated cold-water ponds (See Exhibit 1). Including these two properties in a basic evaluation of hydro-geomorphic conditions during this project increases the understanding of the geo-fluvial conditions in a significant portion of the Callahan Tailings. Without the proposed Conservancy funding, the Council would be unable to include the Farmers Ditch and Kalpin properties in the project studies for potential future enhancement activities on the Kalpin property.

The original project budgets were developed prior to the full understanding of the complexity of the reach and the extent of analysis necessary to sufficiently evaluate the complex geo-fluvial condition. Addressing regulatory concerns regarding protection of the human infrastructure and mercury contamination also requires significant additional analysis. The proposed larger-scale analysis will lead to completion of planning for pending projects and likely lead to additional restoration actions over time.

Site Description: The project site is in rural Siskiyou County near the community of Callahan. The total project reach of 2.27 miles lies within the Callahan Dredger Tailings of the Scott River. The project lies approximately 45 miles upstream of the Scott River's confluence with the Klamath River and extends both upstream and downstream of Sugar Creek's confluence with the Scott River. Within the reach lies two significant pieces of human infrastructure.

Approximately 2.5 miles upstream of the southern project boundary lies the East Callahan Road bridge crossing. Approximately 26 miles of anadromous streams with documented current

utilization by Coho Salmon lie above the tailings. These streams consist of the Scott River and its two main tributaries, East Fork Scott River and South Fork Scott, and a few tributary streams. Due to more frequent and extreme drought, the annual dewatering of the Scott River in the tailings has frequently extended later in the year, limiting adult Chinook and Coho spawner migration into the upper ⅓ of the watershed.

The project area includes 3 components (see Exhibit 1). Component 1 contains an active gravel mining operation. Mr. Moore, the owner of the gravel mine approached the Council with a request to initiate restoration planning on his property. There are two additional landowners in Component 1, both of whom are highly supportive of restoration on their property and have signed Landowner Agreements.

Component 2 consists of four separate ownerships whose owners are engaged in the project and have signed landowner agreements.

Component 3, analyzed under this project, and a potential future and stand-alone restoration site, is owned by the Klapin Family, which has signed a landowner agreement. The entire reach is characterized by dredge tailings consisting of piles of cobble, intermixed with residual dredger ponds. Some of these ponds have vegetation surrounding them. Adjacent (to the East) to Component 3 study area lies the "Farmers Ditch Company", which contains their diversion infrastructure.

Grantee Qualifications: This grant would be the first Conservancy grant to the Scott River Watershed Council. However, the Council has successfully managed state and federal grant funds for other projects, including a concurrent California Department of Fish and Wildlife (CDFW) Fisheries Restoration Grant Program grant for this project.

The Council has an extensive history of successfully initiating and sustaining innovative projects, such as the State's first Beaver Dam Analogue projects, now a widespread, small scale habitat restoration project that mimics the form and habitat benefit of ponds formed by beaver dams. The Council has been a leader in developing and applying new regulatory pathways for the emerging restoration methodologies associated with process-based restoration. In doing so, it has developed strong relationships with, and the respect of, regulatory agencies. It works in a mostly private-lands setting and has learned how to engage multiple stakeholders with diverse interests and motivations in seeking solutions to complex problems and has established collaborations with multiple academic and research institutions such as Humboldt State University, University of California- Davis, University of Washington, Southern Oregon State University, NOAA research centers, and US Forest Service research centers.

The Scott River Watershed Council is a 501 (c)(3) in good standing and has demonstrated the ability to develop and manage publicly funded habitat restoration projects in the heart of the "State of Jefferson." Its ability to navigate between regulatory requirements and landowner expectations of performance shows a competence and ability sufficient to support Conservancy confidence in their abilities.

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 below.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section below.
3. **Promotion and implementation of state plans and policies:** The proposed project is consistent with the following plans and policies:
    a. The proposed project is consistent with the themes for habitat restoration identified in the "Steelhead Restoration and Management Plan for California" (California Department of Fish and Wildlife, 1996). Specifically, that plan advises that "(h)abitat improvement projects should be focused on the many areas throughout the State where steelhead habitat is severely degraded and restoration work is sorely needed" (p. 74). Providing unimpeded access to support the growth and survival of juvenile salmonids is one of the highest priority habitat improvement actions known.
    b. More recently, the proposed project is consistent with the "Recovery Strategy for California Coho Salmon" (California Department of Fish and Wildlife, 2004) in that the Scott River is identified as a "key population to maintain or improve." More specifically, the plan advises to "(r)estore the Scott River floodplain in the Callahan Dredger Tailings Reach through a community-driven process supported by the Scott River Watershed Council" (Scott HM-2c, pg. 10.18), and later advises implementation of "…the reclamation plan that remedies effects of historic mining (e.g. tailings near Callahan) with the goal of enhancing the production and survival of coho salmon" (SS-HA-14, pg. 9.43).
    c. The project is consistent with federal National Marine Fisheries Service 2014 "Final Recovery Plan for the Southern Oregon/Northern California Coast (SONCC) Evolutionarily Significant Unit of Coho Salmon (Oncorhynchus kisutch)". In recent years, the Scott River has seen the largest runs of coho in the state validating the Recovery Plan's assignment to the Scott River of one of the highest "Intrinsic Potential Values" of all tributaries to the Klamath River. The SONCC Coho Recovery Plan 2014 advises identifying and prioritizing mining reaches, developing a plan to restore the floodplain and channel by removing tailing piles and reconstructing the channel…." (SONCC-ScoR 2.2.21.1 pg. 36-34), and then advises removing tailing piles and reconstructing the channel guided by that plan (SONCC-ScoR 2.2.21.2 pg. 36-34). Overall, the SONCC Recovery Plan lists beaver removal, road construction, agricultural practices, river channelization, dams and

diversions, timber harvest, mining/dredging, gravel extraction, high severity fires, and rural residential development as limiting factors that have simplified, degraded, and fragmented migrating, spawning, and rearing habitat throughout the Scott River basin, conditions which have reduced stream flows; increased water temperatures; restricted access to spawning habitat in drought years; seasonally disconnected tributaries from the mainstem; stranded juveniles; reduced summering habitat in tributaries; sedimented rearing pools and spawning gravels, and reduced riparian cover and instream structure for coho salmon rearing. This project will help reverse that trend within the project reach.

Notably, the Scott River Watershed Council's watershed action plan is in the appendix of the NOAA Recovery Plan. This watershed action plan sets priorities for future actions and practices to restore and manage Scott River basin resources, emphasizing salmonids. Current work focuses on floodplain and wetlands habitat restoration to enhance rearing opportunities for salmonids.

d. Finally, the project is consistent with the "California Water Action Plan", a collaborative effort of the California Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture, issued in 2014. This plan was developed to meet three broad objectives: more reliable water supplies, the restoration of species and habitat, and a more resilient, sustainably managed water resources system. It lays out the state's challenges, goals and actions needed to put California's water resources on a safer, more sustainable path. The plan identifies ten overarching strategies to protect our resources, including two particular to this project that the Conservancy can help implement: "4) Protect and restore important ecosystems (restore coastal watersheds and strategic coastal estuaries to restore ecological health and nature system connectivity to benefit local water systems and help defend against sea level rise, eliminate barriers to fish migration)" and "7) Increase flood protection (encourage flood projects that plan for climate change and achieve multiple benefits)." By planning to restore channel and floodplain function while increasing flood protection by designing a project that increases flood routing through the project area, the project is consistent with this report.

4. **Support of the public:** Multiple landowners are involved and supportive, including Lorrie Bundy, the NRCS regional engineer, and the Moore family who have operated a gravel mining business in the project reach for 3 generations. The project also engages the Youth Environmental Summer Studies (YESS) intern program. Support letters have been received from the Quartz Valley Indian Reservation, the Northern California Resource Center and NOAA Fisheries (see, Exhibit 2: Project Letters).
5. **Location:** The project site is outside the coastal zone but will benefit numerous coastal resources by providing coastal salmon populations with sufficient access to quality habitat throughout a watershed to fulfill their life history patterns.

6. **Need:** Without this grant funding, the Council could not utilize its existing resources and complete the project, and the existing design funds would revert.
7. **Greater-than-local interest:** In advancing state and federal recovery plan objectives for protected species, the project is of regional importance.

Additional Criteria

8. **Urgency:** Time is of the essence in providing suitable habitat for coastal salmon populations.
9. **Resolution of more than one issue**: Remediation of an impacted mining claim, and restoration of suitable habitat, in combination with the protection of an existing beneficial use of water provides the resolution of previously conflicting issues.
10. **Leverage**: See the "Project Financing" section above.
11. **Innovation**: Attempting to remedy the impacts of industrial mining on a small salmon stream requires considerable ingenuity and innovation to achieve habitat targets such as cold-water availability in a highly altered environment. Floodplain restoration in these areas is a relatively new restoration technique. The concept of synthesizing the theoretical approaches of "processed based restoration" and "reconciliation ecology" in this extraordinarily degraded reach consisting of mining tailings and containing human infra-structure is innovative. Doing so in a fashion that avoids or minimizes the release of hazardous substances is equally important and innovative. It is necessary to achieve maximum benefit at a reasonable cost structure while respecting and protecting human infrastructure in a private-lands setting. Piloting a successful methodology and resulting projects will offer a template for future restoration for the remainder of the tailings and possibly for other areas as well.
12. **Readiness**: The Council-initiated design work under its existing FRGP grant and is ready to continue as authorized under this grant.
13. **Realization of prior Conservancy goals**: Recognizing the need for comprehensive salmon habitat restoration, the Coastal Conservancy has increased over time its support of habitat restoration for Pacific Salmon well outside of the coastal zone. This includes the investments in habitat restoration in the mid and upper Klamath River, as well as in the Scott River, one of the most important spawning and rearing tributaries to the Klamath River. The proposed project is a natural addition to this approach.
14. **Cooperation**: Historically, salmon restoration is a controversial topic in the highly charged political environment found in the mythic "State of Jefferson." But salmon habitat restoration has been championed effectively in the region by several groups, including the Council. The involvement of landowners and state and federal agency officials speaks favorably to the Council's success in this regard.
15. **Vulnerability from climate change impacts other than sea level rise:** Perhaps the greatest threat to Pacific salmon, and the project success, is the increasing variability of precipitation. Absent efforts to ensure cold water refugia for remaining aquatic and terrestrial species that depend on flowing water, the future of these species is bleak. The

proposed project will help to address this issue by expanding and enhancing available cold-water refugia within one of the most important spawning and rearing tributaries in the Klamath Basin.

16. **Minimization of greenhouse gas emissions:** The project involves only planning and design activities that present no contribution to significant greenhouse gas emissions. Designs will ensure that construction methods include measures to avoid or minimize greenhouse gas emissions to the extent feasible and consistent with the project objectives.

PROJECT FINANCING

Coastal Conservancy	**$279,491**
Cal Department of Fish and Wildlife	$333,083
Bureau of Reclamation	$68,520
Project Total	**$681,094**

The expected source of Conservancy funds for this project is the fiscal year 2015/16 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; 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 provide multiple benefits. By collecting the data and preparing the studies and designs needed to restore floodplain and channel form and function, the project will help restore historic access to spawning and rearing habitat, improve water quality by preventing and reducing erosion and reduce temperatures to levels suitable for aquatic life.

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 in the "Consistency with Conservancy's Project Selection Criteria & Guidelines" section of this report.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed authorization is undertaken pursuant to Chapter 6 of Division 21 of the Public Resources Code, as follows:

Pursuant to §31251, the Conservancy may award grants to local public agencies and nonprofit organizations for the purpose of enhancement of coastal resources which, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Consistent with this section, the proposed authorization provides funds to the Scott River Watershed Council to plan to enhance coastal fishery resources disturbed by incompatible land uses, such as intensive mining, timber harvest and other legacy land uses that have disrupted the channel and floodplain processes.

Pursuant to §31251.2(a), "In order to enhance the natural or scenic character of coastal resources within the coastal zone, the Conservancy may undertake a project or award a grant . . . to enhance a watershed resource that is partly outside of the coastal zone." This project will help enhance the recovery of salmon which migrate to and beyond the coastal zone. Salmon populations are known to travel many miles upstream of the coastal zone boundary in order to fulfill their life history patterns. Indeed, salmon depend on unimpeded access to high-quality habitat both within and outside of the coastal zone in order to survive. If salmon and other highly prized aquatic resources are to be maintained and restored to historic levels, projects to improve salmon habitat must be undertaken both within and outside the coastal zone.

Section 31251.2 also requires the review and approval of the California Department of Fish and Wildlife. The Department supported the initial design work of this project.

Pursuant to §31253, "[t]he Conservancy may provide up to the total of the cost of any coastal resource enhancement project . . . ." Consistent with this section, staff has proposed the funding amount in light of the fiscal resources of the applicant, the urgency of the matter, and the application of other factors relevant to project eligibility, as detailed in the "Consistency with Conservancy's Project Selection Criteria & Guidelines" section, above.

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

Consistent with **Goal 4, Objective A** the project will support educational programs that improve public understanding and promote stewardship of coastal resources. This project includes participation by the Youth Environmental Summer Studies (YESS) interns. The YESS program is a collaboration between the Council, the Klamath National Forest, Quartz Valley Indian Reservation and the Salmon River Restoration Council and offers Siskiyou County high school-aged youth summer environmental education and job training. YESS interns will assist in the monitoring and geomorphic evaluation activities of the project.

Consistent with **Goal 6, Objective A**, the project will develop one plan for restoration of a portion of a stream corridor, that of the Scott River.

Consistent with **Goal 6, Objective C**, this project will develop one plan to restore a coastal watershed, which will include remediation of the fish passage barrier created by the Scott River Callahan Dredge Tailings.

Consistent with **Goal 6, Objective F**, this project will complete one plan to reduce sediment contributions from a significant sediment source in the Scott Watershed. This will improve water quality in a 303 listed river, and, potentially, reduce fine sediment contributions from the Scott into the Klamath River.

Consistent with **Goal 7, Objective A**, this project will develop one plan to foster the long-term viability of coastal working lands, including projects to assist farmers, ranchers, and timber producers to reduce impacts of their operations on wildlife habitat and water quality. The Callahan Dredge Tailings contribute high sediment loads to the Scott River, which has a TMDL listing for sediment. Reducing sediment contributions will improve the Scott River agricultural community viability by reducing regulatory obligations. Additionally, sediment from the tailings is deposited downstream on productive agricultural lands. Reducing sediment transport and downstream deposition will support the working landscape of Scott Valley.

Consistent with **Goal 16, Objective A**, the project prioritizes funding to a project in a disadvantaged community. This project is located in the Scott River Watershed, Siskiyou County, all of which is an economically disadvantaged community, and a significant portion of which is a severely disadvantaged community. All of the Council's employees are residents of a disadvantaged community, and it is anticipated that 6 people will be employed part-time by the project. In addition, water quality improvements will benefit the beneficial uses of the river, particularly anadromous fish. This also addresses the tribal cultural needs of both the Quartz Valley Indian Reservation, located in the Valley and downstream Klamath River Tribes.

CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/STATE WATER QUALITY CONTROL PLAN:

The North Coast Integrated Regional Water Management Plan (NCIRWMP) applies to this project and multiple plan goals, objectives, priority actions are relevant to the project. Amongst these are: 1) Respecting Tribal Priorities including: a) Water quality and quantity of groundwater and surface water including stream temperatures, impaired water quality, b) Protect groundwater resources from over-drafting and contamination, c) Conservation, enhancement, and restoration of watersheds and aquatic ecosystems d) Climate change effects; 2) Objectives for NCIRWMP Phase I & phase II: a) Conserve and enhance native salmonid populations by protecting and restoring required habitats, water quality and watershed processes.

Additional regional plans include: 1) "Scott River TMDL Action Plan" which addresses the 303(d) temperature and sediment listings for the Scott river. This project will support reductions in both these pollutants.

CEQA COMPLIANCE:

The project involves data collection and resource evaluation and is thus categorically exempt under CEQA, per §15306 pertaining to information collection activities that do not result in a serious or major disturbance to an environmental resource. These activities are part of a study leading to an action that Conservancy has not yet approved, adopted, or funded.

The project also involves preparation of designs, environmental studies and permit applications, which are also exempt from the provisions of the CEQA pursuant to 14 Cal. Code of Regulations Section 15262, which exempts feasibility and planning studies for possible future actions not yet funded by the Conservancy. Consistent with this section, the project will consider environmental factors in the plan development and permit applications.

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