COASTAL CONSERVANCY

Staff Recommendation
April 18, 2024

SOUTH FORK TEN MILE RIVER HABITAT ENHANCEMENT

Project No. 24-003-01
Project Manager: Joel Gerwein

RECOMMENDED ACTION: Authorization to disburse up to $1,811,600 to The Nature Conservancy to undertake the South Fork Ten Mile River Habitat Enhancement Project, consisting of restoration and enhancement of instream and floodplain salmonid habitat at four sites totaling four acres along the South Fork Ten Mile River in Mendocino County.

LOCATION: South Fork Ten Mile River, Mendocino County

EXHIBITS

Exhibit 1: Project Location Map

Exhibit 2: Project Designs

Exhibit 3: Site Photographs

Exhibit 4: Project Letters

RESOLUTION AND FINDINGS

Staff recommends that the State Coastal Conservancy adopt the following resolution and findings.

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed one million eight hundred eleven thousand six hundred dollars ($1,811,600) to The Nature Conservancy ("the grantee") to undertake the South Fork Ten Mile River Habitat Enhancement Project, consisting of restoration and enhancement of instream and floodplain salmonid habitat at four sites totaling four acres along the South Fork Ten Mile River in Mendocino County.

Prior to commencement of the project, the grantee 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. Names and qualifications of any contractors to be retained in carrying out the project.

3. A plan for acknowledgement of Conservancy funding.
4. Evidence that all permits and approvals required to implement the project have been obtained.
5. Evidence that the grantee has entered into agreements sufficient to enable the grantee to implement, operate, and maintain the project.

Findings:

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

1. The proposed authorization is consistent with Chapter 5.5 of Division 21 of the Public Resources Code, regarding Integrated Coastal and Marine Resources Protection.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.
3. The Nature Conservancy is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code.

STAFF RECOMMENDATION

PROJECT SUMMARY:

Staff recommends the Conservancy authorizes a grant of an amount not to exceed $1,811,600 to The Nature Conservancy (TNC) to undertake the South Fork Ten Mile River Habitat Enhancement Project, consisting of restoration and enhancement of instream and floodplain salmonid habitat at four sites totaling four acres along the South Fork Ten Mile River in Mendocino County (Exhibit 1).

This project is part of a larger effort to restore the Ten Mile River and its watershed with a focus on habitat for endangered Central California Coast coho salmon. The Ten Mile River watershed is home to one of California's strongest remaining wild populations of endangered coho salmon. In some years it accounts for nearly a quarter of the coho salmon that return to spawn in Mendocino County. Unsustainable land management practices have led to the loss of vital salmon rearing habitat, causing an extreme decline in the coho salmon population throughout the state. While California used to be home to hundreds of thousands of spawning coho salmon each fall, less than one percent of their historic numbers now remain. The Ten Mile River sits on the southern edge of a vast, intact landscape that can provide refuge for plants and animals that need cool, wet places to live in a rapidly changing climate. TNC and the Conservancy have worked together with other partners to protect and preserve nearly all of the lower Ten Mile and South Fork Ten Mile River (3,850 acres). This protected land provides an important opportunity to restore habitat for coho salmon as well as many other sensitive species present in the watershed, including threatened northern spotted owls, threatened California red-legged frogs, threatened Chinook salmon, threatened steelhead trout and endangered tidewater goby. The multi-agency Mendocino Coast SHaRP (Salmonid Habitat Restoration Priorities) planning process and the National Marine Fisheries Service (NMFS) coho salmon recovery plan (NMFS 2012) rank the Ten Mile River and its subwatersheds as having amongst the highest potential

for habitat and salmonid population recovery along the Mendocino Coast. Within the lower reaches of the South Fork Ten Mile, the highest priority restoration actions recommended by SHaRP and NMFS are off channel/floodplain habitat enhancements and engineered large wood structures. The project would implement those actions on a property with a TNC-held conservation easement in an effort to maximize winter/spring flow refuge and foraging habitat for juvenile coho salmon in the Ten Mile's alluvial valleys and advance recovery in the watershed. The project will also contribute to coastal resilience by allowing inland migration of coastal wetland habitat as sea levels rise. The project area is mapped as conserved resilient habitat which will serve as an important stronghold for plant and animal species facing habitat loss as a result of climate change (The Nature Conservancy and California State Coastal Conservancy 2018). This is a Phase 2 project; Phase 1 was completed in 2020 and restored 8 similar sites.

The project will restore four sites in South Fork Ten Mile's tidally influenced sub-reach, designed to reconnect historical floodplain lost as the result of past land use and increase coastal resilience under climate-driven sea level rise (Exhibits 2 and 3). These four sites are: alcove and pond complex (SF6), wetland complex (SF7), alcove with adjacent large wood structures (SF8), and cross-channel jam structures (SF9). The SF6 alcove and pond complex will reconnect and enhance an existing wetland complex which currently only connects to the main channel during five year or higher flood peaks. The SF7 wetland complex will convert a dry 1965 gravel deposit into a 1.6-acre multi-threaded channel wetland complex. The entire surface of the gravel bar will be lowered to just above low tide/winter baseflow elevation and shallow pilot channels will be excavated into the new surface to initiate channel formation and provide pathways for fish to navigate the wetland, providing access to rich feeding grounds during daily high tides and peak flow events. Sediment and gravel removed as part SF7 restoration will be used to restore a nearby quarry or otherwise beneficially reused. The SF8 alcove will be graded into a wide, tree covered gravel bench to provide complex off-channel habitat during storms. A similar alcove previously constructed on South Fork Ten Mile has shown extensive use by juvenile coho and steelhead during peak flow events. The SF9 large wood structures will consist of four cross-channel engineered log jams designed to back flows up to initiate inset bench and alcove flooding, scouring, and re-distributing gravels to break up the existing glide and initiate pool/riffle formation. These sites will all contribute to increased availability of velocity refugia which has been found to be the limiting factor for juvenile coho production in North Coast streams, as well as increasing foraging opportunities. The project will create a total of approximately 2 acres of floodplain habitat, enhance 1.6 acres of the channel, and establish 7 large wood jams. The wood jams will occupy approximately 0.2 acres.

Project construction is expected to begin June 2024; permits have already been acquired. An existing grant from the National Oceanic and Atmospheric Administration (NOAA) is funding several key components of construction for this project: construction-period oversight and post-implementation monitoring by the project engineer and log and rootwad acquisition by TNC. Conservancy funds will pay for project construction. The project will also benefit a disadvantaged community (DAC); the site is mapped as a DAC at both the census tract and block group levels and the construction contractor is a local company that employs a local workforce.

Site Description: The lower South Fork Ten Mile River in the project reach flows through a wide alluvial valley with broad disconnected floodplains and a narrow riparian corridor. The channel is entrenched and trapezoidal in shape along much of its length. Small, alternating vegetated bars and inset floodplain benches have formed within the active channel banks, and a narrow band of young riparian trees, primarily alders, lines the streambanks. The broad floodplain pastures are flooded only during infrequent large flood events. The current channel form appears to be heavily influenced by historic logging and ranching practices. Logging practices in the late 1800s and early 1900s denuded the hillslopes of trees and understory vegetation, which led to destabilized drainages and high rates of topsoil erosion and sediment deposition in the valleys. As a result, the floodplains have become elevated five to eight feet above the channel bed and are composed of homogenous silty loam soils. What appears to be a historic valley floor surface is found 6 inches to 1 foot above the channel's riffle crest elevations and is composed of fine gravels and sand similar to the current bed composition. Redwood logs and remains of root crowns are also found buried in this buried gravel layer. Redwood and Douglas fir logs from the upper watershed do not make it into the project reach due to several low bridges upstream. Although there are extensive wetlands along the valley's edges, they are not accessible to fish during high flow events.

The project area is privately owned, but TNC holds a conservation easement over the property that includes the right to restore the property and to maintain and monitor the restoration.

Grant Applicant Qualifications: The Nature Conservancy (TNC) is a global conservation organization that was established in 1951, and now employs over 3,700 staff. It leads projects in all fifty U.S. states designed to conserve and restore aquatic habitat and associated biodiversity in rivers large and small. In California, TNC has conducted extensive river and stream protection and restoration projects in rivers throughout the state, including implementation of four similar restoration projects along the Mendocino Coast in the last six years. Each of those projects were similar in scope and scale to the Project described in this proposal, including three rounds of construction focused on floodplain reconnection and instream habitat enhancement in the Ten Mile River in 2018, 2020, and 2021. For this Project, TNC will be working with the same project team that has successfully implemented the recent Ten Mile projects, including project engineer PCI and construction contractor Wylatti. TNC has extensive experience administering grant funds, including SCC grants, for conservation and restoration.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:

The proposed project is consistent with the Conservancy's Project Selection Criteria, last updated on September 23, 2021, in the following respects:

Selection Criteria

1. **Extent to which the project helps the Conservancy accomplish the objectives in the Strategic Plan.**

See the "Consistency with Conservancy's Strategic Plan" section below.

2. Project is a good investment of state resources.

The project provides important benefits to Californians by restoring habitat for endangered salmonids and other special status fish and wildlife species, as well as enhancing the resilience of wetlands to sea level rise. The project is feasible, as a previous phase using similar methods has been successful. The project leverages federal funding from NOAA, as well as project management provided by TNC. The project advances statewide goals for recovery of endangered fish and wildlife species and implements priorities of the Mendocino Coast SHaRP Plan. The project includes robust monitoring allowing project lessons to be shared in the future.

3. Project benefits will be sustainable or resilient over the project lifespan.

Project implementation will contribute to coastal resilience by allowing inland migration of coastal wetland habitat as sea levels rise. The project area is mapped as conserved resilient habitat which will serve as an important stronghold for plant and animal species facing habitat loss as a result of climate change. Project elements are designed for resilience. The off-channel enhancements and associated large wood structures have been designed to be functional over time and under a wide range of site conditions; they will work with the natural fluctuations in tide and streamflow dynamics and will function through climate change driven shifts in sea level, flooding, drought, and temperature. The alcoves are designed to function in concert with associated large wood jams to minimize sedimentation and maintain accessibility for aquatic species. The SF7 wetland complex is expected to experience coarse sediment deposition, especially at the upstream end. This is anticipated to add to the dynamic nature of the site where deposition and scour will create variable terrain and associated vegetation patches, and potentially result in an anastomosing stream channel/wetland complex over time. Sea level rise will increase the duration of inundation duration and accessibility of the Project's off-channel features. The engineered log jams are designed to withstand a 25-year flood event and should last until the logs decay which is estimated to be 25-30 years. However, these structures will naturally recruit woody material over time, so the resulting jams should persist beyond the lifetime of the project logs.

4. Project delivers multiple benefits and significant positive impact.

In addition to restoring habitat for endangered fish and wildlife species, the project will benefit a DAC; the site is mapped as a DAC at both the census tract and block group levels and the construction contractor is a local company that employs a local workforce.

5. Project planned with meaningful community engagement and broad community support.

The proposed Project was designed and planned in coordination with a Technical Working Group composed of technical and regulatory staff from public agencies, scientific and restoration experts, and local stakeholders. Additionally, TNC's overall salmonid habitat restoration program in the Ten Mile watershed has been supported by a broad coalition of public and private stakeholders. Conservation easements were acquired in close partnership with private landowners, the monitoring program and Habitat Enhancement Plan were developed with the input of staff from public agencies, scientific experts, and the local community, and the three rounds of Phase 1 implementation were completed by a local construction firm in close coordination with landowners, local foresters, and other local

resource experts. Additionally, all of this work was funded by a combination of public and private grants. As a result of this experience, TNC, PCI, and Wylatti have forged critical partnerships and fostered trust with both the local community and the permitting agencies for this kind of restoration work. TNC has not encountered any stakeholder opposition during its previous work in the lower Ten Mile and does not anticipate any opposition to this project.

PROJECT FINANCING

Coastal Conservancy	**$1,811,600**
NOAA	$357,687
Project Total	**$2,169,287**

Conservancy funding is anticipated to come from a Fiscal Year 2023/24 appropriation from the General Fund to the Conservancy to address "urgent sea-level rise adaptation and coastal resilience needs using nature-based solutions or other strategies" (The Budget Act of 2023, Chapter 38, Statutes of 2023 (AB 102)). The coastal resilience funds are available as described in Section 52 of Chapter 258 of the Statutes of 2021, which sets forth a detailed description of the purposes of the coastal resilience funds, including projects that protect coastal watersheds and increase the resilience of coastal ecosystems to climate change impacts. The proposed project is consistent with this funding source because it will restore and enhance riparian habitat for fish and wildlife in a coastal watershed that is an important Pacific salmon spawning and rearing river.

NOAA funding for the project provides $257,687 to complete construction management, engineering oversight, and Tier 1 implementation monitoring, as well as $100,000 to purchase the logs, rootwads, and other woody material required to complete construction of the project.

Unless specifically identified as "Required Match," the other sources of funding and in-kind contributions described above are estimates. The Conservancy does not typically require matching funds or in-kind services, nor does it require documentation of expenditures from other funders or of in-kind services. Typical grant conditions require grantees to provide any funds needed to complete a project.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project is undertaken pursuant to Chapter 5.5 of Division 21 of the Public Resources Code (Section 31220), which authorizes the Conservancy to award grants for coastal watershed restoration and protection projects that will improve and protect coastal and marine water quality and habitats. Only certain types of projects may be funded under Chapter 5.5.

Pursuant to Section 31220(b)(2), the Conservancy may award grants if the project "protects or restores fish and wildlife habitat within coastal and marine waters and coastal watersheds." Consistent with this section, the proposed project will restore and enhance instream and floodplain habitat for fish and wildlife, including listed species, in the South Fork Ten Mile River.

Pursuant to Section 31220(b)(6), the Conservancy may award grants if the project "restores coastal wetlands, riparian areas, floodplains, and other sensitive watershed lands." Consistent

with this section, the proposed project will restore riparian areas and floodplain in the Ten Mile River Watershed.

The Conservancy has consulted with the State Water Resources Control Board in the development of the project to ensure consistency with Chapter 3 of Division 20.4 of the Public Resources Code regarding the Clean Beaches Grant Program. (See Exhibit 4, Project Letters).

Section 31220(c) states that "projects funded pursuant to this section shall include a monitoring and evaluation component." Tier 1 Implementation Monitoring will be performed for the project which will include 1) assessment of the stability and functioning of engineered wood structures, 2) confirmation that habitat enhancement sites are functioning effectively, 3) evaluation of revegetation efforts, 4) confirmation that groundcover has established on disturbed areas and that those areas are stable, and 5) identification of any necessary adaptive or remedial measures. This project will also be folded into the ongoing Ten Mile River Coho Salmon Habitat Restoration Validation Monitoring Project, which was initiated in 2016 with the goal of quantifying the effect of restoration on the coho salmon population in the lower South Fork Ten Mile River. Monitoring activities will include snorkel surveys to quantify habitat utilization, PIT tag arrays to track movement in floodplain features, and outmigrant trapping to quantify smolt production over time. This monitoring project is expected to continue through 2026.

Section 31220(c) also states that projects funded pursuant to this section be consistent with applicable and relevant Integrated Regional Water Management programs, local watershed management plans, and water quality control plans adopted by the state or regional water quality control boards. The project is consistent with the relevant plans, as discussed in the "Required Criteria" and "Consistency with Local Watershed Management Plan/State Water Quality Plan" sections below.

CONSISTENCY WITH CONSERVANCY'S 2023-2027 STRATEGIC PLAN:

Consistent with **Goal 3.2: Restore or Enhance Habitats**, the proposed project will restore 4 acres of anadromous fish habitat.

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

The proposed project is consistent with the Water Quality Control Plan for the North Coast Basin (adopted by the North Coast Regional Water Quality Control Board in 2018) in that it will restore fish and wildlife habitat in a coastal watershed and coastal wetlands, including habitat for state- and federally-listed species, and thereby protect and enhance the following existing beneficial uses identified by the Water Quality Control Plan for the Ten Mile River watershed:

- Estuarine habitat
- Fish Migration
- Fish Spawning

- Cold Freshwater Habitat
- Wildlife Habitat

The proposed project is also consistent with the North Coast Regional Water Quality Control Board's 2005 Watershed Planning Chapter discussion of the Ten Mile River, in that it will restore habitat for coho salmon and other fish and wildlife in the Ten Mile River Watershed. The Watershed Planning Chapter identifies the following steps as important for improving salmonid habitat in the Ten Mile River watershed: reductions in sediment delivery, protection and improvement in riparian functions, increases in large woody debris for sediment metering and habitat, and modification of stream channel type. The project will protect and improve riparian functions, increase large woody debris, and restore and enhance floodplain habitat.

CEQA COMPLIANCE:

The proposed project is categorically exempt from the California Environmental Quality Act under Section 15333 of the CEQA Guidelines at Cal. Code of Regulations title 14 as a small habitat restoration. The project does not exceed five acres in size and will restore, enhance, and maintain coho salmon habitat. There will be no significant adverse impact on endangered, rare, or threatened species or their habitat. There are no hazardous materials at or around the project site that may be disturbed or removed, and the project will not result in impacts that are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. Upon approval of the project, Conservancy staff will file a Notice of Exemption.