



North Coast Regional Water Quality Control Board

December 17, 2021

Subject: CEQA Statutory Exemption for Restoration Projects (SERP) Lead Agency Determinations for the Garcia River Estuary Enhancement Project

Project Title: Garcia River Estuary Enhancement Project

Project Proponent: The Nature Conservancy

Contact: Peter van de Burgt, peter.vandeburgt@tnc.org

Project location: The Project is located within the Garcia River watershed, a tributary to the Pacific Ocean in southwest Mendocino County, California. The Project is 40 miles south of Fort Bragg, three miles northwest of the town of Point Arena, and is west of Highway 1. The center of the Project is mapped at 38.946074° N and 123.726887° W.

The Project includes a half-mile reach of the Garcia River mainstem, from river mile 0.58 to 1.1, as well as the adjacent upper and lower floodplains on the south side of the river. The proposed in-stream habitat structures and graded wetlands are located on federally owned land managed by the Bureau of Land Management as part of the Point Arena-Stornetta Unit of the California Coastal National Monument. Project access, staging, and spoils placement areas are located on private land on the north side of the estuary. The Bureau of Land Management holds a conservation easement over these private lands.

Project Summary and Expected Environmental Benefits: The Project will restore complex salmonid rearing habitat in the 0.5-mile-long middle estuary zone of the Garcia River. The interface between fresh water and saline tidal inflows in the middle estuary provides the food-rich environment and water quality conditions that salmonid smolts need during their biophysical transition to the ocean. The Project's goal is to create sufficient winter and spring rearing habitat in the middle estuary to support up to 54,000 juvenile coho, which is what is needed to provide winter rearing habitat commensurate with the watershed's summer rearing capacity (Stillwater Sciences 2013). Ultimately, the Project is estimated to potentially provide winter/spring habitat for approximately 68,000 coho juveniles (PCI 2018). Currently, the Garcia River is disconnected from the adjacent floodplains except during large storm events, and it is only connected for a few hours during each flooding event. This inundation pattern does not provide the long-duration (two weeks or more) inundation needed to develop primary and secondary biotic productivity on the floodplains. Nor does it provide the floodplain connectivity that juvenile salmon need during winter and spring flows to get out of high velocity channel environments and take advantage of the food-rich wetlands. Between high flows during the outmigration period, hundreds of juvenile salmon (coho, Chinook, and steelhead) have been observed congregating in and feeding from two small log debris jams in the estuary. Those log jams have subsequently broken apart and there is currently no complex shelter for juvenile salmonids to use during their critical estuary

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rearing period. With no in-stream shelter and little high flow refugia, juvenile coho and other salmon are vulnerable to high rates of predation and limited feeding opportunities in the Garcia River estuary, which severely limits the recovery potential in this critical coastal watershed that hosts one of the region's few remaining independent wild coho populations. The Project aims to address these problems and restore complex rearing habitat in the middle estuary by 1) re-connecting and re-creating two seasonally flooded accessible wetlands on the floodplains in the National Monument to provide long-duration inundated habitat for high flow refugia and floodplain feeding opportunities, 2) installing ten engineered log jams and six habitat structures to provide complex low-flow shelter elements that juvenile salmon need during their estuary rearing period, and 3) installing two engineered log jams to guide the river and create complex flow paths and connectivity to the floodplain inlets and habitat structures.

Project Description: Restoration of fish habitat in the Garcia River estuary requires implementation of a suite of high-priority habitat enhancement elements. The proposed approach is driven by a set of biological objectives, which, in turn, are influenced by various physical processes in the estuary. The Project's goal is to create sufficient winter and spring rearing habitat in the middle estuary to support up to 54,000 juvenile coho, which would provide winter rearing habitat commensurate with the watershed's summer rearing capacity. To meet this goal, the Project elements are designed to improve winter rearing and outmigration habitat and in-channel habitat diversity in the estuary through the construction of off-channel floodplain enhancements and instream large wood structures. As a result of the Project, approximately two acres of high-quality floodplain habitat would be made accessible to fish along with nearly 18,000 square feet of complex instream habitat throughout the middle estuary.

By reconnecting and enhancing existing floodplain habitat and building habitat structures, the Project aims to:

- recreate complex in-channel wood features in the form of engineered log jams (ELJs), that connect directly to off-channel floodplain refugia,
- maintain sediment transport velocities in the main channel to ensure fish accessibility to the upper floodplain,
- maintain an inlet to an off-channel alcove and an existing tidal island/channel, and
- provide newly created small seasonal ponds and alcoves excavated into the floodplains to provide long-duration, seasonally inundated habitat.

The specific Project elements are described in detail below.

Flooded Wetlands

The proposed off-channel habitat enhancements would focus on two sites in the middle estuary of the Garcia River known as the upper and lower floodplains. Both sites are located within existing floodplain habitats that have become largely disconnected from the estuary by elevated berms and incised banks that separate them from the channel.

Lower Floodplain

At the lower floodplain, construction would include excavation of an inlet and alcove, a network of floodplain channels, and two seasonal ponds. At the inlet, the elevation of the berm, which is currently between eight and ten feet, would be lowered to six feet to allow inundation of the floodplain during high winter base flow. An alcove would be created at the inlet, with the lowest elevations set at the water surface and transitioning upwards to conform with the existing

floodplain. Small floodplain channels with bottom elevations between six to seven feet would be excavated in the floodplain to increase inundation in the new ponds and across the wider floodplain expanse. Two new seasonal ponds with surface areas of 5,100 square feet and 5,300 square feet will be created.

Taken together, these off-channel features would create long-duration, seasonally inundated habitat that provides high flow refugia, winter rearing habitat, and a rich feeding environment for salmonids, particularly out-migrating smolts. These features are expected to be inundated continuously and accessible for juvenile salmonids for two to three weeks at a time after high flow events during the winter and spring rearing/outmigration period. The low elevation channels and alcove would allow salmonids to exit the floodplain as flows recede and prevent stranding. ELJs would be constructed on both the upstream and downstream sides of the inlet and alcove to provide cover for juvenile salmonids to forage and hold until flows are high enough to inundate the floodplain (ELJ construction is described in detail below).

Upper Floodplain

Currently, the upper floodplain becomes inundated during large rainfall events, but quickly becomes disconnected from the channel. This quick disconnection leads to stagnant conditions with poor water quality and may cause fish stranding. Off-channel habitat enhancement at this location would focus on excavating an alcove at the floodplain outlet to increase the duration of inundation and to maintain a connection to the channel during winter base flows. This would improve water quality and accessibility for salmonids in the floodplain's seasonally ponded areas.

Winter base flow at the floodplain outlet is approximately six feet. The existing berm at the outlet is eight feet in elevation and would be excavated down to four feet at its lowest point and would slope up to six feet throughout the alcove and then higher on its slopes to conform with surrounding ground elevations in the floodplain. During the 2019 and 2020 winters, a gravel bar and sediment deposit formed that threatens to block the floodplain outlet. A gravel bar ELJ would be constructed at the head of the gravel bar and a pilot channel would be excavated to push a portion of flows around the south side of the gravel bar, thereby maintaining sediment transport velocities moving down the main channel and away from the floodplain outlet. This would prevent the floodplain outlet from filling in with sediment and would turn the gravel bar into an island habitat feature.

Engineered and Large Wood Structures

ELJs and large wood structures would be constructed to provide extensive, spatially distributed, complex shelter habitat for salmonids within the middle estuary. The ELJs are designed to provide areas for juvenile salmonids and smolts to congregate and to provide protection from predation while the salmonids are feeding in the forage-rich estuary. A total of eighteen ELJs and habitat structures would be constructed at strategic locations throughout the 0.5-mile Project reach.

Bank Habitat ELJs

The Project would include construction of seven bank habitat ELJs. Each of the seven bank habitat ELJs are designed to provide approximately 2,275 square feet of complex instream habitat for salmonids. These structures are not designed to provide specific geomorphic functions; they are primarily habitat features. Each structure would typically

be constructed with 13 large logs, including eight rootwads, between 20 to 30 feet long, with an additional five vertical log anchors embedded 15 to 20 feet into the channel. The bulk of the logs would be placed between elevation two feet and elevation seven feet to provide complex habitat for salmonids over the full range of tides. However, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction.

The bank habitat ELJs would be located along the channel margins to provide significant cover where foraging opportunities are highest and velocities are lowest during winter high flows. These ELJs are intended to provide shelter from predators and allow salmonids to minimize energy expenditure in a food-rich environment. In the Project designs, the bank habitat ELJs have been spaced throughout the middle estuary along the lower floodplain and tidal islands to ensure that one or more complex shelter element would be available to salmonids at any given time in the dynamic estuary environment, given daily and seasonal fluctuations in tides, freshwater inflow, and resultant water quality conditions. This array of ELJs would provide fish with multiple options to find shelter and feed in the epibenthic zone at any given point in time. Conditions in the estuary can change dramatically from year-to-year, so the precise location of each bank habitat ELJ may be field fitted to accommodate existing conditions in the estuary at the time of construction. Decisions regarding final structure placement would be made by the Project engineer or its representative. The final locations of the structures would all be within the Project area, would not deviate substantially from the Project plans, and would fulfill the objectives of the structures as described above.

Island Habitat ELJs

Two Island Habitat ELJs would be constructed, one at the lower floodplain inlet and one at the head of the lower tidal island. These structures are designed to provide complex habitat and stability at areas of split flow. Each structure would typically be constructed with ten logs, including five rootwads, and six vertical anchors. The island habitat ELJ at the lower floodplain inlet will include two additional rootwads to provide more cover and complexity adjacent to the enhanced off-channel habitat features. Each structure would provide approximately 2,500 square feet of habitat. The bulk of the logs would be placed between elevation two feet and elevation seven feet to provide complex habitat for salmonids over the full range of tides. As with the other ELJs, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction.

The island habitat ELJ at the lower tidal island is designed to maintain the existing tidal island feature and its adjacent side channel by stabilizing the point of the island and continuing to split a portion of high flows from the main channel. This island habitat ELJ would likely recruit additional woody debris over time, providing ample complex habitat at the inlet to a low flow side channel. Assessment of salmonid utilization of the Garcia River estuary found that juvenile salmonids often congregated at a previous woody debris jam in this location. The other island habitat ELJ would be located at the downstream bank of the lower floodplain inlet. This ELJ would stabilize the excavated bank and help backwater a portion of flows into the lower floodplain's off-channel habitat.

This ELJ, in conjunction with the bank jam at the upstream bank of the inlet, would provide cover at the inlet to low velocity, high forage opportunity floodplain habitat.

Battleship ELJ

The battleship ELJ is essentially a combination of an island jam flanked by portions of two bank jams. This large structure is designed to provide at least 3,200 square feet of instream habitat for salmonids in the middle estuary where the channel splits. The ELJ would consist of 15 logs and 11 rootwads, ranging in length from 20 feet to 35 feet, and would be stabilized by 11 vertical anchor logs. As with the other ELJs, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction.

This feature will be placed at the former location of the gravel head of the upper tidal island, at the upstream end of the island head extension (described below under Reuse of Floodplain Soils). After a several large storm events in February 2018 and 2019, this gravel head receded approximately 100 feet. The battleship ELJ will be constructed in the water where the gravel head used to be and will maintain the point of the tidal island, pushing a portion of flows from the main channel into the tidal channel. The battleship ELJ would accrue additional woody debris, create deeper pools, temporarily stabilize the re-used floodplain soils, and potentially build up the gravel bar behind the structure that was washed away in 2019. Though some dynamic geomorphic changes are anticipated to occur, the primary purpose of this structure is to provide a significant amount of complex in-channel habitat at the entrance to a side channel.

Deflection ELJ

A large deflection ELJ would be placed at the upstream end of the Project area near the right (north) bank of the river, across from the upper floodplain. This ELJ is designed to maintain high flows and sediment transport velocities moving down the main channel by directing flows to the center of the channel and towards the bar apex ELJ. This structure would reduce ongoing erosion on the north bank of the river and would work in concert with the bar apex jam to maintain fish access to the floodplain by preventing continued aggradation of gravels and sediment in front of the upper floodplain outlet. The deflection jam would provide approximately 2,500 square feet of instream habitat for salmonids. The structure would be composed of 16 logs, 40 feet in length, and 12 vertical log anchors vibrated deep into the channel bed to provide stability. As with the other ELJs, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction. The feature would likely recruit woody debris moving down the channel, increasing in-channel complexity and cover.

Gravel Bar ELJ

The gravel bar ELJ would be placed just downstream of the deflection ELJ at the head of the active gravel bar and adjacent to the excavated pilot channel at the upper floodplain outlet. Composed of six large logs, seven rootwads, and five vertical anchor logs, this structure would provide approximately 900 square feet of instream habitat. The area behind the gravel bar ELJ would be backfilled with alluvial gravels and soil from the upper floodplain excavation would be placed on the gravel bar. Combined with

excavation and floodplain soil placement, this ELJ would turn the gravel bar into more of a vegetated mid-channel island and reduce the threat of the nearby upper floodplain outlet becoming blocked off by the migrating gravel bar. During winter base flows and higher flow events, the gravel bar ELJ would split the high velocities directed towards it from the deflection ELJ. This would maintain sediment transport velocities down the left side of the river and reduce aggradation in front of the floodplain outlet. As with the other ELJs, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction.

Stornetta Bank Jam

The Stornetta Bank jam would be constructed along the right (north) bank behind the deflection ELJ and would span approximately 400 linear feet of the streambank. This structure would consist of 21 large logs, four rootwads, 20 salvage trees, and 12 angled log anchors and 13 vertical log anchors. As with the other ELJs, the exact composition of logs, rootwads, and their placement may be field fitted to conform with existing conditions at the time of construction.

Multi-log Habitat Structures

Five multi-log habitat structures would be placed at the upper floodplain outlet and adjacent alcove. Two multi-log habitat structures would be placed along the downstream bank of the outlet. These structures would include five rootwads and two to three log anchors. The remaining three multi-log habitat structures would consist of two rootwads and two log anchors and would be spaced throughout the adjacent excavated alcove. Ultimately, the final locations of these habitat structures within the general area of the alcove would be field fitted by the Project engineer during construction to conform with existing conditions and to maximize habitat benefits.

All of these habitat structures would be packed with salvage wood and slash to increase complexity. These five habitat structures are intended to provide valuable transition habitat, with cover for salmonids to hold and feed while entering or exiting the adjacent floodplain habitat.

Reuse of Floodplain Soils

The proposed excavation of the floodplain habitat features would generate a significant amount of excess high-quality floodplain soil. Recognizing the unique importance of sediment deposition and transport dynamics in estuarine environments, the Project has been designed to retain this resource within the estuary system. As a result, the Project will beneficially reuse the excess floodplain soils at strategic locations within the middle estuary.

Lower Floodplain Soils – Island Head Extension

At the lower floodplain, excavation of the off-channel habitat features would be anticipated to generate approximately 1,700 cubic yards of excess floodplain soil. This soil would be reused to extend the head of the tidal island adjacent to the lower floodplain. The approximately 1,700 cubic yards of floodplain soils would be placed between the battleship ELJ and the existing nose of the tidal island. Previously, the tidal island naturally extended close to the proposed location of the battleship ELJ, however due to erosion from high flow events the tidal island retreated to its current location between 2019 and 2021. The proposed reuse of the lower floodplain soils in this location would recreate the previous configuration of the tidal island. Because this soil

would be placed in what is currently open water at the head of the tidal island, a pad made from gravel and slash material will be created to provide a stable base for placing the soil and prevent it from being washed out by daily tidal fluctuations during construction. The 1,200 cubic yards of gravel required to create this pad would be sourced from excavation of the pilot channel in the gravel bar at the upper floodplain outlet. Additionally, a log choker would be constructed around the perimeter of the island head extension to contain the freshly placed floodplain soils and to provide complex edge habitat at the base of the feature.

This island head extension, and its associated gravel/slash pad and log choker, has been designed to be stable for the initial construction period, but is expected to change over time and evolve as part of the complex system of sediment transport and deposition in the estuary. Eventually, the soils placed at island nose extension may wash out, or the island may further aggrade. The overall intent is to retain the high-quality floodplain soils within the natural system of the estuary in a manner that provides habitat benefits for salmonids.

Upper Floodplain Soils – Mid-channel Island

Excavation of the upper floodplain alcove would generate approximately 1,300 cubic yards of excess soil. This soil would be reused on the nearby gravel bar, across the excavated pilot channel from the floodplain outlet and behind the gravel bar ELJ. The excavated soils from the upper floodplain would simply be placed on top of the existing gravel bar in a layer that is just over three feet deep at maximum, transitioning from existing ground on the gravel bar to an elevation of approximately eleven feet at the highest point. After placement, the soil would be planted and seeded. The intent of this feature is to use the high-quality and nutrient-rich excess floodplain soils to build up the gravel bar and create a feature that more closely resembles a vegetated mid-channel island.

Native Vegetation Salvage and Revegetation

Topsoil and native vegetation from the wetlands will be collected prior to excavation to provide local material for replanting the area following excavation activities. Additional plant material may be brought to the site to supplement salvaged material as needed. Care will be taken to minimize impacts to surrounding wetlands and riparian zones. Groundwater encountered during site excavations will be pumped to an approved floodplain area where it will infiltrate and not deliver turbid water to the river. Revegetation of the upper and lower floodplain wetland will include plug plantings, seed bank replacement, and salvaged wetland plants and willow cutting plantings, all revegetation will occur with native seeds and locally collected material.

Access and Staging

Existing farm roads will be used to access the river and the upper and lower floodplain areas. Staging for equipment and construction material will occur in specified agricultural fields on the private land on the north side of the river.

Access to the lower floodplain and river will require temporary installation a floating bridge with a 70-ton capacity using flex-float series modular pontoon. The floating bridge will be removed when construction activities are complete. The culverted crossing will be located at the site of an existing cattle crossing used by the by cattle to access grazing land on the BLM Monument. The culverted crossing will be constructed from salvaged gravels and multiple culverts.

Staging areas will be prepped by removing and storing topsoil. At the end of the construction period the contractor will remove temporary access materials and restore the access routes on the floodplains through decompaction, seeding, and mulching. Repairs to the ranch roads will be made as needed to restore to pre-project conditions, and staging areas will be restored to preconstruction conditions.

Mobilization and Demobilization

Equipment and materials will be hauled to the site. At the end of the Project, remaining materials and equipment will be hauled off the site. Invasive species decontamination and spread-prevention measures will be performed in accordance with the Project's Invasive Species Prevention Plan.

Lead Agency Determinations, per Public Resources Code 21080.56

21080.56. (a): As lead agency, the North Coast Regional Water Quality Control Board has determined that the Project is intended to restore and enhance habitat for coho and other salmon species and will directly contribute to the recovery of the California Central Coast evolutionarily significant unit of coho salmon. The Garcia Estuary Enhancement Project will restore complex salmonid rearing habitat in the 0.5-mile-long middle estuary zone of the Garcia River. The Project will restore complex rearing habitat in the middle estuary by providing fish access to long-duration inundated habitat for high flow refugia and floodplain feeding opportunities, by providing complex low-flow shelter elements that juvenile salmon need during their estuary rearing period, and by creating complex flow paths and connectivity to adjacent floodplains and constructed in-river habitat structures. The Project's goal is to create sufficient winter and spring rearing habitat in the middle estuary to support up to 54,000 juvenile coho, which is what is needed to provide winter rearing habitat commensurate with the watershed's summer rearing capacity (Stillwater Sciences 2013). Ultimately, the Project is estimated to potentially provide winter/spring habitat for approximately 68,000 coho juveniles (PCI 2018). Once implemented, the Project will facilitate the recovery of endangered coho and other salmonids in the Garcia River watershed by substantially enhancing the quality and quantity of winter and spring rearing habitat in the estuary. The engineered wood structures will create over 32,800 square feet of high-quality, spatially distributed, instream shelter habitat. These wood structures will be adjacent to the two acres of newly accessible, seasonally inundated floodplain rearing habitat. The combination of the two habitat elements will provide connected, low-predation risk, high-forage opportunity habitats over the estuary's full range of flow conditions to maximize juvenile salmonid growth and survival. Once implemented, the Project will facilitate the recovery of endangered coho and other salmonids in the Garcia River watershed by substantially enhancing the quality and quantity of winter and spring rearing habitat in the estuary.

21080.56. (b): As lead agency, the North Coast Regional Water Quality Control Board has determined that the sole purpose of the project is to enhance habitat for coho salmon in the Garcia River estuary. The Project has no incidental public benefits. The Project is located on Bureau of Land Management coastal monument land that already has public access and on private land that does not afford public access. Public access will not change with implementation of the Project. The Project's goal is to create sufficient winter and spring rearing habitat in the Garcia River middle estuary to provide winter rearing habitat commensurate with

the watershed's summer rearing capacity, and all construction activities support attainment of the salmonid habitat restoration/enhancement goals.

21080.56. (c): As lead agency, the North Coast Regional Water Quality Control Board has determined that the Project will result in long-term net benefits to climate resiliency, biodiversity, and sensitive species. The off-channel floodplain enhancements and associated ELJs have been designed to be stable and functional over time and under a wide range of site conditions; they will work with the natural fluctuations in tide and streamflow dynamics of the estuary, and will function through climate change driven shifts in sea level, flooding, and temperature. The floodplain features should experience minimal sedimentation, as extensive restoration work has been done in the upper watershed to reduce erosion as part of the State's first sediment TMDL. Additionally, sea level rise will only serve to increase the duration of inundation and accessibility of the Project's floodplain features. See attached Basis of Design Report, section 4.2.

Protection and conservation measures will be implemented during construction to avoid and minimize impacts to sensitive resources and to protect the environment to the greatest extent practicable. The construction work window will be limited to the summer low-flow period from June 15 to October 15. The project will require only limited dewatering and aquatic species relocation will be minimized. Additional protection measures are designed to avoid impacts on federally listed Point Arena mountain beaver and California red-legged frogs and other wildlife species and their habitats, protect native plants and plant communities, protect native fish and aquatic species, protect nesting birds, and protect water quality. Following construction, the site will be stabilized and erosion control measures will be implemented. Revegetation will be implemented as per the revegetation plan in the construction documents and will include native plant salvage and replanting, wetland plug planting, willow staking, re-seeding of disturbed uplands, and restoring access and staging areas to pre-construction conditions. A monitoring plan will be developed for the Project and will ensure that the plantings are successful, the Project elements are stable, and the overall Project meets its success criteria. Development of a monitoring plan is required for a NOAA-Restoration Center planning grant awarded to TNC in 2019. TNC will submit the draft project-specific monitoring plan with ecological permit applications in early 2022, and the final monitoring plan will include the monitoring time period required by the resource agencies. Revegetation success will be monitored through annual assessments of plant survival and establishment of wetland species cover. If revegetation metrics are falling below targets, needs for maintenance measures or remedial actions will be identified. These could include invasive species removal, replanting, improved herbivory protection, supplemental irrigation, or other measures.

The proposed habitat enhancement elements in the Garcia River Estuary have been designed to not require long-term maintenance or management. The floodplain excavations and large wood placement has been designed to maintain long-term connectivity between the floodplain and river through natural geomorphic processes. While minor sedimentation is expected on the reconnected floodplain areas and in the off-channel ponds, the rate of sedimentation is not expected to exceed natural background rates. The floodplains will maintain connectivity and provide improved habitat conditions for salmonids in perpetuity, especially as sea levels rise. The engineered log jams have been designed to remain stable for the lifespan of the wood (approximately 25 years). The log jams are also anticipated to recruit additional woody debris over time and will likely grow and evolve as conditions change. They will continue to provide habitat value over a broad range of flows and channel bed conditions as deposition and erosion patterns shift in this dynamic environment.

The Project will provide climate resiliency for salmonids and their habitat in the Garcia estuary by constructing instream and floodplain habitat features that function across a wide range of potential tides and sea levels, thereby providing critical refugia and feeding habitat for salmonids that will persist even in the presence of rising sea levels and increased frequency of extreme weather events. The enhanced floodplain features will promote biodiversity by providing transitional habitat that ranges across elevations, from upland to river, and is adaptive to changes in inundation patterns. Increased frequency and duration of inundation of the floodplains will also benefit wetland species biodiversity and will likely benefit a range of other species that are not explicitly targeted by the restoration Project, including amphibians and resident and migratory birds. Most of all, the Project will significantly enhance the availability of instream and floodplain habitat for critically endangered coho salmon in the Garcia estuary. The Project is anticipated to provide winter and spring rearing habitat for approximately 68,000 coho juveniles, restoring winter rearing habitat to a level commensurate with the watershed's summer rearing capacity and thereby furthering efforts to recover coho populations in Central California Coast evolutionarily significant unit.

All lands within the Project area are either within the BLM-owned and managed Point Arena-Stornetta Unit of the California Coastal National Monument or under conservation easement and are thus protected in perpetuity. BLM has consulted with the SHPO and tribal members of the Manchester Band of Pomo Indians of Manchester Rancheria about the Project. Access to the Project site was redesigned to avoid disturbing cultural sites within the BLM Monument. The Project will be accessed through private land under conservation easement. BLM has also initiated consultation with USFWS regarding protection of federally listed species, and the Project was designed to avoid impacts on the three species addressed in the Biological Assessment. USFWS has tentatively concluded the Project would not likely to adversely affect the species addressed.

21080.56. (d): As lead agency, the North Coast Regional Water Quality Control Board has determined that the Project does not include any construction activities, except those solely related to habitat restoration.

Proposed construction activities are intended solely to enhance instream and floodplain habitat in the middle estuary of the Garcia River. The following construction activities are proposed:

- Mobilization/Demobilization. The contractor will coordinate construction access, schedule, timing, and safety protocols. Project start-up meetings and general construction materials procurement will occur. Equipment and materials will be hauled to the site. At the end of the Project all remaining materials and the equipment will be hauled out. Invasive species decontamination and spread-prevention measures will be performed in accordance with the Project's Invasive Species Prevention Plan.
- Access and Staging. The contractor will prepare the access and staging areas for construction by prepping staging areas (remove and store topsoil), improving access routes sufficient to handle construction traffic, installing temporary boundary fencing, installing temporary bridges/crossings across the Garcia River estuary, grubbing access routes through riparian zones, and installing composite mats for driving across wetland areas. At the end of the construction period, the contractor will remove temporary access materials and restore the access routes on the floodplains through decompaction,

seeding, and mulching. Repairs to the ranch roads will be made as needed to restore to pre-project conditions.

- Floodplain Excavations. The contractor will excavate and grade the flooded wetland inlets and floodplain areas per the construction plans. Care will be taken to minimize impacts to surrounding wetlands and riparian zones. Excess excavated floodplain soils will be used to build-up existing gravel bars and provide enhanced in-stream habitat, as shown on the construction plans. Any groundwater encountered during site excavations will be pumped to an approved floodplain area where it will infiltrate and not deliver turbid water to the channel. Coir fabric and coir logs will be installed per plans to provide erosion control until plants are established.
- Engineered Log Jam and Large Wood Habitat Structure Installation. The contractor will construct twelve engineered log jams and six multi-log habitat structures. Installation of the structures will occur wet, and will require fish exclusion measures, as well as turbidity control approaches. The structures include both vertical log anchors and boulders for ballast. Installation and access will be affected by daily tidal fluctuations. On two of the structures (Upper Bar Apex ELJ and the Battleship ELJ), adjacent gravel bar material will be excavated to form a channel and the material placed behind the structures along with the excess floodplain soils as described above.
- Revegetation. The contractor will salvage select plant species and set up an on-site nursery for maintenance of these plants during construction. These species will be replanted following construction in accordance with the revegetation sheets in the construction plans. California Conservation Corps work crews will revegetate the excavated flooded wetlands using plug plantings of wetland species. Willow sprigging around ELJs and habitat structures will also occur, as shown on plans.

Lead Agency Certification

I certify that this Project meets all the requirements described in Public Resources Code section 21080.56, and that I have submitted all the determinations required therein necessary to obtain the concurrence of the Director of Fish and Wildlife.

Sincerely,

Mattias St. John
Executive Officer

Attachments:

- 100% Designs
- Basis of Design Report
- Biological Assessment for USFWS