

September 11, 2017

**Public Notice for Water Quality Certification and/or Waste
Discharge Requirements (Dredge/Fill Projects)**

**Humboldt County
Eel River Estuary and Centerville Slough Enhancement Project
40.6064, -124.3286¹
ECM PIN CW-821075, WDID No. 1B16008WNHU**

Humboldt County

On April 24, 2017, the North Coast Regional Water Quality Control Board (Regional Water Board) received an application from the Wildlands Conservancy (Applicant), requesting federal Clean Water Act, section 401, water quality certification (certification) for activities related to the proposed Eel River Estuary and Centerville Slough Enhancement Project (Project) in Humboldt County.

Receiving Waters

The proposed Project would disturb Centerville Slough and wetlands adjacent to the Eel River and within the Salt River watershed, within the Ferndale Hydrologic Sub-Area (Basin Planning Area No. 111.11). Two perennial streams, Russ Creek and Shaw Creek enter the Project area to the south.

Project Description

Project Purpose

The Project purpose is to improve geomorphic and ecosystem functions of the Eel River Estuary to enhance habitat for native fisheries and aquatic species, and support waterfowl and wildlife species.

Project Area

The Project area is within the approximately 1,200-acre Eel River Estuary Preserve (ERP), located approximately four miles west of the City of Ferndale in Humboldt County (see Figure 1 below, *Project Area*).

¹ WGS84 datum

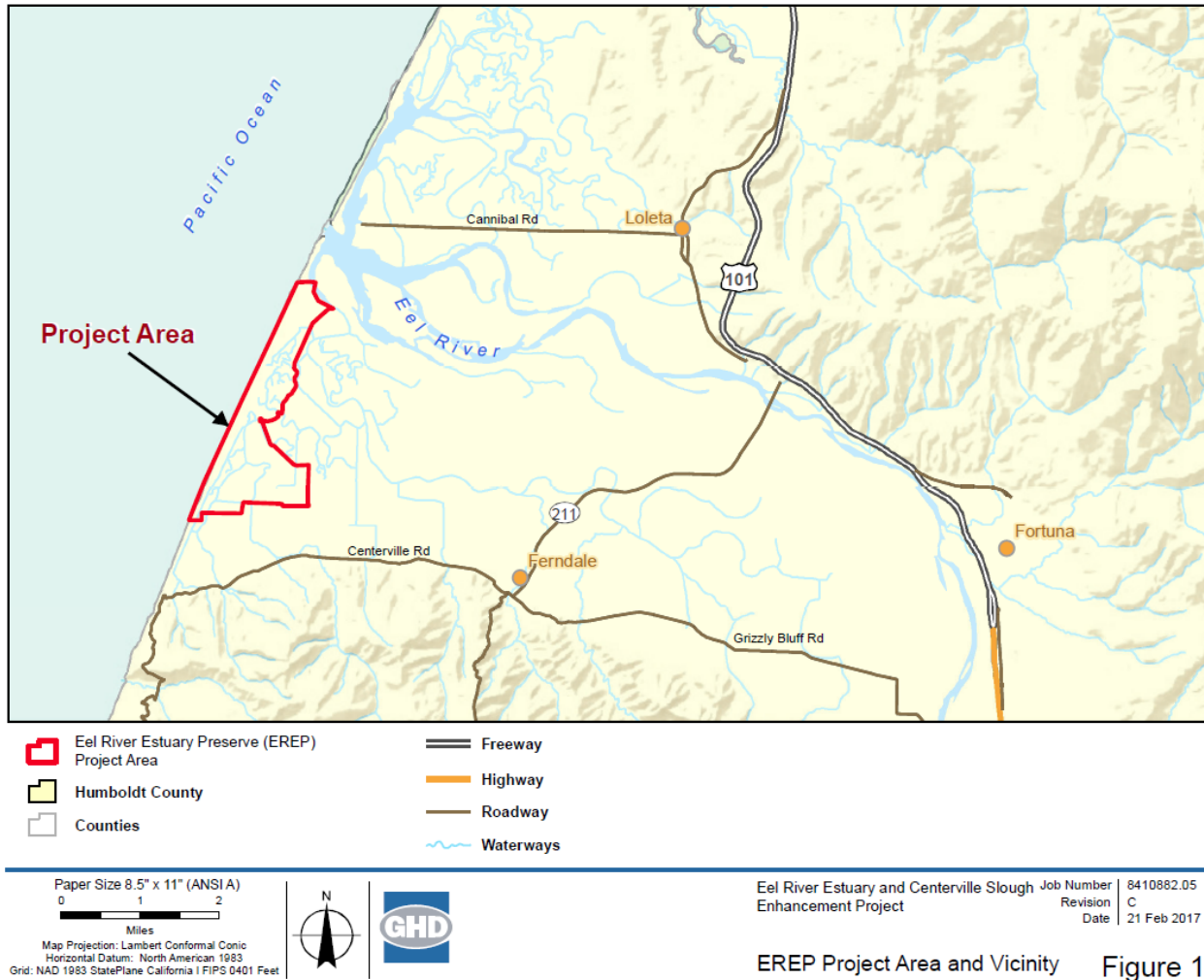


Figure 1: Project Area

Project Setting

The Project area currently includes grazing land, tidal salt marsh, brackish marsh, riparian scrub, sloughs/open water channels, freshwater ponds and ditches, and nearshore dune ridges and swales. The Project area also includes a partially developed upland area with agriculture-related buildings at the eastern portion of the Project that can be accessed from Russ Lane. Prominent water features within the Project area include Russ Creek, remnant Centerville Slough, Cut-Off Slough, the Western Drainage Ditch, as well as smaller seasonal slough channels and drainage ditches.

Project Goals

The specific Project goals are:

- Improve access to restored aquatic habitats for salmonids and other aquatic-dependent species.
- Improve drainage sediment loads more effectively using both passive, natural processes and active management approaches, while enhancing tidal influences by reestablishing connectivity between Russ Creek and a rehabilitated Centerville Slough;
- Adapt to and increase resiliency to sea level rise;
- Reduce salt water intrusion;
- Enhance drainage;
- Establish avulsion management areas for Russ Creek;
- Enhance freshwater pond habitat for water birds and other native aquatic-dependent species;
- Suppress invasive species; and
- Establish long-term water level management.

Project Elements

Generally, the proposed Project would convert an area that is predominantly diked pasture land to a complex of estuarine and tidal slough channels, freshwater streams, freshwater waterfowl ponds, and agricultural pastures. Project elements are shown graphically, below in Figure 2, *Project Area Details*.

Project elements include:

- **Cut-Off Slough Tidegate Retrofit and Repair**
Cut-Off Slough connects the Project area to the Salt River and is currently the only drainage conduit between the Project area and the Eel River. The existing structure is broken, limits aquatic organism passage, and blocks tidal inflow. The tidegate structure would be repaired to allow tidal inflow and freshwater outflow.

The existing tidegate structure consists of six top-hinge tidegates and would be replaced by aluminum or steel side-hinged gates. The tidegates would be replaced incrementally, such as one or two per year over a three to five year period, to reduce abrupt hydraulic changes. The Applicant has prepared a Water Level Management Plan describing water level and quality monitoring

that would be used to inform the replacement schedule. Rock slope protection would be placed on the levee adjacent the outboard tidegate wing walls in locations exhibiting active erosion.

- Inner Marsh Muted Tidegate

The Inner Marsh is an approximately 150-acre area surrounded by a dike of varying elevations on its northern, eastern, and southern boundary, and by dunes on the western boundary. The Inner Marsh is hydraulically connected with culverts to Centerville Slough and Cut-Off Slough, however it remains controlled by the existing tidegate at Cut-Off Slough.

Seasonally muted tidal exchange would be introduced to the Inner Marsh via new tidegates located on the northern end of the Inner Marsh near the existing tidegate structure. Whereas introducing a full tidal cycle would convert the Inner Marsh to mudflat habitat, a muted cycle would allow varied habitats to develop—approximately 115 acres of muted tidal wetlands would be reconnected to tidal flow to create a mosaic of diverse open aquatic, mudflat and salt marsh habitats.

The new tidegate structure would have four gates, three side-hinge (10-foot-high, 8-foot-wide) and one top-hinge (6-foot-high, 6-foot-wide). The side-hinge gates would be controlled by a tidegate regulator and the top-hinge gate would be controlled manually. The structure would be supported on a slab foundation with concrete cut-off walls to prevent under-seepage.

Tidal elevations would be limited to a maximum of 2.5-feet during the wet season (November-April) and approximately 5-feet during the summer months. For flood control purposes, these amounts would be adjusted based upon precipitation patterns affecting flow stages of both Eel River and Russ Creek.

- Inner Marsh Habitat Enhancement

Because the existing Inner Marsh plain elevations are relatively low, a mosaic of mudflat as well as low- mid- and high-marsh habitats are expected to develop after muted tidal exchange introduction. In addition to these re-connected habitats, several additional tidal wetland restoration components focused on aquatic habitat creation for tidewater goby as well as salmonid rearing and refugia are proposed, as described below.

Within the east-central portion of the Inner Marsh are remnant slough channels formerly connected to Cutoff Slough. These channels became disconnected from Cutoff Slough after construction of a perimeter berm between Centerville Slough and the Inner Marsh. Approximately 4,320 linear feet of interconnected channels would be graded to connect Centerville Slough with the currently disconnected channels of the Inner Marsh. This

would increase the length of interconnected channels and would reintroduce tidal exchange to the disconnected channel segments. Internal slough channels would be constructed to provide adequate water depths and conditions for expansion by native eelgrass, which currently occurs in low abundance in existing channels.

Approximately 3.5 acres of alcove ponds and side channels would be graded within the Inner Marsh, off of the main Centerville Slough channel. This work would include increasing channel dimensions between the ponds and Centerville Slough to ensure ample tidal exchange to the ponds. This work would also require removing channel fill berms in several locations. An important component of this grading work is to create ponds that are deeper than the connector channel depths in order to promote and sustain ponding during low (ebb) tide conditions, when most connector channels dry down. Proposed pond depths would vary in order to generate habitat diversity amongst ponds.

Approximately 20 in-channel and marshplain wood structures would be installed in the Inner Marsh to introduce habitat cover and hydraulic diversity. The ultimate number and type of wood structures would depend upon availability of local material generated during project clearing and grubbing as well as availability from offsite sources.

New culverts would be installed between the Inner Marsh and the existing outer Cut-Off Slough channel. These culverts would be installed through the existing outer levee immediately west of the existing Cut-Off Slough tidegate structure. The existing culvert at the south end of the Inner Marsh berm would be removed and replaced with three new 5-foot-diameter gated culverts to allow positive flow only between Cut-Off Slough and the Inner Marsh.

- **Re-establish Centerville Slough**
In order to increase aquatic habitat and provide for future connectivity and enhancement of water, fish, and wildlife, Centerville Slough would be restored by excavating approximately a 1.25-mile channel along its historic alignment. The re-established channel would provide a fresh-brackish water ecotone and potential eelgrass habitat. Material excavated from Centerville Slough would be reused to construct refurbished berms and/or placed in the designated upland agricultural reuse area.
- **Improve Existing Access Roads**
Dikes within the Inner Marsh would be widened in discrete areas and resurfaced with gravel to improve access reliability for operation and maintenance needs. Turn-out areas with interpretive signage are also proposed.

The seasonal access road on the west side of the Inner Marsh would be resurfaced and elevated approximately 6 inches to approximately 8-foot elevation. Culverts would be replaced and/or installed along the road prism in areas of poor drainage.

In order to retain land management and facilitate access, one new approximately 75-foot-long bridge is proposed over the reestablished Centerville Slough channel northeast of the "South Barn." The bridge would facilitate future southward continuation of the Centerville Slough. Rock slope protection would be placed at the base of the bridge footings for scour protection.

Rock slope protection would be placed along the footings of the existing Centerville Slough and Russ Creek bridges as a preventative erosion control measure.

- Russ Creek Re-establishment and Connection to Centerville Slough
Approximately 3,000 linear feet of Russ Creek channel would be established following a historic Russ Creek alignment, which would then connect to the re-established Centerville Slough. The channel would have floodplain connectivity and side channel habitat providing a fresh-brackish water ecotone and in-channel flood storage.

Approximately 3.5 acres of riparian planting would be restored adjacent the re-established Russ Creek channel.

- Russ Creek Sediment Management Areas
Floodwaters from the Wildcat Hills watershed contribute large sediment volumes to Russ Creek at the bottom of the watershed. The current agricultural land use in the Project vicinity preclude the possibility of restoring the Project area to full historic tidal and floodplain functions. Sediment management is proposed to prevent the Project area from filling with sediment and exacerbating local flooding problems.

Sediment management would involve establishment of a sediment management area (SMA) in an avulsion-prone area near the confluence of Russ Creek and Centerville Slough. The SMA would be constructed to emulate a distributary channel network within an alluvial fan by separating floodplain and low-lying areas with low-relief berms. The SMA would be subject to regular inundation, sedimentation and periodic rerouting of Russ Creek through natural fluvial processes. Accumulated sediment in the SMA would be reworked (leveled or tilled), seeded and irrigated as needed to enhance agricultural productivity in those areas.

In the event the SMA performance is not capable of eliminating undesirable sediment accumulation in Russ Creek and/or Centerville Slough, or if sediment accumulation poses an undesirable threat to property or project performance, excavation may be proposed on a small scale within Russ Creek and/or Centerville Slough corridor (excavating specific areas of the channel and SMA). Larger-scale excavation/removal may be necessary as well as breaches in the proposed guide berm to provide additional sedimentation capacity. Routine vegetation maintenance within the SMA would occur during late summer or early fall months when Russ Creek flows are lowest to minimize potential erosion and sediment transport and to minimize impacts to salmonid and wildlife species.

The Regional Water Board may require annual SMA reports detailing SMA performance, volume estimates of annual sediment accumulations and removal, and any proposals for removal or grading of sediment. Removal or grading of sediment would require prior approval of the Regional Water Board, under the permitting mechanism of the Project certification.

- **Pond Enhancement**
Existing freshwater ponds adjoining Centerville Slough, currently managed for waterfowl, would be deepened and re-configured with controlled inlets/outlets to enhance their habitat value and minimize long-term maintenance. The ponds would be primarily filled by seasonal rainfall and by existing wellheads, if needed.
- **Re-establish Dune Configuration**
Significant dune overwash disturbance has occurred at two Project area locations: a northern area approximately 15 acres and an approximately 3-acre central area. The disturbance and movement of this sand unconfined in any remaining dune network threatens the Western Drainage Ditch with infilling, a trend that threatens the safety and land use of the Project area and properties to the south, all of whom are parties to a formal drainage easement over the Project area. This movement has also facilitated breach and wave overwash events that have inundated hundreds of acres of pasture with salt water, impacting their agricultural utility and causing conversion to salt marsh. As a result, the Applicant is proposing the following actions at the two sites:
 - **Mechanical Dune Construction** - The proposed Project design would include mechanically elevating and reconstructing the dunes that have been lost to overwash events. Sand skimmed from the overwash areas and adjoining areas would be used to construct new dunes to similar heights and widths of adjoining dunes and over a total area of approximately 8 acres.

- Sand Fence Installation - Sand fence would be installed in combination with the constructed dunes, or areas prone to overwash, in order to promote the recruitment of sand for dune rebuilding purposes.
- Large Wood (Wrack) Placement - Recognizing that natural recruitment of large wood assists in the recruitment of sand on dunes, the final designs may include large wood placed at select locations in wave overwash areas to promote dune rebuilding.
- Planting Native Vegetation - Native plants capable of encouraging dune stability would be planted as part of a revegetation strategy.
- Accommodating Natural Dune Building Processes - The Project design and configuration of Project features would ensure the ability of dunes to migrate eastward, thereby facilitating the reestablishment of zones of recruitment in the dune network capable of protecting the dune system from episodic disturbance.

These proposed actions are intended to convert the overwash areas back to dunes thereby directly impacting known Western Snowy Plover habitat. To offset the loss of this habitat, the Applicant proposes to create similar habitat by removing non-native beach grass on the dune strand west of the Outer Salt Marsh. Approximately 20 acres of non-native beach grass would be removed from this area using a combination of mechanical, hand removal, burning and/or herbicide methods. An additional approximately 3.7 acres would be removed at the dune re-configuration sites.

- Public Access and Preserve Management Improvements
The Eel River Estuary Preserve would be managed for natural resources enhancement, agricultural production, and for outdoor recreation and education opportunities. Proposed work to further these management objectives include the following activities:
- Main Barn and North Barn - Minor improvements to the parking area and signage would occur at this location. A vault toilet would also be installed at this location.
- Access Improvements - Several appurtenant structures would be installed on Russ Lane such as new gates, an entrance sign, and suitable lighting. Additional area and fencing would be added to provide adequate turn-arounds and livestock protection. The primary existing access routes would be improved with gravel surfaces and elevated and failing road drainage culverts would be replaced. The existing access road connecting the Headquarters Barn to the North Barn would be widened to 16-feet to

accommodate a range of vehicle uses for agricultural and operational needs. Other existing access roads would be maintained at approximately 12-foot wide.

- Dune Walk and Overlook – A short boardwalk and trail with an overlook would take visitors along an existing trail, near the North Barn, into an intact dunefield for wildlife viewing.
- Kayak Put-In and Take-Out – Kayak ‘put in and take outs’ would be installed near the Northern Barn parking area and northern Inner Marsh area. The put in and take outs would consist of foot accessible ramps with all-weather gravel surfaces that would be approximately five to ten-feet wide and follow the ground gradient to provide sufficient depth for launching over a range of anticipated water levels. Kayak access to the Inner Marsh would facilitate post-project monitoring of the Inner Marsh, aquatic educational programs, and minor recreational use by visitors. Interpretative signage would be installed at each put in and take out informing visitors of appropriate kayaking locations and tidal conditions.
- Livestock Exclusion Fencing – Wildlife-friendly fencing is proposed along most channels, riparian and other sensitive habitats adjoining designated agricultural areas to provide livestock exclusion and would be consistent with seasonal grazing rotation practices.

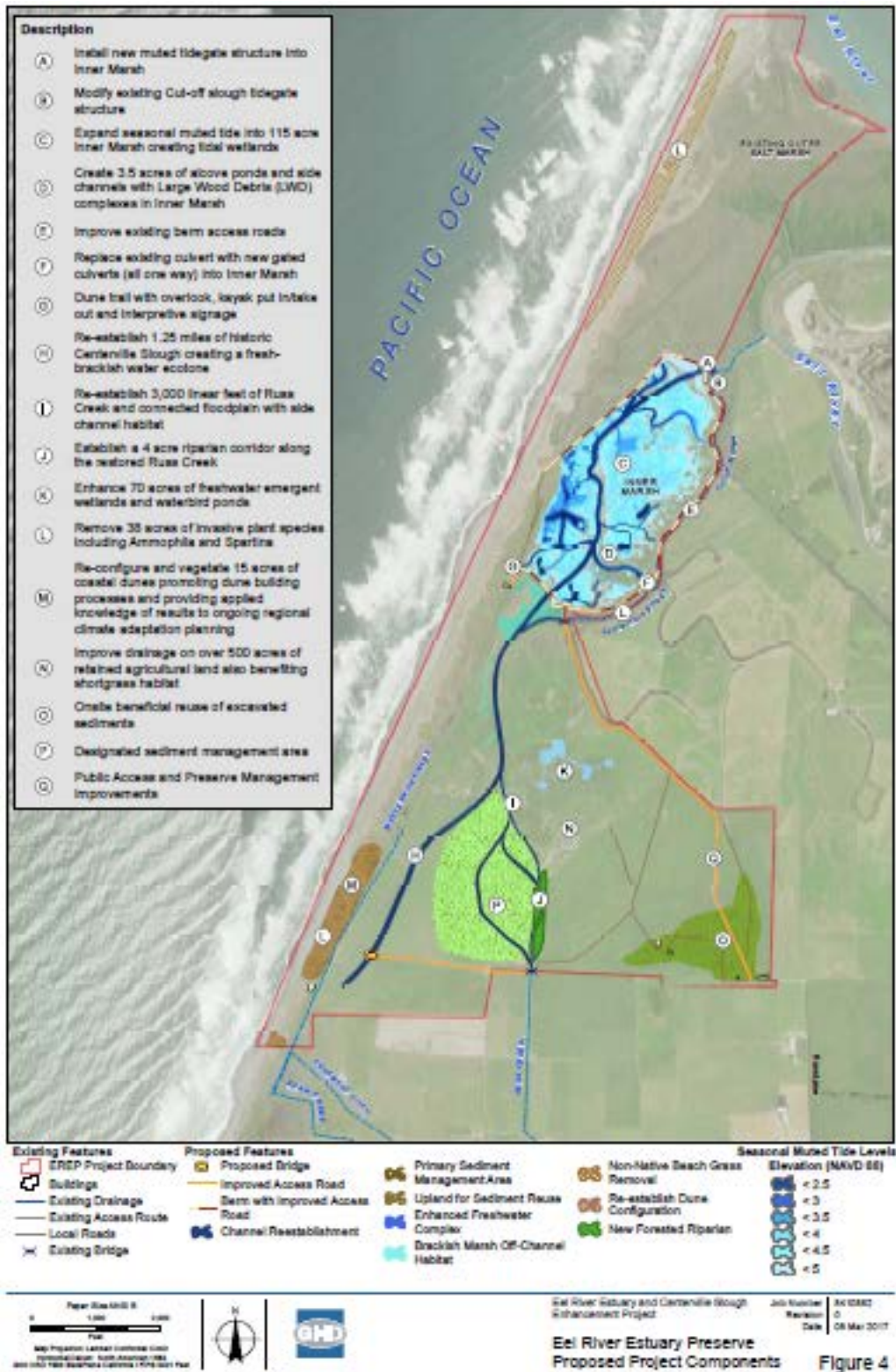


Figure 2: Project Area Details

Construction Timing

Project construction would require 36 months between May 2018 and October 2020. Work performed in 2018 would include site preparation, invasive species removal, and placement of a temporary gravel pile over the proposed new tidegate footprint to pre-consolidate the native foundation soils.

2019 Project activities would include new tidegate construction, existing tidegate repairs, sand dune reconfiguration, and the Inner Marsh side channel and pond complexes would be constructed and connected to the existing channels.

In 2020, the majority of the earthwork is proposed to be completed via the excavation of the new Inner Marsh Slough, Centerville Slough, and Russ Creek channels, as well as construction of the SMA. The gates on the new tidegate structure would be opened and seasonal operations would commence in 2020.

Project Impacts

Pre- and post-Project jurisdictional wetland area would be 1,237.7 acres. Approximately 122 acres of agricultural wetlands would be converted to mostly tidal non-agricultural wetlands, resulting in a net increase of approximately 115 acres of tidal wetlands in the Project area. Berm improvements, access road widening, installation of a new bridge, and installation of a new tidegate would permanently impact approximately 3.1 acres of wetlands. Of the 3.1 acres, approximately 1.66 acres of permanent impacts would be to tidal wetlands, 1.27 acres to pasture wetlands, and less than 0.2 acres to freshwater emergent herbaceous wetlands.

Mitigation for Project Impacts

To mitigate for permanently impacted wetlands, existing upland spoils piles and sections of existing berms would be removed to re-establish no less than 3.1 acres of wetlands. No further mitigation would be required under the certification due to the Project's net enhancement of wetlands.

Other Agency Permits and Actions

The Applicant has applied to the United States Army Corps of Engineers for Individual Permit coverage, pursuant to section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act. The Applicant has prepared Biological Assessments for submittal to the National Marine Fisheries Service and United States Fish and Wildlife Service.

The Applicant has applied for a section 1602 Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) and a Coastal Development Permit from the California Coastal Commission.

The Applicant has applied to the California Coastal Commission for a Coastal Development Permit.

CEQA Compliance

As lead agency, the California State Coastal Conservancy prepared an Environmental Impact Report (EIR) for the Project (SCH No. 2014122040). The California State Coastal Conservancy signed a Notice of Determination adopting the EIR on February 2, 2017.

Total Maximum Daily Load (TMDL)

The Ferndale Hydrologic Sub Area drains to the Lower Eel River, which is identified as impaired for sediment, temperature, and dissolved oxygen under Clean Water Act Section 303(d). The United States Environmental Protection Agency established a TMDL for the Lower Eel River in 2007. Regional Water Board staff has found that Project implementation would not exacerbate the Lower Eel River impairment.

Public Comments

Regional Water Board staff are proposing to regulate this Project pursuant to Section 401 of the Clean Water Act (33 USC 1341) and/or Porter-Cologne Water Quality Control Act authority. In addition, staff will consider all phone calls and comments submitted in writing and received within a 21-day comment period that begins on the first date of issuance of this notice and ends at 5:00 p.m. on the last day of the comment period. If you have any questions or comments, please contact staff member Brendan Thompson at (707) 576-2699 or Brendan.Thompson@waterboards.ca.gov within 21 days of the posting of this notice.

The information contained in this public notice is only a summary of the applicant's proposed activities. The Regional Water Board's Project file includes the application for certification and additional details of the proposed Project, including maps and design drawings. Project documents and any comments received are on file and may be reviewed or copied at the Regional Water Board office, 5550 Skylane Boulevard, Suite A, Santa Rosa, California. Appointments are recommended for document review. Appointments can be made by calling (707) 576-2220.