

COASTAL CONSERVANCY

Staff Recommendation
November 30, 2017

**ELK RIVER ESTUARY TIDAL MARSH RESTORATION
FINAL DESIGN AND PERMITTING**

Project No. 15-033-02
Project Manager: Joel Gerwein

RECOMMENDED ACTION: Authorization to disburse up to \$175,000 to the City of Eureka to prepare advanced designs and complete the permitting process for tidal wetlands restoration and public access improvements in and adjacent to the Elk River Estuary on Humboldt Bay in Humboldt County (Exhibits 1 and 2).

LOCATION: Eureka, Humboldt County

PROGRAM CATEGORY: Integrated Coastal and Marine Resources Protection

EXHIBITS

- Exhibit 1: [Project Location](#)
 - Exhibit 2: [Site photographs](#)
 - Exhibit 3: [Initial Study-Mitigated Negative Declaration](#)
 - Exhibit 4: [30% designs](#)
 - Exhibit 5: [Project Letters](#)
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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31220 and 31113 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed one hundred seventy five thousand dollars (\$175,000) to the City of Eureka (City) to prepare advanced designs and complete the permitting process for the Elk River Estuary Intertidal Wetlands Enhancement and Coastal Access Project (Project) on Humboldt Bay.

This authorization is subject to the following condition:

Prior to disbursement of any funds for the Project, the City shall submit a work plan, schedule, budget, and the names of any contractors or subcontractors to be retained for implementation of the project for the review and approval of the Executive Officer.”

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 5.5 of Division 21 of the Public Resources Code, regarding integrated coastal and marine resources protection projects.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Conservancy has independently reviewed and considered the *Initial Study/Mitigated Negative Declaration for the Elk River Estuary Intertidal Wetlands Enhancement and Coastal Access Project* (IS/MND) adopted by the City of Eureka on November 13, 2017 pursuant to the California Environmental Quality Act (“CEQA”) and attached to the accompanying staff recommendation as Exhibit 3. The IS/MND identifies potentially significant effects from implementation of the Project in the areas of aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, noise, and recreation. The Conservancy finds that the Project as designed avoids, reduces or mitigates the potentially significant environmental effects to a less-than-significant level, and that there is no substantial evidence based on the record as a whole that the Project may have a significant effect on the environment, as defined in 14 Cal. Code Regulations Section 15382.”

PROJECT SUMMARY:

Staff recommends the disbursement of up to \$175,000 to the City of Eureka (City) for advanced design and permitting of the Elk River Estuary Intertidal Wetlands Enhancement and Coastal Access Project (Project) on Humboldt Bay (Exhibits 1 and 2). The goal of the Project is to restore approximately 104 acres of tidal marsh complex and construct one mile of associated coastal trail and a boating access point. The Project will: provide critical habitat for threatened salmonids and other fish and wildlife; protect Highway 101, a wastewater transmission line, and an electrical power line from flooding and storms; sequester carbon to mitigate the impacts of climate change; and expand passive recreational opportunities and coastal access. The proposed project to be funded consists of preparation of close-to-final designs and completion of the permitting process for the Project, including the following:

1. Preparation of a monitoring and reporting program,
2. Photogrammetry and land survey,
3. Preparation of 90% design, and
4. Submission of permit applications to and consultation with the U.S. Army Corps of Engineers (ACOE), Humboldt Bay Harbor Recreation and Conservation District, North Coast Regional Water Quality Control Board (NCRWQCB), California Coastal Commission (CCC), and California Department of Fish and Wildlife (CDFW).

Additional funding requests to CDFW and US Fish and Wildlife Service for preparation of final design and construction documents and implementation are pending, and awards will be announced in January. Conservancy staff is recommending authorization of funding now in order to avoid delays in the design process and allow the project to proceed to implementation in Summer 2018.

Tidal marsh is a threatened habitat type in Humboldt Bay and throughout the United States. Tidal marsh contributes nutrients to the estuarine ecosystem; provides important habitat for fish, invertebrates, shorebirds, and other waterbirds; filters out pollutants; and buffers adjacent lands from flood tides and storms. Protection from flooding and storms is becoming more important due to sea level rise. Because of extensive diking, the Humboldt Bay estuary has sustained significant losses of salt marsh, primary productivity, and natural hydrology, resulting in changes to sedimentation, deposition, currents, habitat for estuarine plants and wildlife, and water quality. The Elk River estuary provides a critical opportunity to regain lost salt marsh around Humboldt Bay, but the estuary is currently severely limited in area and habitat diversity. It has become essentially a three-mile long, linear diked slough channel with very few tidal wetlands areas. After restoration, the Elk River estuary and adjacent coastal wetlands could provide approximately 104 acres of critical winter refugia and rearing habitat for threatened coho salmon, chinook salmon, steelhead trout, and coastal cutthroat trout. All four species use the main stem of Elk River and many of its tributaries for adult and juvenile migration, rearing, and spawning. Restored and enhanced wetlands will also provide habitat for the endangered tidewater goby, Dungeness crab and many other species of concern including eelgrass, waterfowl and shorebirds. Enhancement of the estuary will complement enhancement projects currently in the planning stages upstream on both Elk River and Martin Slough.

The Project area is owned by the City, except for a 50-foot-wide strip of private land (1.3 acres) parallel to Elk River, on the south bank. The private landowner has expressed his willingness to sell the property and the City is negotiating for its acquisition. The Project area consists of a 23 acre salt marsh on the north bank of the Elk River (Area 1) and 100 acres of seasonal freshwater wetlands on the south bank of the Elk River (Area 2). Area 1 has a muted tide cycle due to leaking tide gates. This limits sediment recruitment, preventing the marsh surface from building up with accreted sediment and keeping up with sea level rise. The proposed project includes preparation of 90% designs for the removal of the dike and tide gates to fully connect Area 1 with Elk River Slough and allow the salt marsh to adapt to sea level rise. The design includes the excavation of a tidal channel network, and the removal of invasive cordgrass (*Spartina densiflora*) which dominates this marsh (Exhibit 4). After implementation, Area 1 will consist of 4.1 acres of riparian habitat, 18.5 acres of tidal marsh, and 1.8 acres of subtidal habitat. The designs for Area 1 will also include 0.25 miles of coastal trail and a kayak launching site (Exhibit 4).

Area 2 is isolated by dikes from Elk River and Humboldt Bay. The proposed project includes preparation of final designs to breach Area 2's dikes, excavate tidal channels to connect the area to Elk River, and restore 8.7 acres of riparian habitat, 60.6 acres of tidal marsh, and 11 acres of subtidal habitat (Exhibit 4). The design includes 0.75 miles of coastal trail and a small parking area.

The Project will also provide for the protection from sea level rise for Highway 101, an electrical power line adjacent to the highway, and a wastewater transmission line adjacent to the railroad

berm. The stretch of Highway 101 adjacent to the Project area is lower in elevation than adjacent stretches of highway, and is vulnerable to flooding (Exhibit 1). If current shoreline structures were to be breached, the land adjacent to Highway 101 in the Project area would be inundated by tidewater, Highway 101 would become a causeway (a roadway elevated above a body of water without under-roadway flow), and road embankments would be vulnerable to erosion. The flooding risk will grow more severe as sea level rise progresses. With 0.5 meters of sea level rise, the highway road surface in the planning area will be flooded during the 100 year flood if existing shoreline structures, such as the railroad grade, are breached. With 1.0 meter of sea level rise, 57 percent of the dikes and 64 percent of the railroad grade will be overtopped and the highway road surface in the planning area would be tidally inundated. The proposed project will facilitate a tidal marsh restoration project that will reduce flooding impacts to Highway 101 by increasing flood storage and sediment transport, and absorbing wave energy. The proposed project will also facilitate construction of a tidal ridge that will support marsh vegetation on its slopes and will provide protection from waves and flooding for the highway.

The City is qualified to carry out the proposed project. The City carried out Phase I of the Project, producing 30% designs for the restoration and preparing the IS/MND. The City owns a number of coastal wetland areas, and manages them for open space, wildlife habitat, and public access. The City recently implemented tidal marsh enhancement actions for a 40-acre wetland (PALCO Marsh) north of the Bayshore Mall. In addition, the City is in the process of sea level rise adaptation planning as part of its General Plan update, utilizing funding from the California Ocean Protection Council.

Site Description: The Elk River watershed, located in the coastal temperate forest of Humboldt County, California, is the largest freshwater tributary to Humboldt Bay. Restoration of the Elk River watershed is extremely important to coho recovery. The Humboldt Bay coho population is one of the 17 core populations identified in the Southern Oregon Northern California Coast Coho Salmon Evolutionarily Significant Unit Recovery Plan (2012) as most likely to become viable most quickly in response to recovery efforts. This core population is currently at a high risk of extinction, with an estimated rate of population decline exceeding ten percent per year.

The Project area consists of 123 acres of City-owned property on the north and south banks of the Elk River in the Elk River Estuary (Exhibit 1).

Area 1: The City owns this 23-acre parcel, which has an earthen unfortified dike along Elk River Slough with two top-hinged tide gates (Exhibit 2). The tide gates leak and have created a muted tide cycle supporting salt marsh habitat dominated by invasive *Spartina* and exposed tidal channels. The tidal channels currently do not support eelgrass. The three sides of this area are occupied by a paved access road and trailhead/commuter parking area and U.S. Highway 101, the City's Hikshari' Trail, and the North Coast Railroad Authority's railroad grade.

Area 2: The City owns this 100-acre parcel that is currently used to graze livestock. A naturally occurring sand ridge parallel to Elk River Slough, as well as U.S. Highway 101 to the east, and the NCRA railroad to the west, prevent tidal inundation of this low-lying area that ranges in elevation from 3 to 7 feet (NAVD 88). To the south of Area 2 is private property under a wetlands conservation easement held by the Natural Resources Conservation Service. Vehicular access is from the Highway 101 Humboldt Hill off ramp and Tooby Road. A Humboldt Community Services District forced main sewer line runs parallel to the railroad grade from King Salmon to the Elk River Wastewater Treatment Plant on the north bank of Elk River. A

Pacific Gas and Electric electrical power line runs parallel to the highway on the eastern edge of Area 2. The natural drainage pattern in this area has been altered and consists of a series of ditches that convey stormwater to a culvert and tide gate under Highway 101 that drains this property to Elk River. This area includes a 50-foot-wide strip of private land (1.3 acres) adjacent and parallel to Elk River, as noted above.

The Elk River Wildlife Sanctuary, owned by the City of Eureka, and the Elk River Wildlife Area, owned by the California Department of Fish and Wildlife, are located adjacent to the planning area at the mouth of the Elk River and together comprise nearly 400 acres.

Project History: The Conservancy has supported restoration and public access in the Elk River watershed over the last ten years. The Conservancy granted \$350,000 to the City in March 2016 for the preliminary planning and feasibility studies for the Project. The Conservancy granted \$100,000 to the Redwood Community Action Agency in 2002 to prepare the Martin Slough Enhancement Plan, which was completed in 2005. In 2011, the Conservancy funded the acquisition of a key parcel at the mouth of Martin Slough, a tributary to the Elk River, and also provided a grant to the City to construct the Hikshari’ trail along the river where it enters Humboldt Bay. In 2013, the Conservancy granted \$100,000 to California Trout to support an assessment and planning effort focused on the upper watershed. The Conservancy has also supported coastal wetlands restoration projects on Humboldt Bay for many years, including a \$1,450,000 grant to the Humboldt County Resource Conservation District in 2015 to restore tidal marsh in the White Slough Unit of the Humboldt Bay National Wildlife Refuge, located approximately 1.3 miles south of the planning area.

The City submitted a proposal for the proposed project plus the final planning phase of the Project to the Conservancy’s Proposition 1 grant round in June 2017. The application was reviewed in the competitive grant round along with many other projects, and ranked highly in the review process. Staff is recommending this project as it meets the priorities and criteria described in the Conservancy’s Request for Proposals. The City requested \$350,000 in its grant proposal, which included the additional planning phase of development of 100% designs and a construction bid package for the restoration of Areas 1 and 2. Staff is recommending only the proposed project for funding, with the expectation that other funding sources will provide funds for the final planning work.

PROJECT FINANCING

| | |
|----------------------------|------------------|
| Coastal Conservancy | \$175,000 |
| Project Total | \$175,000 |

The anticipated source of funding for this project is an appropriation 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(a) states more specifically that these funds may be used to “implement watershed adaptation projects in order to reduce the impacts of climate change on California’s communities and ecosystems” and to “protect and restore aquatic, wetland, and migratory bird ecosystems.” Consistent with these

provisions, the project will plan for the restoration of wetland ecosystems providing habitat for migratory birds and furthering adaptation to climate change for the Humboldt Bay community.

As required by Proposition 1, the proposed project provides multiple benefits. By facilitating restoration of tidal wetlands in the Elk River estuary, the project will benefit depleted native fish populations and other aquatic and avian species that utilize coastal salt marshes. This project will also benefit the resiliency of existing marshes and freshwater wetlands to sea level rise, facilitating the restoration of tidal prism and thereby allowing for sediment accretion within the marsh. The project will also further the region's sea level rise adaptation planning by protecting Highway 101 and other built infrastructure in the planning area with a living shoreline approach.

In accordance with Section 79707(b), which requires agencies to prioritize "projects that leverage private, federal, or local funding or produce the greatest public benefit", this project leverages local in-kind contributions as discussed below.

The project was reviewed and subsequently recommended for funding 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.

The City of Eureka will provide significant in-kind contributions of staff time. The value of these in-kind contributions is expected to be over \$15,000.

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) and pursuant to Sections 31111 and 31113, as follows:

Pursuant to Section 31220(a) and 31220(b)(2), the Conservancy may award grants to protect and restore coastal habitats 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 facilitate the restoration and enhancement of tidal marshes that provide habitat for fish and wildlife, including listed species, in Humboldt Bay.

Pursuant to Section 31220(b)(4), the Conservancy may award grants to protect and restore coastal habitats if the project "contributes to the reestablishment of natural erosion and sediment cycles." Consistent with this section, the proposed project will facilitate the restoration of sediment accretion in tidal marshes in the Elk River, enhancing the ability of those marshes to keep pace with sea level rise.

Pursuant to Section 31220(b)(6), the Conservancy may award grants to protect and restore coastal habitats if the project "restores coastal wetlands, riparian areas, floodplains, and other sensitive watershed lands." Consistent with this section, the proposed project will facilitate the restoration of tidal marshes and riparian areas in the Elk River Estuary.

Pursuant to Section 31220(b)(8), the Conservancy may award grants to protect and restore coastal habitats if the project "provides for public access compatible with resource protection and

restoration objectives.” Consistent with this section, the proposed project will facilitate the construction of a trail and non-motorized boat ramp to expand public access in the project area.

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 water quality. (See Exhibit 5, Project Letters) Section 31220(c) states that “projects funded pursuant to this section shall include a monitoring and evaluation component.” The proposed project involves only planning and not implementation. Therefore, a monitoring and evaluation component is not appropriate, but a monitoring plan will be prepared as part of this phase of the overall Project. The proposed project is 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, as discussed in the “Required Criteria” and “Consistency with Local Watershed Management Plan/State Water Quality Plan” sections below.

The proposed project is also consistent with Section 31111, which provides that the Conservancy may “fund and undertake plans and feasibility studies, and may award grants to public agencies and nonprofit organizations for these purposes.” Consistent with this section, the proposed project involves funding a public agency to prepare detailed plans for a tidal marsh restoration project.

This project is also consistent with Section 31113, which provides that the Conservancy may undertake projects and award grants for projects that “reduce greenhouse gas emissions, address extreme weather events, sea level rise, storm surge, beach and bluff erosion, salt water intrusion, flooding and other coastal hazards that threaten coastal communities, infrastructure and natural resources.” The proposed project will facilitate protection for coastal wetlands in the planning area by allowing for sediment accretion, and facilitate protection for the stretch of Highway 101 and other critical infrastructure adjacent to the planning area from erosion, sea level rise and storm surge impacts.

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

Consistent with **Goal 5, Objective A** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will develop a plan for the restoration and enhancement of coastal habitats, including coastal wetlands and intertidal areas.

Consistent with **Goal 7, Objective 7B** of the Conservancy’s 2013-2018 Strategic Plan, the proposed project will develop an adaptation plan to address threats from sea level rise and extreme storm events to public infrastructure while protecting natural resources and maximizing public benefits.

**CONSISTENCY WITH CONSERVANCY’S
PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy’s Project Selection Criteria and Guidelines, last updated on October 2, 2014, in the following respects:

Required Criteria

1. **Promotion of the Conservancy’s statutory programs and purposes:** See the “Consistency with Conservancy’s Enabling Legislation” section above.

2. **Consistency with purposes of the funding source:** See the “Project Financing” section above.

3. **Promotion and implementation of state plans and policies:** The project will help implement two priority actions identified in the 2014 *California Water Action Plan* (CWAP):

Action 4: Protect and Restore Important Ecosystems. The project will implement this action by restoring tidal marsh in an estuary that provides valuable fish and wildlife habitat.

Action 8: Increase Flood Protection. The CWAP calls for action to address flooding threats due to aging levee infrastructure and sea level rise due to climate change. The project will implement this action by restoring tidal marsh in an area currently protected by severely eroded dikes, providing protection for a vulnerable stretch of Highway 101 from flooding and storm damage that will increase with sea level rise.

The project will implement a Management Measure identified in the *California Nonpoint Source Pollution Control Program* prepared by the State Water Resources Control Board in 2000: MM6B- Restoration of Wetlands and Riparian Areas. The project will further the following statewide goals and conservation strategies of the *California Wildlife Action Plan* (Wildlife Plan), prepared by the California Department of Fish and Wildlife in 2015:

Goal 3.3 (Hydrological Regime): Maintain or improve hydrological regimes vital for sustaining ecosystems (including riverine, lacustrine, and estuarine hydrodynamics). (pg. 4-3)

The project will help implement the following conservation strategies identified by the Wildlife Plan for anadromous salmonids in coastal estuaries on the North Coast:

Restore and enhance estuary habitat, connectivity, and ecological processes essential for anadromous species; and

Establish estuary function and structure that will allow anadromous migration and be responsive to climate change. (pg. 6-19)

The project would help implement the following tasks identified in the *Recovery Strategy for California Coho Salmon*, prepared by CDFW in 2004:

- Eureka Plain Task 2: Work with agencies and landowners, to re-establish estuarine function.
- Eureka Plain Task 10: In cooperation with willing landowners, restore and maintain historical tidal areas, backwater channels and salt marsh.
- Rangewide-Estuaries Task 2: Restore estuarine and associated wetland ecosystems.

4. **Support of the public:** The proposed project enjoys broad public support. See Exhibit 4 for Project Letters.

5. **Location:** The proposed project is located within the coastal zone of the City of Eureka and Humboldt County.

6. **Need:** Without Conservancy funding, this planning effort would not occur.

7. **Greater-than-local interest:** The proposed project will lead to the restoration of tidal marsh in Humboldt Bay, which provides plant and wildlife habitat of regional and statewide importance for resident and migratory species.
8. **Sea level rise vulnerability:** Project planning incorporates sea level rise modeling for Humboldt Bay conducted as part of the 2015 Humboldt Bay Sea Level Rise Adaptation Plan, funded by the Conservancy. The project will prepare a restoration design that will increase resiliency to sea level rise by allowing tidal marshes to accrete sediment to keep pace with sea level rise, and by providing protection for Highway 101 and an important wastewater transmission line and electrical power line from inundation. In addition, the project designs include high elevation marsh and a gently sloping marsh plain, allowing for marsh migration to maximize the time period in which marshes will persist in the face of sea level rise.

Additional Criteria

9. **Urgency:** Restoration of the Project area is urgent because some of the dikes protecting the project area are at high risk of failure. If sections of the dike fail, restoration of tidal prism could occur in a way that would be problematic, making the Project more costly or infeasible.
10. **Resolution of more than one issue:** The proposed project will facilitate the restoration of valuable fish and wildlife habitat and the protection of Highway 101 and other infrastructure from sea level rise.
11. **Leverage:** See the “Project Financing” section above.
12. **Innovation:** The proposed project will employ nature-based solutions to create living shorelines as protective features rather than standard shoreline fortification practices.
13. **Readiness:** The city and its partners have completed 30% designs and prepared permit applications. They are ready to proceed with the final design and permitting process as soon as funds are available.
14. **Realization of prior Conservancy goals:** “See “Project History” above.”
15. **Return to Conservancy:** See the “Project Financing” section above.
16. **Cooperation:** Phase I of the project convened a stakeholder and technical advisory group including private landowners, non-profits, and local, state, and federal agencies. The City will continue to engage with regulatory agencies and the public during the final design and permitting phase.
17. **Minimization of greenhouse gas emissions:** Project design will include measures to avoid or minimize greenhouse gas emissions to the extent feasible and consistent with the project objectives.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The planning area is located in the City’s Local Coastal Program (LCP) area. The City’s 1997 General Plan Policy Document (“GPPD”), which was certified by the Coastal Commission as an update to the City’s LCP in 1999, states that the City “shall maintain and, where feasible, restore

biological productivity and the quality of coastal waters, streams, wetlands, and estuaries...” (GPPD Section 6.A.1, pg. B-14). Restoration and enhancement of coastal wetlands in the planning area is consistent with the policy cited above.

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

The project is consistent with, and furthers the goals of, the *Humboldt Bay Management Plan* (HBMP), prepared in May 2007 by the Harbor District. The HBMP expresses support for the goals of the proposed project in the following statement:

Salt marshes in the Bay have been reduced substantially in area with respect to their pre-settlement extent, and they continue to be lost. In addition, the extant salt marshes are degraded by the dominant presence of dense-flowered cordgrass. The benefits of shoreline-protecting salt marshes for stabilizing sediment and protecting shoreline structures from wave impacts combine with a conservation focus on maintaining or restoring salt marshes to make the restoration or enhancement of salt marshes an important concern for the District. (HBMP, p.129)

The proposed project is consistent with Objective CAS-3: “Maintain and enhance habitat for sensitive species” (HBMP, p.204), in that it will lead to the restoration of habitat for Point Reyes bird’s beak and Humboldt Bay Owls Clover, both listed as endangered by the California Native Plant Society.

The project is consistent with, and furthers the goals of, the Humboldt Bay Watershed Salmon and Steelhead Conservation (HBSSC) Plan, prepared by the Humboldt Bay Watershed Advisory Committee in March 2005. The HBSSC Plan highlights the importance of the Bay’s tidal marshlands in supporting salmon populations, as well as diverse communities of fish and wildlife (p.11). The HBSSC Plan notes that estuarine habitat is necessary for the survival of salmon and that this habitat “has been significantly reduced by construction of levees and tidegates, and placement of fill” (HBSSC Plan, p.viii). One of the stated goals of the HBSSC Plan is to “Maintain and restore estuary processes that benefit salmonids” (HBSSC Plan, p.ix). The proposed project would further this goal by facilitating restoration of tidal marshes, as discussed above in the “Project Summary” section.

The proposed project is consistent with the Water Quality Control Plan for the North Coast (adopted by the Regional Water Quality Control Board North Coast Region in 1988 and last updated in 2007) in that it will enhance wildlife habitat, habitat for rare, threatened and endangered species, and estuarine habitat in Humboldt Bay. The Water Quality Control Plan for the North Coast designates wildlife habitat, rare, threatened, and endangered species habitat, and estuarine habitat as beneficial uses of Humboldt Bay (Water Quality Control Plan for the North Coast, Table 2-1, pp. 2-8 to 2-12).

COMPLIANCE WITH CEQA:

The City of Eureka, as lead agency under the California Environmental Quality Act (CEQA), prepared an Initial Study/Mitigated Negative Declaration for the Elk River Estuary Intertidal Wetlands Enhancement and Coastal Access Project (“IS/MND”)(Exhibit 3). On November 13,

2017, the City adopted the IS/MND and a Mitigation Monitoring and Reporting Plan (“MMRP”) with respect to the required mitigation measures.

The IS/MND analyzes the implementation of the current design of the Project. A Notice of Intent to Adopt Proposed Mitigated Negative Declaration and a Notice of Completion for the IS/MND was issued for agency and public review and sent to the State Clearinghouse on August 17, 2017 to announce the availability of the document and the 30-day review period. The Draft IS/MND was available online at <http://www.ci.eureka.ca.gov/news/displaynews.asp?NewsID=606&TargetID=1>, and copies of the IS/MND were made available at City Hall. The City received no public comment letters or emails on the Draft IS/MND.

The Final IS/MND consists of two volumes: Volume 1: the Initial Study Mitigated Negative Declaration, which includes the CEQA-required information and analysis, and Volume 2: the Mitigation Monitoring and Reporting Program. (See Exhibit 3).

Significant Effects Reduced To Less Than Significant Levels by Mitigation

The IS/MND provides a detailed analysis of potential environmental impacts and proposed mitigation measures to address the possible impacts associated with implementation of the Project (See Exhibit 3, IS/MND). The IS/MND identified possible significant effects of the Project in the areas of Aesthetics, Agricultural Resources, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Recreation. Mitigation measures identified in the IS/MND would reduce all of these impacts to a less-than-significant level.

The potential adverse environmental impacts of the Project result from the construction activities associated with the restoration and are summarized below, along with the mitigation measures that will reduce the impacts to a less-than-significant level.

Aesthetics

Potential for new source of light from cars in the parking areas that could adversely affect nighttime views. *Mitigation:* After construction, the City will install signage in the Pound Road and Tooby Road parking areas. Signage will indicate that the hours of public use are to be limited to daylight hours only (sunrise to sunset).

Agricultural Resources

Introduction of tidal influence to uplands could adversely affect potential forestlands.

Mitigation: Once grading is complete, the project will plant 12.8 acres of native riparian forest species.

Biological Resources

1. Impacts to special status fish species from increased turbidity or direct impact.

Mitigation: Construction shall only occur between July 1st and October 31st when freshwater discharge of the Elk River is at its lowest and when the ground surface is dry to reduce the chance of stormwater runoff occurring during construction. Prior to dewatering and beginning construction, the Fish Avoidance Plan shall be implemented to passively encourage fish to leave the project area without harming them. If water remains present during low tides and/or after sealing the Area 1 tide gates, aquatic habitat will be impacted by pumping for the shortest time

necessary to complete construction or excavation. Pumps used to de-water work areas shall utilize a fish screen on the inlet of sufficiently sized mesh to prevent entrainment.

2. Direct impacts to California red-legged frogs. *Mitigation:* Surveys of freshwater habitat by a qualified biologist for juvenile red-legged frogs shall occur two weeks prior to disturbance activities in the areas to be de-watered (July through August). Any red-legged frogs found shall be relocated to suitable areas outside of the area of disturbance. Construction activities shall occur only when the area is dry and when adult red-legged frogs are not expected to be present.

3. Direct impacts to Northwestern pond turtles. *Mitigation:* Northwestern pond turtle surveys shall be carried out by a qualified biologist along tidal margins two weeks prior to commencement of ground disturbing activities (July and August). Surveys shall be utilized to locate and flag northwestern pond turtle nests with eggs, or to remove hatchlings and adults that may be present in the stream reaches above the existing tidal zone below first diversion. Any active nests located shall be left undisturbed until hatchlings have emerged or have been relocated to suitable areas outside of the area of disturbance; similarly relocation of any adults found will occur. No existing freshwater ponds shall be impacted by the project.

4. Disturbance or direct impacts to nesting birds. *Mitigation:* Surveys by a qualified biologist for nesting birds 1,000 ft beyond the limits of disturbance shall occur two weeks prior to commencement of ground-disturbing activities. If breeding is confirmed of any special status birds, construction activities that will degrade or remove breeding habitat shall not occur in the immediate vicinity until the end of the breeding period for that species or until the breeding effort has either been determined to have failed or the young have been determined to have fledged.

If possible, vegetation clearing activities shall take place between August 16 and March 13, outside of the active nesting season for migratory bird species (i.e., March 14 to August 15).

If work must be completed during the nesting season, a qualified biologist shall conduct preconstruction surveys of all ground disturbance areas to verify absence of nesting migratory birds in the project area within two weeks prior to vegetation removal and the start of construction. If nesting migratory birds are found in the project construction area during the preconstruction surveys, they shall be avoided with an appropriate buffer area until the young birds have fledged. Buffers shall be 250 ft for raptors, 100 ft for threatened and endangered species, 50 ft for other special-status bird species; however, buffers may be modified after consultation with, and agreement by CDFW. If state listed California Endangered Species Act (CESA), federally listed Endangered Species Act (ESA), or raptors are found outside of the construction area but near the construction area, appropriate buffers shall be implemented. If non-listed state CESA, non-listed federal ESA, including state species of special concern are found near, but outside of the construction area, no buffers will be implemented.

Vegetative disturbance shall be contained within the limits of grading and kept to a minimum area.

Cultural Resources

Inadvertent disturbance of cultural or paleontological resources. No cultural or paleontological resources were identified within the project boundary by an Archaeological Survey conducted for the project. However, given the history of flooding, silt deposits, and changes to the mouth of Elk River, it is possible that buried archaeological materials could be

encountered during ground disturbing activities. *Mitigation:* If potential archaeological or paleontological resources are encountered during project subsurface construction activities or geotechnical testing, all work within 50 ft of the find shall be stopped, and a qualified archaeologist funded by the City of Eureka shall be contacted to evaluate the find, determine its significance, and identify any required mitigation. The applicant shall be responsible for implementing the mitigation prior to construction activities being restarted at the discovery site.

If project related geotechnical excavations become necessary, as a result of final design, and those excavations are to be more than one ft deep, then the THPOs of each local native American tribe will be contacted and given the date and time of excavations so that a cultural monitor may be present to observe for the presence of buried archaeological materials.

Geology and Soils

1. Potential exposure of trail, boat ramp, pedestrian bridge, and users of those structures to seismic ground shaking, liquefaction, and other related events. *Mitigation:* A California registered Geotechnical Engineer shall conduct a design-level geotechnical study for the project. The geotechnical study shall evaluate seismic hazards and provide recommendations to mitigate the effect of strong ground shaking; any unstable, liquefiable, or expansive soils; or settlement in adherence with current California Building Code (CBC) standards for earthquake resistant construction. The seismic criteria shall consider the active faults in the Eureka area and beyond, and ground motions and shaking related to the faults shall be accounted. The geotechnical study shall include evaluation of unstable land in the project area, including areas susceptible to liquefaction, lateral spreading, or settlement, and areas containing expansive soils. The study shall provide measures to repair, stabilize, or avoid such soils, and include grading, drainage, paving, and foundation design recommendations. The project shall be designed and constructed in conformance with the specific recommendations contained in the design-level geotechnical study, including recommendations for grading, ground improvement, and foundation support. The recommendations made in the geotechnical study shall be incorporated into the final plans and specifications and implemented during construction. Professional inspection of foundation and excavation, earthwork and other geotechnical aspects of site development shall be performed during construction in accordance with the current version of the CBC.

2. Soil erosion due to temporary ground disturbance, especially for *Spartina* removal.

Mitigation: Construction shall only occur between July 1st and October 31st when the ground surface is dry and when Elk River freshwater inputs are at summer baseflow thresholds to reduce the chance of stormwater runoff occurring during construction.

Placement of fill in the Project area shall occur when the area is not inundated by tidewater.

Dewatering measures shall be in place to bypass any discharge from entering the work site.

Hazards and Hazardous Materials

1. Potential release of hazardous materials associated with construction equipment into the environment. *Mitigation:* Heavy equipment used in the project shall be in good condition and shall be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started. Equipment operators shall be trained in the procedures to be taken should an accidental spill occur. Prior to the onset of work the contractor shall prepare a plan for the prompt and effective response to any accidental spills. Absorbent materials designed for spill containment and cleanup shall be kept at the project site for use in case of an accidental spill.

Refueling of equipment shall occur within the staging area. All refueling within the staging area, will occur on a pad to capture any drips or spills. If equipment must be washed, washing shall occur off-site. Stationary equipment shall be positioned over drip pans. Equipment on site during construction shall be required to have emergency spill cleanup kits immediately accessible in the case of any fuel or oil spills. Staging, fueling and maintenance of equipment shall be conducted only in in staging areas and no closer than 150 ft from open water or in any location where hazardous material spills could become entrained in flowing water.

Hydrology and Water Quality

1. Potential violation of water quality standards and waste discharge requirements due to soil erosion and release of hazardous materials associated with construction equipment into the environment. *Mitigation:* Construction and Spartina eradication shall only occur between July 1st and October 31st when the ground surface is dry and to reduce the chance of stormwater runoff occurring during construction and when background Elk River freshwater inputs are at summer baseflow thresholds. Excavated materials shall not be stockpiled overwinter. Sediment control measures shall be in place while materials are being stockpiled to minimize sediment and pollutant transport from the project site. Placement of fill in the project area shall occur when the area is not inundated by tide water. Excavation shall include handling of saturated soils. Saturated soils shall be dewatered and/or transported saturated in a manner that prevents excess discharge or spillage of soils or water within the construction access areas. A silt fence shall be installed around the perimeter of temporary stockpiles of saturated soils to prevent runoff from leaving the site. During construction, a silt fence shall be deployed to isolate work areas from existing channels, and to trap suspended sediment that might leave the construction site if stormwater runoff were to occur. If the silt fence is not adequately containing sediment, the construction activity shall cease until remedial measures are implemented that prevent sediment from entering the waters below. No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter or be washed by rainfall into waters of the U.S./State. Following completion of excavation, placement of fill, and grading all ground to the limits of disturbance (except newly constructed streambeds, pond beds, and tidally inundated areas) shall be treated for erosion prior to the onset of precipitation capable of generating run-off or the end of the yearly work period, whichever comes first. Treated areas that are not exposed to tidal influence shall be mulched with at least 2 to 4 inches of certified weed-free straw mulch with wheat or other straw for riparian and wetland areas and rice straw for uplands and use of a seed mix with coverage equivalent to 100 lbs/acre of barley seed and appropriate riparian vegetation for immediate erosion control. No annual (Italian) ryegrass (*Lolium multiflorum*) shall be used. In places such as stream banks, rush mattresses shall be installed for immediate erosion control. All temporary fill, synthetic mats and silt fences shall be removed from wetlands and waters of the U.S./State immediately on cessation of construction. Biodegradable geotextile fabrics shall be used, where possible. Soil and material stockpiles shall be properly protected to minimize sediment and pollutant transport from the construction site.

The following BMPs (California Storm Water Quality Association Storm Water Best Management Practice (BMP) Handbook for Construction, 2003) shall be implemented to prevent entry of storm water runoff into the excavation site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated contaminated materials:

EC-2 Preservation of Existing Vegetation

EC-6 Straw Mulch

EC-7 Geotextile and Mats

EC-9 Earth Dikes and Drainage Swales

EC-10 Velocity Dissipation Devices

SE-1 Silt Fence

NS-2 Dewatering Operations

NS-4 Temporary Stream Crossing

NS-5 Clear Water Diversion

WM-9 Sanitary/Septic Waste Management

Stream diversion and dewatering shall conform to the following BMPs (California Storm Water Quality Association Storm Water Best Management Practice (BMP) Handbook for Construction, 2003):

NS-2 Dewatering Operations

NS-5 Clear Water Diversion

EC-9 Earth Dikes and Drainage Swales

EC-10 Velocity Dissipation Devices

Herbicides shall be applied directly to plants and at low or receding tide to minimize the potential application of herbicide directly on the water surface, as well as to ensure proper drying time prior to tidal inundation. Herbicides shall be applied by a certified applicator and in accordance with application guidelines and the manufacturer label. The project's site specific water quality control plan shall include and obtain coverage for use of herbicides to treat Spartina from the North Coast Regional Water Quality Control Board (NCRWQCB). Herbicides shall be applied by or under the direct supervision of trained, certified or licensed applicators. Herbicide mixtures shall be prepared by, or under the direct supervision of trained, certified or licensed applicators. Storage of herbicides and surfactants on or near project sites shall be allowed only in accordance with a spill prevention and containment plan included in the site-specific water pollution prevention plan approved by the NCRWQCB; on-site mixing and filling operations shall be confined to areas appropriately bermed or otherwise protected to minimize spread or dispersion of spilled herbicide or surfactants into surface waters.

2. Short term increase in siltation in the project area due to restoration of tidal influence.

Mitigation: The City of Eureka shall coordinate with the contractor to develop and implement a site-specific water pollution control plan, subject to review and approval by the NCRWQCB.

3. Expose trail and boat ramp users to tsunami hazard. *Mitigation:* To inform trail users of the potential of tsunami run-up inundating the trail area, each trailhead location shall have signage informing the public of what actions to take in the event of seismic activity. Said signage shall be posted to the satisfaction of the City of Eureka and prior to the trail being open to the general public.

Noise

1. Short-term exposure of construction workers and Hikshari' Trail users to noise from construction equipment. *Mitigation:* Workers shall be required to wear hearing protection when in the vicinity of or while operating equipment producing noise levels equal to or greater than 85 db. Hours of construction for outdoor activities exceeding 50 dBA shall be limited to Monday through Friday 7:00 a.m. to 7:00 p.m. and weekends and holidays from 8:00 a.m. to 6:00 p.m. Movement and hauling of material, and associated activities such as re-fueling or maintenance, shall be limited to normal working hours for the area, as specified above. More restrictive operation hours may be specified in the construction documents and may be property-specific. All equipment shall operate with factory-equipped mufflers, and staging areas shall be located as far from residential uses as is practical. These conditions shall be incorporated into project contract specifications. A haul-truck route plan shall be developed. Hauling shall minimize passing any substantial collection of noise-sensitive land uses (i.e. occupied houses, schools, hospitals). Larger capacity belly and end-dump trucks as well as double-trailers shall be used whenever feasible to minimize the number of truck trips necessary. Construction personnel shall conduct all work activities in a manner that minimizes noise generation. A variety of contractor actions are available that will reduce construction noise, including: i) turning off engines on all construction equipment not in active use, ii) shielding noisy equipment with less noisy equipment, and iii) avoiding high RPM engine operation whenever possible. Notify commercial property neighbors when activity involving heavy construction equipment is scheduled to occur within 250 ft of occupied structures. Construction personnel shall provide written notification to the adjacent property owners prior to using heavy construction equipment. The written notification shall be provided to each potentially affected property at least 72 hours prior to the start of the activity, and shall indicate the approximate duration of time (dates and hours) during which the noise-generating activity is expected to occur. If necessary, limit public access to Pound Road and the Hikshari' Trailhead during construction to avoid exposing people to noise levels higher than standards established in the local general plan, or applicable standards of other agencies.

Recreation

Adverse environmental impacts from construction of a one mile extension of the Waterfront Trail, a new trailhead and parking area, non-motorized boat launch, and elevated viewing causeways and platforms. *Mitigation:* Impacts related to aesthetics, agricultural resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, and noise are discussed above and will be mitigated to a less than significant level through implementation of the mitigation measures described above.

Mitigation Monitoring and Reporting Program

Under CEQA, whenever measures are required and adopted in order to mitigate or avoid the significant effects on the environment of an approved project, the agency must also prepare and adopt a Mitigation Monitoring or Reporting Program (MMRP) designed to ensure compliance with the required mitigation during project implementation (Public Resources Code § 21081.6). An MMRP for the Project has been prepared and is incorporated in the IS/MND, attached as Exhibit 3 to this staff recommendation.

Based on the foregoing independent review and on the extensive analysis contained in the IS/MND, staff recommends that the Conservancy find that the Project, as modified by incorporation of the mitigation measures identified in the IS/MND, will avoid, reduce, or mitigate all of the possible significant environmental effects of the Project on these resource areas to a level that is less than significant. Based on the record as a whole, there is no substantial evidence that the implementation of the Elk River Estuary Tidal Marsh Restoration Project, as mitigated, will have a significant effect on the environment.

Upon approval of the project, Conservancy staff will prepare and file a Notice of Determination.