

COASTAL CONSERVANCY

Staff Recommendation  
December 1, 2022

**MAD RIVER SLOUGH - WADULH LAGOON RESTORATION**

Project No. 22-006-01  
Project Manager: Su Corbaley

**RECOMMENDED ACTION:** Authorization to disburse up to \$226,300 of Coastal Conservancy and US Fish and Wildlife Service National Coastal Wetland Conservation grant funds to the Humboldt County Resource Conservation District to prepare designs, environmental analyses, and permit applications for the restoration of tidal wetlands in Wadulh Lagoon on the Mad River Slough on Humboldt Bay in Humboldt County.

**LOCATION:** North Spit of Humboldt Bay, Humboldt County

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EXHIBITS

- Exhibit 1: [Project Location Map](#)
  - Exhibit 2: [Current Conditions](#)
  - Exhibit 3: [Photos](#)
  - Exhibit 4: [Project Letters](#)
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**RESOLUTION AND FINDINGS**

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

Resolution:

The State Coastal Conservancy hereby authorizes a grant of an amount not to exceed two hundred twenty-six thousand, three hundred dollars (\$226,300), including \$157,173 to be reimbursed by a grant from the US Fish and Wildlife Service, to the Humboldt County Resource Conservation District (“the grantee”) to prepare designs and permit applications for the restoration of tidal wetlands in Wadulh Lagoon on the Mad River Slough on Humboldt Bay in Humboldt County.

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

1. A detailed work program, schedule, and budget.
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2. Names and qualifications of any contractors to be retained in carrying out the project.

Findings:

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

1. The proposed authorization is consistent with Chapter 3 of Division 21 of the Public Resources Code, regarding the Climate Ready Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria.

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## **STAFF RECOMMENDATION**

### **PROJECT SUMMARY:**

Staff recommends the Conservancy authorize a \$226,300 grant to the Humboldt County Resource Conservation District (HCRCD) to prepare designs and complete permit applications and environmental compliance documents for the Wadulh Lagoon Restoration Project to restore tidal wetlands and enhance and restore riparian forest on the Mad River Slough on Humboldt Bay, in Humboldt County (Exhibit 1). Wadulh is the word for dunes in the Wiyot language. The name Wadulh Lagoon was selected in recognition of the Wiyot Tribe's significant cultural connection to the Project area. The funds derive from a grant to the Conservancy of \$806,990 from the US Fish and Wildlife Service (USFWS) National Coastal Wetlands Conservation (NCWC) Grant Program specifically for this project and a proposed nonfederal match from the Conservancy. This recommended authorization is to disburse \$157,173 of the NCWC funds and \$69,127 in Conservancy funds to the grantee for management related to preconstruction planning and compliance activities. The Conservancy will retain \$13,891 of the total NCWC grant for staff time to manage the grant. The planning activities covered by this authorization will occur in 2023. After the HCRCD completes the designs and environmental compliance documents, Conservancy staff anticipate requesting authorization from the Conservancy to disburse the remaining \$638,926 of USFWS NCWC funds and an additional \$279,680 in Conservancy funds for project implementation.

Wadulh Lagoon is located on a 78-acre parcel that the California Department of Transportation (Caltrans) purchased with the intention of developing a wetland mitigation bank for regional wetland impacts from highway construction. Caltrans completed extensive site investigations of the project area over a ten-year period including plant surveys, hydraulic monitoring, wetland delineations, and hydraulic modeling, but eventually abandoned the mitigation banking idea because it determined that the project would not meet Caltrans requirements for wetland mitigation credits. Caltrans then determined the site was surplus property, and donated it in July 2021 to USFWS for addition to its Humboldt Bay National Wildlife Refuge (Refuge).

Caltrans has provided the background studies to USFWS for use in developing the enhancement project and to serve as the basis for project designs. The HCRCD, in collaboration with Refuge staff, will prepare designs, complete environmental analysis in compliance with the National Environmental Policy Act and the California Environmental Quality Act (CEQA), and prepare regulatory permit applications for project implementation. The HCRCD has the potential to

pursue a CEQA statutory exemption for restoration projects from the California Department of Fish and Wildlife pursuant to Public Resources Code section 21080.56.

Humboldt Bay has lost 90% of its salt marshes since 1900, largely through diking and draining, and over 75% of its shoreline has been armored or otherwise altered. Diking and draining of salt marshes has contributed to the substantial population declines of local salmonid species, including coho, Chinook, and steelhead as well as tidewater goby; all are threatened or endangered under the federal and state Endangered Species Acts. Restoration of tidal channels, eelgrass beds, and salt marsh will provide significant off-channel and nursery habitat. Juvenile salmonids use the estuary, especially areas with eelgrass, as nursery areas for extended periods before entering the ocean. Once implementation is complete, the project will restore historical wetland types, increase adaptation to sea level rise, and provide habitat and wildlife protection in perpetuity under Refuge ownership and management. The project will assist the recovery of those threatened and endangered fish species, as well as special status bird, amphibian, and plant species. The project also supports state and federal goals for restoring and conserving 30% of coastal waters by 2030.

**Site Description:** The 78-acre project site, located adjacent to Mad River Slough on Humboldt Bay, was formerly a tidal wetland prior to its conversion to agricultural land in the early 1900s. Historic diking and draining converted approximately 50 acres of the site to a freshwater wetland used for agricultural production. The remaining acreage consists of uplands, roadway, and subtidal lands within Humboldt Bay (Exhibit 1, page 3). Over time, the drained lands subsided due to decay of organic soils, degrading the value of the site for agricultural use, and leaving the land vulnerable to sea level rise. Currently the parcel is a fallow agricultural field that is bound on the east side by a failing dike and the Mad River Slough, on the west side by dunes and dune forests, on the north by Lanphere Road, and on the south by an emergency dike that was erected by the neighbors after the tide gate on the parcel failed in 2019 (Exhibit 2). This site is currently covered by non-native invasive plant species and non-native grasses with some native freshwater riparian species present along the fringe of the agricultural field (Exhibit 3).

The project is an opportunity to restore a natural shoreline with a transition from slough to salt marsh to freshwater riparian wetlands. Its location is the only place on the Bay where the natural transition from slough to salt marsh to freshwater wetlands to upland (dunes, located to the west) is preserved (Exhibits 2 and 3).

**Grant Applicant Qualifications:** The HCRCDC has successfully managed over \$25 million in state and federal contracts for similar projects within the last 10 years. During this same period, the HCRCDC has successfully managed seven State Coastal Conservancy grants, including two grants obtained in partnership with the USFWS for the White Slough Wetland Enhancement Project with current RCD staff managing and completing the required environmental compliance documentation.

The USFWS, as landowner of the project area, is the partnering federal agency on the project. Refuge staff engineers and hydrologists have worked on, and currently are working on, multiple restoration projects not only on USFWS lands but also other wetland, estuarine, and riverine project areas. The current USFWS Refuge staff have recently completed a wetland restoration

project with similar restoration components on the White Slough Unit of the Refuge and are conducting post project monitoring there similar to what will be planned at Wadulh Lagoon.

**CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA:**

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

**Selection Criteria**

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

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

**2. Project is a good investment of state resources.**

The proposed project will prepare plans for restoration of wetlands and adjacent habitats on Humboldt Bay. As mentioned, Humboldt Bay has lost 90% of its salt marshes since 1900 and over 75% of Humboldt Bay's shoreline has been armored or otherwise altered. Humboldt Bay's loss of shoreline and salt marshes resulted in significant loss of ecosystem services that are essential to people and the environment including wildlife food and habitat, water quality, recreation, buffering against sea level rise impacts, and carbon sequestration. The proposed project will plan for restoration that will reclaim wetlands and provide those important ecosystem services. The project will support state and federal goals for restoring and conserving 30% of coastal waters by 2030.

**3. Project includes a serious effort to engage tribes. Examples of tribal engagement include good faith, documented efforts to work with tribes traditionally and culturally affiliated to the project area.**

The Refuge has begun its formal consultation process with the local tribes whose ancestral lands include the project area. USFWS expects to conduct a cultural survey beginning in late fall 2022. The finalized survey and consultation will be completed before July 2023. The Refuge has worked with these tribes on past projects to address any concerns and will again work with them to ensure that their concerns are addressed and that cultural resources are protected.

USFWS Refuge staff contacted the local tribes in 2021 in support of Conservancy staff's application to the USFWS NCWC Grant program for the project. One of the local tribes, the Wiyot Tribe, will be an active participant in concept, design, and final interpretive signage around the restoration site and will use the site to educate its members and provide eco-cultural interpretation.

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

The project is designed around process-based restoration; though the individual features will likely evolve due to the dynamic nature of a tidal setting, they are expected to persist and provide value for at least fifty years given sea level rise. Project design elements are intended to trap suspended sediment brought in by tides which may allow marshes to keep pace with sea level rise for a longer time. Barriers to upslope migration of salt marsh will be removed.

**5. Project delivers multiple benefits and significant positive impact.**

The project will result in benefits for coastal wetlands and associated dependent species. It will provide the necessary designs, environmental documents, and permit applications to restore diked and drained salt marsh and intertidal areas, restore a natural transition from uplands to shoreline and the slough, and provide nursery and significant off-channel habitat for federally and state listed fish species and habitat for shorebirds and raptors. These project benefits will be resilient to changing ocean conditions and sea level rise because the removal of the dike will result in accommodation space for sea level rise. USFWS will provide management and long-lasting stewardship of the site.

**6. Project planned with meaningful community engagement and broad community support.**

The project is a collaboration between the Conservancy, the HCRCD, Caltrans, and the Refuge for restoration planning and implementation. The team has met with neighbors and partners, including tribes whose ancestral lands include the project area (see Project Selection Criteria, Item 3, above), to develop the project in a coordinated and cooperative manner.

In August 2015, Caltrans, the then-current landowner, held conceptual design coordination meetings with neighbors, stakeholders, and agencies to present and choose a restoration option to use the site for Caltrans' mitigation needs. Though Caltrans determined the site was unsuitable for its mitigation needs and abandoned further design development at the conceptual stage, the proposed project will further develop those early concept plans that included stakeholder input.

The project is supported by California Senator Mike McGuire, Assemblymember Jim Wood, and Humboldt County Supervisor Mike Wilson; letters are included in Exhibit 4. The project is also supported by local non-profit organizations Friends of the Dunes and Redwood Region Audubon Society; each provided a letter in support of the Conservancy's 2021 NCWC grant application and remains committed to supporting public outreach and education following completion of restoration activities.

**PROJECT FINANCING**

<b>Coastal Conservancy</b>	<b>\$69,127</b>
USFWS ( <i>via</i> a grant to the Conservancy)	\$157,173
<b>Project Total</b>	<b>\$226,300</b>

A portion of the funding for the proposed authorization is a USFWS NCWC Grant awarded to the Conservancy for the Mad River Slough – Wadulh Lagoon Restoration project. As described in the Project Summary section of this staff report, the USFWS has awarded \$806,990 to the Conservancy including the \$157,173 proposed for this authorization, \$13,891 to support Conservancy staff costs, and \$638,926 for implementation to be proposed for Conservancy authorization at a future meeting.

A portion of the funding is anticipated to come from a FY 2022/23 appropriation to the Conservancy from the General Fund for the purpose of climate resilience (Budget Act of 2022, SB 154 (2022), Section 52 of SB 155 (2021)). The proposed project is consistent with this funding source because it is a coastal resilience project that will plan for restoration of coastal wetlands that will build resilience for coastal communities and endangered species to future sea level rise.

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

**CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:**

The proposed project would be undertaken pursuant to Section 31113 of Chapter 3 of Division 21 of the Public Resources Code, which authorizes the Conservancy to address the impacts and potential impacts of climate change on resources within the Conservancy’s jurisdiction (Section 31113(a)).

Pursuant to Section 31113(b), the Conservancy is authorized to award grants to nonprofit organizations and public agencies to undertake projects, including those that reduce greenhouse gas emissions or address extreme weather events, sea level rise, flooding, and other coastal hazards that threaten coastal communities, infrastructure, and natural resources.

Pursuant to Section 31113(c), the Conservancy must prioritize grants for projects that maximize public benefits and have several listed purposes, including reducing greenhouse gas emissions and enhancing coastal wetlands.

Consistent with these provisions, the proposed project will develop a plan to restore tidal wetlands adjacent to Mad River Slough. Once restored, the wetlands will provide a buffer against the impacts of sea level rise and help sequester carbon pollution. The plan will also provide for upslope migration of the wetlands, thus ensuring that the restored wetlands are themselves resilient to sea level rise over the coming decades.

The proposed project addresses resources within the Conservancy’s jurisdiction by restoring coastal resources that have suffered a loss of natural value due to indiscriminate dredge-and-fill and other human-induced events (Chapter 6 of Division 21 of the Public Resources Code).

**CONSISTENCY WITH CONSERVANCY’S [2018-2022 STRATEGIC PLAN](#) GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 6, Objective A** of the Conservancy’s 2018-2022 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 6, Objective C** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will develop a plan to preserve and enhance coastal watersheds and floodplains.

Consistent with **Goal 8, Objective B** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will develop a project to increase resilience to sea level rise using a nature-based approach.

**CEQA COMPLIANCE:**

The proposed project is statutorily exempt from the California Environmental Quality Act (CEQA), pursuant to 14 California Code of Regulations Section 15262, and categorically exempt pursuant to 14 California Code of Regulations Section 15306. Consistent with Section 15262, the project will involve only planning studies for future actions that have not yet been authorized or funded, and will consider environmental factors. Consistent with Section 15306, the project will involve data collection and resource evaluation activities that will not result in a major disturbance to an environmental resource.

Upon approval, staff will file a Notice of Exemption for this project.