

COASTAL CONSERVANCY

Staff Recommendation
June 20, 2013

OCEAN RANCH: FEASIBILITY STUDY AND INITIAL DESIGN

Project No. 12-025-01
Project Manager: Michael Bowen

RECOMMENDED ACTION: Authorization to disburse up to \$160,717 to Ducks Unlimited to prepare a feasibility study and initial designs for the restoration of tidal processes at the Eel River Wildlife Area Ocean Ranch Unit, Humboldt County.

LOCATION: Ocean Ranch, near Table Bluff, Humboldt County

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: [Project Location and Site Map](#)

Exhibit 2: [Site Photos](#)

Exhibit 3: [Project Letters](#)

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Section 31251 *et seq.* of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to one hundred sixty thousand seven hundred and seventeen dollars (\$160,717) to Ducks Unlimited to prepare a feasibility study and initial designs for the restoration of tidal processes at the 375-acre Eel River Wildlife Area Ocean Ranch Unit, property owned by the California Department of Fish and Wildlife, subject to the condition that prior to the disbursement of funds, Ducks Unlimited shall submit for review and approval by the Executive Officer of the Conservancy a work program including a schedule and budget for the project, and the names and qualifications of all contractors to be employed for the project.”

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 project is consistent with the current Project Selection Criteria and Guidelines.

2. The proposed authorization is consistent with the purposes and objectives of Chapter 6 of Division 21 of the Public Resources Code, regarding resource enhancement.
 3. The proposed project area is identified in Humboldt County's Local Coastal Plan Eel River Area as requiring public action to resolve resource protection problems.
 4. Ducks Unlimited is a nonprofit organization existing under Section 501(c)(3) of the Internal Revenue Service whose purposes are consistent with Division 21 of the Public Resources Code.”
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PROJECT SUMMARY:

Staff recommends the Conservancy authorize disbursement of up to \$160,717 to Ducks Unlimited to prepare a feasibility study and initial designs for the restoration of tidal processes at the 375-acre Eel River Wildlife Area Ocean Ranch Unit, which is owned and managed by the California Department of Fish and Wildlife (DFW).

The proposed project will include analysis of breaching and/or removing levees to restore tidal prism and increase estuarine habitat. Engineering and hydraulic modeling will explore physical opportunities to meet habitat objectives and will include evaluation of such actions as establishing new levee breaches, widening existing levee breaches, lowering existing levees, and/or establishing new interior channels to add more habitat complexity to the existing landscape. The project proposes to identify which actions will maximize the increase of the tidal prism and connectivity of the Ocean Ranch Unit to McNulty Slough for the benefit of north coast fish and wildlife.

Eel River salmon populations have declined from record high runs exceeding one million fish per year to runs in the low thousands. One reason for this decline is the loss of much of the Eel Delta and estuary to reclamation for agricultural purposes. However, significant efforts are underway, and in concert with the agricultural community, to restore poorly functioning agricultural areas in the Eel Delta to tidal marsh and freshwater riparian areas, thereby restoring significant areas of salmon rearing habitat. Pursuing these projects within a relatively close timeframe provides much efficiency, such as reducing environmental analysis and permitting costs, and arranging for staff to conduct efficient post-project monitoring.

The Ocean Ranch project consists of multiple phases. Phase 1 is described in this staff recommendation and will include initial biological and engineering planning and feasibility evaluation. Activities will include consultation with fisheries experts on specific habitat needs in the lower Eel River estuary and how the existing geomorphology of the project site can be utilized and/or changed to accommodate these needs. Other activities will include initial physical site characteristic data collection, preliminary engineering design and hydraulic modeling.

Phase 1 project activities will include collection of multiple baseline datasets and completion of targeted studies to assist with developing a suitable suite of multiple conceptual (10% level) engineering design alternatives. Conceptual design alternatives developed will be those able to fulfill habitat needs of Pacific salmon populations (coho and Chinook salmon, steelhead, and cutthroat trout) while being cost-effective, readily buildable, and likely to attract sufficient

implementation funding . These data and designs will be modeled for potential physical benefits/impacts to the site and surrounding areas. Two of the initial conceptual designs will be selected and carried forward to the 30% engineering design stage for full feasibility analysis and future environmental analysis in Phase 2.

The following informational gaps are anticipated to be collected as part of Phase 1: existing topographic information including the latest NOAA LiDAR dataset, LiDAR field verification supplemental topography, existing bathymetric information for the project site's interior and adjacent tidal sloughs, tidal stages in McNulty Slough, and condition of McNulty Slough and Ocean Ranch levees and associated infrastructure. Additional studies will include tidal hydraulic modeling of multiple project concepts to size proposed breaches and determine associated inundation within the tidal sloughs and unit as well as scour potential within the levee system.

Future phases would include preparation of environmental compliance materials including biological surveys and regulatory permit development preparation of the final engineering designs and construction documents, as well as receipt of all environmental regulatory and compliance clearances, and on-the-ground project implementation and near-term monitoring. These future phases will be the subject of grant applications to a variety of funders, specifically the Wildlife Conservation Board, DFW, U.S. Fish and Wildlife Service (National Coastal Wetlands Conservation Grant) and the North American Wetlands Conservation Act (NAWCA) programs. The grantee has initiated conversations with representatives of all of these programs, and is confident in the availability of future funding for this important restoration effort.

Ducks Unlimited is well-qualified to undertake this project. It has demonstrated competency in bringing projects such as this to fruition, and has a proven track record in attracting significant levels of federal and other funding for such projects. Their work in the San Francisco Bay, particularly in the Sonoma Marsh, is highly regarded. They have also become a strong partner to the Conservancy in our efforts to complete the Salt River Ecosystem Restoration Project, described in Project History, below.

Site Description: Eel River Wildlife Area's Ocean Ranch Unit (ORU), is located on the northwest portion of the Eel River estuary, approximately 13 miles south of Eureka, California. The ORU is owned and managed by DFW. The proposed project site has an aging levee system and tide gates that were built in the latter 1800s and early 1900s by settlers. The intent of this infrastructure was to reclaim State tidelands for agricultural purposes, and then block permanently tide waters from inundating the reclaimed land. During this process historic tidal channels were filled. Drainage ditches, fencing, roads and internal berms remain throughout the ORU, and are in a state of decay. Outside the levee, tidal marshes have expanded along Hawk Slough and McNulty Slough. Aerial photo sequences suggest that local erosion and widespread sedimentation occurred between 1948 and 1965, which contributed to expansion of tidal marshes near the ORU.

A natural levee breach occurred in 1994 that allowed tidal inundation into the ORU via McNulty Slough. Several other breaches through existing infrastructure within the ORU have occurred and at least one former road crossing is submerged at high tides. The levee surrounding a large freshwater pond was breached in 1998 and was repaired in 2006.

The site is located in a key portion of estuary that is utilized by multiple listed fish species. Given that the site is difficult to maintain, is owned by DFW, is partially breached, and that tidal

brackish wetlands are critical for the recovery of listed fish species, this site is ideal for restoration to full tidal marsh by removing and breaching the remaining levees.

Project History: This proposed project, if funded, would expand upon the Coastal Conservancy’s longstanding and successful commitment to estuarine restoration in the Eel River Delta. Following 25 years of efforts, the Conservancy has helped to bring the Salt River Ecosystem Restoration Project to construction this year. When complete, the Salt River Project will have restored approximately 300-acres of tidal marsh and more than seven miles of tidal and freshwater slough to the Eel Delta, profoundly improving fish and wildlife habitat in the process. More recently, the Conservancy authorized funding for enhancement planning of historic tidelands and marsh on the Eel River Estuary Preserve near Ferndale. That project is well into planning stages and seeks to enhance coastal agricultural uses with natural resource enhancement efforts.

Ocean Ranch affords a similar though far less costly opportunity to expand upon those earlier efforts in concert with our sister agency DFW, and promote the restoration of 375-acres of formerly reclaimed tidelands to habitat function.

PROJECT FINANCING

Coastal Conservancy	160,717.00
Department of Fish and Wildlife	162,302.00
Total Project Costs	327,808.00

The anticipated source of Conservancy funds for this authorization is the Fiscal Year 2010/11 appropriation from the California Wildlife Protection Act of 1990, Fish and Game Code section 2786 (Proposition 117), known as the Habitat Conservation Fund (HCF). Under Subsections (e) & (f), HCF Funds may be used for the acquisition, restoration, or enhancement of aquatic habitat for spawning and rearing of anadromous salmonids and for the acquisition, restoration, or enhancement of riparian habitat. The proposed project concept includes levee breaching, levee reinforcement, and various other measures intended to restore tidal marsh and prism in some areas for the benefit of coastal salmon populations while diminishing flood risk in others.

The Conservancy’s appropriation of HCF funds comes from the Disaster Preparedness and Flood Prevention Bond Act of 2006, Public Resources Code section 5096.825 (Proposition 1E). Proposition 1E funds are available for projects that assist with flood plain habitat restoration. (Pub. Resources Code § 5096.825). The Ocean Ranch is located on the 100-year floodplain, floods frequently, and is an ideal candidate for wetland and riparian restoration compatible with the goals of the Ocean Ranch Enhancement Project. Since development of the property as described will alleviate flooding on nearby prime agricultural lands, the development is consistent with the requirements of Proposition 1E funds.

Ducks Unlimited will contribute at least 40 hours of engineering and project management services to the project at an estimated value of \$4,789.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project would be undertaken pursuant to Public Resource Code Section 31111 and Chapter 6 of Division 21 (sections 31251-31270, regarding enhancement of coastal resources), as follows:

Pursuant to Section 31111, the Conservancy may fund and undertake plans and feasibility studies, and may award grants to nonprofit organizations for these purposes. Ducks Unlimited is a nonprofit organization with extensive experience in designing, funding and implementing marsh restoration projects across the nation.

Pursuant to Section 31251, the Conservancy may award grants to nonprofit organizations to enhance coastal resources. This acquisition will promote the improvement of hydraulic connectivity between McNulty Slough and presently terrestrial areas of Ocean Ranch by designing levee breaches, channels and other features necessary for a full tidal marsh restoration of the area. This feature, in addition to the restoration of hundreds of acres of salt marsh and freshwater habitat on the Riverside Ranch property and historic Salt River channel ensures that the Ocean Ranch project will benefit a variety of aquatic resources that are partly within and partly outside the coastal zone (Pub. Resources Code § 31251.2).

Consistent with Section 31252, the proposed project is consistent with Humboldt County's Local Coastal Plan Eel River Area as described in the Consistency with Local Coastal Program Policies below.

Consistent with Section 31253, the amount of funding recommended for the proposed project is based on the total amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant and its project partners, and the urgency of the project relative to other eligible coastal resource enhancement projects.

CONSISTENCY WITH CONSERVANCY'S 2007 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

Consistent with **Goal 5, Objective A** the project will design a wetland restoration and stream corridor enhancement project and promote future implementation of this project.

Consistent with **Goal 6, Objective E** this project will assist the Conservancy to complete a plan to improve water quality to benefit coastal resources. Consistent with this goal, the designs will define a project that improves tidal and estuarine function within the Eel River estuary. Fully functional estuaries are known to have a significant ability to filter water and reduce contamination such as livestock runoff that is detrimental to the well being of aquatic and terrestrial species in the area.

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 November 10, 2011, 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. **Support of the public:** The proposed project is supported by Congressman Jared Huffman, Assemblyman Wes Chesbro, the landowner (CDFW), the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the Humboldt County Resource Conservation District.
4. **Location:** The proposed project is located within the coastal zone of Humboldt County.
5. **Need:** Extensive enhancement of a large tidal marsh is, by necessity, an undertaking that requires many participants. The Conservancy’s previous expertise with the Salt River Ecosystem Restoration Project, as well as our financial assistance that supports DFW’s efforts to restore habitat on State property, is vital to the project’s success.
6. **Greater-than-local interest:** Recovery of Eel River salmonid stocks can have a significant influence on the regional fishing economy of California’s north coast. Not only is commercial ocean fishing tightly regulated, but recreational fishing within the Eel River is, too. Restoration of Eel River estuarine habitats will benefit a wide variety of marine resources, including recovery of north coast Dungeness crab and salmon stocks and ultimately help to improve the battered north coast fishing economy. One opportunity to alleviate stressors on salmonid populations in Eel River estuarine habitats is to restore tidal connectivity between former estuarine wetlands and adjacent sloughs. Levee removal and breaching is fundamental to recovering tidal prism and exchange in the Eel River estuary. Use of the lower Eel River estuary and its importance to the annual life cycle needs of juvenile and adults salmonids is well documented. A complex and diverse estuary with suitable cover of deep channels and sloughs connected to productive brackish wetlands will help to increase size and fitness of juvenile salmonids prior to ocean entry, and ultimately improve overall marine survival for adults.
7. **Sea level rise vulnerability:** The proposed project is a tidal restoration effort and is designed to allow for sediment accumulation and marsh plain accretion. No formal marsh accretion studies have been undertaken in the Eel River estuary, however given that the Eel carries the second largest sediment load of the World’s rivers, and in light of the large amount of sediment transport and deposit within the Eel River, natural marsh accretion dynamics are expected to maintain pace with sea level rise for at least a twenty year period.

Additional Criteria

8. **Leverage:** See the “Project Financing” section above.
9. **Readiness:** Ducks Unlimited is prepared to begin the project immediately upon authorization by the Board.
10. **Cooperation:** Multiple state and federal agencies have been included in the development of the proposed project. The US Fish and Wildlife Service Coastal Program, the National Oceanic and Atmospheric Administration and National Marine Fisheries Service and the University of California, Sea Grant all have expressed interest in cooperating on a multi-

species restoration planning effort for Ocean Ranch Unit. All agreed and appreciated the early cross disciplinary coordination since it is a necessity due to the complexity of the proposed project.

11. **Minimization of greenhouse gas emissions:** The proposed project involves the development of a feasibility study, and thus in and of itself, will have a negligible effect on greenhouse gas emissions.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project will result in the design of a project that advances habitat restoration within the Coastal Zone generally, and within the jurisdiction of Humboldt County's Local Coastal Plan Eel River Area (ERAP), particularly.

The County of Humboldt Local Coastal Program (LCP) Eel River Area does not specify the Ocean Ranch Unit, except to note the Department of Fish and Wildlife's (DFW) ownership of the Eel River North Spit. This omission is likely due to the fact that most of the Ocean Ranch Unit was acquired after the certification of the ERAP. Nevertheless, the ERAP does state under in Section F (1) (b) of the ERAP that "The Department of Fish and Game, in consultation with the County, local sports and fishing clubs, and property owners adjacent to the Eel River, should investigate opportunities and implement measures to augment and enhance anadromous fish runs in the Eel River." Moreover, per section 30607.1 of the Coastal Act cited in the ERAP, the importance of "opening up equivalent areas to tidal action..." is specifically cited as an appropriate mitigation measure for permitted diking or filling of wetland. In light of the fact that most of the Eel Delta was diked, ditched and drained prior to the passage of the Coastal Act, opportunities to enhance tidal wetland are wholly consistent with the ERAP and the Coastal Act.

Finally, and consistent with efforts to reverse more than a century of habitat degradation at the site, the ERAP outlines several corollary policies that relate to the preservation and restoration of sensitive coastal habitat, including: Policy 3.41: "Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values"; Policy 3.41 1.a.(2): "The County shall continue to pursue opportunities to restore or enhance, if possible, in-stream flows"; Policy 3.41 F.6.a: ". . . long-term protection of riparian vegetation . . . should be provided. . . . To achieve these objectives, the County should work with property owners and affected State and Federal agencies"; Policy 3.41 G.7.: "Natural drainage courses . . . shall be retained and protected from development which would impede the natural drainage pattern or have a significant adverse effect on water quality or wildlife habitat."

The proposed project adheres to the letter and spirit of the LCP guidelines. By developing a project capable of restoring tidal exchange and estuarine function to the ORU, the project is of overall benefit to coastal resources and consistent with the approved LCP guidelines.

COMPLIANCE WITH CEQA:

Preparation of the feasibility study and conceptual design involves only data gathering, planning, and feasibility analyses for possible future actions and is thus statutorily exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to 14 California Code

of Regulations section 15262. The authorization is also categorically exempt under Section 15306 as an information gathering and resource evaluation activity.

Staff will file a Notice of Exemption upon approval.