STAFF REPORT

C17

A 2 11/29/17

W 27113

S 2 M. Schroeder

GENERAL LEASE – OTHER

APPLICANT:

The Wildlands Conservancy

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the Eel River Estuary Preserve, including Cutoff Slough, Centerville Slough and historic tidal sloughs within the approximate limits of distubance of the Eel River Estuary Preserve Ecosystem Enhancement Project, adjacent to Assessor's Parcel Numbers 100-121-01, 100-143-01, 100-142-01, 100-131-03 and -04; 100-121-04 and -05, near Ferndale, Humboldt County.

AUTHORIZED USE:

Construction, use, and maintenance of the Eel River Estuary Preserve Ecosystem Enhancement Project, a tide gate, two kayak launching areas, tidal wetlands, ponds and side channels, aquatic habitat cover, interpretive area, gated culverts, a vault toilet, improvements to access roads, repair or removal of culverts and culvert holes, enhancement of existing freshwater ponds, removal of non-native beach grass, establishment of dunes and sediment management areas, improvement of drainage on agricultural land; and temporary construction work areas including cofferdams, diversion pipelines, and fish screens.

LEASE TERM:

25 years, beginning November 29, 2017.

CONSIDERATION:

Public use and benefit; with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State’s best interests.

SPECIFIC LEASE PROVISIONS:

Liability insurance in an amount no less than $2,000,000 per occurrence.

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

Public Trust and State's Best Interests Analysis:

The Wildlands Conservancy has applied for a General Lease – Other for the proposed Eel River Estuary Preserve Ecosystem Enhancement Project (project). The purpose of the project is to improve ecosystem functions that will enhance habitat for aquatic life, support waterfowl and wildlife, and benefit agricultural land management by more effectively managing onsite flooding and sedimentation.

The project area is approximately 1,200 acres and is a historic reclamation district with the purpose of managing tidal inundation, as well as the Eel River and Wildcat Hill stream floodwaters. Tidal salt marsh, brackish marsh, riparian scrub, sloughs and open water channels, freshwater ponds and ditches, and nearshore dune ridges and swales are located within the project area. Cutoff Slough, Centerville Slough and historic tidal sloughs are located on sovereign land in the project area and are subject to lease. The abandoned channel of Centerville Slough is also located within the project area. However, the channel was patented on April 12, 1946, and is no longer sovereign land; therefore, a lease for the project located within the channel is not required at this time. In addition, the existing bridges, proposed new bridge, enhancement and reestablishment of the Centerville Slough, and the existing Cutoff Slough tide gate are not located on sovereign land and a lease is not required at this time.

The project area includes nine parcels. Seven of the nine parcels are owned by the Applicant, one parcel is owned by O'Rourke Foundation and one parcel is owned by Harville Ranch LLC. The Applicant is in the process of obtaining access agreements from the other owners. The Applicant has established the largest nonprofit nature preserve system in California. This project is a component of that nature preserve system. This system preserves and restores a variety of areas and makes them available to the public for educational and recreational purposes. A combination of grants from the California State Coastal Conservancy and the California Department of Fish and Wildlife were awarded to California Trout to design and implement the project within the Applicant's preserve.

Implementation of the project will occur using a phased approach over multiple years and multiple construction seasons. Each season will last approximately 120 days (May through October). The initial phase is

proposed to commence in 2018 and will include site preparation and invasive species removal. Construction in 2019 is proposed to include the new tide gate construction and sand dune reconfiguration. Additionally, the side channel and pond complexes within the Inner Marsh will be constructed and connected to existing channels. The Inner Marsh is a 150-acre former salt marsh used for summer grazing and is hydraulically connected with culverts to Cutoff Slough and Centerville Slough. In 2020, the majority of the earthwork is proposed to be completed through the excavation of the Inner Marsh Slough and construction of a new sediment management area. The gates on the new tide gate structure will be opened and seasonal operations will commence.

Construction of a new tide gate structure will re-introduce tidal exchange into the Inner Marsh, enabling tidewaters to re-occupy historic tidal slough channels. As a result, enhancement of aquatic species passage through the Eel River Estuary, Centerville Slough, and Cutoff Slough will occur, while improving drainage efficiency. The new tide gates will be aluminum or stainless steel. The disconnected slough channels in the Inner Marsh will be reconnected through excavation of new connector channels which will further enhance re-introduction of the tidal exchange. Creation and enhancement of tidal pools in the Inner Marsh will occur with grading activities. Introduction of habitat cover for aquatic species will be implemented by anchoring approximately 20 in-channel woody structures within primary or secondary channel banks. Culverts connecting the Inner Marsh with Cutoff and Centerville Sloughs will either be removed and the dike repaired or retrofitted with flap gates. Material from excavated channels will be reused on site to construct refurbished berms or placed in the designated upland agricultural reuse area. Existing freshwater ponds managed for waterfowl will be deepened with controlled inlets and outlets to enhance their habitat value. This enhancement of habitat will protect Public Trust resources in the area.

Natural sand dunes are generally self-maintaining; however, the form of the sand dunes can be altered by vegetation, sediment recruitment, storm/wave strength, and geologic changes. Non-native invasive vegetation alters dune mobility and shape. Dunes traditionally migrate, and possess various zones of recruitment. The dunes have been significantly disturbed with movement of sand further into the project area, which facilitates breach and wave over-wash events that have inundated hundreds of acres of pasture with salt water, impacting their agricultural utility and causing conversion to salt marsh. This trend threatens the safety and land use of the project area. The proposed dune work includes

trapping and retaining sand in a manner that rebuilds the dune in over-wash areas to former and surrounding heights.

The Applicant intends to preserve agricultural land productivity through managed short-grass habitat for pasture. Existing access roads and berms within the project area will be improved by raising and resurfacing with gravel. Culverts will be replaced or installed along the road in areas of poor drainage.

Excavation of channels will be through a variety of methods, including track-mounted excavators, scrapers, and large clam-shell type equipment. Clam shell buckets are generally attached to excavators, cranes, or dredges and can be used to excavate both saturated and unconsolidated material. Dredges are not anticipated to be used on this project due to size, weight, and access constraints. The multiple sediment reuse areas coupled with the extent of the project excavation is anticipated to necessitate multiple active staging and excavation sites within the project area. Each work site may include excavators, graders, scrapers, dozers, loaders, dump trucks, small tractors, compactors, and water trucks. Brief restrictions on access to portions of the project area, including Cutoff Slough, Centerville Slough, and historic tidal sloughs are expected during construction for purposes of public safety; however, it is expected that navigation in waterways in the project area will not be impeded.

Primary construction access to the project area will be through Russ Lane from Centerville Road with connecting easements. Temporary construction easements will be used to stage equipment, store material, and transport material. Temporary construction areas will be predominantly contained within the same locations as permanent impacted areas such as excavation and fill placement areas (berms, channel corridor, agricultural reuse lands), and within areas where grading will occur such as lowered berms and channels. All areas disturbed by temporary staging and stockpiling will be de-compacted and naturalized as needed prior to project completion.

Placement of temporary cofferdams will be used to divert and control water flows in the waterways during in-water work. The cofferdams will include a water bladder, geotextile wrapped fill, sheet piles, or a combination of these types. A combination of pumped or gravity diversion pipes will be used to route flow around the active work areas. If diversion pipes are used, temporary sheet piles will be advanced or pushed into the sediments using non-vibratory methods. Fish screens will be installed immediately upstream from the cofferdams to prevent aquatic life from

being transported into the bypass pipe. Turbidity curtains and silt fencing will be used to reduce transport of turbid water. In-water work on the tide gates will take place during low tides since it is not feasible to dewater the structures as the tide gates are located below mean sea level. Seepage water will be pumped to adjacent areas such as adjoining pastures or the back dune area. Ponds and connector channels will be constructed while maintaining an earthen plug at the connection to existing sloughs. Once the final grades are achieved in the newly created habitat, the earthen plugs will be excavated and the habitat allowed to fill in with water. Excavation of the Inner Marsh Slough will be phased and will also utilize earthen plugs to reduce inflow to the active excavation areas.

Public access to the site is from Russ Lane off Centerville Road. Title to the upland includes a right-of-way easement for road uses. The project area is managed for natural resources enhancement, agricultural production, outdoor recreation, and educational opportunities. Public access and recreational components of the project include continuation of access for a waterfowl hunting club, improvements to access roads, trails, an interpretive area, a vault toilet, construction of kayak launch facilities with foot-accessible ramps built of all-weather gravel surfaces to provide recreational amenities for visitors, and installation of interpretative signage at the kayak launch areas. In addition, improvements to the public access parking areas will be completed. The kayak launch ramps will also provide access to the Inner Marsh to facilitate post-project monitoring of the Inner Marsh aquatic educational programs. The addition of these improvements will facilitate the public's ability to access and enjoy the unique coastal features and Public Trust resources at this location.

The Applicant must carry a $2,000,000 per occurrence liability insurance policy to insulate the state from any incidents or damage that could occur in relation to the lease activities. The project will require ongoing maintenance and monitoring activities to ensure that the project meets its goals and objectives; thus, the lease term is for 25 years. Maintenance may require planting to revegetate in the project area, optimization of drainage inflows, integration of sediment and vegetation maintenance.

Climate Change Analysis:

Climate change impacts, including sea-level rise, more frequent and intense storm events, and increased flooding and erosion, affect both open coastal areas and inland waterways in California. The project area is located adjacent to the Eel River, and is a tidally influenced site vulnerable to flooding at current sea levels that will be at higher risk of flood exposure given projected scenarios of sea-level rise. The project area ranges in

elevation from below sea level to an approximate elevation of 30 feet. Prominent water features within the lease area include the remnant Centerville Slough and Cutoff Slough, as well as smaller (seasonal) slough channels and drainage ditches.

The goal of the project is to improve geomorphic and ecosystem functions to enhance habitat for native fisheries and aquatic species, support waterfowl and wildlife species, and benefit agricultural land management by more effectively managing onsite flooding and sedimentation. This would include increasing resiliency to sea-level rise and reducing salt water influences to pastures, and improving drainage; enhancing tidal processes by restoring tidal prism and increasing reliability of tide gate infrastructure to provide adaptability for sea-level rise and varied land management; and augmenting dune formation to increase resiliency to sea-level rise. The project does not propose to place any habitable structures into the lease area; however, it would include the replacement of an existing culvert with a gated culvert at Centerville/Cutoff Slough and removal of an existing culvert and berm repair in Cutoff Slough.

The risk of flood exposure to portions of the project area under lease is likely to increase with time. The region could see up to 0.8 foot of sea-level rise (from year 2000 levels) by 2030, 1.6 feet by 2050, and approximately 4.7 feet by 2100 (National Research Council 2012). Rising sea levels can lead to more frequent flood inundation in low lying areas and larger tidal events. In addition, as stated in *Safeguarding California* (California Natural Resources Agency 2014), climate change is projected to increase the frequency and severity of natural disasters related to flooding, fire, drought, extreme heat, and storms (especially when coupled with sea-level rise). In rivers and tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris. Climate change and sea-level rise will further influence coastal and riverine areas by changing erosion and sedimentation rates. In rivers and tidally influenced waterways, flooding and storm flow will likely increase scour, decreasing bank stability and structure.

The proposed improvements within the lease area would result in increased resiliency from sea-level rise. Regular maintenance, as required by the lease, will reduce the likelihood of severe structural degradation or dislodgement. Pursuant to the proposed lease, the Applicant acknowledges that the lease premises are located in an area that may be subject to effects of climate change.

Conclusion:

For all the reasons above, staff believes the proposed lease is consistent with the common law Public Trust Doctrine and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction.

2. An Environmental Impact Report (EIR), State Clearinghouse No. 2014122040, was prepared for this project by the California State Coastal Conservancy and certified on February 2, 2017. Commission staff has reviewed the EIR and Mitigation Monitoring Program prepared pursuant to the provisions of the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21081.6) and adopted by the lead agency.

3. The EIR and related project approvals have been challenged in a lawsuit under CEQA raising issues in various categories including Agricultural Resources, Cultural Resources, Greenhouse Gas Emissions, Hydrology, Recreation and others. (*Jack Russ, et al. v. California State Coastal Conservancy, et al., Humboldt County Superior Court* (Case No. CV170269).) No injunction or stay has been issued. When a lawsuit has been filed and no stay or injunction has been issued, responsible agencies must assume the EIR complies with the requirements of CEQA and proceed with consideration of the project. If the Commission approves the project, the approval constitutes permission to proceed with the project at the applicant's risk pending final determination of the lawsuit. (Pub. Resources Code, § 21167.3 subdivision (b).)

4. A Mitigation Monitoring Program and Statement of Findings made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15091, 15096) are contained, respectively, in the attached Exhibits C and D.

5. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS REQUIRED:

U.S. Army Corps of Engineers
North Coast Regional Water Quality Control Board
California Department of Fish and Wildlife
California Coastal Commission
Humboldt County
U.S. Fish and Wildlife Service
National Oceanic and Atmospheric Administration

EXHIBITS:

A. Land Description
B. Site and Location Map
C. Mitigation Monitoring Program
D. CEQA Statement of Findings

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that an EIR, State Clearinghouse No. 2014122040, was prepared for this Project by the California State Coastal Conservancy and certified on February 2, 2017, and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgement, the scope of activities to be carried out under the lease to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached.

Adopt the Statement of Findings, made pursuant to California Code of Regulations, title 14, sections 15091 and 15096, subdivision (h), as contained in Exhibit D, attached.

Determine that the project, as approved, will not have a significant effect on the environment.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease will not substantially impair the public rights to navigation and fishing or substantially interfere with the Public Trust needs and values at this location, at this time, and for the foreseeable term of the lease; is consistent with the common law Public Trust Doctrine; and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Other to The Wildlands Conservancy, beginning November 29, 2017, for a term of 25 years, for the construction, use, and maintenance of the Eel River Estuary Preserve Ecosystem Enhancement Project, which includes a tide gate, two kayak launching areas, tidal wetlands, ponds and side channels, aquatic habitat cover, interpretive area, gated culverts, a vault toilet, improvements to access roads, repair or removal of culverts and culvert holes, enhancement of existing freshwater ponds, removal of non-native beach grass, establishment of dunes and sediment management areas, improvement of drainage on agricultural land; and temporary construction work areas including cofferdams, diversion pipelines, and fish screens, as described in Exhibit A and shown on Exhibit B (for reference purposes only), attached and by this reference made a part hereof; consideration being the public use and benefit, with the State reserving the right, at any time, to set a monetary rent as specified in the lease if the Commission finds such action to be in the State's best interests; and liability insurance in an amount no less than $2,000,000 per occurrence.

EXHIBIT A

W27113

LAND DESCRIPTION

Three parcels of tide and submerged land, whether filled or unfilled, lying in the present and historic beds of the Cutoff Slough, Centerville Slough, and historic tidal sloughs, County of Humboldt, State of California and being more particularly described as follows:

PARCEL ONE

A parcel of land lying in the bed of the Cutoff Slough, bounded downstream by the following described line: COMMENCING at the corner common to Sections 32 and 33, Township 3 North, Range 2 West, HM as shown on official government plat approved October 22, 1890, and Sections 4 and 5, Township 2 North, Range 2 West, HM as shown on official government plat approved January 17, 1876; said corner shown on Book 66 of Surveys, at Page 66-67, Humboldt County Records; thence along the township line between said townships, South 89°36'55" West 2652.70 feet to the south quarter corner of said Section 32; thence leaving said line, North 5°02'30" East, 9000 feet to the POINT OF BEGINNING; then North 86°58'28" East, 200 feet to the terminus of said line; said land bounded upstream by a line connecting the left banks of the Centerville Slough, across the mouth of the Cutoff Slough; said land bounded easterly by the right bank of said slough and westerly by the left bank of said slough.

EXCEPTING THEREFROM any portion lying landward of the ordinary high water marks of said Cutoff Slough.

PARCEL TWO

A parcel of land lying in the bed of the Centerville Slough, bounded downstream by the following described line: COMMENCING at the corner common to Sections 32 and 33, Township 3 North, Range 2 West, HM as shown on official government plat approved October 22, 1890, and Sections 4 and 5, Township 2 North, Range 2 West, HM as shown on official government plat approved January 17, 1876; said corner shown on Book 66 of Surveys, at Page 66-67, Humboldt County Records; thence along the township line between said townships, South 89°36'55" West 2652.70 feet to the south quarter corner of said Section 32; thence leaving said line, North 3°30'58" East 6075 feet to the POINT OF BEGINNING; then North 45°43'49" West 250 feet to the terminus of said line; said land bounded upstream by the following described line: COMMENCING at the corner common to Sections 32 and 33, Township 3 North, Range 2 West, HM as shown on official government plat approved October 22, 1890, and Sections 4 and 5, Township 2 North, Range 2 West, HM as shown on official government

plat approved January 17, 1876; said corner shown on Book 66 of Surveys, at Page 66-67, Humboldt County Records; thence along the township line between said townships, South 89°36'55" West 2652.70 feet to the south quarter corner of said Section 32; thence leaving said line, North 11°45'18" West 5405 feet to the POINT OF BEGINNING; then North 3°11'53" West 300 feet to the terminus of said line; said land bounded northwesterly by the left bank of said slough and southeasterly by the right bank of said slough.

EXCEPTING THEREFROM any portion lying landward of the ordinary high water marks of said Centerville Slough.

ALSO EXCEPTING THEREFROM any portions lying within the abandoned channel of the Centerville Slough which was patented April 12, 1946 and filed in S&O Book 13 at page 168.

PARCEL THREE

All those lands lying below the historic ordinary high water marks of the banks of historic sloughs within the Approximate Project Limits of Disturbance as defined in "Eel River Estuary and Centerville Slough Enhancement Project on the Wildlands Conservancy's Eel River Estuary Preserve 65% Design Plans" dated March 9, 2017 and prepared by GHD Inc.

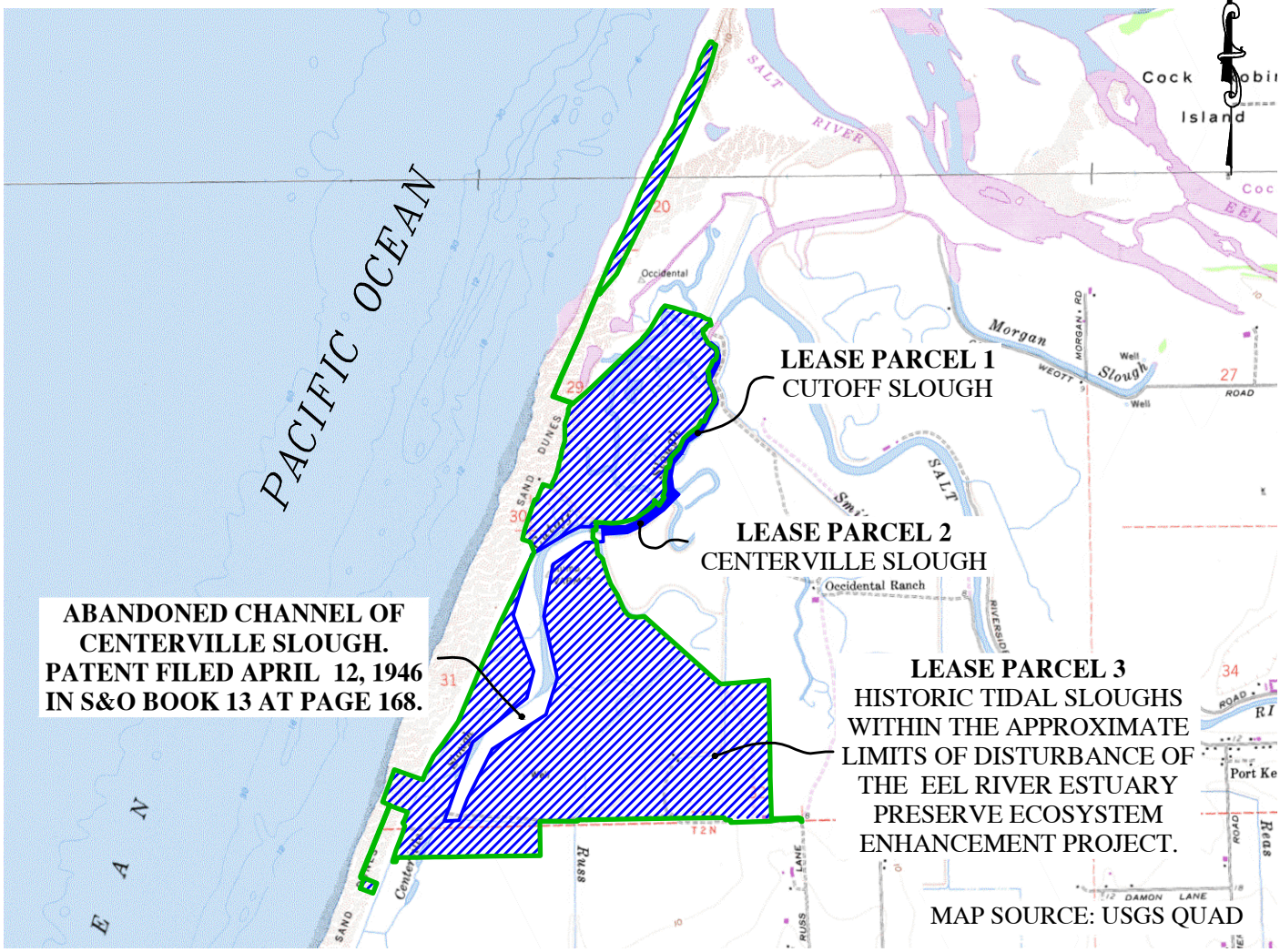
EXCEPTING THEREFROM any portions lying within the abandoned channel of the Centerville Slough which was patented April 12, 1946 and filed in S&O Book 13 at page 168.

END OF DESCRIPTION

Prepared June 29, 2017 by the Boundary Unit of the California State Lands Commission.

NO SCALE

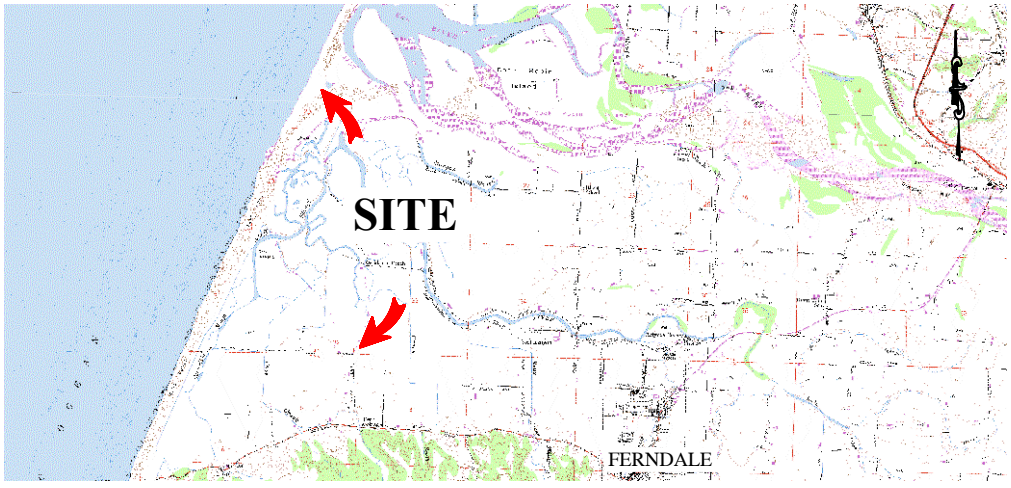
SITE



EEL RIVER ESTUARY PRESERVE ECOSYSTEM ENHANCEMENT PROJECT

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

Exhibit B

W 27113
WILDLANDS CONSERVANCY
GENERAL LEASE - OTHER
HUMBOLDT COUNTY

JWP 10/03/17

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM

EEL RIVER ESTUARY AND CENTERVILLE SLOUGH ENHANCEMENT PROJECT
(W27113, State Clearinghouse No. 2014122040)

The California State Lands Commission (Commission) is a responsible agency under the California Environmental Quality Act (CEQA) for the Eel River Estuary and Centerville Slough Enhancement Project (Project). The CEQA lead agency for the Project is the California State Coastal Conservancy.

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:[1]

> *In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.*

The lead agency has certified an EIR, State Clearinghouse No. 2014122040, and has adopted a MMP for the whole of the Project (see Exhibit C, Attachment C-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMP prepared by the CEQA lead agency and listed in Table C-1, is incorporated by reference in this Exhibit C.

[1] The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM)[2]
Impact AQ-1: Violate Any Air Quality Standard or Result in Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Non-attainment.	**MM AQ-1**: Dust Control Measures during Construction.
Impact BIO-1: Substantial Adverse Effect on Special-Status Wildlife Species.	**MM BIO-1a**: Avoidance, Minimization, and Mitigation for Tidewater Goby. **MM BIO-1b**: Conduct Pre-construction Avian Surveys for Nesting Passerine Birds and Avian Species of Special Concern. **MM BIO-1c**: Avoid, Minimize, and Mitigate for Potential Impacts to Western Snowy Plover. **MM BIO-1d**: Habitat Enhancement for Northern Red-legged Frog. **MM BIO-1e**: Mitigate for Potential Impacts to Salmonid Species and Longfin Smelt.
Impact BIO-2: Substantial Adverse Effect on Special-Status Plant Species.	**MM BIO-2a**: Mitigate Impacts to Beach Layia. **MM BIO-2b**: Mitigate Impacts to Sensitive-Listed Plant Species.
Impact BIO-3: Substantial Adverse Effect on Sensitive Natural Community.	**MM BIO-3a**: Mitigate Impacts to Sensitive Listed Habitats through Avoidance and Re-establishment. **MM BIO-3b**: Mitigate Impacts to Sensitive Listed Habitats Through Control of Invasive Species.
Impact BIO-4: Substantial Adverse Effect on Federally and/or State Protected Wetlands.	**MM BIO-4**: Mitigate Temporary and Short-term Impacts to Sensitive Habitats Including Wetlands through Construction Minimization and Avoidance Measures.
Impact CR-1: The Project could cause a substantial change in the significance of a historical or archaeological resource as defined in Section 15064.5.	**MM CR-1**: Disturbance of Undiscovered Cultural Resources.
Impact CR-2: The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**MM CR-2**: Potential Disturbance of Undiscovered Paleontological Resources.
Impact CR-3: The Project could disturb any human remains, including those interred outside of formal cemeteries.	**MM CR-3**: Potential to Uncover Human Remains.
Impact GEO-1: Expose People or Structures to Potential Substantial Adverse Effects Involving Strong Seismic Ground Shaking or Seismic-related Ground Failure, including Liquefaction.	**MM GEO-1**: Implement Recommendations in the Geotechnical Report.

[2] See Attachment C-1 for the full text of each MM taken from the MMP prepared by the CEQA lead agency.

Potential Impact	Mitigation Measure (MM)[2]
Impact GEO-2: Result in Substantial Soil Erosion or Loss of Topsoil.	**MM HWQ-1a**: Manage Construction Storm Water. **MM HWQ-1b**: Implement Contractor Training for Protection of Water Quality. **MM HWQ-1c**: In-Stream Erosion and Water Quality Control Measures during Channel Excavation and Operations. **MM HWQ-3**: Implement Erosion and Water Quality Monitoring, Maintenance, and Adaptive Management Plan. **MM GEO-1** (see above)
Impact GEO-3: Be Located on Geologic Unit or Soil that is Unstable, or would become Unstable as a Result of the Project, and Potentially Result in Liquefaction, Lateral Spreading, Subsidence, or Collapse.	**MM GEO-1** (see above)
Impact GEO-4: Be Located on Expansive Soil, as Defined in Table 18-1-B of Uniform Building Code (1994), Creating Substantial Risks to Life or Property.	**MM GEO-1** (see above)
Impact HWQ-1: Violate any Water Quality Standards or Waste Discharge Requirements.	**MM HWQ-1a** (see above) **MM HWQ-1b** (see above) **MM HWQ-1c** (see above)
Impact HWQ-3: Substantially Alter the Existing Drainage Pattern of the Site or Area and Increasing Erosion or Siltation.	**MM HWQ-3** (see above)
Impact HWQ-5: Substantial Additional Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality.	**MM HWQ-1a** (see above) **MM HWQ-1b** (see above) **MM HWQ-1c** (see above) **MM HWQ-3** (see above)

ATTACHMENT C-1

Mitigation Monitoring Program Adopted by the

California State Coastal Conservancy

MITIGATION MONITORING AND REPORTING PROGRAM EEL RIVER ESTUARY AND CENTERVILLE SLOUGH ENHANCEMENT PROJECT

In order to mitigate or avoid significant effects resulting from the proposed project, Public Resources Code Section 21081.6 requires that monitoring and reporting procedures take place through a Mitigation Monitoring and Reporting Program (MMRP). **Table A-1** provides the MMRP for the proposed Project in accordance with those guidelines.

TABLE A-1
MITIGATION MONITORING AND REPORTING PROGRAM

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
3.2	**Agricultural Resources**						
AR-1	**Pasture Monitoring Plan (not a Mitigation Measure).** The Coastal Conservancy shall put in place a Pasture Monitoring Plan to monitor the increase in productivity resulting from the proposed Project for no fewer than five years. The Pasture Monitoring Plan will assess the Project's ability to provide a more predictable management of flow and sediment in the avulsion areas, and will quantify pasture production for the five-year period. Additionally, the Coastal Conservancy shall place $90,000 into an escrow account, or otherwise cause such funds to be set aside, to be used only in the event that the Pasture Monitoring Plan shows that the projected productivity increases do not occur by the conclusion of the five-year monitoring period. The funds will be used to acquire or otherwise protect or improve agricultural land in or near the Project area for the benefit of the agricultural economy of Humboldt County. The fund amount is based on agricultural land in the Project area being worth an estimated $6,000/acre, and the potential conversion of prime agricultural land being 15 acres. If this outcome is triggered, the funds will be granted to a suitable non-profit or special district capable of and willing to administer the funds. Possible recipients include the Humboldt Resource Conservation District, the Salt River Watershed Council or the Northcoast Regional Land Trust.	Applicant	Humboldt County Planning and Building Department	Project operation	Project operation	County/ State standards	Applicant/ Coastal Conservancy
	Mitigation Measure						
3.3	**Air Quality**						
AQ-1	**Dust Control Measures during Construction.** The contractor shall implement the following Best Management Practices: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, active graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.	Applicant's Contractor	Humboldt County Planning and Building Department	Project construction	During construction	County/ standards	Applicant

Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 mph, unless the unpaved road surface has been treated for dust suppression with water, rock, wood chip mulch, or other dust prevention measures.						
3.4 Biological Resources						
BIO-1a **Avoidance, Minimization, and Mitigation for Tidewater Goby.** Because implementing the Project could directly or indirectly harm or kill Tidewater Gobies, the following avoidance and minimization measures will be incorporated into the Project: • Construction activities will be phased and conducted in a sequence that minimizes impacts to Tidewater Gobies. Construction also will be limited to dry-season work windows (June 15 through October 15) to reduce the amount of goby habitat affected and minimize the impact on water quality. Although dry-season work windows may coincide with spawning and larval development, the footprint of available goby habitat may be smaller because summer conditions typically are drier, reducing the area in which Tidewater Gobies may be present. In addition, conducting work during the dry season will minimize the impact on water quality from sediment generated by construction activities and from spills that could occur during construction and maintenance of the Project (e.g., oil, fuel, hydraulic fluid). • Phase Project construction so Tidewater Gobies can be relocated to sites in the Project area but away from areas targeted for restoration. During excavation, Tidewater Gobies may be crushed by equipment or debris or may be removed from	Applicant	USFWS	First year of construction during the dry season and pre-operation	During construction and operation	State and Federal standards	Applicant

Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
channels or marshes unintentionally by equipment. Mortality can be minimized by capturing and relocating Tidewater Gobies out of construction areas. Relocating Tidewater Gobies from areas targeted for restoration to habitat outside of the immediate restoration area before construction begins is intended to protect individual fish; however, improper capture and handling may result in injury or mortality. In addition, Tidewater Gobies that need to be relocated should be taken to areas that have suitable habitat (e.g., where Tidewater Gobies are known to thrive). Therefore, the capture and handling of Tidewater Gobies will be conducted by qualified biologists, and suitable habitats for relocation will be identified before construction begins. Tidewater gobies were successfully translocated as part of restoration activities at the nearby Riverside Ranch (Kramer 2016). • Where dewatering needs to occur, all pump intakes will be screened, and only qualified biologists will conduct goby rescue during dewatering. Dewatering to facilitate excavation and other construction activities may be harmful if Tidewater Gobies become entrained into dewatering pumps or if Tidewater Gobies become stranded. • To compensate for the increased potential for predation by non-native species on Tidewater Gobies, the quantity and quality of post-construction habitat for Tidewater Gobies will be increased in the Project area. Tidewater Goby populations are expected to expand into restored areas and be able to withstand any potential increase in predation by non-native species such as Sacramento Pikeminnow as a result of this increase in complex vegetated aquatic habitat.						
Bio-1b **Conduct pre-construction Avian Surveys for Nesting Passerine Birds and Avian Species of Special Concern.**	Applicant	USFWS; CDFW	Pre-construction	Pre-construction	Federal and State standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	Trees are not present; therefore, none would be removed. Clearing of shrubs or other vegetation, if necessary for construction or maintenance, shall be conducted during the fall and/or winter months from August 16 to February 29, outside of the active nesting season for migratory bird species (i.e., March 1 to August 15). If vegetation removal or ground disturbance cannot be confined to work during the non-breeding season, the applicant shall have a qualified biologist conduct preconstruction surveys within the impact area for ground disturbance, vegetation removal and/or maintenance activities, to check for nesting activity of migratory, raptors, and special-status bird species. The biologist shall conduct the preconstruction surveys within the 14-day period prior to vegetation removal and ground-disturbing activities (on a minimum of three separate days within that 14-day period). If ground disturbance and vegetation removal work lapses for 15 days or longer during the breeding season, a qualified biologist shall conduct a supplemental avian preconstruction survey before Project work may be reinitiated. If active nests are detected within the construction or maintenance (operation) footprint or within 500 feet of construction activities, the applicant shall have locations flagged that are supporting breeding, and will not begin ground disturbing work or vegetation removal inside the buffers until the nests have fledged. Construction activities shall avoid nest sites until the biologist determines that the young have fledged or nesting activity has ceased. If nests are documented outside of the construction (disturbance) footprint, but within 500 feet of the construction area, buffers will be implemented if deemed appropriate in coordination with CDFW. In general, the buffer for common species would be determined on a case-by-case basis with consultation with CDFW, the buffer for sensitive species would be 300 feet, and the buffer for raptors would be 500 feet.						
BIO-1c	**Avoid, Minimize, and Mitigate for Potential Impacts to**	Applicant	USFWS	During	During	Federal	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	Western Snowy Plover. Construction and maintenance activities associated with dune re-establishment would be conducted between September 1 and March 1, outside of the plover nesting season. The area of impact, defined as permanent or semi-permanent change in elevation or conversion to > 30 percent vegetation cover, would be mitigated through enhancement of dunes elsewhere on the EREP site, in the northern half of the dune complex within the site (generally between the northern limit of the Inner marsh and the outlet of the Eel River). Enhancement would occur at a minimum ratio of 1.1:1, and would include removal of European beach grass through mechanical or other appropriate methods; and quarterly maintenance, through removal of re-sprouts, for a period of two years post-construction. The initial removal effort would occur concurrently with the impacts. This would result in no net loss nor temporal loss of suitable Western Snowy Plover breeding habitat.			construction	construction, quarterly and for two years post-construction	standards	
BIO-1d	**Habitat Enhancement for Northern Red-legged Frog.** Although direct impacts to Northern Red-legged Frog breeding habitat is not anticipated because the duckponds will remain in freshwater conditions, measures for this species are included because individual frogs may disperse for considerable distances and could enter construction areas. Pre-construction surveys would occur prior to ground disturbance in any areas of potential frog habitat (not in saline or tidal areas). After consultation with CDFW, a qualified Project biologist will relocate Northern Red-legged Frog eggs if observed within the direct Project footprint in spring prior to construction or if observed during Project implementation.	Applicant	CDFW	Pre-construction	During construction	State standards	Applicant
BIO-1e	**Mitigate for potential impacts to salmonid species and Longfin Smelt.** The in-water construction and maintenance work window will be limited to June 15th through October 15th to avoid or minimize impacts to juvenile salmonids and Longfin	Applicant	CDFW/ NOAA Fisheries	Pre-construction and pre-operation	During construction	Federal and State standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	Smelt. Before potential de-watering activities begin in creeks or channels within the Project area, the qualified Biologist shall ensure that native aquatic vertebrates and larger invertebrates, if feasible, are relocated out of the construction footprint into a flowing channel segment by a qualified fisheries biologist. In deeper or larger areas, water levels shall first be lowered to manageable levels using methods to ensure no impacts to fisheries and other special status aquatic species. A qualified fisheries biologist or aquatic ecologist shall then perform appropriate seining or other trapping procedures to a point at which the biologist is assured that almost all individuals within the construction area have been caught. These individuals shall be kept in buckets with aerators to ensure survival. They shall then be relocated to an appropriate flowing channel segment or other appropriate habitat as identified by the qualified Biologist in consultation with NOAA Fisheries and CDFW. Federally threatened salmonid species that occur within the Project area either natal or non-natal Coho salmon, steelhead, and Chinook salmon.						
BIO-2a	**Mitigate Impacts to Beach Layia.** The following measures shall be implemented to mitigate impacts to the federally listed beach layia during construction and operation/ongoing maintenance of the Project, primarily associated with dune building on EREP and European beachgrass removal associated with Western Snowy Plover habitat enhancement required by Mitigation Measure BIO-1c. A pre-construction survey shall be conducted prior to the beginning of ground disturbing work and at the appropriate season to verify the extent of known beach layia occurrences and to identify new occurrences on or adjacent to dunes, if any. At the beginning of construction, flagging or exclusion fencing shall be installed around all known occurrences of beach layia within 10 feet of construction limits. Locations of fencing shall be identified and flagged by a qualified biologist and installed while the	Applicant	USFWS	Pre-construction and pre-operation	Annual monitoring post-construction for two years	No net loss in number of individual plants. If replanting is employed, a 2:1 planting ratio includes built in overplanting in order to meet success criteria and no net loss.	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	biologist is present. The fencing shall be inspected weekly for the duration of construction to ensure that the fencing remains installed properly. Direct impacts to beach layia shall be avoided. If any new or existing occurrences of beach layia are in proximity to areas of Project-related ground disturbance and if Project activities could conceivably result in indirect impacts such as alteration of dune erosion or deposition patterns, then mitigation will be employed that includes one or more of the following mechanisms: protective wooden fencing to shelter the population from shifting sand, seed collection from the site and/or nearby known occurrences so that replacement plants can be grown out at a nursery and replaced at a stable portion of the site (2:1 planting ratio), seed collection for seed banking in the event indirect impacts occur as a result of the Project in a dynamic coastal environment, plant relocation, and/or preparation of a sensitive species management plan (SSMP) that provides further details about the above options in cooperation with USFWS as to which mechanism(s) are preferred option(s) at the time of impact. The triggering mechanism for seed banking would be if this plant species is identified within 100 feet in a downwind direction of dune establishment, and/or 50 feet in any other direction, or within the footprint of the proposed Western Snowy Plover mitigation area. If an SSMP is deemed appropriate by jurisdictional agencies, the report would lay out specific timing and details of seed collection, mitigation site identification (within EREP), substrate preparation, monitoring and maintenance. If plant replacement, or relocation is deemed necessary (whether through relocation and/or replanting) annual monitoring for two years shall be required, with no net loss of number of individual number of plants. If replanting is employed, a 2:1 planting ratio includes built in overplanting in order to meet success criteria and no net loss.						
BIO-2b	**Mitigate Impacts to Sensitive-Listed Plant Species.**	Applicant	CDFW/ NMFS	Pre-	Pre-	Success	Applicant

Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
Mitigation for special status plant species other than beach layia is addressed collectively for all species, with modifications noted for individual species; this measure is patterned after and slightly modified from one used successfully on the adjacent Salt River (Grassetti et al. 2011). Significant impacts to special-status plant species present or likely to be present onsite shall be minimized, avoided, and (if necessary) compensated by complying with the following: • Pre-construction and maintenance surveys: Potential habitat for special-status plant species shall be surveyed in appropriate seasons for optimal species-specific detection prior to Project excavation/dredging, fill, drainage, or flooding activities associated with Project construction and maintenance. Survey methods shall comply with CNPS/CDFG rare plant survey protocols, and shall be performed by qualified field botanists. Surveys shall be modified to include detection of juvenile (pre-flowering) colonies of perennial species when necessary. Any populations of special-status plant species that are detected shall be mapped. Populations shall be flagged if avoidance is feasible and population is located adjacent to construction areas. Previous special-status plant surveys documented populations of Lyngbye's sedge and Humboldt Bay owl's clover as described above. • The locations of any special status plant populations to be avoided shall be clearly identified in the contract documents (plans and specifications). • If special-status plant populations are detected where construction or maintenance would have unavoidable impacts, a compensatory mitigation plan shall be prepared and implemented in coordination with CDFW. Such plans may include salvage, propagation, on-site reintroduction in restored habitats, and monitoring. Plans have been developed for Lyngbye's sedge, Humboldt Bay owl's			construction and pre-operation	construction through construction; and monitored for five years post-construction	criteria achieved	

Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
clover, and eelgrass, and will be further revised in consultation with regulatory agencies. Impacts to these species shall be avoided or minimized to the extent feasible. It should be noted that populations of owl's clover can fluctuate dramatically between years (Pickart 2001), making the number of individuals impacted difficult to predict in advance. • Humboldt Bay owl's clover: A qualified botanist shall collect and conserve seed from local (preferable on-site, or from the immediate region if on-site sources are insufficient) populations of Humboldt Bay owl's clover. These seeds shall be used to replant a population of this species to mitigate for the population lost to construction impacts. The Project area shall be monitored for five years and compared with a reference population to determine whether replanting and natural recruitment have resulted in population numbers equal to or greater than those present before Project implementation. If the population does not appear to have reestablished during the five-year period, seed shall be collected from elsewhere and additional attempts shall be made to reestablish the population. • Lyngbye's sedge: Seed shall be collected from Lyngbye's sedge in the Project area to be used for replanting in the event that natural recruitment does not result in a post-Project population size equal to or greater than the pre-Project population size. Monitoring and adaptive management will be conducted for a ten year period to determine whether the area and approximate number of Lyngbye's sedge in the Project area is similar to the area of sedge before the Project. Additional planting efforts (from seed or from rootstock of mature plants) shall be undertaken if the population size is declining below pre-Project size during the monitoring period. • Eelgrass: The extent and density of eelgrass cover within areas of Project impact shall be mapped prior to						

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	construction. Natural recruitment shall be monitored for three years to determine whether eelgrass is naturally recruiting in newly created channels adequately to replace the area of eelgrass lost due to Project impacts. If eelgrass does not establish in an area equal to or greater than that lost due to Project impacts in the first three years, eelgrass shall be actively planted to offset any lack of natural recruitment, using the most current scientific methods and following NMFS guidance. If CDFW requires propagation or transplantation, scientifically sound genetic management guidelines and protocols for rare plants shall be applied.						
BIO-3a	**Mitigate Impacts to Sensitive Listed Habitats Through Avoidance and Re-establishment.** The restored tidal wetlands will be monitored to determine whether it is developing the diversity representative of native tidal marshes. If necessary, planting and/or seeding or other remedial measures may occur to augment natural recruitment and/or to increase the diversity of salt marsh species using an adaptive management approach. The small patches of intact Dune Mat vegetation will be protected in a similar manner as proposed to protect sensitive plant species above so that impacts during construction can be avoided. If any new or existing occurrences of Dune Mat vegetation communities are in proximity to areas of Project-related ground disturbance, and if Project activities could conceivably result in indirect impacts such as alteration of dune erosion or deposition patterns, then mitigation will be employed that includes one or more of the following mechanisms: protective wooden fencing to shelter the sensitive vegetation community from shifting sand, seed collection from the site and/or nearby known occurrences so that replacement plants can be grown out at a nursery and replaced at a stable portion of the site (2:1 planting ratio), seed collection for seed banking in the event indirect impacts occur as a result of	Applicant	CDFW/ CCC	Post-construction	Annually for 10 years and post-construction	No performance criteria for restored tidal wetlands or dune mat	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	the Project in a dynamic coastal environment.						
BIO-3b	**Mitigate Impacts to Sensitive Listed Habitats Through Control of Invasive Species.** In order to reduce the likelihood of dense-flowered cordgrass (Spartina) colonizing restored tidal marsh, existing populations in and adjacent to (north of the tidegates) the Project footprint shall be controlled prior to construction using manual, mechanical, and/or approved chemical methods, and in compliance with appropriate methods analyzed and disclosed in the Regional Invasive Spartina Management Plan and the associated EIR. During the operation period of the Project (10 year maintenance under the adaptive management plan), removal of cordgrass would be conducted under the authority of the Regional Invasive Spartina Management Plan and the associated EIR. Colonization of the Inner Marsh and other portions of the Project footprint by cordgrass will be controlled in collaboration with the region-wide eradication program. Invasive weed removal shall be conducted as part of Project maintenance. Weed removal techniques may include manual, mechanical, and/or approved chemical means (including mowing, cutting, pulling, grinding, and/or excavation and burial) as discussed in the adaptive management plan and as approved by jurisdictional agencies. Heavy equipment would be required to be cleaned and weed-free before entering the site.	Applicant	CDFW/ CCC	Pre-construction and pre-operation	Pre-construction through construction; and 10 years operation post-construction	Success criteria achieved	Applicant
BIO-4	**Mitigate Temporary and Short-term Impacts to Sensitive Habitats Including Wetlands Through Construction Minimization and Avoidance Measures.** • The locations of sensitive habitats including wetlands to be avoided shall be clearly identified in the contract documents (plans and specifications).	Applicant	USACE/ CCC	Pre-construction	Pre-construction through construction and post-construction for five years	Agency standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	• Before clearing and grubbing commences, disturbance areas shall be flagged to clearly define the limits of the work area. These areas shall be clearly identified on the contract documents (plans and specifications). • Selected contractors shall sign a document stating that they have read, understand, and agree to the required resource avoidance measures, and shall have construction/maintenance crews participate in a training session on sensitive resources. • A qualified biologist shall be on-site to observe activities as appropriate when construction or maintenance in or adjacent to sensitive habitat including wetlands occurs. Site disturbance shall be minimized to the greatest extent feasible by using existing disturbed areas for access roads and staging areas, and concentrating the area of disturbance associated with restoration actions within the minimum space(s) necessary to complete the Project. Where feasible, temporary measures for access or construction, such as the use of temporary tracks or pads, shall be used to minimize impacts. Revegetation activities shall take place at seasonally appropriate times based on habitat types, and as soon as feasible following habitat disturbance, to restore disturbed areas to pre-Project conditions or better. • There would be no net loss of jurisdictional wetlands. Any permanent fill in wetlands would be compensated through in-kind re-establishment or enhancement of wetlands at a ratio determined by use of the USACE SPD Mitigation Ratio Checklist and the California Coastal Commission.						
3.5	**Cultural Resources**						
CR-1	**Disturbance of Undiscovered Cultural Resources.** During the course of ground-disturbing activities associated with Project implementation, if any cultural resources are discovered, work shall be halted immediately within 66 feet	Applicant	Humboldt County Planning and Building	During construction	Throughout construction	County standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	of the discovery, and the Humboldt County Planning Department shall be immediately notified. At that time, the county will coordinate any necessary investigation and evaluation of the discovery with a qualified archaeologist. If the archaeological resources are Native American, representatives of the appropriate culturally affiliated tribe shall also be enlisted to help evaluate the find and suggest appropriate treatment. The county shall consult with the archaeologist and agree upon implementation of treatment of the resources that is deemed appropriate and feasible. Such treatment may include avoidance, curation, documentation, excavation, preservation in place, or other appropriate measures. The final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the Commission must be approved by the CSLC.		Department				
CR-2	**Potential Disturbance of Undiscovered Paleontological Resources.** During the course of ground-disturbing activities associated with Project implementation, if any paleontological resources are discovered, work shall be halted immediately within 66 feet of the discovery, and the Humboldt County Planning Department shall be immediately notified. At that time, the county will coordinate any necessary investigation of the discovery with a qualified paleontologist. The county shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries of paleontological resources. The county shall consult with the paleontologist and agree upon implementation of a measure(s) that are deemed appropriate and feasible. Such mitigation measures may include avoidance, curation, documentation, excavation, preservation in place, or other appropriate measures.	Applicant	Humboldt County Planning and Building Department	During construction	Throughout construction	County standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
CR-3	**Potential to Uncover Human Remains.** If construction activities result in the discovery of human remains during ground disturbing activities, in accordance with California Health and Safety Code Section 7050.5, no further disturbance shall occur until the Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The Coroner shall be notified of the find immediately. If the human remains are determined to be prehistoric, the Coroner shall notify the NAHC, which shall determine and notify a Most Likely Descendant. The Most Likely Descendant shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and non-destructive analysis of human remains and items associated with Native American burials.	Applicant	Humboldt County Coroner	During construction	Continuously during construction	State standards	Applicant
3.6	**Geology and Soils**						
GEO-1	**Implement Recommendations in the Geotechnical Report.** The California State Coastal Conservancy shall ensure that the Project is designed to comply with the recommendations in the Project's Geotechnical Report (LACO 2016) to ensure seismic stability and adherence to the CBC. The geotechnical recommendations are proposed to be incorporated in the final plans and specifications and implemented during construction. Professional inspection by a qualified engineer or geologist 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.	Applicant	Humboldt County Planning and Building Department	Pre-construction	During construction	County/ State standards	Applicant
3.9	**Hydrology and Water Quality**						
HWQ-1a	**Manage Construction Storm Water.** The Project and operations shall obtain coverage under State Water Resources Control Board Order No. 2009-0009-DWQ, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with	Applicant	Humboldt County Planning and Building Department/	Pre-construction	Pre-construction through construction	County/ NCRWQCB standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	Construction and Land Disturbance Activities, as amended by Order No. 2012-0006. In compliance with the NPDES requirements, a Notice of Intent (NOI) shall be prepared and submitted to the NCRWQCB, providing notification and intent to comply with the State of California General Permit. In addition, a Construction Storm Water Pollution Prevention Plan (SWPPP) would be prepared for pollution prevention and control prior to initiating site construction activities. The Construction SWPPP shall identify and specify the use of erosion sediment control BMPs for control of pollutants in stormwater runoff during construction related activities, and would be designed to address water erosion control, sediment control, off-site tracking control, wind erosion control, non-stormwater management control, and waste management and materials pollution control. A sampling and monitoring program shall be included in the Construction SWPPP that meets the requirements of the NCRWQCB to ensure the BMPs are effective. A Qualified Storm Water Pollution Prevention Plan Practitioner shall oversee implementation of the Plan, including visual inspections, sampling and analysis, and ensuring overall compliance. The operations associated with the adaptive management plan include but not limited to activities associated with sediment management and channel maintenance are not anticipated to require preparation and implementation of a SWPPP as per section I (C) of Order No. 2009-0009 DWQ which lists activities that are not covered under the general permit: *(24) Routine maintenance to maintain the original line and grade, hydraulic capacity, or original purpose of the facility and (25) Disturbance to land surfaces solely related to agricultural operations such as disking, harrowing, terracing and levelling and soil preparation.*		NCRWQCB				
HWQ-1b	**Implement Contractor Training for Protection of Water Quality.** All contractors that would be performing demolition,	Applicant	Humboldt County Planning and	Pre-construction	Pre-construction through	County standards	Applicant

	Monitoring Measure	Individual Responsible for Monitoring and/or Reporting	Individual or Organization Responsible for Verifying Compliance	Timing of Initial Action	Frequency and/or Duration of Monitoring	Performance Criteria	Proposed Funding
	construction, grading, operations or other work that could cause increased water pollution conditions at the site (e.g., dispersal of soils) shall receive training regarding the environmental sensitivity of the site and need to minimize impacts. Contractors also shall be trained in implementation of stormwater BMPs for protection of water quality.		Building Department		construction		
HWQ-1c	**In-Stream Erosion and Water Quality Control Measures during Channel Excavation and Operations.** In instances where excavation occurs in an effort to widen/deepen Project channels and ditches, in-stream erosion and turbidity control measures shall be implemented. These measures include installation and maintenance of in-stream turbidity curtains, cofferdams and silt-fence along channel banks as specified in Project designs, specifications and erosion control plans.	Applicant	Humboldt County Planning and Building Department	During construction	Throughout construction	County standards	Applicant
HWQ-3	**Implement Erosion and Water Quality Monitoring, Maintenance and Adaptive Management Plan.** The long-term erosion monitoring of on-site channels would routinely screen the Project for areas experiencing excessive erosion leading to degraded water quality. Maintenance and adaptive management strategies are contained in the plan to stabilize areas experiencing excessive erosion.	Applicant	Humboldt County Planning and Building Department	Post-construction	Pre-construction per AMP	County standards	Applicant

EXHIBIT D – EEL RIVER ESTUARY AND CENTERVILLE SLOUGH ENHANCEMENT PROJECT

CALIFORNIA STATE LANDS COMMISSION STATEMENT OF FINDINGS

1.0 INTRODUCTION

The California State Lands Commission (CSLC), acting as a responsible agency under the California Environmental Quality Act (CEQA), makes these findings to comply with CEQA as part of its discretionary approval to authorize issuance of a General lease, to the Wildlands Conservancy (Applicant), for use of sovereign land associated with the proposed Eel River Estuary and Centerville Slough Enhancement Project (Project). (See generally Pub. Resources Code, § 21069; State CEQA Guidelines, § 15381.)[1] The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The CSLC also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. (Pub. Resources Code, §§ 6301, 6306, 6009, subd. (c).) All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust.

The CSLC is a responsible agency under CEQA for the Project because the CSLC must approve a lease for the Project to go forward and because the California State Coastal Conservancy (Coastal Conservancy), as the CEQA lead agency, has the principal responsibility for approving the Project and has completed its environmental review under CEQA. The Coastal Conservancy analyzed the environmental impacts associated with the Project in a Final Environmental Impact Report (EIR) (State Clearinghouse [SCH] No. 2014122040) and, in February 2017, certified the EIR and adopted a Mitigation Monitoring and Reporting Program (MMRP) and Findings.

Per the EIR, the Project would improve geomorphic and ecosystem functions that would enhance habitat for native fisheries and aquatic species, support waterfowl and wildlife species, and benefit agricultural land management by more effectively managing onsite flooding and sedimentation.

The Coastal Conservancy determined that the Project could have significant environmental effects on the following environmental resources:

- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hydrology and Water Quality

[1] CEQA is codified in Public Resources Code section 21000 et seq. The State CEQA Guidelines are found in California Code of Regulations, title 14, section 15000 et seq.

Of the five resources areas noted above, Project components within the CSLC's jurisdiction (i.e., the replacement of an existing culvert with a gated culvert at Centerville/Cutoff Slough and removal of an existing culvert and berm repair in Cutoff Slough) could have significant environmental effects on all of these resource areas.

In certifying the Final EIR and approving the Project, the Coastal Conservancy imposed various mitigation measures for Project-related significant effects on the environment as conditions of Project approval and concluded that Project-related impacts would be substantially lessened with implementation of these mitigation measures such that the impacts identified as potentially significant would be less than significant.

As a responsible agency, the CSLC complies with CEQA by considering the EIR and reaching its own conclusions on whether, how, and with what conditions to approve a project. In doing so, the CSLC may require changes in a project to lessen or avoid the effects, either direct or indirect, of that part of the project which the CSLC will be called on to carry out or approve. In order to ensure the identified mitigation measures or Project revisions are implemented, the CSLC adopts the Mitigation Monitoring Program (MMP) as set forth in Exhibit C as part of its Project approval.

2.0 FINDINGS

The CSLC's role as a responsible agency affects the scope of, but not the obligation to adopt, findings required by CEQA. Findings are required under CEQA by each "public agency" that approves a project for which an EIR has been certified that identifies one or more significant impacts on the environment (Pub. Resources Code, § 21081, subd. (a); State CEQA Guidelines, § 15091, subd. (a).) Because the EIR certified by the Coastal Conservancy for the Project identifies potentially significant impacts that fall within the scope of the CSLC's approval, the CSLC makes the Findings set forth below as a responsible agency under CEQA. (State CEQA Guidelines, § 15096, subd. (h); *Riverwatch v. Olivenhain Mun. Water Dist.* (2009) 170 Cal.App.4th 1186, 1202, 1207.

While the CSLC must consider the environmental impacts of the Project as set forth in the EIR, the CSLC's obligation to mitigate or avoid the direct or indirect environmental impacts of the Project is limited to those parts which it decides to carry out, finance, or approve (Pub. Resources Code, § 21002.1, subd. (d); State CEQA Guidelines, §§ 15041, subd. (b), 15096, subds. (f)-(g).) Accordingly, because the CSLC's exercise of discretion involves issuing a General lease for this Project, the CSLC is responsible for considering only the environmental impacts related to lands or resources subject to the CSLC's jurisdiction. With respect to all other impacts associated with implementation of the Project, the CSLC is bound by the legal presumption that the EIR fully complies with CEQA.

The CSLC has reviewed and considered the information contained in the Project EIR. All significant adverse impacts of the Project identified in the EIR relating to the CSLC's approval of a General Lease, which would allow the replacement of an existing culvert with a gated culvert at Centerville/Cutoff Slough and removal of an existing culvert and

berm repair in Cutoff Slough, are included herein and organized according to the resource affected.

These Findings, which reflect the independent judgment of the CSLC, are intended to comply with CEQA's mandate that no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects unless the agency makes written findings for each of those significant effects. Possible findings on each significant effect are:

(1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the CSLC. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.[2]

A discussion of supporting facts follows each Finding.

- Whenever Finding (1) occurs, the mitigation measures that lessen the significant environmental impact are identified in the facts supporting the Finding.
- Whenever Finding (2) occurs, the agencies with jurisdiction are specified. These agencies, within their respective spheres of influence, have the responsibility to adopt, implement, and enforce the mitigation discussed.

Because all potentially significant impacts will be reduced to a less than signicant level through mitigation, Finding 3 is not required.

These Findings are supported by substantial evidence contained in the EIR, the lead agency's Findings (Attachment D-1), and other relevant information provided to the CSLC or existing in its files, all of which is contained in the administrative record. The mitigation measures are briefly described in these Findings; more detail on the mitigation measures is included in the Final EIR.

The CSLC is the custodian of the record of proceedings upon which its decision is based. The location of the CSLC's record of proceedings is in the Sacramento office of the CSLC, 100 Howe Avenue, Suite 100-South, Sacramento, CA 95825.

[2] See Public Resources Code section 21081, subdivision (a) and State CEQA Guidelines section 15091, subdivision (a).

A. SUMMARY OF FINDINGS

Based on public scoping, the proposed Project will have No Impact on the following environmental issue areas:

- Population and Housing

The EIR subsequently identified the following impacts as Less Than Significant:

- Aesthetics
- Agricultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral and Energy Resources
- Noise
- Public Services and Utilities
- Recreation
- Transportation

For the remaining potentially significant effects, the Findings are organized by significant impacts within the EIR issue areas as presented below.

B. IMPACTS REDUCED TO LESS THAN SIGNIFICANT LEVELS WITH MITIGATION

The impacts identified below were determined in the Final EIR to be potentially significant absent mitigation; after application of mitigation, however, the impacts were determined to be less than significant. For the full text of each mitigation measure (MM), please refer to Exhibit C, Attachment C-1.

Air Quality	AQ-1
Biological Resources	BIO-1, BIO-2, BIO-3, BIO-4
Cultural Resources	CR-1, CR-2, CR-3
Geology/Soils	GEO-1, GEO-2, GEO-3, GEO-4
Hydrology and Water Quality	HWQ-1, HWQ-3, HWQ-5

1. AIR QUALITY

CEQA FINDING NO. AQ-1

Impact: **Impact AQ-1. Violate Any Air Quality Standard or Result in Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Non-attainment**. Unless controlled, fugitive dust emissions during construction of the proposed Project could be a significant impact.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

Construction emissions would not exceed significance thresholds; however, earth-moving activities would generate fugitive dust (particulate matter 10 micrometers or less in diameter [PM_{10}]). The amount of fugitive dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Implementation of **MM AQ-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM AQ-1: Dust Control Measures during Construction

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

2. BIOLOGICAL RESOURCES

CEQA FINDING NO. BIO-1

Impact: **Impact BIO-1. Substantial Adverse Effect on Special-Status Wildlife Species.** Construction and operation of the proposed Project could directly or indirectly impact populations of tidewater gobies, raptors, migratory birds, western snowy plover, northern red-legged frog, salmonids, and their habitats

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The Project would require activities that could directly or indirectly affect special-status wildlife species, including retrofit of the existing tide gates, the installation of new tide gates, improvements to Centerville Slough, the reconnection of Centerville Slough to Russ Creek and Shaw Creek, and the improvement of existing, and establishment of new, off-channel habitat in the Project area. Operational activities could also directly or

indirectly affect some species. **MMs BIO-1a** through **BIO-1e** would be incorporated into the Project to minimize the impacts on species to a less than significant level.

MM BIO-1a: Avoidance, Minimization, and Mitigation for Tidewater Goby

MM BIO-1b: Conduct pre-construction Avian Surveys for Nesting Passerine Birds and Avian Species of Special Concern

MM BIO-1c: Avoid, Minimize, and Mitigate for Potential Impacts to Western Snowy Plover

MM BIO-1d: Habitat Enhancement for Northern Red-legged Frog

MM BIO-1e: Mitigate for Potential Impacts to Salmonid Species and Longfin Smelt

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-2	
Impact:	**Impact BIO-2. Substantial Adverse Effect on Special-Status Plant Species.** The proposed Project could directly or indirectly impact populations of one federally listed and several California Rare Plant Rank - listed plant species.
Finding(s):	(1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The Project footprint would avoid direct impacts to populations of sensitive listed plant species that have been mapped on the site except for Lyngbye's sedge in areas adjacent to installation of the new tidegate. The proposed Project could also directly or indirectly impact populations of one federally listed plant species (Beach Layia), and several California Rare Plant Rank-listed plant species through changes in tidal prism and site hydrology, operation activities, post-construction (operational) changes in sand movement associated with foredunes, if new plant populations are identified beyond the previously mapped extent, or if new species are identified at the site. Implementation of **MMs BIO-2a** and **BIO-2b** has been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-2a: Mitigate Impacts to Beach Layia

MM BIO-2b: Mitigate Impacts to Sensitive-Listed Plant Species

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-3

Impact: **Impact BIO-3. Substantial Adverse Effect on Sensitive Natural Community.** Four sensitive natural vegetation communities identified within the Project area include dune mat, saltmarsh bulrush, coastal dune willow thickets, and pickleweed mats.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

Temporary impacts to the 41.7 acres of combined saltmarsh habitats (saltmarsh bulrush and pickleweed) would be considered a significant impact. In addition, construction activities could import noxious weed propagules on construction machinery. Avoidance and re-establishment of sensitive habitats and control of invasive species as stipulated in **MMs BIO-3a** and **BIO-3b** would reduce this impact to a less than significant level.

MM BIO-3a: Mitigate Impacts to Sensitive Listed Habitats through Avoidance and Re-establishment

MM BIO-3b: Mitigate Impacts to Sensitive Listed Habitats Through Control of Invasive Species

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-4

Impact: **Impact BIO-4. Substantial Adverse Effect on Federally and/or State Protected Wetlands.** The Project design includes both filling of two and three parameter wetlands, as well as re-establishment of new wetlands.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

Although no net loss overall to wetland acreage/quantity or quality is expected, the proposed Project could result in short-term temporary impacts to permanent, seasonal, and transitional wetland areas. Construction activities associated with restoration would disturb wetlands and waters through vegetation clearing activities, grading and installation of restoration features, dewatering activities, and construction and use of access roads and staging areas for construction equipment, materials and stockpiles.

Minimization and avoidance measures, as included in **MM BIO-4**, have been incorporated into the Project to reduce this impact to a less than significant level.

MM BIO-4: Mitigate Temporary and Short-term Impacts to Sensitive Habitats Including Wetlands through Construction Minimization and Avoidance Measures

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

3. CULTURAL RESOURCES

CEQA FINDING NO. CR-1

Impact: **Impact CR-1. The Project could cause a substantial change in the significance of a historical or archaeological resource as defined in Section 15064.5.** Unanticipated buried archaeological materials may be present at the Project site.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

Due to an extensive history of flooding and silt deposits in the area, significant historical or unique archaeological resources, if buried on the Project site, could potentially go unobserved during field surveys. Implementation of **MM CR-1** has been incorporated into the Project to reduce this impact to a less than significant level.

MM CR-1: Disturbance of Undiscovered Cultural Resources

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. CR-2

Impact: **Impact CR-2. The Project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.** Unanticipated, buried paleontological resources may be present at the Project site.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

There are no known unique paleontological resources or geologic features on the Project site. Because the sand dunes are relatively new geologically, and river flooding over the decades has resulted in silt deposits, the likelihood of the proposed Project affecting paleontological resources is low. However, there is the possibility of unanticipated discovery of paleontological resources during ground-disturbing activities associated with construction of the Project. Implementation of **MM CR-2** has been incorporated into the Project to reduce this impact to a less than significant level.

MM CR-2: Potential Disturbance of Undiscovered Paleontological Resources

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. CR-3

Impact: **Impact CR-3. The Project could disturb any human remains, including those interred outside of formal cemeteries.** Disturbance of buried human remains could result in a significant impact.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

While no evidence exists for the presence of historic or prehistoric burials at the Project site, this does not preclude the existence of buried subsurface human remains. If any human remains were unearthed during Project construction, particularly those that were determined to be Native American, a potentially significant disturbance of human remains would occur. Implementation of **MM CR-3** has been incorporated into the Project to reduce this impact to a less than significant level.

MM CR-3: Potential to Uncover Human Remains

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

4. GEOLOGY AND SOILS

CEQA FINDING NO. GEO-1

Impact: **Impact GEO-1. Expose People or Structures to Potential Substantial Adverse Effects Involving Strong Seismic Ground Shaking or Seismic-related Ground Failure, including Liquefaction.** Past seismic history suggests that the Project area is susceptible to moderate to strong seismic ground shaking.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The Project includes reinforced structures that would be at risk of collapse from groundshaking, and road (haul roads and access roads) improvements that would be susceptible to damage during strong seismic ground shaking. The Project site is in an area with a high liquefaction potential. Quantitative liquefaction analysis indicates that the unconsolidated alluvium underlying the Ferndale bottoms is susceptible to liquefaction. Implementation of **MM GEO-1**, which will ensure seismic stability and adherence to the California Building Code, has been incorporated into the Project to reduce this impact to a less than significant level.

MM GEO-1: Implement Recommendations in the Geotechnical Report

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. GEO-2

Impact: **Impact GEO-2. Result in Substantial Soil Erosion or Loss of Topsoil.** Grading, earthwork, and stockpiling during construction and maintenance could result in increased potential for erosion or loss of topsoil.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The potential for increased soil erosion or loss of topsoil due to Project activities (grading, earthwork, stockpiling) would be reduced with the implementation of the MMs noted below. Most Project actions are designed to reduce/control flooding hazards and susceptibility of soil to erosion or loss of topsoil. All soil areas disturbed during construction would be treated with adequate erosion control practices and revegetated to further ensure long-term stabilization pursuant to the Stormwater Pollution Prevention Plan. Levees, berms, and access and haul roads would be constructed with additional

best management practices to ensure immediate protection from erosion and would also include design components (e.g., erosion-resistant vegetation, aggregate base rock for access and haul roads) as needed to ensure long-term stability. Implementation of the MMs noted below has been incorporated into the Project to reduce this impact to a less than significant level.

MM HWQ-1a: Manage Construction Storm Water

MM HWQ-1b: Implement Contractor Training for Protection of Water Quality

MM HWQ-1c: In-Stream Erosion and Water Quality Control Measures during Channel Excavation and Operations

MM HWQ-3: Implement Erosion and Water Quality Monitoring, Maintenance and Adaptive Management Plan

MM GEO-1. Implement Recommendations in the Geotechnical Report

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. GEO-3

Impact: **Impact GEO-3. Be Located on Geologic Unit or Soil that is Unstable, or would become Unstable as a Result of the Project, and Potentially Result in Liquefaction, Lateral Spreading, Subsidence, or Collapse.** Soils in the Project area are susceptible to liquefaction.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The Project site is potentially susceptible to lateral spreading from liquefaction. Subsidence from liquefaction could also occur. Tidegates, berms, access and haul roads, and bridges could be susceptible to damage or collapse. Implementation of **MM GEO-1,** which will require a site-specific geotechnical report, and design and construction in conformance with applicable design standards, has been incorporated into the Project to reduce this impact to a less than significant level.

MM GEO-1: Implement Recommendations in the Geotechnical Report

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. GEO-4

Impact: **Impact GEO-4: Be Located on Expansive Soil, as Defined in Table 18-1-B of Uniform Building Code (1994), Creating Substantial Risks to Life or Property.** Expansive soils can damage structures and foundations.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

The geotechnical report prepared for the Project identified moderate to highly plastic clays, which are potentially expansive, in borings excavated along Centerville Slough, the proposed Russ Creek Channel alignments, and in the Inner Marsh. A site-specific geotechnical report and design and construction in conformance with applicable design standards would reduce the risk to life or property due to expansive soils. Implementation of **MM GEO-1,** which will require a site-specific geotechnical report, and design and construction in conformance with applicable design standards, has been incorporated into the Project to reduce this impact to a less than significant level.

MM GEO-1: Implement Recommendations in the Geotechnical Report

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

5. HYDROLOGY AND WATER QUALITY

CEQA FINDING NO. HWQ-1

Impact: **Impact HWQ-1. Violate any Water Quality Standards or Waste Discharge Requirements.** Project impacts to water quality could result from sediment mobilization during channel/wetland construction and operations**.**

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

Construction and operation activities such as site clearing, grading, excavation, channel widening/deepening, material stockpiling, tide gate removal and installation, demolition, and berm construction could leave soils exposed to rain or surface water runoff that may carry soil contaminants (e.g., nutrients or other pollutants) into waterways adjacent to the site, degrade water quality, and potentially violate water quality standards for specific chemicals, dissolved oxygen, suspended sediment, or nutrients. Implementation of **MMs HWQ-1a**, **-1b**, and **-1c**, which will ensure that construction and

operation activities associated with the Project are properly managed, has been incorporated into the Project to reduce this impact to a less than significant level.

MM HWQ-1a: Manage Construction Storm Water

MM HWQ-1b: Implement Contractor Training for Protection of Water Quality

MM HWQ-1c: In-Stream Erosion and Water Quality Control Measures during Channel Excavation and Operations

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. HWQ-3

Impact: **Impact HWQ-3. Substantially Alter the Existing Drainage Pattern of the Site or Area and Increasing Erosion or Siltation.** The Project proposes the beneficial reuse of excavation material to recontour the floodplain in specific areas and for agronomic placement in upland areas located on the valley floor.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

All sediment reuse areas would be located within the Federal Emergency Management Agency (FEMA) flood zone and subject to potential localized remobilization during flood periods. The Project and operations would alter drainage patterns of the site, although internal slough channels would be located and sized to optimize internal marsh circulation and water quality. Through intensive hydraulic modeling and established hydraulic geometry relationships for local area reference sites, internal channel dimensions are designed to be in equilibrium with Project hydraulic conditions in order to minimize erosion, down-cutting and bank failure. Bioengineering methods would be used, as necessary, to stabilize sites of potential bank and berm erosion. Hard stabilization measures (e.g., rock slope protection) may also be incorporated, if necessary, to prohibit excessive erosion at notable energy transition points such as culverts, bridges and gates. Measures to protect new setback berms and existing levees from erosion would also be integrated into the stable Project design. Implementation of **MM HWQ-3** has been incorporated into the Project to reduce this impact to a less than significant level.

MM HWQ-3: Implement Erosion and Water Quality Monitoring, Maintenance and Adaptive Management Plan

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. HWQ-5

Impact: **Impact HWQ-5. Substantial Additional Sources of Polluted Runoff or Otherwise Substantially Degrade Water Quality.** The development of the proposed Project and operations and intended land use would alter the types, quantities, and timing of stormwater contaminates relative to existing conditions.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR.

FACTS SUPPORTING THE FINDING(S)

If altered stormwater runoff is uncontrolled and not treated, the water quality of the discharge could affect offsite drainage channels and downstream water bodies. Construction activities could result in substantial stormwater discharges of suspended solids and other pollutants into local drainage channels from the Project area. Construction and operational related chemicals (e.g., fuels, paints, adhesives, etc.) could be washed into surface waters by stormwater runoff. The deposition of pollutants (e.g., gas, oil, etc.) onto the ground surface by construction equipment could similarly result in the transport of pollutants to surface waters by stormwater runoff or in seepage of such pollutants into groundwater.

Implementation of **MMs HWQ-1a**, **-1b**, **-1c**, and **HWQ-3**, which will ensure that Project construction and operation activities are properly managed, has been incorporated into the Project to reduce this impact to a less than significant level.

MM HWQ-1a: Manage Construction Storm Water

MM HWQ-1b: Implement Contractor Training for Protection of Water Quality

MM HWQ-1c: In-Stream Erosion and Water Quality Control Measures during Channel Excavation and Operations

MM HWQ-3: Implement Erosion and Water Quality Monitoring, Maintenance and Adaptive Management Plan

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less tan significant level.

ATTACHMENT D-1

California State Coastal Conservancy
Resolution and Findings

COASTAL CONSERVANCY

Staff Recommendation
February 2, 2017

EEL RIVER ESTUARY AND CENTERVILLE SLOUGH ENHANCEMENT PROJECT: IMPLEMENTATION

Project No.: 12-018-03
Project Manager: Michael Bowen

RECOMMENDED ACTION: Consideration and certification of the Final Environmental Impact Report (EIR) for the Eel River Estuary and Centerville Slough Enhancement Project; approval of the version of the project identified as Alternative 4 in that report ("the Project"); adoption of findings and Mitigation Monitoring and Reporting Program; and authorization to disburse up to $950,000 of U.S. Fish and Wildlife Service funds to The Wildlands Conservancy for implementation of the Project."

LOCATION: Centerville Slough, tributary to the Salt River, near Ferndale, Humboldt County (Exhibit 1)

PROGRAM CATEGORY: Coastal Resource Enhancement

EXHIBITS

Exhibit 1: Project Location Maps and Alternatives

Exhibit 2: Proposed Actions and Budget

Exhibit 3: Staff Recommendation April 18, 2013

Exhibit 4: Final EIR

Exhibit 5: Mitigation Monitoring and Reporting Program and Adaptive Management Program.

Exhibit 6: Project Letters

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251 – 31270 of the Public Resources Code:

"The State Coastal Conservancy hereby certifies the *Final Environmental Impact Report, Eel River Estuary and Centerville Slough Enhancement Project, January 2017* (Final EIR), approves the version of the Eel River Estuary and Centerville Slough Enhancement Project identified as Alternative 4 in the Final EIR ("the Project") at Centerville Slough, near Ferndale (Exhibit 1),

and adopts the Mitigation Monitoring and Reporting Program (MMRP) (Final EIR and MMRP are attached to the accompanying staff recommendation as Exhibits 4 and 5, respectively). The Conservancy further authorizes the disbursement of up to $950,000.00 (nine hundred fifty thousand dollars) of U.S Fish and Wildlife Service grant funds to The Wildlands Conservancy (TWC) to implement the Project subject to the following conditions:

1. Prior to the disbursement of funds, TWC shall have obtained sufficient matching funds to satisfy the obligations of the federal grant agreement.
2. Prior to the disbursement of funds, TWC shall submit for the review and approval of the Conservancy's Executive Officer: 1) a work program including schedule and budget, and the names of any contractors it intends to use to complete the improvements, 2) a sign plan, and 3) evidence that all necessary permits and approvals have been obtained.
3. Prior to commencing the Project, TWC shall enter into and record an agreement pursuant to Public Resources Code 31116(c) sufficient to protect the public interest in the improvements.
4. In carrying out the Project, TWC shall comply with all applicable mitigation and monitoring measures identified in the Final EIR and comply with all measures that are required by any permit or approval.
5. TWC shall comply with all applicable terms and conditions imposed by any federal or state grant.

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 authorization is consistent with Chapter 6 of Division 21 of the Public Resources Code, regarding enhancement of coastal resources.
2. The Project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Conservancy has independently reviewed and considered the information contained in the Final EIR pursuant to its responsibilities as the lead agency for the Project under the California Environmental Quality Act (CEQA). The Final EIR was completed in compliance with CEQA under the direction and supervision of the Conservancy and reflects the Conservancy's independent judgment and analysis.
4. The Final EIR identifies varying degrees of impacts from the implementation of the Project in several resource categories. With regard to these impacts, as modified by incorporation of the mitigation measures identified in the Final EIR, or through design elements intended to minimize or avoid harmful impacts, the Project was changed to avoid, reduce or mitigate the possible significant environmental effects of the Project as described further in the accompanying staff recommendation.
5. The Wildlands Conservancy is a nonprofit organization existing under section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the Public Resources Code."

PROJECT SUMMARY:

Staff is recommending the Conservancy certify the final environmental impact report for the Eel River Estuary and Centerville Slough Enhancement Project in Humboldt County (see Exhibit 1) (Final EIR), approve the Project in the form of Alternative 4 ("the Project" or "Alternative 4"), and approve the disbursement of funds received from the U.S. Fish and Wildlife Service to The Wildlands Conservancy (TWC) to implement the Project on the Eel River Estuary Preserve (EREP). Certification of the EIR will enable TWC to apply for permits and seek additional necessary funding to implement the Project. The Project will significantly advance ecosystem restoration and agricultural preservation in the Eel River Delta, an area once hosting more than six thousand acres of tidally influenced habitat that has received national recognition for the several significant ecosystem restoration projects underway there.

The Project is recommended by staff over the EIR proposed Project ("2016 Proposed Project") primarily due to the recent withdrawal of co-applicants and adjacent property owners from the 2016 Proposed Project. The Project is distinguished from the 2016 Proposed Project in three key ways: 1) Work is limited to the Eel River Estuary Preserve (EREP) owned by TWC; 2) the Project avoids any alteration or adjustment to the existing Drainage Easement amongst the property owners in the area, and 3) the Project reduces environmental impacts below those levels identified and mitigated under the 2016 Proposed Project. These differences are discussed in greater detail, below.[1]

The goal of the Project is to improve geomorphic and ecosystem function on the EREP. The Project will enhance habitats for native fisheries and aquatic species, support waterfowl and wildlife species, and benefit agricultural land management by more effectively managing onsite flooding and sedimentation. The Project objectives also incorporate various measures intended to accommodate future climate change and sea level rise. Proposed actions and costs of the Project are summarized in the attached Exhibit 2.

Proposed activities will enhance the approximately 1,237-acre Project area, transitioning it from a landscape of diked pasture land to a system of pastures and natural habitats, including estuarine and tidal slough channels, freshwater streams, freshwater waterfowl ponds and enhanced agricultural pastures. Critical to achieving the Project goals and objectives is an enhancement in tidal flushing to reactivate wetlands functions within the Inner Marsh and Centerville Slough portion of the Project area (Exhibit 1).

The Project includes design and installation of new tidegates to introduce muted tidal prism into the Inner Marsh and Centerville Slough, occupying historic tidal slough channels that have persisted more than a century, despite former reclamation efforts, floods and significant tectonic activity. This will enhance aquatic organism passage from the Eel River to Centerville Slough, and Russ Creek, while improving drainage efficiency for the betterment of agricultural activities in the Project area.

[1] This staff recommendation uses a lowercase "the project" in some contexts that refer equally to the 2016 Proposed Project and Alternative 4.

All construction activities proposed under this authorization will take place on the EREP, as described in Alternative 4 and as required by the terms of the federal grant agreement with the U.S. Fish and Wildlife Service.

The 2016 Proposed Project analyzed in the Final EIR contains activities that would take place on both the EREP as well as adjacent parcels owned by Russ Ranch and Timber, LLC (RR&T) and Jack and Linda Russ, collectively referred to as "Russ." The analysis of the larger 2016 Proposed Project took place at the request of Russ, and was funded primarily with grant augmentations by the Conservancy to an existing grant to California Trout described under Project History, below. Despite more than two years of discussions and analysis, the grantee (CalTrout), the Conservancy, and their consultants (collectively "The Project Team") were unable to satisfy the Russ' concerns about project related activities.. Therefore, Conservancy staff are recommending that the Conservancy approve the Final EIR, Alternative 4 (referred to in this staff recommendation as "the Project" or "Alternative 4"), which is limited to the EREP, and which avoids conflicts with the existing Drainage Easement, a legal instrument in which TWC and another neighbor grant the Russes certain rights to access and maintain drainage infrastructure on the EREP.

TWC is a nonprofit organization whose dual mission is to "preserve the beauty and biodiversity of the earth and to provide programs so that children may know the wonder and joy of nature." TWC has extensive experience in agricultural land management, public access and education and natural resource enhancement, and therefore has the necessary skill and capacity to achieve the goals and objectives of the Project.

The Project will culminate years of planning and design work funded by the Conservancy and the California Department of Fish and Wildlife (CDFW), most notably the Conservancy authorization of 2013 (Exhibit 3). The construction elements and anticipated costs are summarized in Exhibit 2 and are more specifically described below:

Retrofit Existing Cut-Off Slough Tidegate

The Cut-Off Slough tidegate structure will be repaired to serve its original purpose with modified gates that will improve fish passage without significantly altering water quality and water level relative to existing conditions. The Project does not propose to increase capacity at this structure; however, proposed repairs there will likely improve gate efficiency. The Project proposes to improve aquatic passage, and not adversely impact existing hydraulic conditions upstream. Repaired tidegates and/or fish passage doors inserted into the existing structure will allow for improved, but managed, tidal function and improved drainage efficiency in Cut-Off Slough and adjoining properties, while also providing fish passage and complying with state and federal law.

The repaired or replaced gates will be steel or aluminum, side- and/or top hinged designed to meet specific hydraulic performance and installed by a gate manufacturer to the existing concrete wall with a new seal. To reduce costs and minimize abrupt hydraulic changes, gates may be installed or replaced individually.

Reestablish Historic Centerville Slough

In order to increase aquatic habitat and enhance the movement of water and fish/wildlife to the north and south, the Project proposes to restore much of Centerville Slough, once the largest tributary of nearby Salt River. This will be achieved by excavating a channel along its historic

alignment. The south end of the proposed Centerville Slough alignment will terminate near an existing bridge at the southern portion of the EREP, north of the existing Angels Camp area. The channel would terminate a sufficient distance from the Western Drainage Ditch maintaining the integrity of that feature encompassed in an existing Drainage Easement between TWC and the Russes. The northern end will follow its historic alignment into Cut-Off Slough near an existing bridge crossing. By limiting the tidal exchange into Centerville Slough, the Project will provide habitat and agricultural benefits while also ensuring that restored tidal exchange to Centerville Slough is maintained at a low enough elevation to ensure that adjacent property owners –whose levees have deteriorated to low elevations—will not be adversely impacted by the Project.

Reintroduce Tidal Prism to Inner Marsh and Historic Centerville Slough

To increase and improve tidal wetland and salmonid rearing habitat, tidal exchange will be reintroduced to the Inner Marsh and to a lesser degree to the reestablished Centerville Slough. A new tidegate structure connecting the Inner Marsh to Cutoff Slough will be installed through the existing dike immediately west (outboard) and separate from the existing Cut-Off Slough tidegate structure. This new tidegate will likely have multiple gates including a muted tidegate regulator (MTR). Strategic design and sizing of these new tidegates will restrict tidal exchange to the Inner Marsh such that tidally-controlled water levels will not raise above 2.5 feet in elevation during the winter months and 5 feet during the summer months. This design approach ensures that the Inner Marsh has the capacity to store Russ Creek floodwater following winter storm events. The new tidegate structure will be approximately 75 feet long by 100 feet wide and 20 feet tall. The Project's Water Level Management Plan will include specific tidegate settings and seasonal operation guidelines to meet the desired hydraulic conditions for the area. The existing interior Inner Marsh dike will be raised to a minimum 8.0 feet elevation, widened in discrete areas, and resurfaced with gravel to improve access reliability for operation and maintenance needs. Existing failed culverts that connect the Inner Marsh to Cut-Off Slough will be removed and the dike repaired in these locations.

Reconnect Russ Creek to Centerville Slough

A newly graded channel will follow an historic Russ Creek alignment to re-establish hydrologic and biological connectivity with Centerville Slough. This excavation above the 2.5' elevation will improve site drainage, create in-channel flood storage, reestablish a long tidal to freshwater ecotone and provide a wetland prism that includes freshwater wetland and/or riparian habitat. In addition, the improved Russ Creek channel will restore habitat connectivity for anadromous fish unavailable for more than a century.

Develop Sediment Management Area on Russ Creek

To accommodate natural flood processes, sediment management areas will be established in avulsion prone regions along Russ Creek. Sediment deposits on the Eel River Estuary Preserve will remain or be seasonally relocated within sediment management areas and approved locations as needed. The sediment management area will then be seeded and irrigated as needed to enhance agricultural productivity in those areas.

Public Access and Recreation Components

TWC allows public access on the EREP in the form of a historic duck hunting club, scheduled and docent led small group site visits, and educational events for elementary school children to learn about wetland and estuary systems and agriculture as practiced in the coastal zone. The issue of public access to the EREP remains a subject of controversy. The Project contains the following public access and recreation features:

North Barn Parking Area and Interpretive Signage

Minor improvements to the North Barn Parking Area and signage limiting visitors to existing trails will facilitate TWC's outreach and education efforts while minimizing impacts to the Project area. Signs about the cultural, agricultural and natural heritage of the area would interpret the landscape for viewers. A vault toilet will be installed to reduce impacts and traffic back to the entrance.

Dune Walk and Overlook

A short boardwalk and trail with an overlook will take visitors from an existing trail into an intact dunefield for birding and natural observation.

Kayak Put In and Take Out

Two kayak put in and take out facilities will be installed, one along Cut-Off Slough at the outboard site of the tidegates, and another near the north end of the Inner Marsh. These minor structures will facilitate post-project monitoring of the Inner Marsh, aquatic educational programs and minor recreational use by visitors.

Road and Pasture Improvements

In order to ensure the viability of continued agricultural operations within and around the Project site, a variety of minor appurtenant structures are proposed, such as new gates, road improvements, lighting and fencing.

Adaptive Management Program

Ongoing operations and maintenance activities are necessary to assure long-term hydraulic and ecological functions of the overall Project. Establishing a formal and predictable structure to facilitate these O&M activities is essential to the Project. An Adatpive Management Program (AMP) including a Water Level Management Plan (WLMP) will assist land managers to respond to unanticipated changes to Project components reliably and affordably.

Site Description: The Project area is limited to the Eel River Estuary Preserve (EREP) owned by TWC, and does not include various parcels owned by former co-applicants Russ Ranch and Timber, L.L.C (RR&T) and Jack and Linda Russ, collectively referred to as "Russ". The Project area is approximately 1,237 acres and is located approximately four miles west of the City of Ferndale. The EREP, formerly known as Connick Ranch, comprises approximately 1,153 acres of reclaimed remnant tidal sloughs, tidal wetlands managed for agricultural production, and a

strip of approximately 84 acres of coastal dunes about 3 miles long and 1-3 acres wide, formerly known as the "Palco Property." TWC acquired Connick Ranch in 2008 and then assembled the highly fragmented Palco Property parcels with private funding at significant effort and expense. TWC continues to make this scenic area available for ecological enhancement and recreational use, while maintaining and improving agricultural use through land management efforts and leases to the Miranda Brothers. The EREP extends from the mouth of the Eel River nearly to Centerville Beach, 3.5 miles to the south. (Exhibit 1).

The Project site is part of the greater floodplain of the Eel River, and is at the mouth of the Eel River Delta, an area extending from the mouth up to the confluence of the Van Duzen River. The Delta, located 13 miles south of the City of Eureka, covers approximately 33,000 acres, or 50 square miles. Elevations range from sea level at the river mouth to approximately 700 feet in upland areas near Table Bluff and the Wildcat Hills. Most of the delta lands are relatively flat. The Eel River estuary, particularly the Project area, was once comprised of an intricate network of sloughs, side channels and open water, which, in combination with the tidal exchange and a substantial input of freshwater, provided a hospitable and ever-changing environment for a rich assemblage of wildlife. Due to the depth and complexity of the channel network, the Project area supported a significant commercial shipping industry capable of transporting much of the bounty of southern Humboldt County to faraway ports such as San Francisco.

The Eel River estuary and the Project area particularly was significantly altered over the last 150 years. By 1900, much of the Project area had been patented and reclaimed from tidal marsh for agricultural purposes. By 1970, the estuary, inclusive of sloughs and side channels, was reduced by tens of thousands of acres to 2,200 acres, or 3.4 square miles. The reduction in estuarine size corresponded with the increase of agricultural land within the delta region, as salt marsh was converted to pasture. It also corresponds to a general decline in the quality and quantity of the estuarine environment, declining salmon populations, and a marked reduction in the tidal prism of the estuary. This equates to a possible 60 percent reduction in overall tidal prism[2] and a commensurate decrease in estuarine area over time.

Due to the reduction in hydraulic connectivity and associated tidal prism, flooding and ponding has increased over time. As with the nearby Salt River, drainage of flood waters is impaired by diminishment of channel capacity. Unlike the Salt River, however, the Project area experiences additional challenges in the form of dune breaches and tidal incursions.

Project History: Early history and recent Conservancy involvement in the Project are described extensively in the Final EIR and in the 2013 staff recommendation (Exhibit 3), respectively. The 2013 authorization awarded funds to California Trout, Inc., matched by CDFW funds, to prepare designs for tidal marsh restoration on the EREP. Total funding for planning and design exceeded $1 million. As discussed in those documents, the Project area was marsh reclaimed in the late nineteenth to early twentieth century for agricultural production by Joseph Russ and others. The 1,153-acre Connick Ranch was purchased by TWC in 2008 to enhance habitat and provide recreational and educational opportunities for children. The Palco Property was subsequently acquired in a series of transactions and consolidated into the EREP. Extensive enhancement

[2] The tidal prism is the quantity of water that flows in and out of an area with changes in tides.

planning amongst various stakeholders and TWC ensued from 2009 to 2015, at which time the Coastal Conservancy agreed to serve as lead agency under CEQA.

The Coastal Conservancy issued the original Notice of Preparation of an environmental impact report (NOP) for the original version of the project on December 17, 2014. In August 2015, adjacent property owners, primarily Russ family members, requested that the project scope extend beyond the EREP to include approximately 600 acres of adjacent properties to the south owned by Russ. In response, the project was revised to include and accommodate those adjacent properties with project components similar to those originally proposed for the EREP. CalTrout, the 2013 grantee, secured from the Coastal Conservancy two grant augmentations totaling $220,000 to extend the project footprint to include the Russ properties, as requested by the Russes. These augmentations included funding to conduct additional topographic surveys, hydrologic modeling, analysis of dune morphology and processes, and biological resources investigations, and to include the Russ properties in CEQA analyses and permit preparations. To address the addition of these properties into the project area, the Coastal Conservancy prepared a revised NOP to allow for additional public and agency comment on the preparation of an EIR for the revised proposed project. The revised NOP was circulated between November 13, 2015 and December 18, 2015. Comments provided in a series of meetings with property owners and agency personnel were considered and incorporated into the project and reflected in the Draft EIR. The Draft EIR was submitted to the State Clearinghouse September 8, 2016, and a public comment meeting was held at the Fortuna River Lodge on September 28, 2016. Minor comments were received at the meeting, and extensive comments, most from the Russes or their consultants, were received in writing between October 21 and the close of the public comment period on October 24, 2016.

The comments focused on three areas: hydrology, operations (how the system will be operated) and public access. The critical tone of the comments from the Russes, some of whom were then formally project applicants, prompted Conservancy staff to take several steps. First, staff drafted thorough responses to comments and provided them to the Russes. These responses included four master responses on the topics of: Coordination and Project Development; the Drainage Easement; Reclamation Districts and Operation Needs; and Public Access and Recreation. This unusual step enabled the commenters to determine prior to the release of the Final EIR whether or not their concerns and questions were adequately addressed. Second, the Conservancy recirculated the Draft EIR (RDEIR) in order to include a revised project description that addressed many of the comments. The RDEIR contained a revised project description, two new alternatives that diminished environmental impacts while still meeting the project goals and objectives, and included the draft Adaptive Management Plan (AMP), Water Level Management Plan (WLMP) and the 2013 draft Public Access Plan. In summary these steps and materials were intended to address the comments and concerns about the Draft EIR, and the 2016 Proposed Project in general, so that the Russes would remain as co-applicants for the 2016 Proposed Project.

The RDEIR was filed with the Office of Planning and Research December 5, 2016. During the public comment period, Conservancy staff with the Project Team made repeated and concerted efforts to engage with the Russes and determine their applicant status and general position regarding the 2016 Proposed Project. No reply from the Russes was forthcoming. The review period closed January 19, 2017. Between January 18-19, the Conservancy received comment letters from Harville Ranch, LLC, Lane Russ representing RR&T, and the L.D. O'Rourke Foundation and a joint comment letter from these same individuals and organizations and Jack, Linda and Jay Russ. The more than 130 comments on the RDEIR focused on and largely reiterated concerns about the three key areas of hydrology, operations and public access, as well as the alleged inadequacy of the RDEIR. The joint letter also raised new concerns about the revised alternatives analysis, transportation, energy, greenhouse gas impacts and tribal cultural resource impacts.

Collectively, the comments demonstrated that the Russ' concerns about the 2016 Proposed Project remained unabated. As their joint letter stated "the RDEIR exacerbates the problems in the DEIR previously identified by the Commenters and also introduces new deficiencies." The joint letter requested that the Final EIR clarify that RR&T and the Russes are no longer project applicants or proponents of the project. Due to the extensive nature of the Russ' concerns about the 2016 Proposed Project, and the Project Team's inability to make any measurable progress addressing such concerns, Conservancy staff developed this staff recommendation advising the Conservancy to limit activities to the EREP by adopting Alternative 4.

The Final EIR, comprising the January 2017 responses to comments as well as the DEIR and RDEIR, has been circulated in compliance with CEQA.

PROJECT FINANCING

US Fish and Wildlife Service NCWC Grant	$950,000
Department of Fish and Wildlife (requested)	*$2,000,000*
Wildlife Conservation Board (requested)	*$3,000,000*
NOAA Coastal Resiliency (requested)	*$920,788*
Estimated Total Project Budget	**$8,000,000**
This Authorization Total	**$950,000**

The construction funds proposed to be authorized for disbursement comprise an award of $950,000 in reimbursable grant funds to the Coastal Conservancy from the U.S. Fish and Wildlife Service National Coastal Wetlands Conservation Grant Program. This fund source includes an additional $50,000 for Conservancy staff costs. The NCWC grants are limited to implementation on the EREP.

The estimated construction cost for the Project is approximately $8 million. The funds in italics have been applied for but are not yet secured. Moreover, TWC cannot disburse USFWS NCWC

funds until $457,501 of state match indicated in the original NCWC grant application is secured for the Project. Nonetheless, certification of the EIR and completion of the CEQA process is a prerequisite to seeking additional funding and completing permit applications for the Project. The Coastal Conservancy and TWC are working with California Trout and state and federal agency staff to help secure these funds while the CEQA process is reaching its completion and permit applications are being filed. If the additional funds are not obtained, the Project will be implemented in phases until sufficient funding is secured. No USFWS funds will be disbursed until sufficient non-federal match is secured.

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The Project will be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Public Resource Code sections 31251-31270, as follows:

Pursuant to section 31251, the Conservancy may award grants to nonprofit organizations in order to relocate improperly designed or located improvements and for other corrective measures that will enhance coastal resources that have suffered loss of natural and scenic values due to natural or human-induced events or incompatible land uses. The Project consists of corrective measures to restore an estuarine area degraded by reclamation and improperly located agriculture and tide gates. The Project will restore hydrologic and estuarine connectivity within the remnant Centerville/Cut-Off Slough system, and restore many acres of salt marsh and freshwater habitat on the EREP property while also preserving and enhancing agriculture by relocating it to areas of the EREP better suited for and more capable of sustaining higher production levels. Implementation activities under this grant will benefit a variety of natural resources within and outside the coastal zone (Pub. Resources Code § 31251.2.), particularly coastal salmon populations of the Eel River that utilize habitat within and outside the Coastal Zone.

Consistent with section 31252, the County of Humboldt's Local Coastal Program includes policies in favor of public action (in particular, the County, working with property owners and state and federal agencies) to resolve resource protection problems in the Eel River area, including the Project site, as described in the "Consistency with Local Coastal Program Policies" section below.

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

CONSISTENCY WITH CONSERVANCY'S 2013 STRATEGIC PLAN GOALS & OBJECTIVES, AS REVISED JUNE 25, 2015:

Consistent with **Goal 5, Objective B** of the Conservancy's 2013-2018 Strategic Plan, the Project will preserve and enhance coastal watersheds and floodplains by restoring habitat function and hydrologic connectivity within a diked former marsh. The Project will achieve this by restoring 100-acres of historic tidal wetland, 19-acres of historic aquatic slough and stream habitat, and overall enhancement of ecosystem function within the Project area.

Consistent with **Goal 5, Objective E**, the Project will modify a tidegate to restore fish passage to a restored estuarine area following more than 150 years of complete obstruction to migration.

Consistent with **Goal 5, Objective G**, the Project will significantly improve water quality within this basin by eliminating the historic practice of deliberately avulsing Russ Creek onto pastures, a practice that resulted in impaired water quality, increased sediment loads and hydraulic dysfunction within the Project area.

Consistent with **Goal 6, Objective B**, the implementation of this Project will markedly improve drainage and sediment management within the pastures in the Project area, thereby helping ranchers increase productivity while decreasing adverse impacts of their operations on wildlife habitat and water quality.

Consistent with **Goal 7, Objective B**, the Project has already incorporated a site-specific vulnerability assessment crafted in accord with the Coastal Commission's newly adopted Sea Level Rise Guidance Manual and devised project components that address these threats in a way that protects natural resources and provides maximum public benefit.

Consistent with **Goal 7, Objectives D, and F**, the Project is a pilot project that provides resilience to sea level rise and extreme storm events through dune enhancement and drainage networks, and incorporates marsh restoration components that result in carbon sequestration.

Consistent with **Goal 9, Objectives A and B**, the Project includes trails, kayak launches, overlooks, interpretive displays and other minor amenities that expand environmental education opportunities in the region, and improve public understanding, use and stewardship of coastal resources, particularly with respect to the compatible uses of agricultural production and ecosystem restoration.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The 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 is consistent with the following state and federal plans and policies concerning restoration of riparian habitat and increasing natural production of the coastal salmon populations that depend upon that habitat for certain life history stages:

    a. The Project is consistent with the recommendations for planning, acquisition and habitat enhancement made in the report Natural Resources of the Eel River Delta, published by the California Department of Fish and Game in November 1974. Among other things, the report recommended higher levels of protection for the Delta's natural resources, restoration and floodplain enhancement efforts and

acquisitions that will help advance ecosystem restoration –though they didn't use that expression—as a "highest and best use" of the Delta. This specific site is identified in that plan as the highest priority for acquisition and enhancement within the entire Eel River Delta.

b. While it doesn't specifically address the Eel Delta, the *Steelhead Restoration and Management Plan for California* of February 1996 features the Eel River and underscores the importance of reversing watershed disturbance through restoration activities. Focusing primarily on the introduction of Pikeminnow to the Eel River, the study's author could have noted that juvenile salmonids are safer from predation in the Delta because Pikeminnow cannot tolerate the high salinity of the Delta during summer months. Therefore, the Delta provides a refuge for juvenile salmonids, and other species, in an altered system. Thus, the Project specifically addresses the issues raised in the Steelhead Plan through alternative and likely more feasible and successful means than the chemical treatments recommended in the plan. Finally, and thematically, the plan advises that "(h)abitat improvement projects should be focused on the many areas throughout the State where steelhead habitat is severely degraded and restoration work is sorely needed." This is certainly true in the highly reclaimed Delta where opportunities abound to support the growth and survival of juvenile salmonids and other marine and freshwater species.

c. More recently, and more specifically, the Project is consistent with the California Fish and Game issued *Recovery Strategy For California Coho Salmon* of February 2004 in that the highest priority recommendation of that plan relating to the Eel Delta is to "(e)ncourage the Salt River Local Implementation Plan to incorporate coho salmon-friendly measures, in cooperation with the agencies." Centerville Slough is the largest historic tributary to the Salt River, and its enhancement advances the goals and objectives of the Recovery Strategy within the Eel Delta. TWC and its partners have developed the Project in a way that benefits from experiences gained at the nearby Salt River Ecosystem Restoration Project, and is likely to leverage those ecological benefits significantly. Additionally, the plan recommends that "(i)n cooperation with agencies and landowners, plan to re-establish estuarine function, restore and maintain historical tidal areas, backwater channels and salt marsh" (ER-HU-12 pg. 8.27).

d. The Project is consistent with the *Final Recovery Plan for the Southern Oregon/Northern California Coast Evolutionarily Significant Unit of Coho Salmon* (*Oncorhynchus kisutch)* (National Marine Fisheries Service 2014). That report highlights the statewide importance of the Eel River population of Coho salmon and adds that "(t)he tributaries and estuary located within this population may serve as essential non-natal rearing habitats for all populations in the Eel River watershed" (SONCC 26-7). The report states that "(i)n the estuary, salt marsh was drained and riparian vegetation cleared to convert tidelands to pasture...Tideland reclamation and the construction of dikes and levees have changed the function of the estuary considerably. Slough and creek channels that once meandered throughout the delta

are confined by levees, sufficiently slowing flow to a point that many have become filled with sediment. Remnant slough channels are visible throughout the delta. The estuary and tidal prism have been reduced by over half of their original size (CDFG 2010b)." (SONCC p. 26-4). Top recommendations from the report include: 1) setback or remove dykes and levees; 2) restore salt marsh and tidal sloughs, and; 3) reconnect tidal channels and wetlands.

e. The Project is consistent with the California Water Action Plan, a collaborative effort of the California Natural Resources Agency, the California Environmental Protection Agency, and the California Department of Food and Agriculture. This plan was developed to meet three broad objectives: more reliable water supplies, the restoration of species and habitat, and a more resilient, sustainably managed water resources system. It lays out the state's challenges, goals and actions needed to put California's water resources on a safer, more sustainable path. The plan identifies ten overarching strategies to protect our resources, include two particular to this Project that the Conservancy can help implement: 4) *Protect and restore important ecosystems (restore coastal watersheds and strategic coastal estuaries to restore ecological health and nature system connectivity to benefit local water systems and help defend against sea level rise, eliminate barriers to fish migration)* and 7) *Increase flood protection (encourage flood projects that plan for climate change and achieve multiple benefits).*

f. The *California State Wildlife Action Plan 2015 Update (SWAP 2015 Update)* points out that the North Coast Klamath Mountain Province is known for its extensive river systems and the anadromous fish populations they support. These rivers, according to CDFW, support one-third of the state's Chinook salmon, most of the state's coho salmon and steelhead, and all of the coastal cutthroat trout. These populations have suffered significant declines. That is why one of the fourteen conservation targets for the Province is the "native aquatic species assemblages/communities of coastal watersheds." Restoring lost rearing habitat in former salt marsh is a proven strategy for protecting and enhancing populations of these native aquatic species assemblages, as well as a host of other aquatic and terrestrial species.

g. Finally, *California @ 50 Million: The Environmental Goals and Policy Report (2013 Draft)* Key Action #3 for the "Preserve and Steward State Lands and Natural Resources" section calls for building resilience in natural systems and specifically points out that wetlands "provide important carbon sequestration opportunities for the state."

3. **Support of the public:** The Project is supported by Senator Mike McGuire, Assemblyman Jim Wood, the County of Humboldt, the U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, California Department of Fish and Wildlife, North Coast Regional Water Quality Control Board, Pacific Birds Partnership, the Pacific Marine Estuarine Partnership, the California Fish Passage Forum, California Trout, Trout Unlimited,

the landowner, their lessees and others. Some of the support letters received over the past year, some in relation to the solicitation of funds from other agencies, are included (Exhibit 6).

4. **Location:** The Project is located at the mouth of the Eel River, near Ferndale, in Humboldt County.

5. **Need:** Approximately 85 percent of the tidal marsh in Humboldt Bay and the Eel River Delta has been lost since the Gold Rush, leading to dramatic losses of fish and wildlife, decreased water quality and increased turbidity in the Bay, and changes to physical processes as the size of the Estuary shrank, increasing the need for dredging and the local hazards of flooding. The need for restoration of tidal marsh in Humboldt Bay and the Eel River Delta in order to aid in the recovery of at-risk species, and improve water quality and the physical health of the area, is well-recognized among scientists and resource managers.

6. **Greater-than-local interest:** Restoration of this area is of national significance. It will result in up to 100 acres of tidal wetland restoration and extensive dune enhancement that will provide benefits to a large number of species, including anadromous salmonids, migratory waterfowl and shorebirds, and aid in the recovery of several threatened or endangered species. In addition, the Project will improve flood management for agricultural operations in the area and provide regional recreational opportunities.

   Sea level rise vulnerability: Due to their location, all tidal wetland restoration projects can be vulnerable to sea-level rise impacts. This Project site is somewhat protected from such effects due to the fact that the reintroduction of tidal prism is muted and occurring within a closed cell. Nonetheless, as a low-lying coastal floodplain, the area is highly vulnerable. Conservancy staff conducted a thorough analysis of the Project using the Coastal Commission's new Sea Level Rise Policy Guidance, adopted August 12, 2015. This effort helped determine how sea level rise may impact the Project site from flooding and erosion; identified the longevity and durability of each Project component; and evaluated the impacts of the Project on agricultural resources, coastal habitats, and public access in light of sea level rise.

   This analysis found that the Project area is predicted to be affected by sea level rise sooner and more extensively than other areas in the Humboldt region and on the north coast due to subsidence in the area. According to the "Humboldt Bay: Sea Level Rise Hydrodynamic Modeling, and Inundation Vulnerability Mapping" report by Northern Hydrology and Engineering (2015), the closest site to the Project area (Hookton Slough in southern Humboldt Bay) has the highest rate of subsidence (VLM of -3.56 mm/yr) and thus the highest relative sea-level rise rate, 5.84 mm/yr, relative to other study sites in the Humboldt region and north coast.

   The Project is designed to protect coastal resources from sea level rise and address the area's vulnerability to sea level rise. The Project incorporates a number of elements designed to increase the lifespan of the area, including: 1) elevated berms with gradually sloping side-slopes capable of promoting vegetative shifts across the landscape, 2) dune enhancements intended to protect the area from wave overwash, and 3) sediment management techniques that provide elevation increases to accommodate shifting habitat types and agricultural productivity in the context of sea level rise. Although high sea level rise rates are predicted,

the Eel Delta is an excellent place to accommodate sea level rise, due to the fact that the sedimentation and sediment accumulation rates are very high –second only to the Yangtze River. Once the marsh plain of a restored wetland is colonized by vegetation, the marsh plain becomes an efficient sediment traps, contributing to aggradation and elevation increases. With the exception of the dunes, the longevity of the Project is expected to exceed fifty years due in large part because the Project is within a closed and muted tidal system. Due to erosion, the dune system is unlikely to persist that long, though it will likely accommodate sea level rise for at least twenty years.

Additional Criteria

7. **Urgency:** Failing infrastructure, wave overwash events, aggraded drainage channels and other problems are rendering much of the Project area unsuitable for farming, and inadequate for habitat enhancement. The Project is needed urgently to protect agricultural resources while also enhancing habitat to a semblance of its historic abundance.
8. **Resolution of more than one issue**: The restoration of wetlands combined with enhancements to and increased protection of agricultural areas in the Coastal Zone provides an excellent opportunity to protect and enhance two of the most important natural resource values in the North Coast.
9. **Leverage**: See the "Project Financing" section above.
11. **Innovation**: The Project provides an excellent opportunity to restore ecological function and agricultural productivity within a muted system, thereby providing significant improvements to habitat function, while also honoring and maintaining the existing agricultural utility and infrastructure of the site, and area that has provided significant economic and social benefit for more than a century.
13. **Realization of prior Conservancy goals**: The Project builds on the Conservancy's participation in the development of the *Salt River Ecosystem Restoration Project*, a more than 25-year effort to restore ecosystem function and agricultural productivity to the Ferndale Bottom region of the Eel River Delta, near Ferndale. Centerville Slough was once the Salt River's largest tributary, and will be again following Project completion. Certification of this EIR and award of funds will enable the Conservancy to begin implementing a Conservancy-developed plan and project as enunciated in a Conservancy-led EIR.
15. **Cooperation**: The Conservancy has helped assemble a team of agency personnel, non-governmental organization staff and a private landowner and its lessee intent on developing and advancing the Project. Although debate with Russ continues over detailed aspects of the Project, the Project enjoys the foundation of more than five years of preparation, planning, negotiations and design work.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The County of Humboldt Local Coastal Program (LCP) Eel River Area Plan (ERAP) was certified by the Coastal Commission in 1982 and last updated in 1995. The ERAP outlines numerous policies pertaining to the preservation and restoration of sensitive coastal habitat, but it

also includes strong provisions in support of agriculture. The Project is consistent with these policies in that it will restore coastal habitat and enhance agriculture. Further, all of these LCP policies will influence the preparation of the Project's final designs which will address agricultural preservation and habitat restoration.

There is significant fear within Ferndale's agricultural community that enhancement efforts at the EREP will result in wholesale conversion of prime agricultural lands to non-agricultural uses. However, the Project has been designed to protect agricultural lands (and will continue to do so as final designs are prepared) consistent with the Coastal Act and the zoning of the Project site. Section 30242 of the Coastal Act limits conversion of agricultural land to non-agricultural uses. (Pub. Resources Code § 30242.) Conversion to non-agricultural uses is allowed only where agriculture is either infeasible, or where such conversion will preserve prime agriculture elsewhere and be compatible with continued agricultural use on surrounding lands. As discussed extensively in the DEIR, RDEIR and Final EIR, the Project will convert a small percentage of the agricultural land in the Project area while protecting, preserving and enhancing productivity on non-prime and prime agricultural land elsewhere in the Project area consistent with Section 30242. Ultimately, Section 30242 controls the overall design approach of the Project.

Moreover, the Project area is located primarily in transitional agricultural lands, where development and conversion is even more strongly restricted in favor of maintaining prime agricultural productivity. Thus, per the guidelines of ERAP Section 3.41 C, it is essential that the Project adhere to the principal uses in agriculture exclusive designation, notably the production of food, fiber or plants.

With regard to the protection and enhancement of natural resources, Section 3.34 B states that management for watershed and fish and wildlife is a compatible use with agriculture. The Project provides for management of the area for fish and wildlife as a compatible use, in addition to management for agriculture.

In addition to the above guidelines, it is worthwhile noting the following policies that are highly compatible with the Project. 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."

In all respects, the Project will adhere to the LCP.

COMPLIANCE WITH CEQA:

In order to comply with the California Environmental Quality Act (CEQA) the Conservancy prepared the *Final Environmental Impact Report for the Eel River Estuary and Centerville Slough Enhancement Project, January 2017* (Final EIR). This environmental document is a project-level environmental impact report that examines the environmental impacts resulting

from the construction, development and ultimate operation of the 2016 Proposed Project and five alternatives.

Since both the DEIR and RDEIR retained the 2016 Proposed Project as described, specifically in the inclusion of Russ property within the project area, so too, does the Final EIR. However, the RDEIR included two new alternatives that: a) were limited to the EREP, and; b) resulted in fewer benefits and fewer adverse impacts. In its analysis, staff also determined that Alternative 4: 1) limited project activities to the EREP where TWC remained a cooperative landowner; 2) avoided any conflict with the Drainage Easement, a legal instrument establishing certain rights for water management by the Russes across EREP, and 3) modestly reduced environmental impacts further than the 2016 Proposed Project. Therefore, Alternative 4 is recommended to the Conservancy for approval instead of the 2016 Proposed Project.

The Final EIR is attached as Exhibit 4, and the Adaptive Management Plan and Mitigation Monitoring and Reporting Plan are attached as Exhibit 5.

The material that constitutes the administrative record is located at the offices of the State Coastal Conservancy, 1515 Clay Street, 10th floor, Oakland, California. The custodian of the record is project manager Michael Bowen.

Significant Effects Of The Project (Alternative 4) Reduced To Less Than Significant Levels by Mitigation

The Final EIR identifies thirteen potentially significant effects of the Project in the categories of Air Quality, Biological Resources, Cultural Resources, Geology and Soils, and Hydrology and Water Quality. The Final EIR also finds that in nearly each of the thirteen categories the potentially significant effects are reduced under Alternative 4 relative to the 2016 Proposed Project. While it is also true that the environmental benefits in some categories decline under Alternative 4 relative to the 2016 Proposed Project, the benefits of Alternative 4 remain substantially comparable to the 2016 Proposed Project.

To reduce impacts to less than significant the Final EIR identifies the following mitigation measures, summarized in Exhibit 5.

Air Quality

The EIR concludes that, unless controlled, fugitive dust emissions during construction of the Project could be a significant impact. Therefore, Mitigation Measure AQ-1 provides dust control measures during construction that will reduce this potential air quality impact to less-than-significant.

Agricultural Resources

Due to the importance of agriculture to the local economy, the EIR extensively analyzed the Project's potential to have local and regional adverse impacts to Agricultural Resources. The EIR concluded that impacts are considerable for the 2016 Proposed Project, but not potentially significant, and reduced by at least 25 acres under Alternative 4. Alternative 4 reduces the conversion levels of agricultural land by twenty-five acres, including the reduction of conversion of prime agricultural land from approximately 14-acres to nine-acres due to the reduced footprint of Centerville Slough. In both instances, impacts were found to be less than significant due to design constraints and a net increase in overall agricultural productivity and utility within the

Project footprint. This is highlighted, for example, in the Project intent to offset low productivity pasture lost to inundation by improving pasture at higher and less saline parts of the Project area where Russ Creek currently and routinely avulses at the expense of predictable and productive pasture. In order to ensure that this projection holds true, a Pasture Monitoring Plan will validate or dispel the Final EIR findings in this area. In the event that anticipated agricultural benefits do not materialize as predicted, the Final EIR provides a means of offsetting unforeseen impacts should Project benefits fall short. This is achieved through the deposit of funds into an escrow account for transfer to a suitable non-profit or special district capable of and willing to administer the funds in order to compensate for lost agricultural productivity, should EIR projections not be achieved.

Biological Resources

The EIR concludes that despite the Project's avoidance or minimization of impacts to special status wildlife and plant species through planning and design measures, construction and operation of the Project could directly or indirectly impact populations of Tidewater Gobies, raptors, migratory birds, Western Snowy Plover, Norther Red-legged Frog, salmonids, Longfin smelt and collectively a variety of other special-status plant species and their habitats. Furthermore, implementation of mitigation measures to enhance Snowy Plover habitat could impact sensitive dune plant species such as Beach Layia.

Avoidance, minimization and mitigation for salmonids, Longfin smelt, Tidewater Goby and Red legged Frog include but are not limited to temporal phasing of construction, relocation of sensitive species out of construction areas, prudent dewatering techniques that protect aquatic species and oversight by qualified biologists. Through such means Mitigation Measures BIO-1a, BIO-1d and Bio-1e reduce potential impacts to a less than significant level.

Potential impacts to avian species, including nesting passerine birds, avian species of special concern and Snowy Plover, are addressed through pre-construction surveys and construction buffers of three feet for common birds, 300-feet for sensitive species and 500-feet for raptors. Dune enhancement at a ratio of 1.1:1 via removal of European Beach Grass to mitigate for dune enhancement activities within the Project area reduce impacts to Snowy Plover to a less than significant level. See Mitigation Measures BIO-1b and BIO-1c.

As for potential impacts to plants, surveys, avoidance and physical protection measures for Special Status or Sensitive-Listed Plant Species, in combination with pre-construction seed collection, replanting efforts and, where necessary, compensatory mitigation plans, reduce potential impacts through Mitigation Measures BIO-2aand BIO-2b to less than significant levels.

The EIR finds that four sensitive natural vegetation communities were identified within the Project area, and that these would be temporarily impacted by Project activities. Mitigation Measure BIO-3a provides that through avoidance and reestablishment, temporary impacts to Dune Mat will be reduced to a less than significant level, and that community will increase in size as a result of the Project.

Sensitive Listed Habitat types will be enhanced, and temporary impacts reduced to less than significant levels, via invasive species control measures described in Mitigation Measure BIO-3b.

The EIR finds that the Project design includes filling of wetlands and reestablishment of new wetlands. No net loss in quality or quantity of wetlands is expected, but short term impacts will be reduced to less than significant levels under Mitigation Measure BIO-4 through demarcation, contracting requirements and contractor training, supervision of work by a qualified biologist and if necessary compensation for any net loss of wetlands.

In summary, the Biological Resources section of the EIR shows that the ecological benefits of the Project are extensive, and that the short term potential impacts are sufficiently addressed and reduced to less than significant levels by means of mitigation measures.

Cultural Resources

An extensive and thorough cultural resources investigation concluded that no cultural resources, paleontological resources, or human remains were identified or likely to be found within or immediately adjacent to the Project site. The potential disturbance of undiscovered cultural resources paleontological resources, or human remains is addressed in Mitigation Measures CR-1, 2 and 3, which require work stoppage and notification procedures in the event of such discovery. The potential significant impacts are reduced to a less than significant level.

Geology and Soils

The Project involves heavy construction near a triple juncture zone and is located on unstable and/or expansive soils. Therefore, the Project has the potential for significant impacts through exposing people or structures to seismic events including liquefaction, to result in substantial soil erosion, and to be developed on an unstable geologic unit or soil that could result in liquefaction, lateral spreading, subsidence or collapse and create a risk to life or property. These potential impacts are addressed in Mitigation Measures GEO-1, 2 and 3 by requiring adherence to the recommendations presented in the geotechnical report (LACO 2016), through development of a Stormwater Pollution Prevention Plan (SWPPP) specific to the proposed grading and earthmoving activities and through the implementation of erosion and water quality control measures, including water quality monitoring and adaptive management efforts. Overall, potentially significant impacts to Geology and Soils are reduced to less than significant levels.

Hydrology and Water Quality

The dynamic hydrologic environment of the Project area, in combination with the extensive construction proposed for the area, guarantee the potential for significant impacts to Hydrology and Water Quality, particularly in the areas of drainage patterns, erosion and siltation. These impacts will be addressed through various measures including: HWQ-1a, the management of construction storm water runoff via the development of and adherence to an adequate and approved Construction Storm Water Pollution Prevention Plan (SWPPP); HWQ-1b, the training of contractors in the adherence to the SWPPP; HWQ-1c, the implementation of various in-stream erosion and water quality control measures such as cofferdams, silt fences, etc.; HWQ-3, the long term erosion monitoring of on-site channels to screen for excessive erosion and degraded water quality and the accompanying adoption of the Adaptive Management Plan that is specifically designed to accommodate the dynamic, erosive, and unpredictable conditions within the Project area over time in a continuing effort to improve Hydrology and Water Quality resources within and outside of the Project area. Staff notes that the design intent in combination with mitigation measures such as seasonal operation of the tidegates will maximize flood storage capacity of the Project area resulting in less than significant findings in the area of Hydrology

and Water Quality, though at the expense of maximizing available aquatic habitat for increased biological benefit.

The Project Alternatives

Meetings amongst property owners with land adjacent to the EREP to discuss land management and improvements began in 2009-2011. During the preliminary modeling and feasibility assessment phase of the project, various configurations were assessed, including some on adjacent lands. Despite those discussions, and in large part due to an ongoing dispute over public access, a proposed project limited to TWC property was developed and a Notice of Preparation was circulated in December 2014. At the first scoping meeting, the National Oceanic and Atmospheric Administration requested that the Conservancy analyze an alternative that contemplated removal of the Cut-Off Slough tidegate and full tidal exchange into the project area.

Subsequently, and in recognition of the agricultural benefits afforded by the project components, adjacent landowners held their concerns about public access in abeyance, requested participation in a broader project, and sought funding from the Conservancy to support that participation (Exhibit 6). The Conservancy augmented its grant by $240,000, and the proposed project was revised and re-scoped in 2015 to include adjacent properties. Thus, the alternatives analyzed in the Draft EIR included the 2016 Proposed Project, the No Project Alternative, the 2014 (original) NOP Alternative and the Full Tidal Exchange Alternative.

The public comment period for the Draft EIR closed October 24, 2016. Public comment on the Draft EIR focused on three key areas: hydrology, infrastructure operations ("operations") and public access. Consequently, the Conservancy recirculated the Draft EIR on December 5, 2016 with a revised project description, responses to comments, an Adaptive Management Plan, a Water Level Management Plan, and two new alternatives that limited proposed project activities to the EREP and reduced overall environmental impacts. The public comment period for the recirculated Draft EIR (RDEIR) closed January 19, 2017. Public comments again focused on the same three key areas, as well as new concerns about greenhouse gas emissions, utilities, traffic and tribal cultural resources. Responses were incorporated into the Final EIR to accompany the initial response to comments on the Draft EIR. Thus, the alternatives analyzed in the Final EIR include the 2016 Proposed Project, the No Project Alternative, the 2014 (original) NOP Alternative, the Full Tidal Exchange Alternative, Alternative 4, and Alternative 5. Each is described, below, with summary analysis.

No Project Alternative

Under the No Project Alternative, no modifications to the area will occur. The alternative maintains the existing levee and tidegate conditions and continues to preclude tidal exchange within the area with no provisions for sea level rise adaptation, sediment management, drainage improvement or ecosystem restoration. The site will continue to be managed to maximize agricultural potential and flood control. There is no improvement proposed for internal channels, culverts, tidegates, dune or levee improvements under the No Project Alternative.

The No Project Alternative will have similar impacts to the 2016 Proposed Project for Public Services, Recreation, and Transportation resource categories; and lesser impacts than the 2016 Proposed Project for all other resource categories with the exception of Agricultural Resources, Biological Resources, and Hydrology and Water Quality as over time –perhaps rapidly–these resources will continue to degrade.

2014 Original Notice of Preparation Alternative

The 2014 Original Notice Of Preparation (NOP) provides a detailed description of the proposed elements for this alternative. The enhancement features associated with the 2014 Original NOP Alternative, which is restricted to the EREP, or TWC property, are similar to the 2016 Proposed Project. Most impact categories analyzed under CEQA are similar or lesser to the 2016 Proposed Project, with a few exceptions. For this reason, the 2014 Original NOP Project was identified in the EIR as the environmentally superior alternative.

In the key categories of Biological Resources, Cultural Resources, Greenhouse Gas Emissions, and Hydrology and Water Quality, the 2014 Original NOP Alternative would have slightly lesser impact levels than the 2016 Proposed Project, and very similar impacts to Alternative 4. These lesser impacts are primarily associated with fewer construction activities than the 2016 Proposed Project. Notably, however, in the category of Hydrology and Water Quality, the 2016 Proposed Project offers greater benefit to the surrounding area.

Biological Resource, Cultural Resources and Greenhouse Gas impacts associated with this alternative are reduced relative to the 2016 Proposed Project as construction-related activity diminishes. All impacts would fall into the less than significant category. As with the 2016 Proposed Project, minus the Russ land south of the EREP, this alternative would also provide a net benefit to terrestrial, avian and aquatic species by the introduction of a muted tidal exchange into the EREP and recreates historic on- and off-channel ponds and the associated wetland habitats within the historic back-dune Centerville Slough channel system.

As with the 2016 Proposed Project, Hydrology and Water Quality impacts were determined to be less than significant with implementation of mitigation measures (reference Final EIR Section 3.9.5). However, the improvements to Centerville Slough and Russ Creek would be limited to EREP property only; thus, poor drainage and unchecked wave over wash would still occur on Russ property. Therefore, although the hydrology and water quality impacts are anticipated to be similar, the resulting hydrologic deterioration of agricultural pastures on Russ property under this scenario is expected to be more severe. For these reasons, the hydrology and water quality impacts associated with this alternative are anticipated to be greater than with the 2016 Proposed Project.

Full Tidal Exchange Alternative

Although this alternative has generally fewer impacts in most categories, analysis demonstrated that its impacts upon agricultural resources are severe, involving the inundation of nearly 2,000-acres of pasture and permanent conversion of that agricultural resource to tidal marsh. In so doing, this alternative cannot meet project objectives of protecting and enhancing agricultural resources.

Alternative 4

Alternative 4 includes many of the same components from the 2014 NOP Alternative, as well as components that were further improved upon in the 2016 Proposed Project. These are depicted in Exhibit 1. Consequently, the analysis provided above for the 2014 NOP Alternative holds true for Alternative 4. Generally speaking, fewer construction related activities on a smaller footprint equate to lesser potentially significant impacts for this Alternative. The key differences between Alternative 4 and the 2016 Proposed Project are as follows:

1. This alternative is limited to TWC's EREP property, and does not include the adjacent properties and proposed actions there, such as re-routing of Shaw Creek/Creamery Ditch, construction of a setback berm around the 200-acre Angels' Camp and other features;
2. Centerville Slough will not be routed into the Inner Marsh, but will retain its historic and current alignment to the north into Cut-Off Slough. Therefore, seasonally varied muted tidal exchange will be prevented from entering Centerville Slough, Western Drainage or Angels Camp. Accordingly, tidal prism and exchange in the southern reaches of Centerville Slough will be minimal;
3. Centerville Slough will be re-established upstream of the existing bridge crossing (widened to 50- to 75-feet) along its current (historic) alignment and terminated somewhat north of EREP/Russ property boundary to provide additional off-channel aquatic habitat and provide the potential for future drainage connection to the south from adjacent properties as envisioned in the 2016 Proposed Project.
4. No changes to existing function or infrastructure cited in the Drainage Easement between TWC and the Russes would occur or result in conflict with the terms of that existing legal instrument.

The alternatives chapter of the RDEIR describes the other differences and components of this alternative.

In nearly every category, environmental impacts associated with this alternative will be modestly lower than with the 2016 Proposed Project.

Agricultural Resources

Alternative 4 would result in approximately 25 fewer acres of agricultural land experiencing conversion or alteration, including the reduction of the conversion of prime agricultural land from fourteen to nine acres. This reduction by 5-acres of impacts to prime agricultural land is due the shortened reach of Centerville Slough towards the south of the Project area where prime agricultural lands are located. The reduction of non-prime agricultural land conversion from 120-acres to 100-acres is due to less overall inundation from the reintroduction of tidal exchange. The same increases in productivity throughout the area, however, are anticipated, and due to be monitored and documented via the proposed Monitoring Measure AR-1 (Exhibit 5).

Overall, Alternative 4 (the Project) will have fewer impacts to Agricultural Resources than the 2016 Proposed Project for three key reasons: 1) Seasonally adjusted muted tidal exchange is limited to the Inner Marsh, so less area (approximately 20 acres) is inundated and converted to non-agricultural uses; 2) Centerville Slough excavation terminates further north, so less pasture (prime agricultural land in that location) is impacted by channel construction, and; 3) Most other project features such as drainage improvements and sediment management activities are retained, so overall productivity increases are commensurate with the 2016 Proposed Project. Accordingly, Alternative 4 will have commensurate benefits to the 2016 Proposed Project, but fewer impacts to Agricultural Resources than the 2016 Proposed Project.

Air Quality

Alternative 4 will have fewer impacts to Air Quality than the 2016 Proposed Project simply because less construction will translate directly to fewer construction-related impacts to Air Quality.

Biological Resources

Biological resource, cultural resource and greenhouse gas impacts associated with this alternative are reduced relative to the 2016 Proposed Project as construction-related activity diminishes. All impacts will fall into the less than significant category. This alternative will also avoid potentially significant impacts to biological resources by avoiding the proposed construction of an extensive levee on Russ property, and the redirection of Shaw Creek and Creamery Ditch from their present course and into the Angels Camp area. This alternative will provide a net benefit to terrestrial, avian and aquatic species by the introduction of a muted tidal exchange into the EREP and the recreation of historic on- and off-channel ponds and the associated wetland habitats within the historic back-dune Centerville Slough channel system.

Cultural Resources

Alternative 4 will have fewer potential impacts to Cultural Resources due to a smaller project footprint, less construction activity and thus a lower potential to disturb cultural resources in the area.

Geology and Soils

Regarding Geology, the impacts are reduced slightly under this alternative to the extent that construction related activities are reduced. However, they remain potentially significant, but reduced to a less than significant level with the proposed mitigation measures.

Hydrology and Water Quality

As with the 2016 Proposed Project, Hydrology and water quality impacts were determined to be less than significant with implementation of mitigation measures. However, the improvements to Centerville Slough and Russ Creek will be limited to EREP property only; thus, poor drainage and unchecked wave over wash will still occur on Russ property. Therefore, although the

hydrology and water quality impacts will be similar or slightly lesser, the resulting hydrologic deterioration of agricultural pastures on Russ property under this scenario is expected to continue. For these reasons, the hydrology and water quality impacts associated with this alternative are comparable to the 2016 Proposed Project, but the immediate benefits are fewer.

Nevertheless, this alternative affords maximum flexibility for the future accommodation of additional properties into the design, permitting and implementation phases of the Project. This is particularly true for a southward extension of Centerville Slough onto Russ property to improve drainage from that area, an effort that would ameliorate wave overwash events and provide the opportunity to accommodate sea level rise through construction of a setback berm on the western boundary of Russ property. However, until the Russes actively pursue those additional project components, the benefits of this alternative are commensurately lesser than the 2016 Proposed Project. In other words, absent the extension of the Project onto adjacent properties as the 2016 Proposed Project does, this alternative provides a lower level of long-term protection and resiliency to the overall Project area. In particular, this alternative excludes activities south of the EREP such as dune enhancements, setback berm construction around Angels Camp and a restored Centerville Slough on the Russ property, all of which are intended to protect the agricultural land from future wave over wash events and to provide adequate drainage for future operations. Therefore, this Alternative will have fewer overall benefits to the Project area but lesser or equal impacts compared to the 2016 Proposed Project, and still less than significant impacts.

Alternative 5

Alternative 5 represents most of the same components as the 2016 Proposed Project, but its components are limited to those on the EREP. These are depicted in Exhibit 1. The key differences between Alternative 5 and the 2016 Proposed Project are as follows:

1. This alternative is limited to TWC's EREP property, and does not include the adjacent properties;
2. Centerville Slough would still be routed into the Inner Marsh, and therefore, seasonally varied muted tidal exchange would be allowed to enter Centerville Slough. However, a muted tidal regulator would be needed to separate Western Drainage from Centerville Slough so that tidal exchange and tidal prism would not interfere with drainage from properties to the south;
3. Centerville Slough would be re-established upstream of the existing bridge crossing (widened to 50- to 75-feet) along its current (historic) alignment and terminated north of EREP/Russ property boundary to provide additional off-channel aquatic habitat and provide potential future drainage connection to the south from adjacent properties.

The alternatives chapter of the Final EIR describes the other differences and components of this alternative.

In nearly every category, environmental impacts associated with this alternative are expected to be lower than with the 2016 Proposed Project, and nearly identical to Alternative 4, above. However, benefits of this alternative are also lower than with the 2016 Proposed Project, much as is the case and described more thoroughly under Alternative 4, above. Potentially significant impacts also appear to be modestly greater than Alternative 4 due to the routing of Centerville Slough out of its historic alignment and into the Inner Marsh directly.

With respect to Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, Geology and Hydrology resources, see the discussion previously concerning Alternative 4. Similarly, with respect to biological resources, the biological impacts of less construction are lower, but the inability to connect Centerville Slough to the Angels Camp area, thereby reducing both tidal prism opportunities and diminishing habitat connectivity, reduces the overall biological benefits of this alternative, relative to the 2016 Proposed Project. Nonetheless, the benefits of this alternative are significant, and the impacts are less than significant.

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 designed to ensure compliance with the required mitigation during project implementation (Public Resources Code Section 21081.6). Staff has prepared a Mitigation Monitoring and Reporting Program, attached as part of Exhibit 5. The proposed Conservancy resolution for this project serves to adopt the program.

Significant Impacts

The Final EIR found that all potentially significant impacts of the Project will be reduced to less-than-significant levels with mitigation measures adopted.

Cumulative Impacts

The Final EIR also evaluates the potential environmental impacts of the Project when considered together with other projects. This analysis found no cumulative impacts; therefore, all cumulative impacts are determined to be less than significant.

Project Benefits

The Project provides the following benefits:

- Improve access to restored aquatic habitats for salmonids and other aquatic dependent species by increasing or creating migratory access between estuarine and inland waters and by restoring overwintering and rearing habitat for juvenile salmonids;
- Improve drainage efficiency and manage sediment loads more effectively using both passive natural processes and active management approaches, while enhancing tidal influences by reestablishing connectivity of Russ Creek to a rehabilitated Centerville Slough;

- Increasing resiliency to sea level rise and reducing salt water influences to pastures, enhancing drainage and establishing avulsion management areas for Russ Creek;
- Enhance tidal processes by restoring tidal prism and improve reliability of tidegate infrastructure to provide adaptability for sea level rise and varied land management;
- Enhance dune formation to increase resiliency to sea level rise;
- Enhance freshwater pond habitat for waterbirds and other native aquatic dependent species;
- Facilitate access for continued passive and active agricultural land management, and nature study opportunities, including installation of two kayak launches and dune nature trail;
- Suppress invasive species; and
- Establish a long-term Adaptive Management Program to promote and sustain the agricultural and ecological viability of the landscape for the future.

The Project offers significantly greater environmental benefit than any of the other alternatives analyzed in the Final EIR, excepting the 2016 Proposed Project. Moreover, the components and environmental impacts of the Project are sufficiently similar to the 2016 Proposed Project that mitigation requirements as identified in the MMRP are identical for the Project, the 2016 Proposed Project and Alternative 5.

Overall, the environmental benefits of the Project as detailed above and in the Final EIR lead staff to recommend that the Conservancy certify the EIR and approve the Project. As discussed above, and in the Final EIR, the environmental impacts of the Project, however considerable, pale in comparison to the risk of doing nothing to remediate the significant deterioration of and risk to the Project area and its environmental components by natural and anthropogenic forces.

Upon Conservancy certification of the Final EIR and approval of the Project, Conservancy staff will file a Notice of Determination with the County of Humboldt Clerk and with the Office of Planning and Research.