

COASTAL CONSERVANCY

Staff Recommendation
December 19, 2019

ELKHORN SLOUGH TIDAL MARSH RESTORATION – PHASE 2

Project No. 12-014-02
Project Manager: Rachel Couch

RECOMMENDED ACTION: Authorization to disburse up to \$1,480,000, of which \$980,000 was awarded to the Conservancy by the U.S. Fish and Wildlife Service under its National Coastal Wetlands Conservation Grant Program, to the Elkhorn Slough Foundation for Phase 2 of the Elkhorn Slough Tidal Marsh Restoration Project in Elkhorn Slough, Monterey County, and adoption of findings under the California Environmental Quality Act.

LOCATION: Elkhorn Slough, Monterey County

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

- Exhibit 1: [Project Location and Maps](#)
- Exhibit 2: [Figures and Photos](#)
- Exhibit 3: [Project Letters](#)
- Exhibit 4: [December 3, 2015 Staff Recommendation](#)
- Exhibit 5: [January 18, 2018 Staff Recommendation](#)
- Exhibit 6: [Mitigated Negative Declaration and Addenda](#)

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 authorizes disbursement of up to one million four hundred eighty thousand dollars (\$1,480,000), of which \$980,000 was awarded to the Conservancy by the U.S. Fish and Wildlife Service under its National Coastal Wetlands Conservation Grant Program, to the Elkhorn Slough Foundation (“ESF”) for Phase 2 of the Elkhorn Slough Tidal Marsh Restoration Project.

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

1. A detailed work program, schedule, and budget.
2. Names and qualifications of any contractors to be retained in carrying out the project.
3. A plan for acknowledgement of Conservancy funding and Proposition 1 as the source of that funding.
4. Evidence that all permits and approvals required to implement the project have been obtained.
5. Evidence that the grantee has entered into agreements sufficient to enable the grantee to implement, operate, and maintain the project.”

Staff further recommends that the Conservancy adopt the following findings:

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

1. The proposed authorization is consistent with Chapter 6 of Division 21 of the Public Resources Code, regarding enhancement of coastal resources.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. Elkhorn Slough is a nonprofit organization organized 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.
4. As a responsible agency, the Conservancy has independently reviewed and considered the “Initial Study/Mitigated Negative Declaration for the Elkhorn Slough Tidal Marsh Restoration Project,” adopted by the California Department of Fish and Wildlife (CDFW) on August 27, 2015, the Addendum to the MND adopted by CDFW in September 2017, and the Addendum to the MND prepared by CDFW on October 21 2019, pursuant to the California Environmental Quality Act (“CEQA”) and attached to the accompanying staff recommendation as Exhibit 6. The Conservancy finds that based on the record as a whole the Elkhorn Slough Tidal Marsh Restoration Project, as mitigated, will not have a significant effect on the environment, as defined in 14 Cal. Code Regulations Section 15382.

PROJECT SUMMARY:

Staff recommends that the Conservancy authorize disbursement of up to \$1.48 million in grant funds to the Elkhorn Slough Foundation to restore an additional 61 acres of coastal habitat as

Phase 2 of the Elkhorn Slough Tidal Marsh Restoration Project (TMR or project) (Exhibit 1). This will include: 1) \$980,000 in grant funds awarded to the Conservancy by the U.S. Fish and Wildlife Service (“USFWS”) from the National Coastal Wetland Conservation Grant Program (“USFWS grant”); and 2) \$500,000 of Conservancy funds. On December 3, 2015 and January 18, 2018, the Conservancy authorized disbursement of a total of \$1,500,000 for Phase 1 of the TMR. However, the final bid for Phase 1 was lower than expected, and \$500,000 of those funds were not needed. The proposed authorization would enable staff to redirect that \$500,000 for Phase 2.

The Elkhorn Slough estuary, containing California’s second largest tract of salt marsh, is currently facing unprecedented rates of tidal wetland loss and degradation. Fifty percent of the tidal salt marsh in Elkhorn Slough has been lost in the past 150 years. This habitat loss is a result of diking and draining, increased tidal flooding, which “drowns” vegetation, and bank erosion, which causes the marsh to collapse into the channel. It is predicted that the dramatic rates of tidal wetland loss and degradation in Elkhorn Slough will continue in the near future if no management actions are taken.

To address the loss of tidal marsh in the slough, ESF, in partnership with the California Department of Fish and Wildlife (“CDFW”) and the Elkhorn Slough National Estuarine Research Reserve (“ESNERR”) developed the TMR with the restoration goal of 147 acres of vegetated tidal salt marsh, ecotone, and ruderal grassland. The plans include raising the elevation of 104 acres of degraded tidal marsh to restore it to healthy tidal marsh, creating 17 acres of new marsh (some of which will be part of the ecotone) and restoring 8 acres of surrounding uplands to grasslands. The remaining 18 acres of upland buffer lands will be restored to native vegetation over time. The TMR is located at the Minhoto-Hester Marsh and Seal Bend areas of Elkhorn Slough, both located on the south side of the main channel (Exhibit 2). The recently completed Phase 1 of the TMR resulted in approximately 61 acres of tidal marsh and 5 acres of adjacent grassland habitat (Exhibit 2).

In Phase 2 of the TMR (“Phase 2”), ESF intends to raise the elevation of approximately 58 acres of degraded marsh to restore it to tidal wetland habitat within Minhoto-Hester Marsh (subareas M4-M6) and Seal Bend (subareas S1-S4), create approximately 3 acres of new marsh, as well as restore approximately 3 acres of adjacent grassland habitat, as shown in Exhibit 2.

The project area was previously diked and drained for agricultural use and consequently subsided by approximately two feet. As a result, the project area is too low to sustain healthy tidal marsh and too high to support healthy mudflats. To address this, the TMR involves placement of approximately 400,000 cubic yards of sediment to raise the subsided land an average of 2.4 feet to the elevation necessary to enable formation of tidal marsh. The revegetation process also includes reducing the weed seed bank, and decompacting the soil. The TMR includes post-construction monitoring to ensure implementation and ecological success of the restored tidal wetlands. The grassland habitat that will be restored is located on the scraped areas between area of tidal marsh that will be restored and neighboring farmland. Plant and seed material will be locally sourced and amounts are based on staff and field

capacity. Initial planting areas are smaller (5 and 3 acres) and will be used as seed and plant source material for further restoration as the plants mature. Areas not planted will be kept in a cover crop of Merced rye.

The TMR will result in several ecosystem-wide benefits: reduced tidal erosion; increased sea-level rise resilience; improved water quality; increased carbon sequestration; and improved ecosystem function. Reduction in tidal erosion will be accomplished through filling deep areas left from past erosion and subsidence, which compete with tidal marsh for sediment suspended in the water column. Setting the marsh relatively higher in the tidal frame will likely increase marsh resiliency to erosion and rising sea levels. Increasing the extent of tidal marsh in Elkhorn Slough will increase the capacity of the marshes to filter excess nutrients and pollutants from the water column while sequestering additional carbon in the new marsh roots. The restored habitat will help restore ecosystem functions and will benefit eight federally- or state-listed special status species including Brown pelican, Southern sea otter, California Least tern, Burrowing owl, American White Pelican, and Northern Harrier.

Phase 2 will continue pioneering efforts to increase the extent of tidal marsh in Elkhorn Slough and will demonstrate an innovative approach that, when fully implemented in all construction phases, will result in an 8-10 percent increase in tidal marsh in the estuary. If extended to other parts of the estuary, this approach could increase the extent of marsh by 50 percent over existing acreage, approaching the historic extent of tidal salt marsh in Elkhorn Slough. Because sediment addition wetland restoration projects are still relatively rare in California, this project is considered a pilot project that can inform strategic planning for this system as well as other wetland ecosystems in California, especially given existing need at Elkhorn Slough as well as projections of future impacts from sea level rise.

Site Description: Elkhorn Slough, an estuary extending inland for seven miles from the midpoint of Monterey Bay in Central California, provides extraordinary biological diversity and recreational opportunities. The estuary contains many distinctive habitat types including subtidal channels, tidal creeks, mudflats, salt marshes, and tidal brackish marshes. These habitats provide a rich ecosystem essential for over 340 bird species, 550 marine invertebrate, and 102 fish species. Elkhorn Slough is an important nursery for commercial and recreational fish and a premier migratory stopover for birds. Estuaries like Elkhorn Slough are among the most threatened ecosystems in California, and as a result, a disproportionate number of rare, threatened, and endangered species reside in these areas. In the Elkhorn Slough watershed, two dozen species are included in these categories. The estuary also provides many beneficial human uses such as recreational boating, hiking, and bird watching. Moreover, the coastal wetlands minimize shoreline erosion and filter polluted waters.

Due to its ecological importance, Elkhorn Slough was designated as a National Estuarine Research Reserve (NERR) in 1979. The Elkhorn Slough NERR is funded by NOAA and managed by CDFW. It encompasses approximately 1,700 acres of the Elkhorn Slough ecosystem. The slough has also been recognized as a Ramsar wetland of international importance, a Globally Important Bird Area by the National Audubon Society and a Western Hemisphere Shorebird

Reserve Network by the Manomet Center for Conservation Sciences. Portions of the slough are designated a State Ecological Reserve and Wildlife Management Area and a Marine Protected Area.

The Phase 2 project area is located entirely within the Elkhorn Slough Reserve, which is owned by CDFW. The Phase 2 site is immediately north of the restored Phase 1 area and was historically a rich coastal ecosystem, with grassland transitioning to extensive salt marshes drained by narrow, meandering tidal creeks. By the late 1930s and 40s all of the salt marsh in the TMR project area had been diked and drained for agricultural use, leading to sediment compaction and land subsidence. Over time the dikes began to fail, reintroducing tidal waters to the reclaimed wetlands. As a result of subsidence, the area converted to a high elevation intertidal mudflat instead of converting back to salt marsh.

Surrounding the TMR project area are agricultural lands, a dairy operation, and some light industrial activities. In the near vicinity is a natural gas-burning power plant and the Moss Landing Harbor. Human alterations to the landscape have significantly decreased the abundance of native grassland species in the watershed. Grasslands adjacent to the project area were converted to agriculture, where crops historically extended to the edge of the Slough and agricultural runoff drained directly into its wetlands and surface waters. After the land was acquired and added to ESNERR, the footprint of the existing agricultural fields was reduced from 140 to 105 acres, to decrease direct agricultural runoff, and the 35-acre buffer was planted in non-native annual grasses for purposes of erosion control. This phase will add an additional 3 acres of restored grassland buffer to the 5 acres restored as part of Phase 1.

Southern sea otters, a federally threatened species, have recently moved into the project area and new data suggests that the salt marsh in Elkhorn Slough may be an important refuge and foraging habitat for mother and pup otters. The greatest density of mothers and pups in their entire range is found in Elkhorn Slough. The loss of additional marsh may impact otter populations struggling to recover. Increasing the salt marsh in the slough may aid in recovery of this iconic species.

Grantee Qualifications: Phase 2 will be led by ESF in partnership with ESNERR, a partnership that is now 30 years old. ESF is a community non-profit and, working with the Conservancy, serves as the fiscal agent for receiving and administering federal grant funding from the National Oceanic and Atmospheric Administration (“NOAA”) for the support of ESNERR staff. ESNERR, a member of the national network of estuarine research reserves, is a partnership between NOAA and CDFW. Successful restoration projects have resulted from this partnership including restoration of 24 acres of wetlands at Azevedo Ranch, the installation of the Parsons Slough Sill to reduce tidal scour and sediment loss in the slough, and Phase 1 of this project, which restored 61 acres of wetlands. The Elkhorn Slough National Estuarine Research Reserve is an educational facility that reaches 40,000 people each year. The lessons learned through this project will increase public education about the need for collaboration to solve complex environmental issues, as well as on the ecological benefits of wetland restoration.

Project History: The project is the outcome of an ecosystem-based management initiative that began in 2004. The Elkhorn Slough Tidal Wetland Program (“TWP”), which includes the Elkhorn Slough Tidal Marsh Restoration Project as well as other restoration projects in the Slough, has engaged over 100 scientists, agency staff, and elected officials in planning and implementing activities for the restoration of the physical processes that support the long-term vitality of the slough’s estuarine habitats. Conservancy staff has participated on the Strategic Planning Team for the TWP.

In 2008, the Conservancy secured a \$200,000 grant from the U.S. Environmental Protection Agency and added \$100,000 of its own funds for planning the Parsons Slough Wetland Restoration Project, which included investigating sediment addition as a method to restore tidal marsh in the slough. This information helped lead to the current project proposal. In 2012, the Conservancy provided \$600,000 in funds for the preliminary planning phase of the Elkhorn Slough Tidal Marsh Restoration project, which was the highest priority project identified in the TWP Strategic Plan in 2007. The planning project included preparation of 30% designs, environmental analysis and permit application documents for restoration of approximately 104 acres of tidal marsh and 43 acres of upland habitat.

In 2015, the Conservancy was awarded \$1,000,000 (of which \$980,000 was then authorized for disbursement) in USFWS National Coastal Wetland Conservation Program funds for implementation of the first phase of restoration. In 2018, ESF requested an additional \$500,000 in Proposition 1 funds for the first phase of the project because permitting delays and higher cost estimates necessitated more time and funding to complete the project. Ultimately, however, the final bid came in lower than estimated for Phase 1 construction. As a result, ESF requested that the remaining Phase 1 funds be available to complete Phase 2 of the restoration.

In 2019, the Conservancy was awarded a second \$1,000,000 in USFWS National Coastal Wetland Conservation Program funds for the implementation of Phase 2.

PROJECT FINANCING:

This Authorization – Phase 2

Coastal Conservancy (USFWS grant to Conservancy)	\$980,000
Coastal Conservancy (Proposition 1)	\$500,000
Ocean Protection Council	\$2,373,240
CDFW Greenhouse Gas	\$1,596,780

Previous Authorization - Phase 1

Coastal Conservancy (Proposition 1) (not used)	(\$500,000)
Other funding	6,870,107

Project Total

\$10,806,788

In 2019, the Conservancy was awarded a \$1 million grant from the USFWS National Coastal Wetland Conservation grant program for Phase 2. \$980,000 is recommended for disbursement. \$20,000 will be retained for Conservancy staff costs.

The source of funds for the previously authorized \$500,000 for Phase 1 that will be redirected to Phase 2 is an appropriation to the Conservancy from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code § 79700 et seq.). Phase 2 of the project achieves the same purposes as Phase 1 and thus the proposal to redirect these funds to Phase 2 remains consistent with the use of Proposition 1 funds as summarized in the January 18, 2018 staff recommendation (See Exhibit 5).

In-kind contributions to the project will be provided by ESF in the amount of \$10,000, CDFW in the amount of \$10,000, San Jose State Foundation – Moss Landing Marine Labs in the amount of \$10,000, NOAA Coastal Ocean Services in the amount of \$10,000, and Monterey Bay Aquarium in the amount of \$5,000.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

Conservancy funding of the project is consistent with Chapter 6 (Sections 31251-31270) of the Conservancy’s enabling legislation, Division 21 of the Public Resources Code, regarding enhancement of coastal resources. Pursuant to Section 31251, the Conservancy may award grants to nonprofit organizations for the purpose of enhancement of coastal resources that, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Such grants must be used for assembly of parcels of land, relocation of improvements or for other corrective measures that will enhance the natural and scenic character of the area. The project consists of corrective measures, i.e., restoration, that are necessary to enhance the natural and scenic character of the Elkhorn Slough complex, which has been significantly degraded by historical diking and farming of the property.

Consistent with Section 31252, Elkhorn Slough has been identified in the Monterey County Local Coastal Program as requiring public action to resolve existing resource protection problems. Specifically, Section 2.3.4.2 of the North Monterey County Local Coastal Program calls for all appropriate agencies to participate in the development and financing of a comprehensive wetland management plan for Elkhorn Slough, and for an agency to accept management responsibility for implementing the plan. CDFW, in partnership with ESF and NOAA have taken responsibility in implementing actions to manage the wetlands of Elkhorn Slough.

Section 31253 states that the Conservancy may provide up to the total cost of a coastal resource enhancement project. Consistent with Section 31253, the following factors were considered in determining the amount of Conservancy funding for this project: the total

amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant, the urgency of the project, and the Conservancy’s project selection criteria, as described in detail below, under the heading “Consistency With Conservancy’s Project Selection Criteria & Guidelines.”

CONSISTENCY WITH CONSERVANCY’S [2018-2022 STRATEGIC PLAN](#)

GOAL(S) & OBJECTIVE(S):

The project remains consistent with the Conservancy’s strategic plan goals as described in the January 18, 2018 staff recommendation (Exhibit 5)

Consistent with **Goal 6, Objective B** of the Conservancy’s 2018-2022 Strategic Plan, Phase 2 will restore and enhance 59 acres of coastal habitats, including coastal wetlands and intertidal areas.

Consistent with **Goal 6, Objective G** of the Conservancy’s 2018-2022 Strategic Plan, the project will improve water quality to benefit coastal and ocean resources.

Consistent with **Goal 6, Objective H** of the Conservancy’s 2018-2022 Strategic Plan, the project will support the recovery of the southern sea otter.

Consistent with **Goal 8, Objective C** of the Conservancy’s 2018-2022 Strategic Plan, the project is an adaptation pilot project that will experiment with an innovative technique of sediment addition to wetlands to reduce hazards from sea level rise and extreme storm events and protect natural resources and maximize public benefits.

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

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

Required Criteria

1. **Promotion of the Conservancy’s statutory programs and purposes:** See the “Consistency with Conservancy’s Enabling Legislation” section above.
2. **Consistency with purposes of the funding source:** See the “Project Financing” section above.
3. **Promotion and implementation of state plans and policies:** By restoring the historic tidal wetland habitats of the subject property the project serves to promote and implement several state plans including:
 - *California Water Action Plan*. Goal #4, “Protect and Restore Important Ecosystems”, identifies restoration of coastal watersheds as a priority action.

- *California @ 50 Million: The Environmental Goals and Policy Report* (Governor’s Office of Planning and Research, 2013 Draft). Key Action #3 of the “Preserve and Steward State Lands and Natural Resources” calls for building resilience in natural systems and specifically calls out the need for well-maintained watersheds and floodplains.
 - *CA Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan* (CA Natural Resources Agency, July 2014). The plan identifies “Actions Needed to Safeguard Biodiversity and Habitats” including #1: Improve habitat connectivity and protect climate refugia. The restoration will add to the effort to preserve the tidal wetland ecosystem of the Elkhorn Slough, which drains to Monterey Bay.
 - This proposed project also aligns with the goals listed in the *CA Climate Adaptation Strategy/Safeguarding California: Reducing Climate Risk Plan* (CA Natural Resources Agency, July 2014) in terms of improving management practices for coastal and ocean ecosystems and resources by including climate adaptation strategies.
4. **Support of the public:** The project has the support of state and local elected officials including Assembly Member Mark Stone, as well as other organizations. See Exhibit 3.
 5. **Location:** The project is located within the coastal zone of Monterey County.
 6. **Need:** While Elkhorn Slough Foundation has obtained in-kind commitments and matching funds from public agencies and partnering organizations, Conservancy assistance is needed at this point to enable the project to move forward with Phase 2.
 7. **Greater-than-local interest:** Elkhorn Slough is one of the most ecologically important and largest estuarine systems in California as signified by its designation as a National Estuarine Research Reserve. The project will provide water quality and habitat benefits for the Elkhorn Slough complex, as well as enhance significant tidal wetland habitat for state and federally endangered species.
 8. **Sea level rise vulnerability:** One of the project’s primary goals is to provide resilience to sea level rise into the foreseeable future as marsh vegetation traps sediment and builds upon itself. Elkhorn Slough has been the subject of numerous studies that include vulnerability assessments and ongoing monitoring of existing marsh conditions and conditions projected under various sea level rise scenarios. NOAA's latest sea-level rise predictions over the next 100 years range from ~0.5m (intermediate low) to 3m (extreme). At the low end of the estimate the restored project would last more than 100 years, but if accelerated sea-level rise occurs, the restored marsh could be inundated sooner. ESF will monitor the restoration work and restored marsh to gain a better understanding of the effectiveness of sediment addition restoration projects in Elkhorn slough and which local factors most affect marsh viability.

Additional Criteria

9. **Urgency:** Human actions have altered the tidal, freshwater and sediment processes essential to supporting and sustaining Elkhorn Slough’s estuarine habitats. Historic marshes

in this area are lost or in poor condition and are in need of restoration to once again function viably. A unique opportunity exists to restore a rare ecosystem in coastal California and improve habitat for rare and declining estuarine dependent species through the use of these grant funds.

10. **Leverage:** See the “Project Financing” section above.
11. **Innovation:** The project employs an experimental design involving sediment addition to restore tidal marsh function.
12. **Readiness:** ESF is ready to commence the proposed project in 2019.
13. **Realization of prior Conservancy goals:** The Conservancy has worked with ESF and other organizations for almost two decades to preserve and restore the resources of Elkhorn Slough. Tidal erosion and marsh loss within the Slough threaten the resources the Conservancy has worked hard to protect. The project will evaluate one option for protecting these resources from continued erosion. See also the “Project History” section above.”
14. **Minimization of greenhouse gas emissions:** Because this is a tidal marsh restoration project, it will not emit greenhouse gases (“GHGs”) once construction is completed. Further, it is expected to reduce GHG effects through sequestering about 130 metric tons of carbon per year as long as the tidal marsh persists and is not changed by sea level rise or other land use changes. The IS/MND found that the GHGs from construction emissions will be less than significant.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The proposed project is consistent with the North Monterey County Local Coastal Program as discussed below.

Section 2.3 defines environmentally sensitive habitats as “areas in which plant or animal life or their habitats are rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.” Section 2.3.1 states that environmentally sensitive habitats of North County “shall be protected, maintained, and where possible, enhanced and restored.” This project will facilitate enhancement and restoration of the Elkhorn Slough through a sediment addition pilot project. Section 2.3.3.B.5 states “all wetland areas of the north County Coastal Zone shall be protected and preserved for their plant and wildlife values, including but not limited to...Elkhorn Slough...” Section 2.3.4.5 states “the County shall encourage the restoration of sensitive plant habitats on public and private lands.”

The proposed project will restore tidal wetland habitat, thereby implementing one of the top priorities of the Tidal Wetland Management Program, developed by a multi-organization group of stakeholders including state and federal resource agencies.

CEQA COMPLIANCE:

The potential impacts of the TMR were evaluated in the *Elkhorn Slough Tidal Marsh Restoration Mitigated Negative Declaration* (MND) adopted by CDFW on August 27, 2015, the Addendum to the MND prepared by CDFW in September 2017, and the Addendum to the MND prepared by CDFW dated October 21, 2019 (Second Addendum). The potential impacts and mitigation measures in the MND are summarized below. There are no changes in the project or in the circumstances under which the project will be undertaken, and no new information, that would trigger the need for a subsequent or supplemental mitigated negative declaration pursuant to the CEQA Guidelines at California Code of Regulations Title 14, Section 15162. As described in the Second Addendum, there have been changes in the project since the MND was approved but the changes do not result in new significant environmental effects or increased severity of previously identified environmental effects. The changes are an increase in the amount of sediment necessary to raise the elevation of the subsided land to the level necessary to support tidal salt marsh, and a related expansion of the area from which on-site sediment will be excavated. The MND estimates the need for 276,000 cubic yards of sediment to raise the elevation whereas during implementation of Phase 1, it became apparent that approximately 494,000 cubic yards of sediment will be necessary for the TMR (both phases). Most of the sediment will come from onsite; it will be generated by the excavation of uplands at the site. The MND identifies a 41-acre area of excavation. The Second Addendum explains that the area of excavation has increased to 43 acres and that the location of the excavation area has shifted to avoid excavation of archaeological resources and steep slopes and to encompass a new 17-acre area. The Second Addendum indicates that because the additional sediment will be excavated on-site, it will not result in additional truck trips or other new or increased impacts on air quality. Further, the new location of 17 acres of the excavation area does not have any cultural resources or habitat that would cause the excavation to result in new effects or increased severity of previously identified effects. Accordingly, no further CEQA documentation is required.

The MND identifies potential effects of the TMR in the areas of: Air Quality, Biological Resources, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, and Transportation and Traffic. The MND identifies mitigation measures to avoid, reduce or mitigate all of the possible significant environmental effects to less than significant. The project's significant effects and mitigation measures, which are summarized below, are set forth in the MND and summarized in the attached Mitigation and Monitoring and Reporting Program (Exhibit 5).

Air Quality

Temporary, localized emissions of Particulate Matter¹⁰ during construction have the potential to exceed ambient air quality standards and contribute to regional violations of the ambient air quality standards. The Monterey Bay Unified Air Pollution Control District has a list of

construction dust control measures (sweeping, watering, etc.) that will be implemented for all construction phases to reduce these impacts to a less than significant level.

Biological Resources

The project could result in direct and indirect impacts to federal and/or state listed plant and animal species, including marine mammals (Southern sea otter) and (harbor seal). Mitigation measures to reduce potential impacts to special status species to less than significant include seasonal avoidance, education program for construction workers, biological monitoring during construction, and project compliance with all state and federal permits. The loss of a large number of nesting birds would represent a potentially significant impact. Implementation of mitigation measures including seasonal avoidance, pre-construction surveys, and buffer zones will reduce potential impacts to nesting birds to less than significant levels. Further, the project is subject to the federal Migratory Bird Treaty Act (MBTA; 16 U.S.C., §703, Supp. I, 1989) and California Fish and Game Code (§§3503, 2513, and 3800), which protect active bird nests from destruction.

Cultural Resources

The project could have potential significant impacts on buried paleontological or cultural resources including human remains. To reduce this potential impact to a less-than-significant level, construction contractors will be required to stop work in the vicinity of the find if any cultural deposits that are encountered during construction so that the discovery can be appropriately assessed by a qualified expert.

Geology

Landslides

Excavation in the upland area of the project site could destabilize adjacent areas and increase the risk of landslides until completion of the project, when the restored upland area will have a gentle slope that is unlikely to fail. Adherence with sound grading practices (e.g., bracing or underpinning of excavated faces) in accordance with California Occupational Safety and Health Administration (OSHA) regulations, as required for all California construction projects, will generally ensure that construction activities do not create new areas of instability during excavation. This would adequately protect workers, construction equipment, and nearby buildings from effects of excavation. To adequately protect workers and construction equipment from unexpected slope failure of the sediment stockpiles, all sediment or soils stockpiled onsite will be sloped at an angle not steeper than one and one-half horizontal to one vertical.

Erosion

The project would expose soil to erosive forces during construction by stockpiling sediments, spreading earth materials on the surface of the marsh, and potentially excavating upland sediments onsite. If erosion from these areas is not adequately controlled, gullies could form and propagate upslope and cut into the agricultural land to the west of the buffer area. To mitigate this impact, excavation for the project will require a National Pollutant Discharge Elimination System General Construction Permit and a required Storm Water Pollution Prevention Plan (“SWPPP”). The SWPPP will include soil stabilization and sediment control best management practices (“BMPs”) to limit the amount of sediment entrained in runoff from the excavation and stockpile areas. In addition, Mitigation Measure AIR-1 requires that exposure of construction areas to wind erosion be minimized by covering inactive storage piles and prohibiting grading during periods of winds over 15 mph. Implementation of Mitigation Measures AIR-1 and the geology mitigation measures, in addition to the erosion control BMPs included in the SWPPP will limit erosion and loss of topsoil to less than significant levels.

Once the project is complete the upland area will be vegetated, stabilizing the upland portion of the project site. In addition, the project is designed to protect the marsh area from future erosion by raising marsh elevation to limit tidal scour and to encourage regrowth of native marsh vegetation.

Hazards and Hazardous Materials

Construction activities will include the use of hazardous materials such as fuels, oils, lubricants, petroleum products, and solvents in the operation of construction equipment, creating the potential for accidental releases of small quantities of hazardous materials, which could degrade soil and water quality. This potential effect will be mitigated to less than significant through compliance with the BMPs in the SWPPP and through a mitigation measure that requires any spill to be contained, reported and cleaned up.

Transportation and Traffic

The project will impact traffic and roads surrounding the project area as a result of trucks trips hauling sediment and worker travel trips to the worksite during construction. To reduce the impacts on local roads, especially SR 1, SR 156, and SR 183, mitigation measures will be implemented including: preparation and submission a Construction Traffic Control Plan to Monterey County and CalTrans District 5; obtaining all necessary permits for the use of oversized/overweight vehicles that will utilize county-maintained roads, which may require California Highway Patrol or a pilot car escort; and coordination with the Monterey County Public Works Department to ensure completion of sediment importation prior to the County’s repaving of Dolan Road.

Conclusion

Conservancy staff has independently reviewed the MND and both addenda and concluded that the proposed project as mitigated poses no potential for significant environmental impacts. Accordingly, staff recommends that the Conservancy find that there is no substantial evidence that the TMR, as mitigated, will have a significant effect on the environment.

Staff will file a Notice of Determination upon the Conservancy's approval of the project.