

COASTAL CONSERVANCY

Staff Recommendation  
October 17, 2019

**Upper Newport Bay Living Shoreline Project**

Project No. 15-053-10  
Project Manager: Evyan Sloane

**RECOMMENDED ACTION:** Authorization to disburse up to \$250,000 to Orange County Coastkeeper to augment the Conservancy grant, previously authorized on June 25, 2015, for oyster and eelgrass restoration using a living shoreline approach in Upper Newport Bay in Newport Beach, California.

**LOCATION:** Upper Newport Bay, Newport Beach, County of Orange

**PROGRAM CATEGORY:** Resource Enhancement

---

EXHIBITS

- Exhibit 1: [Project Location Map](#)
- Exhibit 2: [June 25, 2015 Staff Recommendation](#)
- Exhibit 3: [Project Photos](#)
- Exhibit 4: [Project Support Letters](#)

---

**RESOLUTION AND FINDINGS:**

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

"The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed two hundred fifty thousand dollars (\$250,000) to Orange County Coastkeeper ("the grantee") to augment the grant previously authorized on June 25, 2015 for oyster and eelgrass restoration using a living shoreline approach in Upper Newport Bay in Newport Beach, California."

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

1. A detailed work program, schedule, and budget.

2. Names and qualifications of any contractors to be retained in carrying out the project.
3. A plan for acknowledgement of Conservancy 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 resource enhancement.
  2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
  3. Orange County Coastkeeper 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.”
- 

#### **PROJECT SUMMARY:**

Staff recommends that the Conservancy authorize disbursement of \$250,000 to Orange County Coastkeeper to augment the grant for \$250,000 that was authorized on June 25, 2015 for oyster and eelgrass restoration using a living shoreline approach in Upper Newport Bay in Newport Beach, California (Exhibit 1), bringing the total grant amount to \$500,000. The project is testing a living shoreline approach to promote shoreline resiliency in the face of sea level rise in Upper Newport Bay by restoring native Olympia oysters, *Ostrea lurida*, and eelgrass, *Zostera marina*, with an emphasis on education, outreach, monitoring success, and adaptive management. The proposed augmentation would go to fund additional monitoring and adaptive management of the project

The project is occurring over four sites in Upper Newport Bay, including De Anza Peninsula, Castaways, Pacific Coast Highway, and Shellmaker (Exhibit 1). The project’s restoration uses a block design. Each block is testing oysters restored alone, eelgrass alone, oysters and eelgrass together, and a control treatment. In addition to the restoration, the original project included preparation of a 4-year monitoring plan to test the effectiveness of living shorelines for coastal resiliency (i.e. sediment accretion and wave attenuation), oyster and eelgrass abundance, and habitat value for fish, invertebrates, and birds.

Pursuant to the previous Conservancy authorization (Exhibit 2), the grantee installed 1,280 m<sup>2</sup> of eelgrass in 2016 and 240 m<sup>2</sup> of oyster beds in 2017 in Upper Newport Bay (Exhibit 3). The grantee’s post-restoration monitoring of both habitats thus far has shown significant native

oyster recruitment, use of both habitats by fish and invertebrates, and persistence and spread of eelgrass. However, this limited data (i.e. 1.5 years) is not enough to determine project success nor can it answer specific questions resource agencies have in regard to the project's unique, community-based restoration methods. This budget augmentation will fund the monitoring program for 2 more years to provide a total of ~4 years of post-restoration monitoring, as was originally anticipated for the project, which will enable the grantee to continue to adaptively manage the restored oyster and eelgrass beds as needed, primarily using the grantee's dedicated group of volunteers from the local community and universities.

**Site Description:** The Upper Newport Bay Ecological Reserve (and State Marine Conservation Area) is an important remaining coastal wetland in Southern California and is home to over 935 species of plants and animals and over 200 bird species, including several endangered species. Visitors and locals come to the Reserve to hike, run, bike, kayak, boat, fish, or watch the thousands to tens of thousands of birds that inhabit the area during breeding, migration, or wintering seasons.

Historically, native oysters and eelgrass beds thrived in Upper Newport Bay. However, habitat destruction from development and dredging activities as well as poor water quality has degraded these species. While remnant populations exist, native oysters are no longer habitat forming (i.e. they do not build beds/reefs). The eelgrass that is present is largely due to past restoration efforts carried out by the grantee. The proposed project will focus monitoring efforts within the restored 1,280 m<sup>2</sup> of eelgrass and 240 m<sup>2</sup> of oyster beds as well as reference sites within the Reserve.

**Grantee Qualifications:** The Conservancy has worked with the grantee on several successful restoration projects in the Upper Newport Bay. In 2011, the Conservancy authorized a grant to Orange County Coastkeeper to restore eelgrass beds in Upper Newport Bay. The eelgrass project was successful in restoring 1-acre of eelgrass and in adding to the understanding of best restoration practices for eelgrass in the region. The grantee has successfully administered Conservancy grants and on-going management and monitoring of the project to-date.

**Project History:** As part of the Conservancy's Climate Ready Grant Program, Grant Round Three, the Conservancy authorized a \$250,000 grant to the grantee on June 25, 2015 to construct and monitor the project (Exhibit 2). However, the grantee was not able to obtain additional monitoring funds to cover the proposed 4 years of monitoring and thus only 1.5 years of post-restoration monitoring was funded and completed. Since the project was approved by the Conservancy, the monitoring and adaptive management components of the project were added to the Southern California Wetlands Recovery Project Work Plan on July 22, 2019. The Work Plan provides a prioritized list of wetland and marine restoration projects for southern California that have been vetted by a panel of 18 resource and regulatory agencies. The extension of the monitoring program for this project is seen as a high priority by many agencies.

**PROJECT FINANCING**

<b>Coastal Conservancy</b>	<b>\$250,000</b>
<b>Honda Marine Science Foundation</b>	<b>\$74,998</b>
<b>Project Total</b>	<b>\$324,998</b>

The anticipated source of Conservancy funds for this authorization is the Safe Neighborhood Parks, Clean Water, Clean Air, and Coastal Protection Bond Act of 2000 (Proposition 12, Public Resources Code sections 5096.300 et seq.). Proposition 12 authorizes the Conservancy to disburse funds, pursuant to Division 21 of the Public Resource Code, for projects that restore or enhance coastal areas and watersheds within Conservancy jurisdiction, including projects that restore and protect the Upper Newport Bay Ecological Reserve. (Section 5096.352.) By restoring oyster and eelgrass beds in Upper Newport Bay, the project will help restore and protect the Bay, and therefore the project is an appropriate use of Proposition 12 funds.

Other funds come from a grant Orange County Coastkeeper received from the Honda Marine Science Foundation aimed to help restore marine ecosystems and facilitate climate change resilience.

The grantee will be providing equipment (e.g. boat, vehicles, and field equipment) and materials (i.e. oyster shell) at a total estimated value of thirteen thousand five hundred dollars (\$13,500).

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

The proposed project is consistent with Chapter 6 of Division 21 of the Public Resources Code (Sections 31251-31270) regarding coastal resource enhancement projects. Consistent with Section 31251, the proposed authorization will augment a grant to a nonprofit organization to enhance coastal resources that have become degraded due to natural and human-induced events. The proposed project is restoring the natural character of eelgrass and oyster beds in Upper Newport Bay by re-establishing populations that existed before they were impacted by poor water quality and habitat degradation. Monitoring the functioning of the restored beds is a fundamental element of project implementation because it helps to ensure that the beds have been properly installed.

Section 31252 states that all areas proposed for resource enhancement shall be identified in a certified local coastal plan or program as requiring public action to resolve existing or potential resource protection problems. Although the City of Newport Beach does not have a certified Local Coastal Program, they do have a Coastal Land Use Plan (LUP) and an approved local issue identification and work program, which satisfy the requirements of section 31252, as stated in section 31109. The project is consistent with the LUP, as described in the Consistency with Local Coastal Program Policies below.

Consistent with Section 31253, staff has determined the recommended amount of funding by evaluating the total amount of funding available to the Conservancy for coastal resource enhancement projects, the fiscal resources of the applicant, the urgency of the project relative

to other eligible similar projects, and the application of other factors prescribed by the Conservancy for the purpose of determining project eligibility and priority. The Conservancy's funding is appropriate because the project's benefits to coastal habitat are significant, the funding source is dedicated to coastal resource restoration, and the project's use of volunteers will provide added cost savings and an important public education component.

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

**GOAL(S) & OBJECTIVE(S):**

Consistent with **Goal 4, Objective A** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will support education programs that improve public understanding and promote stewardship of coastal resources by utilizing the grantee's volunteers for adaptive management activities such as rebuilding oyster beds.

Consistent with **Goal 6, Objective B** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will restore and enhance coastal habitats such as native oyster and eelgrass beds, which are important habitats in coastal wetland ecosystems that have been degraded in the project area.

Consistent with **Goal 6, Objective E** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will restore fish habitat as the project's preliminary monitoring data has already demonstrated that the restored oyster and eelgrass beds are utilized by and benefit native fish species.

Consistent with **Goal 6, Objective G** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will implement a project to improve water quality to benefit coastal and ocean resources as native oysters have been found to improve water quality within estuaries. Eelgrass beds have also been shown to improve water quality in terms of ocean acidification amelioration.

Consistent with **Goal 8, Objective C** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will implement a project to increase resilience to sea level rise by using a nature-based solution, i.e. a native oyster and eelgrass living shoreline project. The project will analyze the effectiveness of using oysters and eelgrass to reduce erosion and flooding of the shoreline within the project area.

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

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on 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:**
  - a. This project is consistent with the Regional Strategy 2018 of the Southern California Wetlands Recovery Project, which calls to “protect shallow subtidal habitats associated with coastal wetlands” and to fulfill research priorities in regard to subtidal living shoreline projects.
  - b. This project is consistent with the 2014 Safeguarding California update to the 2009 California Climate Adaptation Strategy, in the Biodiversity and Habitat section, which calls to “increase capacity [of coastal and ocean ecosystems] to withstand and recover from climate impacts” including “supporting pilot projects for innovative shoreline management techniques” which is a focus of this project since this project will design and implement a Living Shorelines technique.
  - c. This project is consistent with the California @ 50 Million: the Environmental Goals and Policy Report (2013 Draft) because it “increase[s] ecosystem services and biodiversity” and “increase[s] resilience of natural systems to recover from disruption.” This project accomplishes this goal since and will document the effects of Living Shorelines on ecosystem services and biodiversity.
  - d. This project is consistent with the City of Newport Bay’s Harbor Area Management Plan which includes the long-term goal to establish an “ecosystem approach Eelgrass Management Plan (EMP) rather than managing eelgrass projects on an incremental basis” The project fits well with the goals and strategies of this objective by piloting a demonstration project of use of eelgrass beds in a living shoreline.
  - e. This project is consistent with the City of Newport Beach Coastal Land Use Plan (City of Newport Beach, Adopted July 14, 2009), Chapter 4.1.2: Marine Resources which seeks to “maintain, enhance, and, where feasible, restore marine resources.” This project fits well with this goal because it will enhance and restore key marine resources.
4. **Support of the public:** As indicated by the support letters provided in Exhibit 4, the proposed projects received support for the June 25, 2015 Conservancy authorization from local and state agencies.
5. **Location:** The proposed project is located within the coastal zone of Newport Beach in the County of Orange.
6. **Need:** The proposed project would not continue if not for Conservancy funding. The grantee has submitted several grant applications to other agencies since 2015 to attempt to

fill the monitoring funding gap and they only received one small grant from the Honda Marine Science Foundation for adaptive management (i.e. placing additional oyster shell). Other agencies, at the time, did not want to support monitoring. Since then, the project was added to the Southern California Wetlands Recovery Project's Work Plan in 2019, placing it as a high priority for the region due to the need for more information about living shoreline methods and usefulness.

7. **Greater-than-local interest:** As a part of the Southern California Wetlands Recovery Project, 18 state and federal agencies have determined that the questions to be answered in the proposed project are needed to design and implement living shoreline projects across the region and entire California coast (see Need above).
8. **Sea level rise vulnerability:** The project area is vulnerable to future flooding with both 2050 and 2100 sea level rise projections. The project is testing and analyzing how this flood risk can be reduced by using natural habitats, in this case native oysters and eelgrass habitat, to mitigate the effects of sea level rise via sediment accretion.

#### **Additional Criteria**

9. **Urgency:** The impacts of sea level rise have begun and if resource managers wait too long to implement nature-based adaptation strategies wetland ecosystems will be lost either to flooding, erosion, or man-made protective structures. The proposed project is testing an innovative strategy using native habitats to protect estuarine coastlines in California.
10. **Resolution of more than one issue:** The proposed project will resolve several issues in terms of habitat restoration, sea level rise adaptation, community engagement, and research.
11. **Leverage:** See the "Project Financing" section above.
12. **Innovation:** While resource managers are interested in using native habitats to ameliorate the effects of sea level rise, there are few demonstration projects. The proposed project uses natural methods (i.e. coconut coir for oysters & bundling transplants for eelgrass) to build a native oyster reef and eelgrass bed.
13. **Readiness:** Grantee has been working on the project since 2015 and is ready to continue.

#### **CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

The City of Newport Beach does not have a certified Local Coastal Program (LCP) but it does have a Coastal Land Use Plan (LUP) and, consistent with Section 31109 of the Public Resources Code, a local issue identification and work program that have been approved by the Coastal Commission. This LUP contains the following two policies that relate to restoration in Newport Bay:

- Policy 4.1.4-1 states: Continue to protect eelgrass meadows for their important ecological function as a nursery and foraging habitat within the Newport Bay ecosystem.

- Policy 4.1.4-2 states: Implement eelgrass restoration and enhancement programs in Newport Harbor.

Although discussion of eelgrass restoration in the LUP is specific to Newport Harbor, the project is consistent with the LUP policy to protect eelgrass as it will increase the seed bank in Newport Bay and will provide information for future restoration projects.

**CEQA COMPLIANCE:**

The proposed project is categorically exempt from review under CEQA pursuant to 14 California Code of Regulations Section 15333, Small Habitat Restoration Projects, regarding projects under five acres in size that assure the maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife. While there are a few species of concern and endangered species in the Upper Newport Bay Ecological Reserve, including the endangered Ridgeway's Rail (*Rallus obsoletus levipes*) and the California Least Tern (*Sterna antillarum browni*), they are not expected to be active in the specific project area. Still, the grantee will take special measures to avoid any impact on these two species. All volunteers will be informed on how to identify and behave around these species prior to ever stepping foot on the mudflat or entering the water. To complete any work on the mudflat (oyster restoration and monitoring), workers will access the intertidal oyster restoration site by an existing, unvegetated foot path without the use of motorized equipment of any kind. If these species are encountered, workers will maintain a minimum distance of 30 feet away from that animal's location. For eelgrass restoration and monitoring, the project site will be accessed by water only from small motorized boats with quiet engines (to avoid disturbance of the foraging California least terns). Following 2015 approval, Conservancy staff filed a Notice of Exemption.