

COASTAL CONSERVANCY

Staff Recommendation
November 30, 2017

SEA OTTER RECOVERY GRANTS 2018

Project No. 08-079-07
Project Manager: Hilary Walecka

RECOMMENDED ACTION: Authorization to disburse up to \$94,570 to the Friends of the Sea Otter, California Department of Parks and Recreation, and San Francisco State University to implement three separate projects to aid in recovery of the southern sea otter.

LOCATION: Nearshore waters from southern San Mateo County to northern Santa Barbara County and San Francisco Bay

PROGRAM CATEGORY: Integrated Coastal and Marine Resources

EXHIBITS

- Exhibit 1: [Project Location Maps](#)
Exhibit 2: [Southern Sea Otter Population Trend](#)
Exhibit 3: [Project Letters](#)
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RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31220 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to ninety four thousand five hundred seventy dollars (\$94,570) to implement three projects focused on the recovery of the southern sea otter, specifically as follows, to the:

- Friends of the Sea Otter: sixty-two thousand two hundred dollars (\$62,200) to reduce sea otter disturbance through a public education campaign on responsible viewing of wild sea otters.
 - California Department of Parks and Recreation: twelve thousand six hundred dollars (\$12,600) to install two speed humps on the entrance road to Moss Landing State Beach where sea otters are known to cross the road.
 - San Francisco State University: fourteen thousand seven hundred and seventy dollars (\$14,770) to conduct an analysis of potential sea otter habitat and threats in San Francisco Bay.
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Prior to the disbursement of funds, each grantee shall submit for the review and written approval of the Executive Officer of the Conservancy a work program, including scope of work, budget and schedule; and the names and qualifications of any contractors to be employed in carrying out 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 5.5 of Division 21 of the Public Resources Code, regarding Integrated Coastal and Marine Resource Protection.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Friends of the Sea Otter 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 disburse \$62,200 to the Friends of the Sea Otter (FSO), \$12,600 to California Department of Parks and Recreation (State Parks), and \$14,770 to San Francisco State University (SFSU) to undertake three separate projects to aid the recovery of the southern sea otter. The projects consist of public education to reduce stress on otters induced by interactions with humans, installation of traffic-slowing measures to reduce the risk of a vehicle strike on sea otters at Moss Landing State Beach, and assessment of potential habitat and mortality risks in San Francisco Bay to inform potential sea otter recolonization efforts.

The southern sea otter (*Enhydra lutris nereis*) is an ecologically important species that faces numerous challenges, from disease and shark bite mortality to resource limitation in large portions of its occupied range. Southern sea otters were hunted to near extinction in the early part of the 20th century, and listed as a federally threatened species in 1977. Currently the population numbers around 3,186 animals inhabiting the near-shore marine environments adjacent to San Mateo County south to Santa Barbara County. This is far less than the historic levels estimated at approximately 16,000-20,000 animals, with a range along the entire California coast and south into Baja California.

To address this decline, taxpayers can voluntarily contribute to the California Sea Otter Recovery Tax Fund, of which the Conservancy receives approximately half the proceeds for expenditure on projects that will assist in the recovery of sea otters. In July 2017, the Conservancy solicited project proposals aimed at recovery of the southern sea otter. This solicitation was posted on the Conservancy’s website and emailed to multiple organizations involved with sea otter recovery efforts in California. The Conservancy received six proposals and staff recommends funding the three projects described below.

1. “Be Otter Savvy” Program. FSO will reduce stress on otters through continued implementation and expansion of its Be Otter Savvy educational program. This program promotes responsible viewing of wild sea otters to reduce disturbance and harassment. The Conservancy also funded this program in 2015 and 2016. Human disturbance to sea otters has become a growing problem as sea otters have expanded their population in harbors, estuaries, and other heavily-trafficked nearshore areas and the public has developed an increased interest in these sea otter viewing opportunities. Wildlife tour operators, kayakers, photographers, and other marine recreationists often approach too closely, creating repeated disturbances to sea otters throughout the day. Sea otters have high metabolisms to keep them warm, which requires them to eat approximately 25% of their body weight in food each day and spend most of their day foraging or resting to conserve their critical energy reserves. Female sea otters are physiologically stressed during their reproductive stage, therefore are especially vulnerable to disturbance. Research conducted during the first two years of the Be Sea Otter Savvy Program revealed that female otters are 30% more likely to be active when marine recreation crafts are nearby. In extreme cases, the additional stress caused by human disturbance may lead to pup abandonment or death.

The goal of the “Be Sea Otter Savvy” program is to reduce sea otter disturbance by inspiring responsible viewing of wild sea otters. The program will accomplish this goal by engaging and educating the wildlife-viewing public through a variety of strategies, including:

- Increase distribution of decals designed for placement on rental kayaks and stand-up paddleboards that provide clear guidelines for safe otter-viewing behavior.
- Develop and install educational signage regarding safe-otter viewing at boat launch facilities to target private marine recreationists at disturbance hot spots
- Expand the Be Otter Savvy outreach program through social media, public presentations, school programs, events, a business certification program, and direct engagement with groups such as SCUBA divers and local officials such as Harbor Districts.
- Conduct research on the effects of marine recreation on sea otter activity and behavior.

FSO aims to reduce the frequency of disturbance to sea otters by fostering a sense of stewardship and modifying the expectation of wildlife viewers of proximity to sea otters to realistically incorporate the spatial needs of otters. Without continued intervention, the problem of sea otter disturbance and harassment in densely populated areas is likely to continue to increase.

2. Sea Otter Crossing Speed Humps at Moss Landing State Beach. State Parks will reduce the risk of vehicles striking sea otters through the installation of two speed humps and advance warning markers on the entrance road Moss Landing State Beach in order to slow traffic where sea otters are known to cross the road. The Moss Landing area provides important estuarine habitat for southern sea otters, with more than 100 animals using habitat in Elkhorn Slough and the north harbor of Moss Landing. Small numbers of sea otters also utilize Bennett Slough for foraging and resting, which they approach from the north harbor and access via the culverts beneath Jetty Road (Exhibit 1C). Under certain tidal conditions, the culverts become impassable to sea otters and otters have been seen crossing via the roadway instead. Sea otters have been observed doing so regularly, with at least 21 separate instances captured by photo or video since

2014. Crossing has likely increased in frequency as the sea otter population in Elkhorn Slough has expanded. The vehicles that transit Jetty Road pose a significant hazard to sea otters crossing the roadway and the death of a sea otter attempting to cross a nearby road in July 2016 illustrates the lethal potential of a vehicle strike.

Measures to slow traffic before it reaches the culvert area and well-placed warnings to drivers of the potential for sea otters on the roadway represent the best readily available means of reducing this risk. State Parks will install and maintain speed humps at two locations on Jetty Road with advance warning markings painted on the roadway and posts installed adjacent to the humps to prevent vehicles from driving off the edge of the road to avoid speed humps.

The number of sea otters that utilize Bennett Slough is likely to increase as the local sea otter population grows, but its value as sea otter habitat is dependent on its connectivity with the north harbor of Moss Landing. Completion of this project will improve connectivity by decreasing the risk sea otters face crossing the roadway when the culverts are impassible.

3. Anthropogenic Risks to Sea Otters Resettling San Francisco Bay. SFSU will model the spatial availability of estuarine habitat and distribution of risks in San Francisco Bay to inform the potential recolonization of sea otters in San Francisco Bay. California sea otters exceeded their Endangered Species Act recovered-status threshold of 3,090 individuals for the first time in May 2016. However their geographic extent still represents only 13% of their historically occupied range and has remained unchanged for the past five years. Recent research has found that sea otters are near the limit of the maximum number of individuals that can be supported in their current range due to food and resource availability. For continued population recovery, sea otters need to expand beyond their range into new, resource-abundant territories. San Francisco Bay, the largest estuary in California, lies outside the current extent of the sea otter range and has been identified as a potential location for sea otter recolonization due to the success of sea otter populations in other estuaries, such as Elkhorn Slough. Although sea otters were historically abundant in San Francisco Bay, it is unknown whether a sea otter population could thrive in a highly urbanized estuary. The current extent of available sea otter habitat and prey in the Bay and the cumulative impacts of anthropogenic stressors are currently unknown.

SFSU will use existing data to model the extent of available estuarine habitat and anthropogenic stressors in three regions within San Francisco Bay (San Pablo Bay, Central Bay, and South Bay) and analyze these to address the following questions: (1) What factors pose significant risks to sea otters in San Francisco Bay, (2) how are these threats spatially distributed throughout the Bay, and (3) how would these threats affect the quality and availability of crucial sea otter habitat and food resources? This spatially-explicit analysis will inform managers on the challenges and threats sea otters will face as they reoccupy their historic home-range.

Site Description: Southern sea otters historically ranged from Oregon to Baja, but are currently found only from Pt. Conception, in Santa Barbara County, to just below Half Moon Bay, in San Mateo County. Inhabiting rocky, sandy, and mixed shores, they are most common in near shore areas with large kelp beds. They are generally found in water depths of sixty-five feet or less, facilitating foraging along the ocean floor.

1. The Be Otter Savvy program began with a focus on areas with a high frequency of disturbance reports (as recorded by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (CDFW)), including the Cannery Row area of Monterey, Moss Landing, San Simeon, Morro Bay, and Port San Luis. Outreach efforts will continue in these areas but the program will expand throughout the range of the otters to establish comprehensive outreach to marine recreation businesses, and collaborate with groups working on marine wildlife conservation education.
2. State Parks will install two speed bumps along Jetty Road, which is the only access road to Moss Landing State Beach in Monterey County. Jetty Road bisects Moss Landing North Harbor, where there are often rafts of 30 or more otters, and Bennett Slough, which is used by several otters on a regular basis for foraging and resting. This two-way road is heavily trafficked, especially on weekends.
3. SFSU's proposed assessment of anthropogenic risks to sea otters resettling San Francisco Bay will be conducted in three subsections: San Pablo Bay, Central Bay, and South Bay. San Francisco Bay historically contained a large population of sea otters and as the largest estuary in California, may be an important site for sea otter population expansion and recovery.

Project History: In 1972, Congress passed the Marine Mammal Protection Act prohibiting the take of protected marine mammals in U.S. waters, including the southern sea otter. In 1977, the animal was placed on the federal endangered species list as a threatened species, and in 1982, the U.S. Fish & Wildlife Service (USFWS) released a sea otter recovery plan. The threshold for southern sea otters to be considered for de-listing from the federal endangered species list is if the population exceeds 3,090 individuals for three consecutive years. Although the southern sea otter population count for 2017 decreased from 2016, it is the second year in a row that the population is over the 3,090 (Exhibit 2). If the otter population exceeds the threshold for a third consecutive year, the USFWS will conduct a full analysis pursuant to the criteria of the Federal Endangered Species Act to determine if the threats to the species have been sufficiently ameliorated to warrant delisting.

In 2006, the California legislature passed AB 2485 after concerns about the slow pace of sea otter recovery prompted environmental groups to lobby for legislation to address this problem. Among other provisions, this bill established the California sea otter tax check-off fund (see Project Financing below). Fifty percent of the funds (after administration costs taken by the Controller and Franchise Tax Board) may be used by the Conservancy for sea otter-related projects as described in the Financing section below. The remaining 50% is provided to the Department of Fish and Wildlife for sea otter-related purposes.

Since 2008, the Conservancy has provided over \$1.15 million of sea otter tax check-off funds for projects to aid in the recovery of southern sea otters. Conservancy staff have worked closely with the Sea Otter Alliance, a multi-agency partnership focused on sea otter recovery, and other stakeholders to identify high priorities for tax-check off funding. Projects funded to date include critical research for sea otter recovery, education, and reduction of environmental stressors impacting sea otters. One multi-year study examined the effects of contaminants and human-

caused stressors on central coast sea otter populations and found that overall food availability was the most significant limiting factor on sea otter populations. Another recently completed study analyzed 15 years of sea otter mortality data and found that primary causes of death include shark bites (primarily at either margins of their range), Acanthocephalan parasitic worms (primarily in the central portion of their range), and domoic acid intoxication. Early findings from this study identified microcystin, a freshwater toxic algae, as a cause of otter deaths and linked them to drainage from Pinto Lake in Watsonville. As a result of this, the Conservancy funded a project in 2014 to help reduce microcystin levels in Pinto Lake. A high density of female otters and pups have been observed in Elkhorn Slough in the past decade and it is believed that the warmer waters and haul out spots allow otters in the slough to reduce their food intake needs. A multi-year study currently underway is investigating otter feeding habits, prey availability and contamination, and the findings will be used to inform future restoration efforts at the slough and sea otter recolonization in other estuaries. The projects recommended for funding this year build off of the research from previous years.

PROJECT FINANCING

Coastal Conservancy	\$94,570
Others	\$5,000
Project Total	\$99,570

The anticipated source of Conservancy funds for these projects is an appropriation from the California Sea Otter Fund. Established in 2006, the California Sea Otter Fund is an income tax check-off program allowing taxpayers to dedicate funds to facilitate sea otter recovery. (Revenue and Taxation Code (RTC) Section 18754). The funds may be used for “research, science, protection projects or programs related to the Federal Sea Otter Recovery Plan or improving the nearshore ocean ecosystem, including, but not limited to, program activities to reduce sea otter mortality.” (RTC Section 18754.2(a)(3)). The Final Revised Federal Southern Sea Otter Recovery Plan (2003) states that “[t]he primary objectives of this recovery plan are to create the conditions that will allow the southern sea otter to increase in numbers and distribution and to identify appropriate conservation actions to address the threats to this species”. The proposed authorization is consistent with the requirements of the California Sea Otter Fund in that funds will be used to further the objectives of the Final Revised Federal Southern Sea Otter Recovery Plan (2003) as described below:

- Be Sea Otter Savvy Program will implement Task 7 of the Federal Sea Otter Recovery Plan to “Develop and implement a public education and outreach program”.
- Sea Otter Crossing Speed Humps at Moss Landing State Beach will reduce a direct threat to mortality of sea otters.
- Anthropogenic Risks to Sea Otters Resettling San Francisco Bay: In 2015, the U.S. Fish and Wildlife Service completed a five year review of the status of the Southern Sea Otter, as required by section 4(c)(2) of the Endangered Species Act. The review identified additional recovery actions that should be taken including, “Develop and

implement a plan to enhance natural range expansion through releases of small numbers of rehabilitated live-stranded sea otters”. This project will further understanding of suitable locations for sea otter range expansion. This information is important for developing a plan to enhance natural range expansion.

RTC Section 18754.2(b) requires the Conservancy to solicit available federal, private, matching, and other dollars to maximize or leverage funds benefitting sea otters. In addition to the funding shown above, State Parks will provide approximately \$7,680 in-kind contributions to the project for planning, design, purchasing, and installation of the speed humps. The Be Sea Otter Savvy program is supported by volunteers for outreach and research and also has hours contributed by its advisory committee comprised of US Fish and Wildlife Service, California Department of Fish and Wildlife, Monterey Bay Aquarium, and UC Santa Cruz/US Geological Survey.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

These projects are consistent with Division 21, Chapter 5.5 (Coastal and Marine Resources) of the Conservancy’s enabling legislation (Public Resources Code § 31220).

Under Section 31220 of the Public Resources Code, the Conservancy may undertake water quality and living marine resource protection projects that meet any of the objectives specified in subsection (b) of that section. Section 31220(b)(7) states that the Conservancy may undertake a project that “[r]educes the impact of population and economic pressures on coastal and marine resources.” The proposed projects would reduce stress on sea otters (a marine resource) by reducing conflicts between otters and humans and would also undertake research to aide in future conservation of estuarine ecosystems where sea otters may recolonize and expand their range.

CONSISTENCY WITH CONSERVANCY’S 2013 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S), AS REVISED JUNE 25, 2015:

Consistent with **Goal 5, Objective H**, the proposed authorization will result in three grants that will support the recovery of the southern sea otter.

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:** The proposed projects would advance the objectives of the U.S. Fish and Wildlife Service (USFWS) 2003 Final Revised Recovery Plan for the Southern Sea Otter (see “Project Financing” section). Under the terms of a 1991 cooperative agreement between the California Department of Fish and Wildlife and USFWS, the State will assist in pursuing the objectives of federal recovery plans.
4. **Support of the public:** The proposed projects are supported by the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, California State Parks, and the Monterey Bay Aquarium. (See Exhibit 3).
5. **Location:** The proposed projects would be located within the coastal zone of San Mateo, Santa Cruz, Monterey, San Luis Obispo and Santa Barbara Counties and San Francisco Bay. (See Exhibit 1).
6. **Need:** Funds for this project will be derived from monies appropriated to the Conservancy from the Sea Otter Recovery Fund. On their own, the proposed grantees do not have sufficient funds to undertake these projects.
7. **Greater-than-local interest:** The southern sea otter is a federally-listed threatened species. Like all threatened and endangered species, the otter’s recovery is of great significance, both from a biological and cultural perspective. As a sentinel species in the food chain, the sea otter is a measure of the entire marine ecosystem. Thus, sea otter recovery is an important component of marine resource restoration and protection overall. Additionally, because of its preferred habitat in near shore kelp beds and its habit of feeding on the surface of the water, the sea otter is highly visible from the shore. Wildlife viewing opportunities attract millions of tourists.
8. **Sea level rise vulnerability:** The sea otter crossing project that will install speed humps on Jetty Road was subjected to California State Parks’ sea-level rise evaluation criteria established through its Department Sea Level Guidance and Documentation policy. The expected lifespan of this project is 20 years. The project cannot be modified to tolerate sea level rise and extreme events, but the speed humps can be removed from the road and salvaged if the road is damaged from flooding or inundation. The other proposed projects presented will not be affected by sea level rise considerations.

Additional Criteria

9. **Leverage:** See the “Project Financing” section above.
10. **Readiness:** The proposed grantees are ready to move forward with this study immediately.
11. **Minimization of greenhouse gas emissions:** The projects have the potential to generate short-term greenhouse gas emissions associated with vehicles used to conduct outreach efforts, research and installation of speed humps.

COMPLIANCE WITH CEQA:

The Friends of the Sea Otter's Be Otter Savvy educational program is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Title 14 California Code of Regulations (14 CCR) Section 15322 which exempts the "adoption, alteration, or termination of educational or training programs which involve no physical alteration in the area affected." Examples provided by the exemption include the development of, or changes in curriculum or training methods (Section 15322(a)). Implementation of the outreach effort and public education campaign concerning responsible viewing of wild sea otters as described in this staff recommendation does not involve the physical alteration of the environment. In addition, the project is exempt pursuant to Title 14 CCR Section 15306 (Information Collection). Section 15306 exempts basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious major disturbance to an environmental resource as part of a study leading to an action which the Conservancy has not yet approved, adopted or funded.

Installation of speed humps along Jetty Road is categorically exempt from CEQA pursuant to 14 CCR Sections 15301 (Existing Facilities). The project consists of the minor alteration of existing public structures or facilities involving negligible or no expansion of use beyond current levels.

The SFSU proposed project to conduct a risk assessment for sea otters in San Francisco Bay is not a project subject to CEQA review. Under the CEQA Guidelines, 14 CCR Section 15378, a "project" is defined as an action that can cause either direct physical change or reasonably foreseeable indirect change in the environment and is an activity directly undertaken or funded by a public agency, or involves the issuance of a permit or other entitlement. This project involves computer modeling to simulate conditions in the natural environment of importance to sea otters, and does not have the potential to cause direct or indirect physical change to the environment and therefore does not constitute a project necessitating review under CEQA.

Upon approval, staff will file a Notice of Exemption.