

COASTAL CONSERVANCY

Staff Recommendation
January 23, 2014

SEA OTTER RECOVERY 2014 GRANTS

Project No. 08-079-03
Project Manager: Trish Chapman

RECOMMENDED ACTION: Authorization to provide up to \$119,985 to the City of Watsonville and the University of California to implement three projects focused on the recovery of the southern sea otter.

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

PROGRAM CATEGORY: Integrated Coastal and Marine Resources

EXHIBITS

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

Exhibit 2: [Project Letters](#)

RESOLUTION AND FINDINGS:

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

“The State Coastal Conservancy hereby authorizes the disbursement of up to one hundred nineteen thousand nine hundred eighty-five dollars (\$119,985) to implement projects focused on the recovery of the southern sea otter, specifically as follows, to the:

- City of Watsonville (City): Eleven thousand seven hundred dollars (\$11,700) to implement a carp removal project in Pinto Lake in order to reduce toxicity to sea otters from harmful algal blooms.
- Regents of the University of California, Santa Cruz (UCSC): Fifty two thousand twenty dollars (\$52,020) to: 1) assess the use of Elkhorn Slough by southern sea otters in order to identify opportunities to conserve and restore suitable otter habitat; and 2) to conduct a public education program on the recovery of southern sea otters.
- Regents of the University of California, Davis (UCD): Fifty six thousand two hundred sixty five dollars (\$56,265) to assess southern sea otter mortality patterns and identify key causes of premature mortality.

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 project is consistent with the current Project Selection Criteria and Guidelines.
2. The proposed authorization is consistent with the purposes and objectives of Chapter 5.5 of Division 21 of the Public Resources Code, regarding Coastal and Marine Resource Protection.”

PROJECT SUMMARY:

The proposed authorization would provide funding to the City of Watsonville (City), University of California, Santa Cruz Campus (UCSC) and the University of California, Davis Campus (UCD) to undertake three separate projects to aid the recovery of the southern sea otter.

Southern sea otters (*Enhydra lutris nereis*,) currently inhabit near-shore marine environments from San Mateo to Santa Barbara Counties. They were hunted to near extinction in the early part of the 20th century, and listed as a federally threatened species in 1977. The population currently numbers between 2,000 and 2,700 animals, far below the historic levels estimated at approximately 16,000 animals. In recent years, multiple organizations have undertaken studies to better understand otter population dynamics, including the causes of early mortality and low birth rates.

In October 2013, 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 recommended grants would fund the three highest-rated proposals, as described below.

Pinto Lake Carp Removal: The City of Watsonville would remove carp from Pinto Lake in order to reduce production of toxins that can be lethal to sea otters. Pinto Lake is a heavily impaired waterbody in the Pajaro River watershed. Every year, the lake experiences massive cyanobacteria blooms which produce dozens of very potent hepatotoxins and neurotoxins. The lake’s toxin levels are typically at or above the State health limit (0.8 parts per billion (ppb)) year-round, with levels often exceeding 10,000 ppb in the last summer and fall. One sample exceeded 2,893,000 ppb—over three million times the health limit. The death of over 31 southern sea otters in the Monterey Bay region has been attributed to these cyanotoxins, with Pinto Lake being identified as a likely source.

The primary cause of these toxic algal blooms is the presence of elevated nutrients in the lake with the level of phosphorus being the limiting factor. A significant portion of the phosphorus in the lake is mobilized from the lakebed sediment by the feeding practices of carp, a non-native species. The City proposes to use electrofishing technology to remove approximately 85% of the

carp from the lake. It is estimated that this could reduce the phosphorus levels in the lake water by up to 24%. This project is one of several efforts underway in the watershed to reduce the toxicity of Pinto Lake. It is expected that reduction of these toxins will have a direct effect on the water quality of the nearby marine environment in Monterey Bay where a large population of southern sea otters feed and reproduce.

Sea Otter Ecology in Elkhorn Slough. UCSC, in collaboration with the Elkhorn Slough Foundation would research how sea otters use the estuarine habitats of Elkhorn Slough and investigate otter feeding habits, prey availability and contamination. This information would have several purposes. With an understanding of how otters benefit from, or are impacted by in the slough environment, future restoration projects could incorporate components that enhance or increase high quality otter habitat. In addition, water quality regulations (Total Daily Maximum Loads) are currently being developed for Elkhorn Slough and its source tributaries. These regulations could be informed by knowledge of contaminant effects on otters in the estuary. Currently, too little is known about estuarine habitat use by otters to allow restoration and regulatory strategies to be designed and implemented to support sea otter needs. This would fund the second year of a three year study.

In addition to the research at Elkhorn Slough, UCSC, in coordination with the Friends of the Sea Otter, will continue efforts to inform the public, including policy makers and regulators, about the status of sea otters, their habitat, and research needed to manage problems plaguing the population. This is seen as a critical component of the overall recovery strategy. The proposed project will focus outreach efforts in coordination with Sea Otter Awareness Week.

Investigating Sea Otter Mortality Patterns: U.C. Davis would undertake the second year of a three-year study, performing in-depth investigations of the causes and patterns of mortality in southern sea otters. This three-year study expands on an landmark epidemiological study conducted in 2003 of 105 dead sea otters collected from 1998-2001. This previous study provided critical information about impacts of coastal contamination on sea otters. The new study expands on this research and incorporates more complete diagnostic testing to provide a broader understanding of sea otter disease processes. Data from approximately 600 otters will be included in this study. By completing tests for exposure to common pathogens and toxins for all enrolled animals, researchers can pinpoint high-risk areas for exposure and also begin to tease apart potential synergistic effects.

Researchers from UCSC and UCD have been integrally involved in efforts to recover southern sea otter populations and helped form the Sea Otter Alliance, a partnership of state and federal agencies, research institutions, and community organizations focused on sea otter recovery. Both institutions have partnered on previous recovery efforts with a range of stakeholders, including Friends of the Sea Otter, the Department of Fish and Wildlife, the U.S. Geological Survey, and the Monterey Bay Aquarium. The City of Watsonville has developed the carp removal project in collaboration with researchers from UCSC and UCD, as well as staff of the U.S. Fish and Wildlife Service and Resource Conservation District of Santa Cruz County. All three grantees are well qualified to undertake the proposed projects.

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. The U.C. Davis mortality study will research dead otters collected from throughout the otters' range.

Elkhorn Slough, a National Estuarine Research Reserve, is regarded as critically important habitat for marine and nearshore wildlife on California's Central Coast. The slough including Moss Landing Harbor, has the highest concentration of southern sea otters on the California coast with counts exceeding 100 animals. They can be found in open water or hauled out on the mudflats in the main slough channel, from Moss Landing harbor to Hudson Landing. Males are most common in the North harbor area. Groups of sea otter mothers and pups are more commonly found further in the slough where the protected waters provide both food sources and refuge.

Sea otter recovery outreach and education efforts will be focused within the coastal counties within the sea otters' range (Santa Barbara north to San Mateo) and at aquariums and marine education centers throughout the state.

Project History: In the 1700s, sea otters ranged from Baja California along the west coast of the United States into Alaska and around the Pacific to the eastern coast of Russia and down into Japanese waters. Relentlessly hunted for their luxuriant fur, by the early 1900's southern sea otters (those previously found from Baja California to the Pacific Northwest) were believed extinct. In 1938, about fifty animals were unexpectedly discovered along the Big Sur coast.

In 1972, Congress passed the Marine Mammal Protection Act prohibiting the taking of any protected marine mammal, 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 released a sea otter recovery plan. At that time, resource managers predicated that the southern sea otter population would rebound to about 13,000 animals. Throughout the 1980s and early 90s, the population grew at a healthy rate of about five to seven percent a year and by the mid-1990s population levels had reached about 2,000 animals. Shortly thereafter, however, managers noted a worrisome slow-down in population growth, and in more recent years, no growth at all.

Concerns about stagnation of the sea otter population prompted environmental groups to lobby for legislation to address this problem. In 2006, the California legislature passed AB 2485 which focuses on sea otter mortality. Among other provisions, this bill prohibits the disposal of substances known or believed to have deleterious effects on fish, plant life, mammals or bird life in state waters. (Fish and Game Code § 5650(a)(6)). Additionally, the bill established the California sea otter tax check-off fund (see Project Financing below) to allow taxpayers to contribute to funding solutions to this problem. 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 \$720,000 of sea otter tax check-off funds for studies to better understand the causes of high mortality and low birth rate in southern sea otters.

PROJECT FINANCING

Coastal Conservancy

\$119,985

The anticipated source of Conservancy funds for this project 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 §18751) 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 §18754.2(a)(3)). The proposed authorization is consistent with the requirements of the California Sea Otter Fund in that funds will be used to further understanding of sea otter habitat use and mortality patterns in order to guide future recovery efforts. The public education grant will further the recommendations of the Final Revised Federal Southern Sea Otter Recovery Plan (2003), Objective 7 (develop and implement a public education and outreach program). Section 18754.2(b) requires the Conservancy to solicit available federal, private, matching, and other dollars to maximize or leverage funds benefitting sea otters. UCD and its partners will provide approximately \$235,042 in-kind staff and laboratory resources to their portion of the grant. UCSC and the Elkhorn Slough National Estuarine Research Reserve will also provide in-kind staff assistance in performing the grant.

CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:

This project would be undertaken 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)(5) states that the Conservancy may undertake a project that “[p]rovides for monitoring and mapping of coastal currents, marine habitats, and marine wildlife, in order to facilitate the protection and enhancement of resources within the coastal zone. A project considered under this paragraph shall be implemented in consultation with the Department of Fish and [Wildlife].” Consistent with this section, the proposed project will provide for monitoring of southern sea otter to facilitate their protection and enhancement within the coastal zone. The public outreach portion of the project will also assist in the protection of marine resources. The Department of Fish and Wildlife has been consulted with regard to this project, as required by Section 31220(b)(5). The project addresses a marine species and thus is not directly addressed in local watershed management plans. Conservancy staff has consulted with the State Water Resources Control Board in the development of this project in order to ensure consistency with the Clean Beaches Program under Chapter 3 of Division 20.4 of the Public Resources Code.

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

Consistent with **Goal 5, Objective G** of the Conservancy's 2013-2018 Strategic Plan, the proposed authorization will implement one project that improves coastal water quality.

Consistent with **Goal 5, Objective H**, the proposed authorization will result in the three projects that will contribute to sea otter recovery.

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

The proposed project is consistent with the Conservancy's current Project Selection Criteria and Guidelines, last updated on November 10, 2011, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The proposed research is supported by U.S. Fish and Wildlife Service, the California Department of Fish and Game, the Monterey Bay Aquarium, and the State Water Quality Control Board (See Exhibit 2).
4. **Location:** The proposed projects would be located within the coastal zone of San Mateo, Santa Cruz, Monterey, San Luis Obispo and Santa Barbara Counties.
5. **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 this study.
6. **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 such as this attract millions of tourists. The southern sea otter exhibit at the Monterey Bay Aquarium is one of the most popular in the facility, revealing the high level of public interest in this animal.
7. **Sea level rise vulnerability:** The proposed research and education components of the project will not be affected by sea level rise considerations.

Additional Criteria

8. **Leverage:** See the "Project Financing" section above.

9. **Readiness:** The proposed grantees are ready to move forward with this study immediately.
10. **Cooperation:** This project is a cooperative effort between many resource agencies and organizations focusing on sea otter health and recovery.
11. **Minimization of greenhouse gas emissions:** The proposed authorization is not expected to have any long-term green house gas emissions. The project has the potential to generate short-term greenhouse gas emissions associated with vehicles used by commuting research workers, but these emissions would be limited, and not cumulatively significant.

COMPLIANCE WITH CEQA:

The proposed projects considered for funding under this authorization are exempt from the California Environmental Quality Act (CEQA) pursuant to 14 California Code of Regulations Sections 15301(i), 15304 and 15306.

Section 15304 (Minor Alterations to Land). Section 15304 exempts minor alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry and agricultural purposes. As an example of activities that satisfy this exemption, alteration to water in wildlife management areas and fish production facilities which result in improved fish habitat or greater fish production are exempted. (*Id.* Subsection(d)). The proposed removal of carp from Pinto Lake, which is part of a city park, will remove a non-native fish species from the lake without adverse impact to the lake's other resources and will improve the water quality of the lake. This activity is also exempt pursuant to Section 15301(i) which exempts "maintenance of... wildlife habitat areas...streamflows, springs and waterholes to protect fish and wildlife resources." The testing of removal of non-native carp will improve the water quality of the land and is consistent with the need to protect the native fish resources and the downstream southern sea otter population.

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. The UCD study will not result in a major disturbance to sea otters as only dead sea otters will be handled. The USSC study will involve only observational studies of sea otter behavior and educational activities.

Upon approval, staff will file a Notice of Exemption for the project.