



## **Morro Bay National Estuary Program 320 Grant Semi-annual Report: October 2023 to March 2024**

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The Morro Bay National Estuary Program (Estuary Program) is moving forward on completing new and ongoing tasks in the Fiscal Year (FY) 2024 320 workplan. All workplans are approved by the Environmental Protection Agency and the Estuary Program's Executive Committee. The budget report shows that our Section 320 expenses under the grant (Grant Number 98T25101) in the first half of the fiscal year were \$402,477. As of March 31, we have expended 71% of the 320 grant (started in FY22). The Estuary Program has met 194% of its match requirement for the cumulative grant with cash match and estimated current in-kind contributions (at approximately \$4,472,773).

The Estuary Program requests EPA's continued participation on the Executive Committee and assistance with meeting relevant administrative and programmatic grant conditions. During this reporting period, the Estuary Program continued to address the final Program Evaluation (PE) letter, which was completed at the end of FY20.

The following report summarizes activities and deliverables completed during the semi-annual report period. As the Estuary Program does not have any subawards under this federal grant, a reporting of subaward monitoring activities carried out under 2 CFR 200.331(d) does not apply.

The Estuary Program received grants to implement Bipartisan Infrastructure Law (BIL) funding in January 2023 and in February 2024. Some of the organization's work is funded by BIL but supported and implemented by staff funded through the Estuary Program's 320 grant. Thus, the status of BIL-funded efforts are included in this semi-annual report. Deliverables for efforts with project costs other than staff time directly funded by BIL will be reported in the BIL semi-annual report.

### **Habitat and Water Quality Protection and Restoration**

#### **Land Conservation**

**Objective:** Conserve land to achieve Management Plan goals as opportunities arise.

**Status:** Ongoing task

**Progress Toward Milestones:**

The Estuary Program continues to work with The Land Conservancy of San Luis Obispo (LCSLO) to explore potential easement projects in the watershed. The Coastal San Luis Resource Conservation District (CSLRCD) is conducting a conservation easement planning effort in conjunction with the State Coastal Conservancy to look at Chorro Flats and actions needed to protect nearby critical infrastructure. The CSLRCD is also in contact with private landowners regarding potential easements.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: These efforts directly support the task outcome of completing land conservation projects as opportunities arise.

Problems Encountered: None.

Deliverables: None.

Activities Planned for Next Six Months: The Estuary Program plans to coordinate with the LCSLO and other partners to continue outreach to landowners and support new easements as opportunities arise.

Pending Deliverables: Updated map tracking protected lands included in next State of the Bay report. NEPORT reporting.

## Restoration Maintenance and Monitoring

Objective: Conduct maintenance and monitoring for conservation easements and restoration projects, as necessary.

Status: Ongoing task

Progress Toward Milestones: The Estuary Program conducted flow monitoring on Pennington Creek following a project to remove a fish passage barrier and improve a water diversion. Data are submitted to Trout Unlimited on a regular basis to manage the flow diversion and comply with water rights.

Staff have been developing a project to assess conditions at Chorro Creek Ecological Reserve (CCER) following the storms of winter 2023 that caused significant shifts at the site. Contractor selection is underway to conduct surveys and drone flights to better understand conditions at the site and allow for planning for adaptive management efforts. The California Conservation Corps (CCC) continues to conduct annual site maintenance such as weed management and quarterly plant monitoring to track plant success rate. The Estuary Program measured stream temperatures to observe if there were any significant changes in temperature between the project site channels and the historic main stem during low flow conditions (August to November 2023).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The accomplished tasks directly support the outcomes of conducting easement monitoring and maintaining landowner communications. Efforts also support the outcome of meeting eelgrass restoration targets.

Problems Encountered: None.

Deliverables: Pennington Creek data submitted to the California Environmental Data Exchange Network ([CEDEN](#)) and shared with partners.

Activities Planned for Next Six Months: The Estuary Program is conducting planning to address impacts to CCER from the 2023 winter storms. We will also work with partners to address any needed restoration maintenance.

Pending deliverables: None.

## Other Restoration Efforts

Objective: Engage in other restoration efforts that arise to help achieve Management Plan goals.

Status: Ongoing task

Progress Toward Milestones: The Estuary Program participated in numerous efforts to meet Management Plan goals. These included participation in the following efforts:

- San Luis Obispo (SLO) County and Caltrans effort to replace the bridge over Los Osos Creek on South Bay Boulevard.
- Collaboration and support of CSLRCD restoration of their Los Osos Wetland project, including installation of additional plants.
- Working with CSLRCD to install fencing and off creek water sources in the watershed. The work is being conducted through a subaward under our BIL grant.
- Local invasive management efforts in the estuary, including managing eradication of an invasive sea lavender within tidal marsh habitat and iceplant on the sand spit. The effort includes a partnership with University of California, Santa Barbara (UCSB) with Morro Bay acting as a pilot project for dune restoration efforts.
- Collaboration with SLO County on management of *Arundo* (giant reed) and mapping invasive riparian species in the Chorro Creek watershed. Staff have been reaching out to landowners to get permission for plant mapping work this spring. A consultant has been hired to assist with the effort under our BIL grant. Next steps include obtaining funding for invasive removal efforts, initially focusing on *Arundo* removal.
- Established a contract with Cuesta College in support of their Sustainable Agriculture program through installation of water infrastructure for grazing livestock and wildfire resilience. The project was completed in November 2023 and closed out this spring, through a subaward under our BIL grant.
- Partnership with the United States Geological Survey (USGS) to monitor and model impacts to sensitive salt marsh habitat with sea level rise. Monitoring is underway, with results supporting the modeling effort.
- Coordination with Cal Poly in scoping out future floodplain enhancement and restoration projects along Walters Creek. Potential projects have been identified and are currently under development. These include restoration of a floodplain at the confluence of Walters and Chorro Creeks and installation of low tech process-based restoration techniques along Walters Creek to enhance flows and water quality.
- Staff have been working to develop a Habitat Protection/Restoration Strategy that meets EPA requirements. An updated plan is expected this summer for EPA input, with a final version expected in the fall.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The Estuary Program met the anticipated outputs and outcomes by staying involved in partner efforts related to the estuary and watershed as opportunities arise that support CCMP implementation and partner projects.

Deliverables: Activities described in Semi-annual report (see above).

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue work on the Habitat Protection/Restoration Strategy and to continue to participate in the local restoration and management efforts listed above.

Pending Deliverables: Final habitat protection/restoration strategy planning document.

## Conservation and Restoration Project Development

Objective: To develop projects and funding for conservation and restoration.

Status: Ongoing

Progress Toward Milestones: Staff works closely with multiple partners from the watershed and beyond to develop conservation and restoration efforts to help meet CCMP goals.

In FY19, the Estuary Program completed a grant from the Resource Legacy Fund to work with the CSLRCD to educate private landowners on conservation practices such as rotational grazing, keyline ploughing, etc. and identify potential projects. With support from the Estuary Program, CSLRCD was awarded a state grant to implement a subset of these projects. CSLRCD is also adding two stormwater/sediment reduction projects sites on Army National Guard Base Camp San Luis Obispo (Camp SLO) property to address sediment sources to Chorro Creek. With increased coordination with Camp SLO, the Estuary Program financially supported project development and full designs for another stormwater project at the facility along Calaveras Ave. This project had to be scaled back due to underground utilities but was implemented in September 2023 with additional plantings in fall/winter 2023. The Estuary Program is working with partners to evaluate future projects to address stormwater runoff quality, volume, and rates to mitigate downstream impacts in a section of Chorro Creek watershed. This evaluation focuses on developed areas of Camp SLO including the CCC Center and Cuesta College, which ultimately discharge to Chorro Creek and Pennington Creek.

The Estuary Program partnered with the San Luis Obispo Council of Governments (SLOCOG) on a transportation planning grant to study sea level rise impacts on South Bay Boulevard (the only road directly connecting Morro Bay and Los Osos) and adjoining roads that ring the estuary. The awarded grant would also support extending the existing bay-wide circulation/flooding model. The Estuary Program began providing match to the CSLRCD in fall 2023 for an SCC grant to model lower Chorro Creek flooding due to increasing storminess and accelerated sea level rise. The project will also consider potential solutions to flooding in the lower Chorro Creek area. Both of these projects will have their first stakeholder and community engagement meetings in Summer/Fall 2024.

Estuary Program staff also supported SLO County planning efforts to improve the coastal access point and habitat restoration at Pasadena Point in Los Osos. This access point is popular for launching kayaks and paddleboards from the beach. Because the access is through soft sand, users have been walking over salt marsh habitat to avoid the sand. The County is seeks to improve the original access area to protect the marsh habitat from trampling. The Estuary Program and partners are seeking funding for the effort.

Estuary Program staff is working with San Francisco Estuary Institute (SFEI) to complete a historical ecology study of the lower Morro Bay watershed and areas surrounding the bay. The project will

document landscape conditions prior to recent Euro-American modification, providing information to inform management and restoration planning that will enhance climate resilience. Initial gathering of available maps and resources is currently underway, and a site visit to the area is planned for the spring.

Staff have partnered with Caltrans and SLO County to address two fish passage barriers on San Luisito Creek. Channel surveys have been conducted and an alternatives analysis is underway.

Researchers at Cal Poly are monitoring for the presence of native Olympia oysters within Morro Bay. In addition, through a partnership with Grassy Bar Oyster Company, Cal Poly researchers are continuing to track survival and growth of native Olympia oysters in an estuarine shellfish aquaculture setting.

Deliverables: Activities described in this Semi-annual report (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Working with partners such as the CSLRCD to provide resources to private landowners with the end goal of implementing projects to improve water quality.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to work with partners to further the progress of stormwater management and water conservation projects. The Estuary Program will work with the CSLRCD to implement projects described above. The Estuary Program will also work with Camp SLO on stormwater implementation projects.

## Fisheries Management

Objective: To implement projects to benefit native species and other opportunities as they arise.

Status: Ongoing

Progress Toward Milestones: A three-year state grant from the California Department of Fish & Wildlife (CDFW) was concluded in fall 2023 with a final round of pikeminnow management on Chorro Creek. Permit processing, project planning, pikeminnow management in creek and reservoir, and reporting were completed.

A project to study steelhead growth in Chorro Creek was kicked off in fall 2023. PIT tags were inserted into netted steelhead, and antennae arrays were set up in lower Chorro Creek. The movement of steelhead could be tracked as they moved from Chorro Creek into the estuary and back again. This movement of steelhead was measured during the storms of early 2024 and indicated that steelhead in Chorro Creek were making their way out to the estuary and then returning to the creek. Monitoring will continue through the fall of 2024.

A project was implemented in fall 2023 to study fish populations in the estuary. A fall monitoring effort took place where fish were captured in locations throughout the bay using various methods. Fish were measured, identified, counted, and returned unharmed to the bay. Planning has begun for a repeat of the monitoring in spring 2024 to collect data that will provide a seasonal component to the study. The project was funded through the BIL grant.

Deliverables: Annual report for 2023 pikeminnow management efforts. Final report for pikeminnow management from 2021 to 2023 through the CDFW grant.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Anticipated output is control of the invasive pikeminnow population and a better understanding of sustainable ratios of pikeminnow to steelhead that support steelhead recovery. Improved understanding of steelhead use of lower Chorro Creek, which could help identify locations for projects to improve flows, passage, and water quality. Improved understanding of bay fish populations and how they have shifted over time with eelgrass decline and recovery.

Problems Encountered: None.

Activities Planned for Next Six Months: Conduct spring round of bay fish monitoring and receive analysis from contractor. Continue tracking of tagged steelhead movement in Chorro Creek.

Pending Deliverables: Results of bay fish monitoring and Chorro Creek steelhead growth study.

## Environmental Monitoring and Research

### Monitoring Program Coordination

Objective: Continue coordination of the Monitoring Program and collect data that meets Quality Assurance Project Plan guidelines.

Status: Ongoing

Progress Toward Milestones: Staff conducted monitoring in the watershed and estuary to track long-term ambient trends and project implementation effectiveness. During the first half of FY24, the following occurred:

- Staff continued to work with long-time volunteers and began training new volunteers to conduct monitoring to support understanding of bay and creek health. Staff and volunteers were able to conduct the following monitoring in the first half of FY24: 42 monitoring trips for bay water quality, 111 for bacteria, 159 for creek water quality, four for stream profiling, and three for toxicity.
- Staff coordinated with the California Department of Public Health (CDPH) and local shellfish growers on monitoring related to storm flows and bacteria. This included monitoring bacteria in Chorro Creek, Upper Los Osos Creek, and Warden Creek. Staff also monitored nitrates in the freshwater seeps along the bay shoreline to track improvements in water quality following the Los Osos Water Reclamation Facility coming online. Staff implemented a new monitoring project with CDPH to focus on post-storm monitoring in the shellfish growing areas to determine if the current rainfall closure guidelines are still adequate or whether they need to be revised.
- Staff continued long-term partnership with Cuesta College, providing lecture and class materials for an oceanography course.
- Staff continued its bacteria monitoring effort in partnership with the Cuesta College Biology Department. Cuesta students completed their fall 2023 semester of monitoring and began the

spring 2024 semester work. The partnership continues the Estuary Program's long-running ambient bacteria data set while providing monitoring and research opportunities for community college students.

- Staff monitored sites watershed-wide for nutrients every other month to track long-term trends.
- Staff monitored water quality conditions monthly at three sites to assess impacts from agricultural land use.
- Staff collected water and sediment samples from three creek sites during the wet season for toxicity testing to assess the impacts to creek water quality from agricultural land use.
- Staff conducted planning to develop a pesticide monitoring effort to track the impacts from wastewater, agriculture, and golf course chemical application in the watershed.
- Staff maintained a network of water depth sensors to track flows year-round. Staff is planning for spring and summer low flow monitoring to determine if adequate water is present for fish passage.
- Staff conducted bay macroalgae monitoring to track macroalgae abundance over time and space. This is particularly of interest due to the potential of macroalgae to crowd out eelgrass.
- Staff developed and implemented a monitoring protocol to track recreational use at popular spots around the estuary. This data helps in estimating the economic value of recreational use of the bay.
- Staff deployed continuous monitoring sensors to measure temperature, dissolved oxygen, pH, chlorophyll-a, and conductivity at watershed sites.
- Staff is planning for spring bioassessment monitoring throughout the watershed.
- Staff is coordinating with the city of SLO and Cal Poly on bioassessment monitoring in the SLO watershed. Staff lent technical expertise and guidance in planning, coordination, fieldwork, and data analysis. This project is funded by a grant from a private foundation.
- Staff is conducting planning for spring monitoring of bay fish populations.

Deliverables: A quality dataset that meets the parameters outlined in the Quality Assurance Project Plan (QAPP). Activities described in Semi-annual report (see above). [2023 Bay Health Memo](#).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities for this task involved collecting and sharing data, resulting in an increased understanding of the long-term trends in ambient water quality in the watershed and estuary.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to conduct the following types of monitoring: creek water quality (including bimonthly nutrient monitoring, and monthly agricultural site monitoring), creek and bay bacteria, bay water quality, seeps water quality, bioassessment, and streamflow monitoring.

Pending Deliverables: Creek Health memo for Water Year (WY) 2023. Bioassessment memo for 2023. Sediment report for 2023.

## Monitoring Program Reporting and Analysis

Objective: Analyze data and share results with grantors, partners, local landowners, and the public.

Status: Ongoing

Progress Toward Milestones: Estuary Program staff compiled data in formats appropriate for various audiences, including academic classes, researchers, regulators, landowners, and the general public. Staff responded to requests for program-generated data. Several blog posts on monitoring-related topics were created over the year, including popular monthly “Field Updates” posts that provide a rundown of what staff have been up to in the estuary and watershed. Analysis is underway on creek water quality, bioassessment, and sediment data.

Deliverables: Activities described in Semi-annual report (see above). [2023 Bay Health Memo](#). Example monthly bacteria memo.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities conducted under this task involved analyzing and sharing data and results with partners, landowners, and the general public. These activities directly support the task outcome of making analysis available for others to support their own efforts to protect and restore Morro Bay and its watershed.

Problems Encountered: None.

Upcoming Activities: The Estuary Program plans to respond to requests for data, create blog posts to share data, and compile bioassessment, bacteria, and water quality data to share monitoring results.

Pending Deliverables: Sediment Report for 2023. Creek Health memo for WY 2023. Bioassessment memo for 2023.

## Monitoring Program Data Management

Objective: Maintain data in Surface Water Ambient Monitoring Program (SWAMP)-compatible format.

Status: Ongoing

Progress Toward Milestones: Estuary Program staff have been preparing monitoring data and submitting to CEDEN. Staff participates in State Water Resources Control Board (SWRCB) meetings to discuss updating of CEDEN. Staff worked with the SWRCB on submittal of our bioassessment, toxicity, and water quality data. Data through the first half of FY23 has been submitted to CEDEN. Staff has been working with a database developer to implement updates to the Access database used to manage our data. Updates will be completed soon, and timely data submittal can resume.

Deliverable: Activities described in Semi-annual report (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities such as storing and submitting data accomplished the outcome of making available to the public and state a high-quality data set that supports TMDL analysis, 303(d) assessment, land management, etc.

Problems Encountered: None.



Activities Planned for Next Six Months: The Estuary Program will continue to manage data and work with the SWRCB to upload data to CEDEN. Staff will submit program data in response to the Central Coast Regional Water Quality Control Board's data solicitation for the 2028 Integrated Report.

Pending Deliverables: Submittal of WY 2023 and WY 2024 data to CEDEN. Submittal of data for the 2028 Integrated Report.

## Monitoring Program Quality Assurance

Objective: Update and submit a Quality Assurance Project Plan (QAPP), work with reviewers to approve document, and implement necessary quality assurance measures.

Status: Ongoing

Progress Toward Milestones: The Estuary Program continues to implement the quality assurance measures contained in the QAPP to ensure data quality. Staff compiled an annual update to the QAPP and four addenda for short-term monitoring efforts, which included tide height monitoring, bay bacteria monitoring, bay fish monitoring, and recreational use. These were submitted to EPA and approved in February 2024. Staff continues work to develop four additional addenda to cover short-term projects starting later in the year.

Deliverables: Activities as described in this Semi-annual report (see above). [2024 QAPP](#).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: An accurate and up-to-date QAPP document directly supports the task outcome of producing a high-quality data set to support efforts throughout the watershed, including 303(d) and TMDL assessment.

Problems Encountered: None.

Activities Planned for Next Six Months: Staff will conduct the QA measures needed to ensure the quality of program-generated data. Staff will complete additional addenda covering bay phytoplankton monitoring, pesticide monitoring, salt marsh sediment monitoring, and bay genetic analysis monitoring.

Pending Deliverables: QAPP addenda.

## Project Effectiveness Monitoring

Objective: Complete monitoring to demonstrate project effectiveness for various restoration projects.

Status: Ongoing

Progress Toward Milestones: Staff conducted monitoring of the freshwater seeps at the bay's edge to assess the impacts of the Los Osos Water Reclamation Facility. The Estuary Program conducted monitoring for a project on Pennington Creek to assess the impacts of a water diversion improvement project.

Deliverables: Activities as described in the Semi-annual report (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The activities under this task support the outcome of conducting monitoring and developing analysis that informs future management and restoration efforts.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue monitoring the seeps. Staff will collect Pennington Creek flow data and share it with Trout Unlimited to manage a water diversion. Staff will coordinate with California Polytechnic State University, San Luis Obispo (Cal Poly) researchers on future monitoring and potential publications. Staff will also communicate with project partners to share data results and coordinate efforts.

Pending Deliverable: None.

## Eelgrass Monitoring and Research

Objective: Monitor eelgrass to determine its condition and distribution in the bay.

Status: Ongoing

Progress Toward Milestones: Staff coordinated with Cuesta College faculty on their eelgrass research efforts. This includes genetic analysis of the prokaryotic communities in Morro Bay eelgrass. Cal Poly completed drone flights of the bay in February 2024 to collect bay wide imagery to track eelgrass health. Staff conducted groundtruthing during the time period of the drone flights. Staff continued to work with a contractor to complete a baywide map from data collected in spring 2023. Fall bed condition monitoring was conducted of eelgrass beds throughout the bay. Staff conducted macroalgae monitoring to track its presence throughout the bay and how it changes over time. Staff coordinated with the Army Corps of Engineers on spring dredging of the bay mouth to ensure that the work does not negatively impact sensitive habitats in the bay.

Deliverables: Monitoring activities documented in the Semi-annual report (see above). [2022 EG report](#).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Monitoring and planning for mapping efforts as well as working with research partners all support the outcome of better understanding eelgrass stressors and dynamics. This improved understanding directly supports the outcome of development of restoration and monitoring strategies and goals.

Problems Encountered: None.

Activities Planned for Next Six Months: Staff will conduct spring macroalgae monitoring. Staff will share the results of the 2023 baywide eelgrass map. Staff will complete the 2023 eelgrass report.

Pending Deliverables: Bay wide eelgrass map for 2023. 2023 eelgrass report.

## Partner Research Efforts

Objective: Support science partners in pursuing research efforts relevant to the goals of the Estuary Program.

Status: Ongoing

Progress Towards Milestones: Estuary Program staff coordinated and collaborated with Cal Poly, California Department of Fish & Wildlife (CDFW), the National Oceanographic and Atmospheric Administration (NOAA), Cuesta College, the Army Corps of Engineers (ACOE), the city of Morro Bay, and other project partners to research bay eelgrass and related water quality issues. Staff sought results of research efforts in Morro Bay and other areas on the west coast related to nutrients, macroalgae, sedimentation, ocean acidification, and other water quality data. Staff coordinated with Cal Poly on ocean acidification monitoring efforts in the bay. Staff collaborated with partners such as Cal Poly and USGS on future research efforts related to eelgrass, climate change, and marsh habitat. Monitoring of sediment and water levels was conducted in the tidal marsh to support a project with USGS to study sea level rise impacts to the tidal marsh. Staff worked with Cal Poly to plan for the 2024 drone flight. Staff collaborated with researchers from SCCWRP, the California Estuary Monitoring Workgroup, the Estuary Marine Protected Area monitoring effort, EPA, and others on potential collaborative monitoring efforts.

The Estuary Program has coordinated with Cal Poly on numerous ongoing monitoring efforts, including bay nutrient monitoring, Olympia oyster research, microplastic research, and phytoplankton monitoring. Staff developed a new monitoring project with CDPH to sample shellfish growing waters following storms. The data will help CDPH determine whether the current rainfall closure guidelines are still relevant or whether they need to be updated.

The Estuary Program continued supporting a neighboring watershed whose stakeholders are working to create a bioassessment monitoring effort. Estuary Program staff supported data management and analysis efforts for the group's bioassessment monitoring in 2023, conducted by Cal Poly students in partnership with the city of San Luis Obispo. Staff is supporting planning for the 2024 monitoring season.

Research efforts conducted in the Morro Bay estuary and watershed include:

- USGS tidal marsh elevation and plant species monitoring to help assess future impacts from sea level rise.
- Cal Poly research into the impact of crabs on eelgrass.
- Cal Poly research on the impact of brant grazing on eelgrass.
- Cal Poly and California State University, Northridge research on marine mammal relationships with eelgrass.
- Cal Poly research on microplastics in Morro Bay.
- Cal Poly research on Olympia oysters in the bay.
- Cal Poly research on bay nutrient levels.
- Cal Poly research on bay phytoplankton populations in water and sediment.
- Cuesta College research on impact of *Labyrinthula spp.* wasting disease on eelgrass.
- Cal Poly research on ocean acidification and water quality in Morro Bay, in partnership with Central and Northern California Ocean Observing System (CeNCOOS). Coordinated with Cal Poly

to assist in the purchase of updated equipment and a meteorological station to support the sensor arrays.

- Central Coast Wetland Group monitoring under the Estuary Marine Protected Area biannual monitoring protocols completed in fall 2023 and planned for spring 2024.
- SCCWRP research related to ocean acidification on the central coast of California.
- California Estuary Monitoring Workgroup efforts to coordinate monitoring and research throughout the state.
- EPA efforts to coordinate and publish data focused on ocean acidification conducted by NEPs around the country.

We also track research that is occurring elsewhere but is relevant to Morro Bay, including nutrient target development in Elkhorn Slough and pathogen TMDL development in Southern California.

Deliverables: Water quality data collected by Cal Poly and shared on the CeNCOOS web portal for the [front bay](#) and [back bay](#). [2022 eelgrass report](#).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Coordination with research partnership efforts directly supports the task outcome of improving understanding of resources in order to better target efforts such as monitoring and restoration.

Problems Encountered: None.

Activities Planned for Next Six Months: Staff will coordinate with Cal Poly and Cuesta on ongoing research efforts. Staff will work with USGS staff on salt marsh monitoring.

Pending Deliverables: 2023 eelgrass report.

## Public Participation, Education and Outreach

### Communications

Objective: Communicate with a variety of audiences using presentations, printed materials, online presence, social media, and other avenues.

Status: Ongoing

Progress Toward Milestones: Estuary Program staff regularly conducted the following communications tasks:

- Created regular blog posts that were shared via email, website, and social media. 549 subscribers receive the blog via email each week. The blog is posted on Facebook and corresponding content is posted to Instagram and LinkedIn when appropriate for the platforms. Popular blog posts have as many as 2,500 reads, not including subscribers. Developed fall and winter issues of a seasonal/quarterly newsletter that posted on the website, was sent to 250 email subscribers, and was posted on social media channels.

- Maintained a Facebook feed for the Estuary Program that currently has 2,664 followers. Utilized two-way communication with these users, such as recognition of rain gauge network volunteers and cleanup participants.
- Maintained an Instagram feed for the Estuary Program that currently has 3,580 followers and a Mutts for the Bay Instagram account that currently has 107 followers.
- Maintained a LinkedIn account with 395 followers.
- Four news stories were published that covered Estuary Program-specific content and projects in the watershed.
- Continued updates on the program website to refresh current content. In the first half of FY24, the website had 43,144 visits.
- Implemented a new quarterly science talk series called Science on Tap that rotates among different venues around the watershed and county. Events were hosted in December 2023 and March 2024 and had over 50 attendees who learned about climate change and watershed restoration methods.

Deliverables: Blog posts published on a regular basis at [www.mbnep.org/blog](http://www.mbnep.org/blog). Website and social media statistics (see above). Relevant news stories available online and press releases submitted at [www.mbnep.org/news](http://www.mbnep.org/news). Quarterly newsletter at <http://www.mbnep.org/newsletter>.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The activities listed above enhanced communication with residents, visitors, and the general public. This works toward the task outcome of increasing their understanding of their roles as stewards of the estuary and encouraging behaviors that protect clean water.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue the communications tasks outlined above including blog posts, published reports, seasonal newsletters, upcoming events, and stewardship tips.

Pending Deliverables: Regular blog posts. Social media statistics included in semiannual report. News stories posted to website.

## Education

Objective: Develop formal education partnerships and services and other education efforts.

Status: Ongoing

Progress Toward Milestones: Efforts to support education included the following:

- Hosted 19 field trips in the first half of FY24 in various locations around the watershed for school groups, youth organizations, and the El Camino Homeless Organization shelter, reaching 438 individuals. Topics included watershed health, careers in the environmental field, local wildlife, nature journaling, tidepooling, and estuarine habitats.

- Established a monthly recurring fieldtrip with the Heartland Charter School for their Estuary Adventure Club. This includes 15 to 30 students with their parents from various locations around San Luis Obispo County and Kern County.
- Presented to two Cuesta College oceanography classes about water quality monitoring and nutrients that reached 50 students.
- Continued distribution of marine education focused coloring book and activity book available in English and Spanish. The project is a partnership of SLO and Monterey Marine Protected Area (MPA) Collaboratives. A new version of this coloring book is under development in Chinese to be printed and distributed in 2024. They are available online in English at <https://www.mpacollaborative.org/project/mpa-coastal-explorer-guide-english-v2/> and in Spanish at <https://www.mpacollaborative.org/project/a-descubrir-areas-marinas-protegidas-guia-del-explorador-costero-de-california-2/>
- Worked with Camp Ocean Pines to start a watershed and marine lab at their campus location in Cambria. Estuary Program staff will support curriculum development and activities related to estuary and watershed science.
- Established an educational partnership with Cal Poly to support a new four-unit course at the university in the College of Science and Mathematics called “Environmental Literacy: An Integrative STEM Approach.” This partnership also supported the creation of professional development teacher training workshops.
- Established and implemented an educational partnership with the nonprofit One Cool Earth to create a watershed week for all of their classrooms across 28 schools in San Luis Obispo County. Estuary Program staff trained twenty-one Cool Earth instructors and staff about the estuary and Morro Bay watershed prior to the watershed week. One Cool Earth presented watershed education curriculum in 75 classrooms throughout the county this spring, reaching an estimated 2,250 students.
- Developed and hosted two of three teacher training workshops that focused on the Morro Bay estuary and watershed in FY24. The workshops covered teaching nature journaling, ocean literacy, climate resilience, and stewardship through restoration. The same cohort of 25 educators will attend all three workshops of the series in FY24. These attendees included 20 traditional school teachers. The other five attendees were a combination of informal educators, docents, volunteers, and environmental educators.
- Interviewed and judged coastal science projects at the California State Science Fair. A special award for excellence in coastal science and research was given by the California Shore and Beach Preservation Association.
- Continued to work with California State Park Interpreters at the Morro Bay State Park Natural History Museum and the SLO Coast District on various educational programming.

Deliverables: Fieldtrip and presentation statistics (see above in the Communications section).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The activities under this task directly support the outcome of providing formal education partnerships to share watershed and estuary-related messaging with local students.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue the Education tasks outlined above and host the last of three workshop in the series of teacher trainings in spring 2024.

Pending Deliverables: None.

## Nature Center Maintenance & Operations

Objective: Maintain the content and displays in the Nature Center.

Status: Ongoing

Progress Toward Milestones: Staff conduct activities to maintain the Nature Center. In the first half of FY24, the Nature Center had 9,000 visitors. In the first half of FY24, staff implemented a new “kids’ corner” in the Nature Center that has rotating activities for visitors to engage with. Staff continues to update this area with new activities. The tank in the Nature Center has been removed due to the challenges with maintaining a saltwater tank. That area of the Nature Center will be replaced with an expanded Kid’s Corner. A new logo and entrance artwork have been designed and produced, and they will be installed this spring. Estuary Program staff are planning for the addition of new exhibits and updates to maps and interpretive information. Staff conducted ongoing maintenance to keep the Nature Center functioning smoothly.

Deliverables: Visitor statistics for the Nature Center (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The maintenance and updates to the Nature Center conducted as part of this task directly support the outcome of providing a learning center for the estuary that contains updated and engaging exhibits.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program will continue activities to maintain the Nature Center. The Estuary Program will continue to provide field trips and educational programming in the Nature Center.

## Other E&O Tasks/Community Partner Projects

Objective: Support outreach projects in the community that further the goals of the Management Plan.

Status: Ongoing

Progress Toward Milestones: Efforts to support outreach projects in the community included:

- Continued discussions on partnering with ECOSLO to plan adopt-a-spot cleanups across San Luis Obispo County. ECOSLO will create and distribute cleanup kits to help keep marine debris out of the waters of San Luis Obispo County. The Estuary Program will be the organizational liaison for any adopt-a-spot cleanup groups formed in Morro Bay and Los Osos. The effort is expected to launch in spring 2024.
- The Estuary Program’s Community Engagement Projects Manager serves as a co-chair for the SLO MPA Collaborative. While the Bay Foundation formerly acted as the applicant and grant recipient for the Collaborative, the group has recently been able to hire staff to take on this role for the organization. Estuary Program staff will continue to participate in the Collaborative.

- Estuary Program staff have been active members in the newly formed Environmental Education Coalition of SLO County, hosted by One Cool Earth. The group aims to effectively communicate and collaborate on environmental education initiatives and programs in the county.
- Staff worked with the SLO MPA Collaborative to develop and print new versions of the MPA coloring books that are bilingual English-Traditional Chinese. State-wide distribution of these coloring books began in January and will continue to through this spring.
- Staff opportunistically partnered with other organizations to engage the community including Woods Humane Society, Sea Otter Savvy, Camp Ocean Pines, Creek Lands Conservation, El Camino Homeless Organization, SLO Beaver Brigade, and more.
- Staff tabled at the Downtown SLO Farmers Market and Downtown Morro Bay Farmers Market on average every quarter. Tabling at farmers markets in the first half of FY24 reached approximately 200 people.

Deliverables: Outreach statistics (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities conducted under this task directly support the outcome of coordinating with partner organizations on developing and sharing key messages.

Problems Encountered: Staff changes at ECOSLO have delayed progress on the Adopt-a-Spot cleanup partnership. Estuary Program staff are looking at ways to potentially host this individually. Winter weather delayed or canceled some events.

Activities Planned for Next Six Months: Staff will develop an effort to establish and manage the Los Osos and Morro Bay groups of adopt-a-spot cleanup crews. Staff will also continue to be active members of the SLO MPA Collaborative and to host and attend community event opportunities as they arise.

Pending Deliverables: Cleanup statistics. Event participation statistics.

## Mutts for the Bay

Objective: Support pet waste management program to prevent bacterial contamination in the bay.

Status: Ongoing

Progress Toward Milestones: The Estuary Program continued its work managing the program, which included accepting and managing donations, installing and maintaining dispensers, and coordinating volunteers. In 2018, the program received a grant from a private foundation to fund staff time and related costs for three years. In March 2021, the grant was extended and will now support the Mutts for the Bay Program through 2025. The grant also funds the development and sharing of outreach materials with pet owners. There are 36 dispensers that are maintained by the program. More than 150,000 bags were given away to pet owners in the first half of FY24. These bags prevented an estimated 40,000 pounds of pet waste from reaching the estuary. The Estuary Program continued its Mutts for the Bay Instagram account (see above in Communications). The Estuary Program continued its partnership with a local Humane Society animal shelter, Woods Humane Society. Staff launched an effort to rebrand the Mutts for the Bay program logo and branding kit. The new logo will launch in spring with additional materials on how to be an eco-friendly dog owner. During the first half of FY24, staff brought Mutts for



the Bay materials to all tabling events and reached over 750 people. Staff will continue to partner with the San Luis Obispo County Stormwater Program to fund the bags in all the Los Osos dispensers. An interactive map of dispenser locations is available at <https://www.mbnep.org/mutts-for-the-bay/>.

Deliverables: Mutts for the Bay program statistics (see above). Mutts for the Bay educational materials available [online](#).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities under this task directly support the outcome of encouraging responsible behavior by pet owners to reduce bacterial loading to the estuary, thus improving water quality and protecting beneficial uses such as shellfish farming and recreation.

Problems Encountered: None.

Activities Planned for Next Six Months: Staff will continue its financial management and coordination activities to maintain the program. Staff will also continue to develop outreach materials and connect with pet owners. The partnership with Woods Humane Society's educational programming will be further developed to bring Mutts for the Bay curriculum and materials to students across SLO County. Estuary Program staff will continue to table at pet-focused events and farmers markets.

Pending Deliverables: Reporting on the private foundation grant. Outreach materials. Statistics on students reached as applicable.

## Program Management

### Manage Committees and Build Partnerships

Objective: Hold quarterly meetings and support partnerships.

Status: Ongoing

Progress Toward Milestones: Staff compiled meeting materials and coordinated quarterly meetings of the Executive Committee (EC) throughout the year. Technical Advisory Committee (TAC) members were called on as needed for review of Community Project applications, eelgrass efforts, water quality monitoring, data analysis, fish monitoring, and technical plans. Staff recruited a new Government-at-Large member from the SLO County Public Works Department. This new member is a great addition to the committee as many of their projects overlap with efforts in the Morro Bay watershed.

Partnerships are also supported through collaborative project development and technical support. The Estuary Program continues its work on partnership projects developed and implemented in collaboration with partner organizations. These include:

- Staff conducted eelgrass monitoring and restoration under a USFWS grant awarded through the Pacific Marine and Estuarine Fish Habitat Partnership (PMEP).
- Staff served on the PMEP Science and Data Committee and attended two meetings during this time period.

- The Estuary Program is a partner on the Santa Monica Bay National Estuary Program’s vessel pump-out monitoring program. Staff monitor three pump-outs three times a year and share the results via a publicly-accessible app.
- The Estuary Program partnered with USGS to implement a project to study tidal marshes and rising sea levels.
- The Estuary Program is working with Caltrans, SLO County, and other partners to study the feasibility of removing fish passage barriers on San Luisito Creek.
- Staff served on the California Coastal Dune Science Network Advisory Team. The organization strives to expand understanding of coastal dunes and their role in building a resilient, transitional, and adaptive coast for the future.
- Staff served on the board of the California Shore and Beach Preservation Association, which is the state chapter of the American Shore and Beach Preservation Association.

Deliverables: Minutes, agendas, staff reports, and materials completed for each EC meeting. List of partnerships and project activities (see above).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The activities conducted under this task directly supported the task outcome of providing input and direction for the program and ensuring that partnerships are well supported.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue to coordinate quarterly meetings and work with Management Conference members. We will continue to work with the TACs to develop projects, funding, and collaborations. We will continue to partner with the CSLRCD to seek funding to implement projects developed with funding from Resource Legacy Fund and support work at the Los Osos Wetland property. Staff will continue monitoring efforts in partnership with USGS to support modeling and planning to address the impact of sea level rise on the tidal marsh.

## Grants and Contracts Administration and Financial Management

Objective: Develop workplan, administer grants, and complete annual financial management tasks.

Status: Ongoing

Progress Toward Milestones: Staff worked on financial reporting, progress reports to the EPA and the Management Conference, and participation in NEP conference calls and committees. We coordinated with EPA to provide required materials for oversight of the 320 and BIL grants and managed numerous outside grants to the Estuary Program to support our project work. Staff managed the 320 and BIL workplans and budgets for FY24. Staff began development of a workplan and budget for FY25 for the 320 funding. Staff continued implementation of the FY22 and FY23 BIL funding workplan. Staff developed and submitted an FY24 BIL workplan and budget, which was approved and awarded in February 2024. Staff successfully completed a financial single audit with an outside auditing firm. The Executive Director and staff attended the fall Association of National Estuary Programs (ANEP) meeting in Portland, Oregon in November. The Executive Director is planning to attend the ANEP meeting in Washington, D.C. in the spring.

Deliverables: Minority Business Enterprises-Women Business Enterprises (MBE-WBE) submitted to EPA Region 9 Grants Office. Semi-annual report for FY23 and FY24 funding.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: Activities under this task directly supported the outcome of conducting grant administration and financial management tasks in a timely and accurate manner.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program will continue to implement the FY24 320 and BIL Workplans.

Pending Deliverables: Annual FFR and MBE-WBE. FY25 320 workplan.

## General Administration and Human Resources Management

Objective: Maintain accurate financial and human resources records and manage personnel.

Status: Ongoing

Progress Toward Milestones: Staff maintained the ongoing financial and administrative functions, including recordkeeping, filing, bookkeeping, and equipment and office space upkeep, as well as interacting with the general public. In addition, the Director spent time managing staff performance and workplan progress. Other HR tasks included training, professional development, recruitment, and keeping all personnel policies and procedures up to date. COVID-19 protocols were regularly reviewed and updated based on new state and federal guidance as well as changes in local restrictions. The Estuary Program hired a part-time Monitoring Technician and a part-time E&O Intern. Staff began recruiting for a part-time Environmental Planning Intern.

Deliverables: Summary of task activities (see above). Bookkeeping and other recordkeeping tasks contribute to the completion of the deliverables included for the previous tasks (financial management).

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The administrative and human resources management tasks conducted in the first half of FY24 directly supported the outcome of providing the administrative support that allows the program to function smoothly so that staff can focus on attaining the goals of the organization.

Problems Encountered: None.

Activities Planned for Next Six Months: Staff will conduct all bookkeeping and recordkeeping tasks required for grant management. Staff will conduct all HR tasks including training and professional development.

## Tracking Implementation of the Management Plan and Workplan

Objective: Keep track of Workplan and Comprehensive Conservation and Management Plan (CCMP) implementation.

Status: Ongoing

Progress to Date: Tracked progress on CCMP implementation through biannual reports to the Executive Committee. Conducted analysis of status of CCMP Action Plans to develop a “dashboard” with implementation status for the public.

Deliverables: Semi-annual report to EPA submitted in fall 2023. Biannual Executive Committee reports.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The tasks completed directly support the outcome of conducting tracking to ensure that tasks are completed in a timely and accurate manner.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to report to the Executive Committee on Workplan progress.

Pending Deliverables: None.

## Community Projects

Objective: Provide support for Community Projects that further the goals of the Management Plan and engage the community.

Status: Ongoing

Progress Toward Milestones: Two ongoing Community Projects are underway, with staff working with partners to complete the efforts. For FY24, One Cool Earth, a nonprofit focused on outdoor education in the county, is conducting school garden support, lessons, curriculum, and other activities for Baywood Elementary School in Los Osos. A project started in FY23 to monitor phytoplankton monitoring in Morro Bay is wrapping up. Monitoring was completed, a final report was submitted, a student involved in the project developed a poster and attended a scientific conference to present it, and a public-friendly poster is nearing completion. An approved project with the Los Osos Community Services District to address trash management in Los Osos has been halted due to logistical challenges that were preventing the project from moving forward. As no funds had yet been expended, both parties agreed to cancel the project agreement.

Staff are working with partners to develop projects for FY25.

Deliverables: None.

Comparison of Actual Accomplishments with Anticipated Outputs/Outcomes: The activities conducted under this task included working with existing funding recipients and coordinating with partners to develop new projects that support CCMP goals and Action Plans. These activities directly supported these goals, thus meeting the task outcomes of developing and completing projects that meet program guidelines on community involvement and CCMP nexus.

Problems Encountered: None.

Activities Planned for Next Six Months: The Estuary Program plans to continue to work with partners on ongoing Community Projects. Staff will work with the EC and TAC to review and approve projects for FY25.

Pending Deliverables: Final reports for completed Community Projects.

## Lab Competency Documentation

The Estuary Program utilizes laboratories that have met the certification requirements for their technical area. During FY24, the following labs were used:

For Water Quality: The Estuary Program works with Fruit Growers Laboratory (FGL) and the County of SLO Public Health Laboratory. Both labs maintained Environmental Laboratory Accreditation Program (ELAP) certification during this time period. The certification for FGL is [available online](#). The certification for the County of SLO Public Health Laboratory is under ELAP certification number 2114 and is [available online](#). Note that the state has been slow to update the certification status online. Staff contacted the labs to confirm that their certifications are still current.

For Bioassessment: The Estuary Program uses one lab, EcoAnalysts, Inc., for analysis of bioassessment samples. Bioassessment labs certify their individual taxonomists rather than the lab as a whole. They provided their taxonomists' certifications. Any of the lab's taxonomists listed could be assigned to our projects. The list of taxonomists' certifications is provided with the deliverables for this semi-annual report.

For Bay Nutrient Analysis: The University of California, Santa Barbara (UCSB) Marine Sciences Laboratory conducts analysis of Morro Bay waters for nutrients. Although the laboratory is not ELAP-certified, it undergoes similar steps to ensure data quality. Their detailed QA manual was provided and reviewed by Estuary Program staff, and the lab's QA activities were deemed sufficient to ensure data quality.

## Budget Overview

Table 1: Costs expended during this semi-annual report period (October 1, 2023 to March 31, 2024) and cumulative since the beginning of the grant in October 2021.

Category	Subcategory	FY24 Period 1 320 Funds	FY24 Period 1 Cash Match	FY24 Period 1 TOTAL	Cumulative 320 Funds	Cumulative Cash Match	Cumulative TOTAL
Personnel	Salaries	\$247,803	\$6,750	\$254,553	\$1,102,344	\$36,647	\$1,138,991
	Fringe	\$36,604	\$170	\$36,774	\$122,300	\$876	\$123,176
	Management Conference	\$0	\$0	\$0	\$0	\$0	\$0
	<i>Subtotal</i>	\$284,407	\$6,920	\$291,327	\$1,224,644	\$37,523	\$1,262,167
Travel	<i>(category includes local mileage)</i>	\$5,886	\$0	\$5,886	\$21,592	\$874	\$22,466
Supplies	Software	\$1,132	\$0	\$1,132	\$5,349	\$0	\$5,349
	Monitoring supplies	\$14,288	\$0	\$14,288	\$36,205	\$12,103	\$48,308
	Misc. office supplies, computers	\$4,609	\$0	\$4,609	\$16,405	\$0	\$16,405
	<i>Subtotal</i>	\$20,029	\$0	\$20,029	\$57,959	\$12,103	\$70,062
Contractual	Audit/Taxes/Accounting/Fees	\$2,489	\$4,698	\$7,187	\$36,760	\$18,049	\$54,809
	Education and Outreach	\$6,613	\$11,383	\$17,996	\$39,862	\$31,030	\$70,892
	Monitoring and Research	\$40,856	\$259	\$41,115	\$59,968	\$55,137	\$115,105
	Restoration and Protection	\$825	\$3,650	\$4,475	\$15,725	\$983,343	\$999,068
	<i>Subtotal</i>	\$50,783	\$19,990	\$70,773	\$152,315	\$1,087,559	\$1,239,874
Other	Rent	\$27,636	\$0	\$27,636	\$124,517	\$0	\$124,517
	Utilities	\$1,846	\$0	\$1,846	\$7,112	\$0	\$7,112
	Postage	\$66	\$0	\$66	\$579	\$0	\$579
	Copying, Printing	\$1,207	\$0	\$1,207	\$5,092	\$0	\$5,092
	Training, Prof. Dev.	\$1,170	\$0	\$1,170	\$4,209	\$0	\$4,209
	Telephone, Internet	\$2,702	\$0	\$2,702	\$11,043	\$0	\$11,043
	Repairs and Maintenance	\$1,382	\$0	\$1,382	\$12,660	\$0	\$12,660
	Insurance	\$3,990	\$0	\$3,990	\$7,885	\$0	\$7,885
	Vehicle maintenance, fuel	\$1,373	\$0	\$1,373	\$8,935	\$0	\$8,935
	Community Projects	\$0	\$19,772	\$19,772	\$0	\$35,587	\$35,587
	<i>Subtotal</i>	\$41,372	\$19,772	\$61,144	\$182,032	\$35,587	\$217,619
	<b>TOTAL</b>	<b>\$402,477</b>	<b>\$46,682</b>	<b>\$449,159</b>	<b>\$1,638,542</b>	<b>\$1,173,646</b>	<b>\$2,812,188</b>

Table 2: Costs by program area and task. Match numbers do not include in-kind match.

Program Area	Project	FY24 Period 1 320 Funds	FY24 Period 1 Match	FY24 Period 1 TOTAL	FY23 Overall TOTAL
Education and Outreach	Communications	\$4,685	\$0	\$4,685	\$4,965
	Bay Friendly Recreation	\$70	\$0	\$70	\$653
	Education and Nature Center	\$21	\$0	\$21	\$785
	Community Volunteer Program	\$0	\$0	\$0	\$0
	Mutts for the Bay	\$0	\$11,383	\$11,383	\$22,677
	Other E&O Tasks	\$1,837	\$0	\$1,837	\$2,793
	<i>Subtotal</i>	\$6,613	\$11,383	\$17,996	\$31,873
Monitoring and Research	Benthic Invertebrate Monitoring	\$0	\$0	\$0	\$765
	Water Quality Monitoring	\$2,937	\$259	\$3,196	\$25,076
	Equipment	\$37,919	\$0		
	Eelgrass Monitoring & Analysis	\$0	\$0	\$0	\$0
	<i>Subtotal</i>	\$40,856	\$259	\$41,115	\$25,841
Habitat Protection and Restoration	Restoration & Conservation Planning	\$0	\$0	\$0	\$0
	Restoration Maintenance & Monitor	\$513	\$0	\$513	\$513
	Other Restoration	\$312	\$0	\$312	\$7,005
	Fisheries Management	\$0	\$3,650	\$3,650	\$11,246
	<i>Subtotal</i>	\$825	\$3,650	\$4,475	\$18,764
Program Administration	Community Projects	\$0	\$19,772	\$19,772	\$23,643
	<b>TOTAL</b>	<b>\$48,294</b>	<b>\$35,064</b>	<b>\$83,358</b>	<b>\$100,121</b>