

**SANTA MONICA BAY NATIONAL ESTUARY PROGRAM
DRAFT Fiscal Year 2019 Work Plan**

(October 1, 2018 – September 30, 2019)

8 February 2018 DRAFT

Table of Contents

DRAFT FISCAL YEAR 2019 WORK PLAN	1
COMMON WORK PLAN ACRONYMS	1
I. INTRODUCTION	1
II. WORK PLAN OVERVIEW	4
III. TASK DESCRIPTIONS	7
PROGRAM AREA 1: WATER RESOURCES AND QUALITY IMPROVEMENT	8
1.1 <i>Support regional water quality improvement planning and policies</i>	8
1.2 <i>Improve water quality through pollution control and prevention</i>	10
PROGRAM AREA 2: NATURAL RESOURCE PROTECTION AND HABITAT RESTORATION.....	15
2.1 <i>Support natural resource protection policies and programs</i>	15
2.2 <i>Restore wetlands and streams</i>	18
2.3 <i>Restore coastal bluffs, dunes, and sandy beaches</i>	22
2.4 <i>Restore rocky intertidal and subtidal habitats</i>	25
PROGRAM AREA 3: MULTIDISCIPLINARY AND INTEGRATIVE PROGRAMS	28
3.1 <i>Promote climate change adaptation</i>	28
3.2 <i>Conduct public outreach and increase collaborations</i>	30
3.3 <i>Support planning, monitoring, and organizational management</i>	33
<i>Appendix A. Completed, Removed, or Combined Objectives or Tasks from FY18 Work Plan</i>	39
<i>Appendix B. Prop. 84: details of completed projects from FY17 and FY18</i>	47
<i>Appendix C. Prop. 84: details of ongoing projects</i>	48
<i>Appendix D. Groups for which SMBNEP staff provide technical support</i>	50

Common Work Plan Acronyms

BEP = Boater Education Program
BRP = Santa Monica Bay Restoration Plan
CDFW = California Department of Fish and Wildlife
CMP = Santa Monica Bay Comprehensive Bay Monitoring Program
CRI = Loyola Marymount University's Coastal Research Institute
CVA = Clean Vessel Act
DBW = California State Parks Division of Boating and Waterways
EC = Santa Monica Bay Restoration Commission Executive Committee
EWMP = Enhanced Watershed Management Plans
FY19 = Federal Fiscal Year 2019
GB = Santa Monica Bay Restoration Commission Governing Board
GPRA = Government Performance and Results Act
LARC = Los Angeles Regional Collaborative for Climate Action
LARWQCB = Los Angeles Regional Water Quality Control Board
MPA = Marine Protected Area
MRCA = Mountains Recreation and Conservation Authority
NPDES = National Pollutant Discharge Elimination System
Prop. = Proposition Grant
RCDSMM = Resource Conservation District of the Santa Monica Mountains
SCC = California State Coastal Conservancy
SCCWRP = Southern California Coastal Water Research Project
SMBNEP = Santa Monica Bay National Estuary Program
SMBRA = Santa Monica Bay Restoration Authority
SMBRC = Santa Monica Bay Restoration Commission
SotB Report = 2015 State of the Bay Report
SWRCB = State Water Resources Control Board
TAC = Santa Monica Bay Restoration Commission Technical Advisory Committee
TBF = The Bay Foundation (also known as the Santa Monica Bay Restoration Foundation)
TMDL = Total Maximum Daily Load
UCLA = University of California, Los Angeles
USC = University of Southern California
USEPA = United States Environmental Protection Agency
WMP = Watershed Management Plans

I. INTRODUCTION

Santa Monica Bay National Estuary Program Entities

Section 320 of the federal Clean Water Act establishes the National Estuary Program (NEP), which is administered by the United States Environmental Protection Agency (USEPA). To implement the NEP, USEPA identifies national estuaries, develops a Comprehensive Conservation and Management Plan to restore the estuaries, and provides grants to pay for activities necessary to implement the plan. USEPA identified the Santa Monica Bay as a national estuary and approved the Santa Monica Bay Restoration Plan (BRP), with the concurrence of the State that identifies actions and priorities to restore the Santa Monica Bay. The Santa Monica Bay National Estuary Program (SMBNEP) is implemented by four entities: the Santa Monica Bay Restoration Commission (SMBRC), the Santa Monica Bay Restoration Authority (SMBRA), the Santa Monica Bay Restoration Foundation also known as The Bay Foundation (TBF), and Loyola Marymount University's Coastal Research Institute (CRI) (Figure 1). Each entity is briefly described below, and more information can be found on the roles, membership, and relationship between entities on the following webpage: http://www.smbrc.ca.gov/about_us/orientation/.

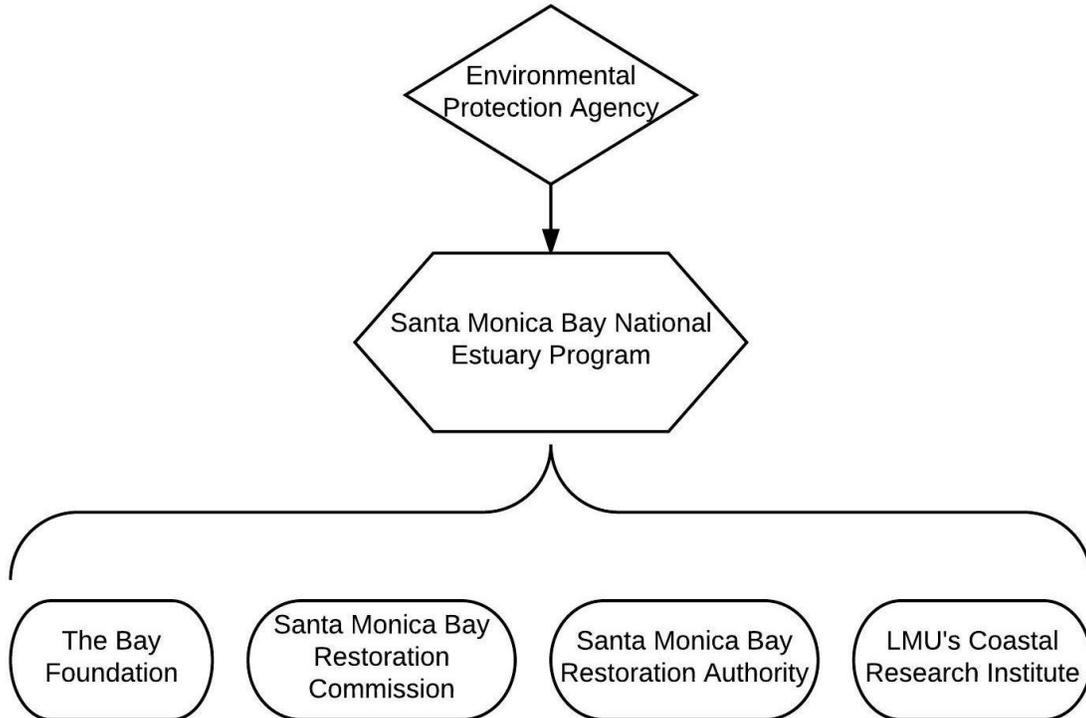
SMBRC is a non-regulatory, locally-based state entity established by an act of the California Legislature in 2002 [Pub. Res. Code §30988(d)]. SMBRC is charged with coordinating activities of federal, state, local, and other entities to restore and enhance the Santa Monica Bay, including identifying and leveraging funding to put solutions into action, building public-private partnerships, promoting cutting-edge research and technology, facilitating stakeholder-driven consensus processes, and raising public awareness (www.smbrc.ca.gov). SMBRC brings together local, state, and federal agencies, environmental groups, businesses, scientists, and members of the public on its 36-member Governing Board. SMBRC is also supported by a Technical Advisory Committee (TAC), and a broad stakeholder body, the Watershed Advisory Council (WAC). SMBRC is supported administratively by the State Water Resources Control Board (SWRCB), including staff and office space.

SMBRA was created in 2004 by a joint exercise of powers agreement between SMBRC and the Los Angeles County Flood Control District and operates as a local public agency within the Santa Monica Bay watershed and the jurisdictional boundaries of SMBRC and the District. The purpose of SMBRA is to broaden funding opportunities for projects within the Santa Monica Bay Watershed, and it provides an efficient method by which state agencies can fund important programs of the SMBNEP.

TBF is an independent, non-profit 501(c)(3) organization founded in 1990. The mission of TBF is to contribute to the restoration and enhancement of the Santa Monica Bay and other coastal waters (www.santamonica.org). TBF receives an annual grant from USEPA pursuant to section 320 of the Clean Water Act (33 U.S.C. §1330) to implement the BRP. TBF also receives important grants and donations from other entities to support TBF and its implementation of the BRP.

The Coastal Research Institute (CRI) brings together expertise from Loyola Marymount University's Frank R. Seaver College of Science and Engineering and TBF to restore and enhance Santa Monica Bay and local coastal waters. The Institute contributes to better understanding of global urban coastal resource management through the execution of projects that stem from TBF's work on USEPA's Santa Monica Bay National Estuary Program. CRI will engage educators, academics, graduate students, undergraduate students, agencies, industry and more in research related to coastal resource management.

Figure 1. Santa Monica Bay National Estuary Program structure.



Bay Restoration Plan and FY19 Work Plan

The original BRP of 1995 was updated in 2008 and again in 2013. SMBNEP is currently beginning a major BRP revision. The revision is scheduled to be completed by 2019. EPA’s funding guidance describes a revision as an alteration of the BRP that involves significant changes such as new or significantly altered goals, or to incorporate new information and data, such as from climate change. Updates and revisions are made to the BRP through a public and iterative process with active participation from members of the Governing Board as well as members of the WAC and TAC. The [2013 BRP](#) identified approaches and strategies intended to make substantial progress toward Bay restoration over the next ten to twenty years. It reflected the consensus of SMBNEP partners with regard to the best strategies and priorities to ensure continued progress and achieve eventual restoration of the Bay and its watershed. The current revision to the BRP is ongoing and will include new information and data obtained since the last update, including applying the results of the climate change vulnerability assessment project completed in September 2016.

The purpose of this federal Fiscal Year 19 (FY19) Work Plan is to identify program objectives, tasks, and timelines of the work to be performed during the federal fiscal year (FY19): October 1, 2018 – September 30, 2019, specifically to accomplish the goals and objectives of the 2013 BRP and various technical, managerial, and administrative activities necessary to continue to advance the mission of SMBNEP. Fourteen Goals are identified in the 2013 BRP, in three major “Priority Issue” categories: *Water Quality*, *Natural Resources*, and *Benefits and Values to Humans*. The 14 Goals are described below. The Goals that will be addressed in this Work Plan are identified with an asterisk. The Goals are achieved through actions by many different entities, including public agencies and non-profit organizations that take the lead on specific projects.

Priority Issue – Water Quality

Goal #1: Improve water quality through enhancement of current regulatory framework and collaborative, integrated watershed-wide planning and implementation *

Goal #2: Improve water quality through pollution prevention and source control *

Goal #3: Address potential impacts of contaminants of emerging concern.

Priority Issue – Natural Resources

Goal #4: Create and support policies and programs to protect natural resources *

Goal #5: Acquire land for preservation of habitat and ecological services

Goal #6: Manage invasive species *

Goal #7: Restore wetlands, streams and riparian zones *

Goal #8: Restore coastal bluffs, dunes, and sandy beaches *

Goal #9: Restore intertidal and subtidal habitats *

Goal #10: Protect and restore open ocean and deep water habitats

Priority Issue – Benefits and Values to Humans

Goal #11: Protect public health *

Goal #12: Maintain/increase natural flood protection through ecologically functioning floodplains and wetlands *

Goal #13: Increase public access to beaches and open space *

Goal #14: Conserve water and increase local water supply *

Connection to USEPA Goals

The Clean Water Act section 320 grant is administered by USEPA and provided to TBF for carrying out certain annual Work Plan activities. Non-federal grant matching funds are required at a minimum rate of 1:1. In lieu of direct funding, the State Water Resources Control Board (SWRCB) contributes by providing state staff, office space, and other administrative services to SMBRC. In addition to the SWRCB contribution, the federal grant match requirement is met using funds from the State bond grants [e.g., Proposition 50 and 84 grants administered by the SWRCB and Proposition 12 grants administered by the State Coastal Conservancy (SCC)], and other State and local grants and funds received and managed by TBF and SMBRA. Projects and activities conducted by other entities identified in this Work Plan are funded by various sources secured by those entities.

The FY19 Work Plan and the BRP serve USEPA's Goal 1: Core Mission – deliver real results to provide Americans with clean air, land, and water. EPA's *FY 2014-2018 Strategic Plan* charts a course for the agency and is organized around five key goals, including: addressing climate change and improving air quality; protecting America's waters; cleaning up our communities and advancing sustainable development; ensuring the safety of chemicals and preventing pollution; and enforcing environmental laws.

This Work Plan includes activities that will contribute to the FY14-18 EPA Strategic Plan goals as well as the Office of Water (OW) *National Water Program Guidance* (FY16 and FY17). Specifically, the SMBNEP contributes to the element of the guidance that states: "EPA will continue to build the capacity within the National Estuary Program to adapt to changes from climate change on the coasts, and will provide additional assistance to individual NEPs to support their work to develop adaptation plans for their study areas or technical assistance to support implementation of those plans."

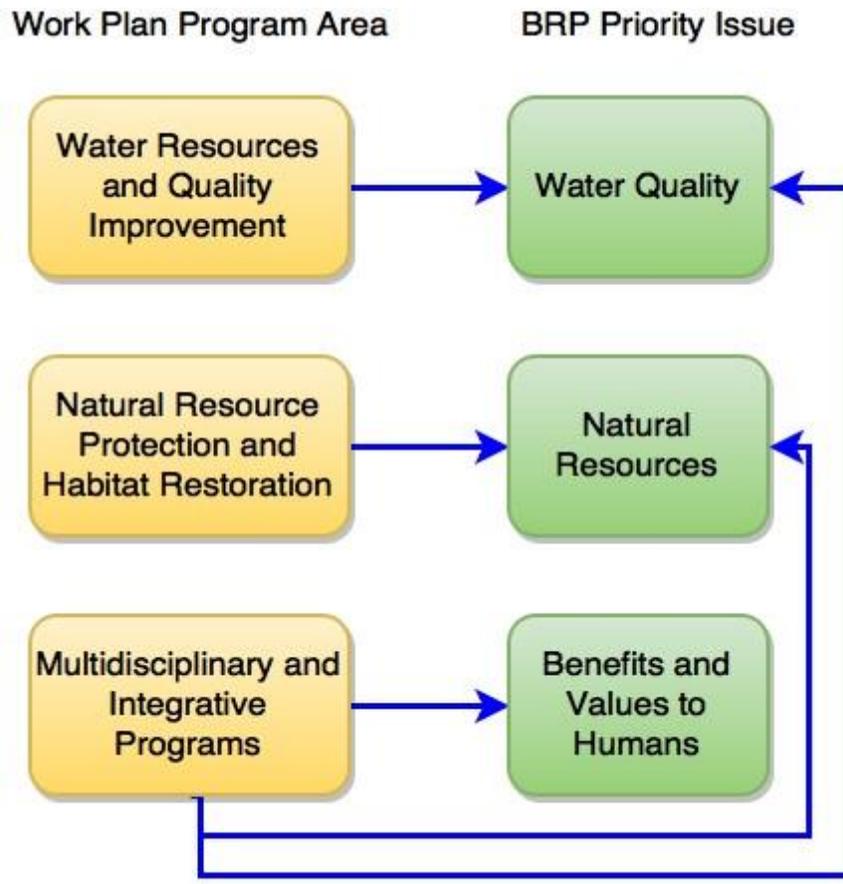
II. WORK PLAN OVERVIEW

Work Plan Structure

Section II of the Work Plan provides an overview of the activities to be undertaken in FY19. Section III provides details on the individual tasks and how each task advances the goals of the BRP. Sections IV and V depict the Work Plan budget and travel documentation, respectively.

The scope of this Work Plan is broad and structured into three overarching Program Areas (all contained within Section III) (Figure 2). Significant efforts will be devoted to carry out water quality improvement and habitat restoration programs and projects, aimed at achieving the objectives and milestones in the Water Quality and Natural Resources sections of the BRP. The Program Area identified as Water Resources and Quality Improvement relates specifically to the BRP Priority Issue: Water Quality; the Program Area identified as Natural Resource Protection and Habitat Restoration relates specifically to the BRP Priority Issue: Natural Resources (Figure 2). There will also be focus and efforts in FY19 to implement programs that interconnect and integrate issues across traditional boundaries such as climate change and comprehensive monitoring. These interdisciplinary issues that cover a broad range of topics are categorized into the Work Plan Program Area: Multidisciplinary and Integrative Programs. Figure 2 illustrates the connection between SMBNEP’s FY19 Work Plan and BRP 2013 Priority Issues.

Figure 2. Connection between SMBNEP’s FY19 Work Plan Program Area and 2013 BRP Priority Issues.



Each of the three Work Plan Program Areas are further categorized into broad Goals and can be identified as 1.1, 1.2, etc. The table below illustrates each of the three Work Plan Program Areas and the nine Goals identified as priorities for FY19.

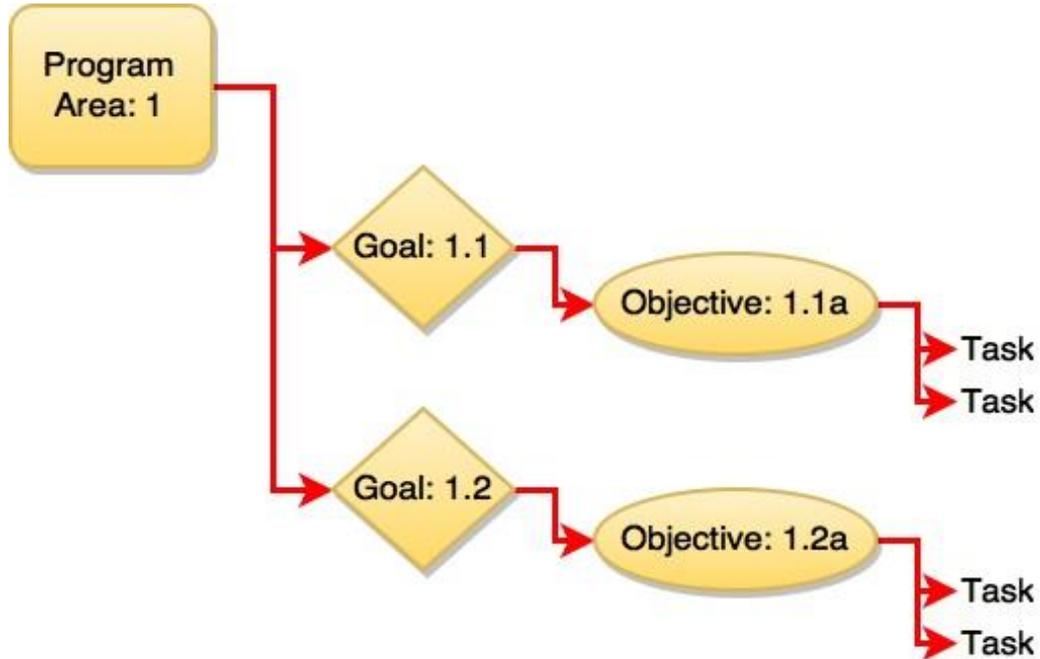
Work Plan Program Area	Work Plan Goal
1. Water Resources and Quality Improvement	1.1 Support regional water quality improvement planning and policies
	1.2 Improve water quality through pollution control and prevention
2. Natural Resources and Habitat Protection	2.1 Support natural resource protection policies and programs
	2.2 Restore wetlands and streams
	2.3 Restore coastal bluffs, dunes, and sandy beaches
	2.4 Restore intertidal and subtidal habitats
3. Multidisciplinary and Integrative Programs	3.1 Promote climate change vulnerability assessment and adaptation
	3.2 Conduct public outreach
	3.3 Support planning, monitoring, and organizational management

The Work Plan Goals are further divided into Objectives (at the level of 1.1a, 1.1b, etc.). Each Objective has its own subsection within Section III containing a series of tasks identified within a table that will take strides towards reaching the Objective. Figure 3, on the next page, illustrates the Work Plan structural outline.

Work Plan Changes from FY18

The differences between the FY18 Work Plan and the FY19 Work Plan are summarized in Appendix A, through a table that briefly describes tasks that were either completed in FY18, combined with other tasks for FY19, or removed. Tasks were combined for many reasons, including, but not limited to, reporting efficiency, increasing the readability and succinctness of the Work Plan, increasing consistency of task scopes throughout the Work Plan, and to provide a better understanding of projects with similar goals. Tasks were removed primarily due to lack of funding identified for FY19. Removal from the Work Plan does not indicate that the task will not be re-initiated in future years. Work Plan tasks will continue to be driven by SMBNEP's BRP.

Figure 3. Work Plan structural outline graphic.



Partnerships and Roles

In addition to projects led and carried out directly by entities of SMBNEP, staff will work with partner organizations and other stakeholders toward collaborative programs, and facilitate and promote activities by partner organizations and stakeholders to achieve the objectives and milestones of the BRP. The role of each SMBNEP entity (SMBRC, TBF, or SMBRA) may differ for each specific Work Plan task and their roles are clearly identified in the Work Plan as one or more of the following:

- **Lead:** SMBNEP entity is the lead sponsor and oversees completion of the project activity, and/or the entity carries out the projects directly. These tasks are priorities for the current fiscal year.
- **Participate:** SMBNEP entity contributes staff and/or other resources and actively engages in project activities.
- **Facilitate:** SMBNEP entity provides assistance in coordination, consensus and partnership-building, information exchange, fund raising, etc.
- **Promote:** SMBNEP helps to accomplish the project by actively campaigning for, and/or helping to disseminate information, etc. for the associated activities.
- **Support:** SMBNEP advocates for the project or activity by adopting policy statements, offering endorsements, providing supporting letters, testimony, etc.

III. TASK DESCRIPTIONS

This section outlines each of the FY19 Work Plan goals and objectives and provides project narratives and background with task level details summarized in a table for each goal. Each task table articulates which SMBNEP entity(ies) are involved, their role, major project partners, and key actions and deliverables. Tasks in which an SMBNEP entity is identified as the lead or tasks which are identified as SMBNEP priorities for FY19 will also have a supplemental narrative containing details about the task and the project(s) it may contain.

The particular BRP objectives and milestones that are linked to each task are identified, along with the anticipated environmental results. Environmental results are divided into Outputs (i.e., an activity or effort and/or associated work products that are produced or provided over a specific period of time) and Outcomes (i.e., long term environmental changes or benefits resulting from such activities/ efforts) and refer to results that are expected to be achieved in FY19.

Many of the FY19 tasks are continued from previous efforts or projects. Tasks which are new for this fiscal year are identified with a double asterisk in the tables; all others should be assumed to be ongoing. Completed tasks are often closely connected to ongoing, similar projects, and/or are part of a larger project. Relevant recent completed tasks from the FY19 Work Plan are identified with a summary narrative for each individual project at the end of each section (after the task table for each objective).

Program Area 1: Water Resources and Quality Improvement

Tasks and activities in this section of the Annual Work Plan are intended to advance the goals, objectives, and milestones that address water quality-related issues, as laid out in Priority Issue 1, Water Quality, of the BRP. Section A of the BRP lays out goals, objectives, and milestones for addressing major water quality issues existing in the Bay and the Bay watershed. One primary goal of this Section is to improve water quality through enhancement of current regulatory framework and collaborative, integrated watershed-wide planning and implementation (Goal #1). To achieve this goal, SMBNEP has worked, and will continue to work with, parties responsible for meeting allocations of total maximum daily loads (TMDLs) and dischargers responsible for complying with National Pollutant Discharge Elimination System (NPDES) permits. The following table summarizes the Goals and Objectives for Program Area 1 in the FY19 Work Plan.

Goal	Objective
1.1 Support regional water quality improvement planning and policies	1.1a Implement stormwater pollution control BMP funded through Prop. 84 bond and other grant programs
	1.1b Promote and participate in integrated watershed-wide water quality improvement planning and implementation
1.2 Improve water quality through pollution control and prevention	1.2a Implement green infrastructure and LID projects
	1.2b Implement the Boater Education Program
	1.2c Implement the Restaurant Engagement Program

1.1 Support regional water quality improvement planning and policies

Specific contributions of SMBNEP towards regional water quality improvement planning and policies include recommending awards and overseeing implementation of State Proposition (Prop.) 50 and 84 grant funding for stormwater pollution reduction projects, and facilitating other sources of State funding. SMBNEP has also facilitated, and will continue to facilitate the achievement of TMDL waste load and load allocation targets through integrated regional water resource management approach, which will not only improve the Bay’s water quality, but also aid in recharging local groundwater supplies and conserving water.

1.1a Implement stormwater pollution control BMP funded through Prop. 84 bond and other grant programs

SMBRC Governing Board recommends funding of projects through this program to the State Water Resources Control Board (SWRCB) after a public process to ensure they meet the BRP objectives and address the BRP priorities, meet the requirements of the enabling legislation, and are consistent with USEPA’s Strategic Plan. Adequate oversight of these projects is essential and entails close coordination with SWRCB staff and project proponents in preparing grant agreements, project execution, and project reporting.

Prop. 84 Grants

At the time of this report writing, the construction phase of two Proposition projects was completed in FY18: University Park Rain Gardens and Milton Street Park Project (Appendix B). Project monitoring and closeout should be completed by mid-2018. Both projects will increase native habitat, divert and treat stormwater, and improve water quality by addressing Ballona Creek TMDLs for trash, metals, bacteria, DDT and PCBs through trash capture, infiltration and treatment. For additional details on these ongoing projects, see Appendix C.

In FY19, SMBRC will continue to work with grantees to implement four additional Prop. 84 projects: Culver Boulevard Realignment and Stormwater Infiltration/Retention Regional Project, Westwood Neighborhood Greenway Project, Santa Monica Bay Catch Basin Insert Project, and Ladera Park Water Quality Enhancement Project.

1.1b Promote and participate in integrated watershed-wide water quality improvement planning and implementation**Water Quality Planning and Funding**

SMBRC and TBF will continue to promote state-wide, regional, and sub-regional efforts in water quality improvement planning and implementation efforts. These efforts include, but are not limited to the collaborative effort of local environmental, municipal, and business communities to increase funding for water resiliency. Efforts will be made to assist a timely completion of the LA County Water Resiliency Work Plan, a collaborative effort of local environmental, municipal, and business communities to increase funding including a new County-wide funding ballot measure, for water resiliency. SMBNEP will support the identification of available Prop. 1 funding for new projects, with a continued focus on projects identified in the Watershed Management Plans (WMPs) and Enhanced Watershed Management Plans (EWMPs) thereby assisting compliance with the Los Angeles County MS4 permit; and the related Storm Water Strategy, an effort led by the SWRCB to sustainably manage and utilize storm water in California to support water quality and water availability, by engaging and collaborating with SWRCB and LARWQCB staff, supporting projects where appropriate, and keeping the SMBRC Governing Board and membership informed of pertinent developments.

Integrated Water Resource Management Plan

SMBRC has been participating as a member of the Leadership Committee representing open space, and the two sub-regional groups in the Santa Monica Bay watershed of the Integrated Water Resource Management Plan (IRWMP) for the Los Angeles Metropolitan region. During FY19, SMBRC will continue to participate in the activities of the leadership group and sub-region steering committees to provide necessary technical and advisory support. In addition, SMBRC will continue to work with LARWQCB staff and others to identify and incorporate regulatory priorities into the selection of specific projects included in the IRWMP, especially projects that lead to water quality improvement by reducing stormwater pollutant loading, regulated by the MS4 permit, specific TMDL implementation plans, and related efforts.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
1.1a Implement stormwater pollution control BMP funded through Prop. 84 bond and other grant programs				
Oversee pollution control BMPs funded through Prop. 84 bond grants	SMBRC	Participate	SWRCB*, LARWQCB, MS4 permittees	Grant agreements drafted in early 2017; project implementations: April 2017 – 2020
1.1b Promote and participate in integrated watershed-wide water quality improvement planning and implementation				
Implement water quality planning and funding projects and programs	SMBRC, TBF	Promote	LA County, MS4 permittees, LADPW, LACSD, West Basin Water District, LARWQCB	Engage with County staff to identify collaborative projects and opportunities for proposition and other money for water quality improvement projects
Participate in IRWMP to provide technical support	SMBRC	Participate	Los Angeles County Dept. of Public Works (LACDPW)*, municipalities in watershed, Los Angeles County Sanitation District (LACSD), West Basin Water District	Quarterly meetings

* Project lead

Linked BRP Objectives and Milestones: 1.1a-d

1.2 Improve water quality through pollution control and prevention

Another important goal in the Water Quality Section of the BRP is to improve water quality through pollution prevention and source control (Goal #2). This goal is aimed at implementing projects to reduce and prevent the generation of pollutants at their sources before entering the region’s waterways. To achieve this goal, SMBNEP has spearheaded and carried out several successful pollution source control programs including the residential rain garden program, Boater Education Program, and the Clean Bay Restoration Certification program. In FY19, SMBNEP will continue to seek opportunities to fund and expand these programs.

1.2a Implement green infrastructure and LID projects

Green infrastructure and low impact development (LID) practices are increasingly used as an effective tool to capture, treat, and infiltrate stormwater on-site. In addition to improving surface water quality,

these practices also provide multiple benefits including creation of native habitat, beautification of the urban landscape, and reduction of outdoor water use for irrigation, etc. SMBNEP has given priority to green infrastructure projects when recommending the allocation of the state bond funding (Prop. 50, 84, see Section 1.1a) and seeking grants to implement (TBF) LID projects directly.

Rain Garden Pollutant Tracking

TBF and LMU's Coastal Research Institute are partnering on a study to evaluate how metals are concentrated in the soils and plants at the Ballona Creek Rain Garden (BCRG) to understand the fate of metals from the retained stormwater. Constructed biofilters (e.g. bioswales, rain gardens, bioretention gardens) have been shown to significantly reduce pollutant load by mimicking natural processes and filtering out pollutants; however, their fate within the biofilter itself is largely unknown. This work will fill a gap in the knowledge and understanding of metal pollutant removal in the BCRG and in Southern California bioswale vegetation to inform LID and BMP development.

1.2b Implement the Boater Education Program

California has one of the highest levels of recreational boating activity in the nation with approximately 2 million recreational boats. Boating related pollution such as sewage, oil, copper, household hazardous waste (i.e. cleaners, stains, varnishes, batteries, automotive fluids, certain paints, etc.), aquatic invasive species, and marine debris can directly impact water quality along the 1,100 miles of coast and of hundreds of inland navigable waterways. The [Boater Education Program](#) (BEP) helps to accomplish Goal #2 of the BRP, which is to improve water quality through the pollution prevention and source control.

Pumpout Monitoring

The goal of pumpout station monitoring is to promote usability of pumpout stations, promote useful pollution prevention amenities for boaters, and decrease the amount of sewage discharged into waterways. In FY19, TBF staff will continue quarterly monitoring of 70 pumpout stations throughout Southern California's major harbors including: Santa Barbara, Ventura, Channel Islands, Marina del Rey, King Harbor, Los Angeles, Long Beach, Huntington Harbor, Newport, Oceanside, Dana Point, and San Diego. TBF staff will continue to work with program partners, SFEP and DBW, on developing monitoring protocols for the State of California. TBF staff will work DBW on the beta-trial of Pumpout Nav application and the application's administration site for on-site pumpout data collection. Pumpout Nav also serves as a mobile app for boaters to geo-locate pumpout stations, submit facility reviews and photos, and will include a portal to notify facility managers of operational difficulties with a given pumpout.

Boating Community Engagement

TBF will educate the boating community about minimizing the environmental impact of boating, with the goal of decreasing pollutants that enter the waterways. Engagement will be accomplished through three main projects: mobile pumpout service outreach (i.e. Honey Pot Program), volunteer coordination (i.e. Dockwalker Partner Program), in-water hull management (i.e. Marina del Rey Boat Lift project). The Honey Pot Program encourages proper sewage disposal by providing free mobile pumpout service and clean boating education to boaters in Los Angeles County. The Dockwalker Partner Program exists to promote leadership and behavioral change through peer-to-peer outreach. This program coordinates volunteers and conducts trainings to distribute information about safe and clean boating practices. The two main goals of the in-water hull management outreach project are to promote the Marina del Rey Harbor Copper TMDL Boat Lift Program to boaters in Marina del Rey Harbor and to increase boater

knowledge about the copper TMDL, integrated pest management solutions, and raise the visibility of the Los Angeles County Department of Beaches and Harbor's actions to address the issue.

Specifically in FY19, tasks will include: Develop annual Southern California Tide Calendar, quarterly Changing Tide newsletters, annual Dockwalker newsletter and other communications, Dockwalker training presentation, Boater Kit, boater questionnaire, Clean Boating Pledge, attend boating engagement events, track contacts and distribution of engagement materials, conduct 4 to 5 Dockwalker trainings, convene Dockwalker TAC meeting in winter 2018/19, and award top Dockwalker Partners in 2018/19, and produce six outreach tools (i.e. fliers, fact sheet, newspaper articles, post card, brochure, and video) for the Marina del Rey Harbor Boat Lift Program.

****NEW: CVA Vessel Waste Disposal Plan**

TBF will partner with SFEP to provide recommendations for the update of the 5-year California Statewide Vessel Waste Disposal Plan. This effort includes updating the current stock of stationary pumpout facilities, dump stations, and floating restrooms for coastal and inland waterbodies throughout Southern California, as well as recommend strategies for resource development.

1.2c *Implement the Restaurant Engagement Program*

Clean Bay Restaurant Certification Program

Clean Bay Certified helps cities meet Municipal Separate Sewer and Storm (MS4) permit requirements by providing a framework for implementation of their Public Involvement and Participation requirement under the permit. Annual stormwater inspections by the city, along with additional support (i.e. stormwater education, water conservation tools, source reduction assistance, etc.) from TBF helps limit pollutants conveyed by stormwater from restaurants. TBF will support inspections and promote certified restaurants on websites, social media, at public engagement events, and presentations. For more information, go to: www.santamonicabay.org/learn/our-work/clean-bay-restaurants/.

Community Composting and Organics Recycling Outreach

The Table to Farm Composting for Clean Air program addresses methane generation from landfills, organics recycling, and healthy soils by connecting restaurants with compost hubs, urban farms, and community gardens.

TBF will partner with local community groups and schools (i.e. Social Justice Learning Institute (SJLI), Environmental Charter Schools) on a "Table to Farm" composting program in the City of Inglewood. TBF will work with these groups to install and manage community composting sites assisting restaurants with source reduction, organics recovery, and food rescue. In addition to addressing air quality issues, TBF will raise awareness about SJLI's CSA program and the benefits of buying from it at local L.A. restaurants. For more information, go to: www.santamonicabay.org/explore/our-communities/clean-bay-restaurants/table-farm-composting/

Single Use Disposable Products Reduction Initiative

In FY19, through a partnership with Rethink Disposables (a program of Clean Water Action and Clean Water Fund), TBF will work to reduce single use disposable items from food service establishments. This program addresses litter prone food packaging found in stormwater and marine debris and focuses on stopping the pollution at its source. TBF will conduct waste audits at food service establishments,

provide technical assistance to restaurants on the use of durable products, and continue to seek additional funding.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
1.2a Implement green infrastructure and LID projects				
Implement the rain garden pollutant tracking study	TBF	Participate	LMU's CRI *	Final Master's thesis and associated presentation completed in June 2019
1.2b Implement the Boater Education Program				
Conduct pumpout monitoring	TBF	Lead	San Francisco Estuary Partnership, DBW	Quarterly monitoring of 79 (may vary) stationary sewage pumpout units and annual report
Implement boating community engagement program	TBF	Lead	DBW, CA Coastal Commission, San Francisco Estuary Partnership, US Coast Guard Auxiliary, US Power Squadrons, boating community, marinas and yacht clubs, volunteers, DBH, LARWQCB	Conduct outreach and produce materials (e.g. Changing Tide Calendars, newsletters, Boater Kits) to engage more than 6,500 boaters; distribute boater kits via the Dockwalker and Marina del Rey Boat Lift Programs; track event participation; award Dockwalker Partners
** NEW: Update the CVA Vessel Waste Disposal Plan	TBF	Lead	San Francisco Estuary Partnership, DBW, CCC, marinas, yacht clubs, harbor management, cities	Recommendations for the revised CVA Vessel Waste Disposal Plan
1.2c Implement the Restaurant Engagement Program				
Implement Clean Bay Certified program	TBF	Lead	Cities in the Bay Watershed, RWQCB	Seek grants and funding (ongoing); semi-monthly online promotion; award events in Feb 2019; conduct restaurant staff interviews; media

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
				outreach, support annual/monthly inspections of restaurants (approx. 350 annually)
Implement community composting and organics recycling outreach	TBF	Lead	Social Justice Learning Institute, Environmental Charter Schools, cities in the Bay Watershed, restaurants	3-4 restaurant composting programs; oversee 2 composting hubs (central composting location); engagement materials and signage
Single Use Disposable Products Reduction Initiative	TBF	Lead	Rethink Disposables, Clean Water Action / Clean Water Fund, food service establishments	Seek grants and funding (ongoing); produce 3 case studies on transitioned food service establishments and distribute engagement materials

* Project lead

** New project for FY19

Linked BRP Objectives and Milestones: 2.1d-f, 2.2, 2.4a-d, 2.5a, 14.1, 14.2

Program Area 2: Natural Resource Protection and Habitat Restoration

Tasks and activities in this section of the Annual Work Plan are intended to advance the goals, objectives, and milestones that address natural resources-related issues, as laid out in Priority Issue 2, Natural Resources, of the BRP. The BRP addresses the natural resources-related issues first by supporting better information gathering and implementation of more effective protection policies, regulations, and management programs (Goal #4), and by laying out specific steps and projects needed for protection and restoration for each of the major habitats in the Bay (Goals #7–10). The following table summarizes the Goals and Objectives for Program Area 2 in the FY19 Work Plan.

Goal	Objective
2.1 Support natural resource protection policies and programs	2.1a Promote marine ecosystem protection
	2.1b Support stream protection and policies
2.2 Restore wetlands and streams	2.2a Facilitate restoration of priority wetlands
	2.2b Facilitate stream restoration and fish barrier removal
2.3 Restore coastal bluffs, dunes and sandy beaches	2.3a Restore coastal dune and bluff habitats
	2.3b Protect and restore sandy beach habitats
2.4 Restore rocky intertidal and subtidal habitats	2.4a Promote protection of rocky intertidal habitats
	2.4b Restore and enhance rocky reef habitat
	2.4c Reintroduce and restore abalone

2.1 Support natural resource protection policies and programs

The lack of enforceable regulations and and/or conservation policies have been identified as a major cause of loss and degradation for all types of habitats, either land or ocean based. Goal #4 of the BRP calls for new regulations and policies such as a stream protection ordinance, enhanced assessment and effective management of Marine Protected Areas (MPAs), and support for development of fishery management plans to prevent further loss of the remaining habitat areas and living resources within the watershed and Bay.

2.1a Promote marine ecosystem protection

Ocean Vessel Aerial Monitoring

Objective long-term data on the type, extent, and location of boating and boat-based fishing directly supports the success of marine spatial planning and resource management of coastal oceans. Initiated in 2010, the ocean vessel aerial monitoring project (BRP Milestone 4.2d) documents the location, type, and activity of ocean vessels operating in state waters with the purpose of informing the south coast Marine Life Protection Act Initiative and interested parties with a fishery-independent data set on the expanse and type of fishing effort in Southern California. This project also contributes data directly to the Marine Protected Area (MPA) collaborative and is conducted in partnership with LightHawk, a 501

(c)(3) non-profit organization that engages over 200 volunteer pilots to benefit conservation projects. In FY19, TBF will continue quarterly ocean vessel aerial monitoring flights and produce an annual report summarizing the quarterly data. Outreach will continue through direct communications with partners and interested agencies, and will include opportunistic presentations.

Marine Protected Area Collaborative

The network of MPAs in the Southern California Region established by the State of California in 2012 includes four MPAs in Santa Monica Bay. Two are located along the north coast (i.e. Point Dume State Marine Conservation Area and Point Dume State Marine Reserve), and two are located along the Palos Verdes Peninsula coastline (i.e. Point Vicente State Marine Conservation Area and Abalone Cove State Marine Conservation Area). For additional background details on MPAs, refer to the [California Department of Fish and Wildlife's \(CDFW\) website](#).

In FY19, TBF will continue to explore funding and partnership opportunities to promote sustainable fishery resource management and marine ecosystem protection. To ensure that these MPAs are truly effective in protecting the region's critical habitats and living resources, an adaptive management approach has been designed to provide adequate outreach, and to inform monitoring and enforcement. Specifically, TBF will continue to participate in the Los Angeles MPA Collaborative and with statewide partners to facilitate management and inform monitoring and enforcement challenges.

Sustainable Fisheries Outreach

The outreach associated with the kelp restoration project, aerial monitoring project, efforts of the Los Angeles MPA Collaborative are key components for the promotion of sustainable fishery management in Santa Monica Bay and Southern California coastal waters. Communication of the results of these efforts will be made through various methods including web based material, press releases, publication of reports and presentations to resource managers and other organizations and individuals interested in fishery management issues.

In FY19, TBF will continue to support the Marina Del Rey (MDR) Anglers' Youth Fishing Program, assisting in the attraction and development of interns to support the fishing trips. This program provides an opportunity for hundreds of disadvantaged youth annually to go "catch and release" fishing with the anglers and receive presentations on marine stewardship and sustainable fishing practices. Specific actions will include promotion and awareness building for the program.

Monitoring the Acoustic Telemetry Network

California State University, Long Beach (CSULB) leads an effort to monitor and maintain an existing network of acoustic telemetry receivers that track the movement of a number of marine species of interest (e.g. great white sharks, giant black sea bass, white croaker, and barred sand bass). These species and their movements in and around the Bay are of special interest to expand knowledge of their known ecology, biology, and as targeted species for fishing.

The expansion of this network into the North Bay provides valuable data that will assist the public and the efforts of the USEPA and project partners in work related to The Fish Contamination Education Collaborative (FCEC). Which is the public outreach and education component of the United States Environmental Protection Agency's (USEPA) program to protect the most vulnerable populations from the health effects of consuming contaminated fish related to the Palos Verdes Shelf Superfund Site. More information can be found at www.pvsfish.org. Additionally, this information will allow for outreach to resource management and the public on ways to safely interact and protect these

ecologically significant species. In FY19, TBF will continue to assist with outreach regarding these findings and contribute to the ongoing and adaptive management of the Acoustic Telemetry Network in southern California coastal waters.

Remote Monitoring of Habitats to Fill CMP Data Gaps

Remotely operated underwater vehicles (ROVs), once only available to agencies and universities due to their expense, now allow everyone from children to scientists the opportunity to experience and understand the ocean by capturing high-resolution images and videos of the seafloor and other aquatic environments. These versatile underwater robots are both research and educational tools, allowing for enhanced exploration and the collection of a wide variety of scientific data. In 2017, TBF launched an exploration program to utilize its remotely operated underwater vehicle, R2Deep2, to support ongoing conservation and restoration projects, and explore lesser known marine habitats in Santa Monica Bay.

In FY19, TBF will continue deploying the ROV to support kelp and submerged aquatic vegetation monitoring, abalone site suitability surveys, and explore lesser known marine habitats. Specifically, the ROV will be used to do 8 surveys of eelgrass habitat to understand extent and general condition of offshore eelgrass in the Bay. Surveys will be conducted periodically throughout the Work Plan time period. Deep reef habitats are poorly understood and a persistent data gap for the SMBNEP. Five surveys of deep reef habitats will also be conducted using R2Deep2, when conditions allow. Efforts to engineer innovative sensors will continue via the Coastal Research Institute in coordination with LMU engineering faculty and students to enhance monitoring capabilities. In FY19, opportunities will also be explored to survey coastal habitats using remote aerial monitoring to fill data gaps about vegetative cover, land use, and elevation. TBF will also continue to seek additional funding to support the monitoring of habitats to fill data gaps identified in the CMP and SotB Reports.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
2.1a Promote marine ecosystem protection				
Implement ocean vessel aerial monitoring project	TBF	Lead	LightHawk, Vantuna Research Group	Quarterly surveys and annual report
Participate in MPA Collaborative	TBF	Participate	14 MPA Collaboratives statewide: http://www.mpacollaborative.org/	Semi-annual statewide meetings; quarterly LA meetings; ongoing communications and outreach
Promote sustainable fishery outreach	SMBRC, TBF	Promote	MDR Anglers	Opportunistic participation in meetings and communications; continue to

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
				promote MDR Anglers Youth Fishing Program
Monitor Acoustic Telemetry Network	TBF	Support	CSULB*, FCEC, County Lifeguards	Communications and outreach of results
Remotely Operated Vehicle (ROV) surveys	TBF	Lead	LMU, other universities	Launch ROV to conduct eelgrass (8 surveys) and deep reef (5 surveys) monitoring; capture, edit, and distribute video and imagery

* Project lead

Linked BRP Objectives and Milestones: 4.1a, 4.2a-d, 4.3a-c

2.2 Restore wetlands and streams

Wetlands, streams, and riparian zones are lifelines of the Bay watershed ecosystem and their preservation and restoration is a high priority. Goal #7 of the BRP calls for restoration of wetlands, streams, and riparian zones and outlines specific objectives and milestones for restoration of the Ballona Wetlands Ecological Reserve (Reserve), Malibu Lagoon, Topanga Lagoon, and other coastal wetlands. Specific objectives and milestones are also established to restore streams through removal of fish barriers, restore or daylight culverted streams in urban areas, and construct greenways along urban streams. Invasive plants and animals have also become a major threat to the integrity of many wetland and stream habitats in the Bay watershed as addressed by Goal #6 of the BRP, and specific objectives and milestones were established to investigate, control, and eradicate invasive species that affect wetland and riparian habitats, such as New Zealand mudsnail, crayfish, iceplant, and others.

2.2a Facilitate restoration of priority wetlands

California’s coastal wetlands support a wealth of precious wildlife habitat and play a crucial role in improving coastal water quality and reducing the harmful effects of floods and erosion on surrounding communities. Over 96% of the vegetated estuarine wetlands have been lost over the past century and a half in the Los Angeles region. Thus, restoration to bring back higher level ecosystem functions and services of wetlands is of the utmost importance in our area.

The Ballona Wetlands Ecological Reserve (Reserve), located on the Los Angeles County coast, is an example of this wetland loss, having suffered from over a century of abuse and land degradation, including the channelization of Ballona Creek, dumping of millions of cubic yards of sediment on the site,

and the continued encroachment of habitat-altering invasive species. The progress of the Ballona Wetlands Restoration Project for the Reserve has been a multi-year process, which entered the CEQA/NEPA process in 2012 with the release of the Notice of Intent/Preparation. The lead agencies are CDFW (state lead) and the Army Corps of Engineers (Corps) (federal lead). For more detailed information about the site, and links to the technical reports, refer to the project website: www.ballonarestoration.org.

SMBRC and TBF will also continue to support restoration of other coastal lagoons in Santa Monica Bay (e.g. Trancas Lagoon, Zuma Lagoon) through partnership building, outreach, assistance with coordination, and information exchange. Opportunities to apply for funding will also be explored.

Ballona Reserve – Community Stewardship Project

TBF is implementing an interim stewardship management project for invasive vegetation removal at the Reserve through community engagement. TBF began implementation of this project in FY16. With help from community and student volunteers who devoted over 500 hours to this effort, TBF removed over 15 tons of iceplant (more than 200 cubic yards) from the restoration area in FY17. In total, 0.75 acres were restored from September to December 2016. In FY18, post-restoration project monitoring and additional supplemental invasive vegetation removal events continued within the current project footprint. In FY19, TBF may expand this project, pending funding availability. TBF will also continue to promote and participate in other cleanup efforts and trash removal projects throughout the Reserve.

Ballona Reserve – Support Restoration Planning

In FY18, the lead agencies released the Draft Environmental Impact Statement and Report (DEIS/R) for the Reserve and entered a public comment period extending from September 2017 through 5 February 2018. In FY19, TBF will continue to support the lead agencies through outreach and communications and contributing technical input as requested by the Project Management Team in support of the production of the Final EIS/R.

Malibu Lagoon Maintenance and Monitoring

Since 2013, with support from the California State Department of Parks and Recreation (DPR), SMBRA and TBF have led the post-restoration biological, chemical, and physical monitoring activities and produced annual reports which can be found on TBF's website: www.santamonicabay.org. Based on data collected thus far, the project has been a success. Water quality data indicate an increase in water circulation both in open and closed berm lagoon conditions and removal of the pre-restoration "dead zones". The presence of juvenile fish in the post-restoration surveys indicates the lagoon provides beneficial fish nursery habitat. Birds continue to use the lagoon and special-status species make heavy use of the site. Vegetation cover has increased and is expected to continue developing over time as plants mature and spread. In FY19, SMBRA and TBF will complete the fifth monitoring year and produce the final report, continue assistance in invasive plant removal, and conduct public outreach.

Level 3 Regional Wetland Monitoring Program

A regional wetland monitoring program is imperative to understanding the condition and relative health of coastal estuarine systems. Programs such as these inform wetland restoration projects from the scale of the Ballona Reserve, down to the small, 3-6 acre lagoons in the northern portion of the Santa Monica Bay. Understanding current conditions allows for the scientific development of robust restoration planning documents.

Based on the results of TBF's wetland monitoring programs, a regional, Level 3 (site-intensive) long-term monitoring program for wetland habitats was conducted at five major estuaries in Southern California through 2015. With grant funding awarded from the USEPA Wetland Program Development Grant (WPDG), SMBRA and TBF and their partners developed the framework for Level 3 monitoring, field tested numerous protocols, and produced a [Monitoring Manual](#) and [Regional Wetland Monitoring Report](#). In FY16, SMBRA, TBF, and new partners applied for and received another USEPA WPDG to continue and expand the regional wetland monitoring program to evaluate data from additional wetlands between Point Conception and the Tijuana border, including updates to the Monitoring Manual. In FY19, this program, in partnership with SCCWRP, California State University Long Beach, and the Tijuana River National Estuarine Research Reserve, will be completed. Final products will be produced and posted on TBF's website.

2.2b Facilitate stream restoration and fish barrier removal

SMBNEP has been active in leading and facilitating stream restoration programs and projects through sponsorship of the [Ballona Creek Watershed Historical Ecology Study](#), writing the [Greenway Plan for Ballona Creek](#), coordinating maintenance events, documenting and controlling impacts of invasive species, and participating in fish barrier removals. Removal of barriers are imperative to the survival of important species such as the Southern California Steelhead Trout, a federally endangered species. It is estimated that due to damming and other human impacts that Steelhead Trout have lost 80 – 95% of their historic habitat range.

FY19 will also include opportunistic promotion of additional fish barrier removal projects and stream restoration (e.g. Topanga Creek) or daylighting projects, and may include funding searches, collaborative communications, and exploration of partnerships. Specifically, TBF and SMBRC will continue discussions with lead agencies such as State Parks and RCDSMM to find new projects.

Stone Canyon Creek Maintenance

Stone Canyon Creek was formerly a dominant feature of the University of California, Los Angeles (UCLA) campus. But over the years, as the campus expanded, the Creek was routed underground and now only one small segment running behind the Anderson School of Management remains. TBF, UCLA, and the UCLA Lab School (ULS) have worked together, with thousands of volunteers over more than six years, to help restore the ecosystem. Serving as a 'living classroom' for both UCLA and ULS, huge progress has been made, but it requires ongoing maintenance to preserve the habitat for native vegetation and wildlife. In FY19, TBF will continue ongoing monthly volunteer maintenance and invasive species removal events at Stone Canyon Creek. Additionally, TBF will explore opportunities to increase stewardship in partnership with UCLA, including collaborating with restoration ecology courses and student driven research.

New Zealand Mudsnaill Monitoring Surveys and Research

New Zealand mudsnails (NZMS), *Potamopyrgus antipodarum*, are tiny (3-5 mm), highly invasive, aquatic snails. A single snail is capable of producing a colony of 40 million progeny in the course of a single year by reproducing parthenogenetically, by cloning. In FY19, SMBRC and TBF will continue to lead and support efforts to address the environmental damage caused by NZMS. SMBRC staff will continue to help facilitate presence and abundance surveys and help produce reports, place warning signs at popular access points throughout the Santa Monica Mountains, work with SWRCB and LA Regional Board to place newly colonized streams on the state 303(d) list as impaired for aquatic invasive species,

and continue to support Heal the Bay's efforts to compare pre- and post-establishment water quality data to evaluate the impacts of NZMS. The next NZMS survey will be conducted in late summer/early fall of 2018. TBF also participates in the surveys and assists with the reporting and analyses.

California Red Legged Frog Reintroduction

Recent field work by NPS found evidence that California red-legged frogs (CRLF) are breeding in the Santa Monica Mountains at one of the two original translocation/re-introduction sites. Five fresh egg masses and two pairs of adults were discovered. It's the first time in decades CRLF have bred in the Santa Monica Mountains. At the time of this Work Plan draft, additional funding is being sought to expand the translocation and re-introduction program to include additional streams in the Santa Monica Mountains for FY18 and FY19.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
2.2a Facilitate restoration of priority wetlands				
Implement Ballona Reserve community stewardship and invasive species removal project	TBF	Lead	CDFW, FBW, LMU	Continue post-restoration monitoring; conduct opportunistic restoration events in summer/fall 2018; seek additional funding to continue subsequent phases of project
Ballona Reserve – Support Restoration Planning	TBF	Support	CDFW*, Corps*	Continue ongoing communication / outreach; provide technical input to facilitate FEIS/R production
Conduct Malibu Lagoon post-restoration maintenance and monitoring	SMBRA, TBF	Lead	State Parks, RCDSMM, Cooper Ecological	Maintenance and volunteer events once monthly; monitoring ongoing 2013-2018; annual monitoring report in May 2018
Implement Level 3 regional wetland monitoring program	SMBRA, TBF	Lead	SCCWRP, CSUCI, CWMW	Conduct literature review; data consolidation; periodic partner meetings
2.2b Facilitate stream restoration and fish barrier removal				
Conduct Stone Canyon Creek maintenance	TBF	Lead	UCLA	Monthly volunteer restoration events

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
Conduct mudsnail surveys and research in the Northern Bay watershed	SMBRC, TBF	Lead	Heal the Bay	Biennial surveys, pending funding; biennial reporting
Support reintroduction of red-legged frogs in the Santa Monica Mountains	SMBRC TBF	Support	NPS	Support reintroduction and monitoring efforts

* Project lead

Linked BRP Objectives and Milestones: 7.1a, 7.1b, 7.2a, 7.4a-e, 7.5a-c, 7.6a, 7.8a, 7.8b

2.3 Restore coastal bluffs, dunes, and sandy beaches

Coastal dunes, bluffs, and sandy beaches are prominent features and dominant habitat types along the Bay coastline and support a variety of plant and animal species. Goal #8 of the BRP calls for restoration of coastal bluffs, dunes, and sandy beaches and outlines specific objectives and milestones for restoration of specific dune habitats including dune habitats at LAX, and comprehensive measures to protect, manage, and restore sandy beaches.

2.3a Restore coastal dune and bluff habitats

SMBNEP has a long history of supporting and engaging in the restoration of coastal dune and bluff habitats, including restoration of coastal dunes in the Ballona Reserve, beach bluffs along Redondo Beach, and three coastal bluff sites on the Palos Verdes Peninsula. In FY19, TBF will explore new funding, partnerships, and opportunities to expand and/or conduct new beach, dune, and bluff restoration projects throughout the Santa Monica Bay.

Restore LAX Dunes

The El Segundo/LAX Dunes (LAX Dunes) in the City of Los Angeles, at the Los Angeles World Airports (LAWA), is the largest remaining contiguous coastal dune system in Southern California. Covering a total area of over 300 acres, it is home to an estimated 900 species of plants, insects, and other wildlife. Set aside as a natural wildlife preserve by LAWA, native plants and animals that once seemed destined for extinction, including the El Segundo blue butterfly and the California legless lizard, are thriving once again, thanks to large-scale habitat restoration efforts by LAWA and partners. However, invasive species continue to encroach on the native plants, reducing the diversity and health of the ecosystem.

In FY18, 605 volunteers removed 726 bags of invasive, non-native vegetation from the LAX Dunes that included species such as *Brassica nigra*, *Arundo donax*, *Carpobrotus spp.*, *Erodium botrys*, and *Euphorbia terracina*. In FY19, TBF will provide a variety of services to accomplish maintenance and restoration objectives in conformance with conditions set forth by the California Coastal Commission (CCC), as part of LAWA's 2013 permit to remove former roads, driveways, and other hardscape in the area. Tasks will

include hosting monthly restoration events, biological and physical monitoring, and drafting a 5-year update and monitoring report. Additional efforts will be focused on restoration and maintenance of the northern 48-acre section of the dunes. TBF will also host Coastal Cleanup Day at the LAX Dunes for the fourth year in a row. Additionally, TBF will continue to explore additional opportunities and partnerships to participate in and promote restoration of more coastal dunes and bluffs along the Bay coast.

2.3b *Protect and restore sandy beach habitats*

Sandy beaches are the most prominent feature along the Santa Monica Bay coastline. Although sandy beaches traditionally have been, and continue to be managed primarily as recreation areas, they are also important natural ecosystems that link marine and terrestrial environments and are considered one of the seven major natural habitats in the Bay. Animals and plants, including many endemic species, depend on sandy beaches for critical periods of their lives. The habitat provides foraging and nesting grounds for many shore birds, fish, and marine invertebrate species, and is essential to the population recovery of two endangered species, the California least tern and Western snowy plover. The protection of sandy beaches and an understanding of their condition has become increasingly important because of the roles of beaches in addressing the impacts of sea level rise.

Beach Restoration Projects to Improve Coastal Resilience

The Santa Monica Beach Restoration Pilot Project conducted in partnership with the City of Santa Monica is restoring three acres of sandy coastal habitats on the beaches of Santa Monica to bring back a healthy, diverse coastal plant and wildlife community. Scientific monitoring of the project will evaluate increased protection for coastal infrastructure and residences from sea level rise and erosion, while providing a vital refuge for invertebrates, birds, and rare coastal vegetation species. It will also serve as a model for the region, showing that heavy recreational use of Los Angeles beaches and meaningful habitat restorations are compatible. Specific project activities during FY19 will include: post-restoration monitoring, maintenance, and outreach; annual report; and ongoing opportunistic media engagement. Quarterly scientific monitoring will track wrack accumulation, plant growth, invertebrate densities, birds, physical conditions and topography, and sediment characteristics. For additional details, visit the project webpage: <http://www.santamonica.org/santa-monica-beach-restoration-pilot/>.

In FY18, TBF was awarded a Proposition 1 Grant through the State Coastal Conservancy to partner with the City of Malibu and Los Angeles County Department of Beaches and Harbors to plan and implement the Malibu Living Shoreline Project. This project will design and implement dune restoration and monitoring at Zuma and Point Dume (Westward) County Beaches. The project will increase the resiliency of the shoreline through restoring three acres of sandy beach and dune habitat, implementing “soft-scape” protection measures against sea level rise and coastal storms, and increasing engagement of the community through enhanced beach experiences, outreach, and education. In FY19, TBF will continue stakeholder meetings, finalize design plans and permit requirements, initiate and complete baseline monitoring, and initial stages of implementation.

Beach Monitoring and Research

This task aims to expand the development of standardized sandy beach monitoring protocols for the ecological assessment of beaches in California, utilizing community and student-based monitoring and research to collect baseline data of beaches in the Los Angeles region. These data will inform SMBNEP’s State of the Bay Report, and Comprehensive Monitoring Program and further partnerships with LMU’s

Coastal Research Institute, Pepperdine University, UCSB, and CSUCI. Studies include topographic and elevation analyses, sand transport, microplastics, and additional ecological, social, and economic parameters. This monitoring and research task will increase our regional understanding of beach ecology, allow an evaluation of natural variability and beach management practices, and evaluate the benefits and effectiveness of sandy beach protection and restoration activities to address climate change stressors.

Additionally, in FY19, TBF will continue to partner with USGS to develop innovative data visualization products, presenting sea level rise data as experiential information through the use of virtual reality environments to more effectively communicate data to engage environmental managers, decision-makers, and the public.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
2.3a Restore coastal dune and bluff habitats				
Restore LAX Dunes	TBF	Lead	LAWA, FOLD, Conservation Corps, LMU, others TBD	Submit annual work plan, submit quarterly reports and one annual report; conduct scientific monitoring; submit 5-year update report; host monthly volunteer restoration events, including Coastal Cleanup Day in September
2.3b Protect and restore sandy beach habitats				
Implement Beach Restoration Projects to Improve Coastal Resilience	TBF	Lead	City of Santa Monica, UCSB, State Parks	Conduct quarterly scientific monitoring at Santa Monica site; annual report in August; begin Malibu baseline monitoring in Sept 2019
Conduct Beach Monitoring and Research	SMBRC, TBF	Facilitate	Pepperdine University, UC Santa Barbara, others	Grant applications submitted opportunistically throughout work period; ongoing communications; student reports

* Project lead

Linked BRP Objectives and Milestones: 8.1a-d, 8.2c-e

2.4 Restore rocky intertidal and subtidal habitats

Relatively sparse and restricted in distribution compared to sandy beach and soft bottom habitats, rocky intertidal and rocky subtidal habitats are highly diverse and productive, and home to hundreds of species. These habitats are also highly vulnerable to, and have been greatly impacted by human activities, as well as natural processes. Goal #9 of the BRP calls for restoration of rocky intertidal and subtidal habitats and outlines specific objectives and milestones for kelp restoration through sea urchin removal, education and other management measures to address impacts of visitors to rocky reef habitats, and reintroduction and restoration of abalone populations in the Bay.

2.4a Promote protection of rocky intertidal habitats

SMBNEP has promoted rocky intertidal habitat protection through research on the impacts of marine organism trampling and collection, and outreach aimed at reducing these impacts. In FY16, TBF partnered with UCLA to conduct research, education, and outreach regarding rocky intertidal restoration/condition.

In FY19, TBF will continue to seek additional resources and collaborative opportunities to promote protection of intertidal habitats, with an increased consideration of physical and chemical factors associated with climate change stressors. These efforts will include habitats on the Palos Verdes Peninsula and in Malibu. Protection will be approached via outreach, consultation, research, development of funding and exploration of student research opportunities.

2.4b Restore and enhance rocky reef habitat

Rocky Reef / Kelp Forest Restoration Project

Over the past 100 years, the Palos Verdes Peninsula has lost approximately 75% of its giant kelp canopy. Sedimentation, development, urban runoff and storms slow or prevent kelp growth. At the same time, the loss of key urchin predators and competitors allowed urchins to overrun the reef and devour the remaining kelp. Subtidal observations based upon mapping efforts conducted in 2010 identified 61.5 hectares of nearshore rocky reef that were dominated by high densities of sea urchins, *Strongylocentrotus purpuratus* and *S. franciscanus*, in urchin barrens. The purpose of the kelp restoration project is to reduce the density of purple sea urchins (*S. purpuratus*) to approximately 2/m² within the boundaries of urchin barrens on the Palos Verdes Peninsula. This will allow for the recruitment and development of giant kelp, *Macrocystis pyrifera*, and other species of macroalgae. This project will reduce sea urchin grazing pressure to restore biogenic habitat to rocky reefs that historically supported kelp forests, which will, in turn, increase the spatial and temporal stability, biomass, and production associated with rocky reefs on the Peninsula.

In FY19, TBF will continue to carry out this restoration project off the Palos Verdes shelf which is expected to result in restoration of 10 acres of kelp forest. Semi-annual reports to NFWF, and one annual report to CDFW will be developed to document the activities, including pre and post-restoration monitoring, and results of the project. There are many partners and participating or interested organizations in this project, including (in part): NOAA, Montrose Settlement Restoration Program

(MSRP) trustees, NMFS, Vantuna Research Group, Occidental College, Commercial Sea Urchin Harvesters, OPC, SCC, Southern California Marine Institute, and CA DFW.

2.4c *Reintroduce and restore abalone*

Abalone are functional components of a healthy kelp forest ecosystem, competing for food and space with other grazers, such as sea urchins. Abalone were once abundant along the California coast, but populations have been impacted by habitat loss, Withering Syndrome (WS) disease, and commercial and recreational fishing. Five of the seven species of abalone native to California (red, pink, black, green, and white) once supported commercial and recreational fisheries but were closed by 1997. Both the subtidal ecosystem and the California economy will benefit from the presence of healthy abalone populations if restoration of these vital species is achieved.

Abalone Research Laboratory

Construction of the abalone laboratory at the Southern California Marine Institute (SCMI) was completed in 2016 which allows captive abalone spawning and broodstock conditioning experiments to improve methods for abalone reproduction. Wild green (*Haliotis fulgens*) and red abalone (*H. rufescens*) broodstock were collected and brought into the facility to be spawned. In FY19, the larvae and juvenile abalone produced by these organisms will be used to test and refine outplanting methods.

In recent years, rising sea temperatures have negatively affected the production of red abalone aquaculture in Southern California. There is concern among abalone growers that increasing frequency of El Niño events and long-term climate change may dramatically impact successful abalone aquaculture. In partnership with Cal Poly Pomona, TBF is developing aquaculture production methods for green abalone that may support the transition of the industry from red to the relatively warm water tolerant green abalone. The improved and adapted larval and juvenile production methods generated for green abalone will simultaneously support efforts in FY19 to outplant and restore wild green abalone to Santa Monica Bay. In FY19, the facility will continue to be maintained, support conditioning and rearing research, and serve as a staging center for outplanting efforts in southern California.

Abalone Restoration

TBF's work, in conjunction with government agencies, is aimed at bringing back all abalone stocks throughout southern California. In 2015, 846 juvenile green abalone were outplanted into coastal waters off of the Palos Verdes Peninsula. Quarterly monitoring will continue through FY19 to track progress and success of this outplanting event. Outplanting methods will continue to be tested using larval and juvenile green and red abalone. Additionally, deck spawning trials will continue in FY19. This field method allows for researchers to collect abalone from the wild, induce them to spawn on the deck of a research vessel, and return them to the wild the same day. If successful, deck spawning would allow abalone to be spawned without the need to keep them in captivity indefinitely. Lessons learned through these efforts will inform restoration of other abalone species to the wild, most notably the endangered white and black abalone.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
2.4a Promote protection of rocky intertidal habitats				
Promote protection of rocky intertidal habitats	TBF	Promote	CDFW, NOAA, others	Continue ongoing communications, identify research priorities, develop and submit opportunistic grant funding applications
2.4b Restore and enhance rocky reef habitat				
Implement the rocky reef/kelp forest restoration project	TBF	Lead	NOAA, MSRP trustees, NMFS, Vantuna Research Group, Commercial Sea Urchin Harvesters	Semi-monthly monitoring; annual report; restore additional 10 acres by Sept 2019
2.4c Reintroduce and restore abalone				
Maintain abalone research laboratory	TBF	Lead	SCMI, NOAA, NMFS, Cal Poly Pomona	Maintain and support abalone laboratory; captive spawning and rearing experiments; aquaculture industry research project
Restore abalone	TBF	Lead	NOAA, NMFS, Cal Poly Pomona, SCMI, NFWF Bodega Marine Lab, Southwest Fisheries Science Center	Deck spawning and outplanting experiments; quarterly monitoring of outplanting locations

* Project lead

Linked BRP Objectives and Milestones: 9.1a, 9.2a-c, 9.3a, 9.4a, 9.4b

Program Area 3: Multidisciplinary and Integrative Programs

Many programs and projects carried out by SMBNEP are considered either multidisciplinary and/or integrated in purpose or structure. Although all these activities can be linked to, and shown to contribute to implementation of specific goals, objectives, and milestones of the BRP, they are closely interrelated and conducted in unison to achieve informed, integrated, and effective messaging.

Goal	Objective
3.1 Promote climate change adaptation	3.1a Implement climate change planning and policy improvements
	3.1b Conduct research on local impacts of climate change
3.2 Conduct public outreach and increase collaborations	3.2a Create and manage communications
	3.2b Coordinate the volunteer program
	3.2c Participate in and provide technical support to stakeholder groups
3.3 Support planning, monitoring, and organizational management	3.3a Conduct BRP Revision
	3.3b Support comprehensive monitoring of Bay health
	3.3c Support organizational management and improve organizational capacity

3.1 Promote climate change adaptation

SMBNEP's climate change program was initiated around the same time with the implementation of the Climate Change Implications for the Ballona Wetlands Restoration, which was a climate change modeling and adaptation project completed in 2012 with funding support from the USEPA Climate Ready Estuaries (CRE) Program. Since then, SMBNEP's efforts in addressing the impacts of climate change have been growing and have become broader and integrated with ongoing regional efforts in southern California.

3.1a Implement climate change planning and policy improvements

Conduct Climate Action Planning for BRP Revision

In FY16, with support from SMBRC, TBF was awarded a USEPA grant to conduct a broad, risk-based, climate change vulnerability assessment of the actions and milestones in the BRP. The vulnerability assessment was completed in September 2016, and identified strengths and weaknesses of existing milestones and objectives to manage and adapt to the impacts of climate change. Specific tasks included developing a literature review of existing applicable models for six different climate change stressors: warmer temperatures, warmer waters, sea level rise, increased drought, increased storminess, ocean acidification. Next, a broad set of risks were identified for each BRP objective and milestone, a risk matrix framework based on the "USEPA's Being Prepared for Climate Change

Workbook” was developed by a panel of expert climate scientists. The last step applied the risk matrix to each BRP objective with results reviewed by expert scientists, and finally, produced data visualization graphs to easily display the complex data analyses.

Beginning in FY17 and continuing through FY19, SMBRC and TBF will review the subsequent steps recommended by the “USEPA’s Being Prepared for Climate Change Workbook”, which focuses on involving and coordinating with stakeholders to develop and inform a risk-based action plan including BRP revision recommendations based on the results of the vulnerability assessment. The results of this exercise will support the planned BRP revision process, scheduled for completion by 2019.

Participate in AdaptLA Project

In 2013, SMBRC teamed up with the Los Angeles Regional Collaborative for Climate Action (LARC), USC Sea Grant, City of Santa Monica, and Heal the Bay, to support a successful grant application by the City of Santa Monica for the State Coastal Commission/Conservancy LCP climate change adaptation grant. Since 2014, the collaborative team has partnered with USGS and completed and released the initial CosMos 100-year coastal storm modeling results. The team conducted a series of webinars to disseminate the modeling results as well as other climate change adaptation information. The team has also conducted training workshops on climate change impacts and vulnerability and adaptation planning.

In FY19, SMBRC and TBF will continue to participate in this project and similar efforts, conduct outreach to coastal municipalities in Santa Monica Bay, and facilitate dissemination and exchange of information between agencies, experts, and stakeholders.

3.1b Conduct research on local impacts of climate change

Kelp Forest Hydrodynamics Study

In FY19, USC SeaGrant funding will support the continuation of the Kelp Forest Hydrodynamic Study in partnership with researchers from UC Davis and California State University Northridge. This project aims to quantify how restored kelp forests influence temperature, stratification, mixing, sediment transport, currents, ocean acidification and the attenuation of wave energy. Oceanographic equipment will be deployed in fall 2018 to collect physical measurements, and subsequently downloaded and calibrated quarterly; water samples are also collected to measure chemical properties quarterly. Subtidal SCUBA based surveys are conducted quarterly to categorize the biological condition of the reef, focused on type, density and size of macroalgae. All data collection will occur and sensors will be deployed for a minimum of one year.

Ocean Acidification Monitoring

With the support of a USEPA grant, a high precision instrument package for pH, dissolved oxygen, and pCO₂ has been installed and maintained by the Los Angeles County Sanitation District since November 2016. Data collected by the sensors provide valuable time-series information on acidification and hypoxia in Santa Monica Bay which will advance research on status and trends as well as response to acidification by biological communities in the Bay. Data collection and analysis will continue in FY19 in collaboration with the Los Angeles County Sanitation District, the City of Los Angeles Environmental Monitoring Division, the Southern California Coastal Water Research Project, and the Los Angeles Regional Water Quality Control Board.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
3.1a Conduct climate change vulnerability assessment and policy improvements				
Conduct climate action planning for BRP revision	SMBRC, TBF	Lead	Multiple stakeholders TBD	Engage TAC and incorporate suggestions into BRP revision planning; targeted completion date: early 2019
Participate in AdaptLA project	SMBRC, TBF	Participate	USC Sea Grant*, LARC, Heal the Bay, City of Santa Monica, other coastal jurisdictions	Participate in community meetings and webinars
3.1b Conduct research on local impacts of climate change				
Implement kelp forest hydrodynamics study	TBF	Participate	UC Davis, California State University Monterey Bay, UCLA IoES	Set up second study site off Palos Verdes (deploy long-term sensors in fall 2018); subsequent quarterly calibration and downloading; analyses and reporting ongoing
Monitor ocean acidification	SMBRC, TBF	Participate	LA County Sanitation District*, City of LA Bureau of Sanitation, SCCWRP, LARWQCB	Sensor is currently deployed – quarterly calibration and data download will occur in FY19

* Project lead

Linked BRP Objectives and Milestones: All, especially 4.5a-c

3.2 Conduct public outreach and increase collaborations

SMBNEP's outreach efforts are very broad and are integral parts of every specific program and project under this work plan. Outreach components supporting specific programs and activities are incorporated and described in more detail in the corresponding relevant sections throughout this work plan. SMBNEP also carries out general outreach for the purpose of educating the public about the value and status of the Bay's natural resources, boosting public support for and participation in water quality improvement and habitat restoration activities, informing the public on the background of SMBNEP, and providing timely updates on the progress of SMBNEP's activities.

3.2a Create and manage communications

SMBNEP Outreach and Communications

In FY19, SMBNEP will continue to grow awareness and make information accessible to the public and all stakeholders through multiple communications-based channels, including press releases, newsletters, outreach materials and publications, technical reports, and updated websites and social media. All media materials will be linked in TBF's media center online. SMBNEP will publish the electronic Baywire newsletter quarterly and an Annual Report summarizing key activities and programs of that calendar year. Social media will be posted regularly throughout the week, especially on Twitter (@SMBRF), Facebook (@The Bay Foundation), and Instagram (@thebayfoundation). TBF's YouTube page (@The Bay Foundation) will continue to be populated with educational and experiential material as created.

Conferences

In FY18, two SMBNEP staff attended the ANEP National Conference in Washington, DC (May 2017). At the National Conference, staff presented on the Kelp Forest Restoration Project with a focus on project partnerships. The Kelp Forest Restoration Project was also presented at SCAS in April 2017 and the Western Society of Naturalists (WSN) conference in November. The Abalone Restoration Project was presented during the speed talk session at WSN. The Santa Monica Beach Restoration Pilot Project was presented at many local and regional meetings, including the Beach Ecology Coalition Winter Meeting for southern California. TBF presented on the Pumpout Nav app and Statewide pumpout monitoring effort at the State Organization for Boating Access Conference in August.

In FY19, SMBNEP staff will attend conferences opportunistically as appropriate for each program. At minimum, two staff will attend the Association of National Estuary Programs (ANEP) National Conference and the ANEP Tech Transfer Conference to facilitate communication and information sharing with other NEPs and to present on new or ongoing projects.

3.2b Coordinate the volunteer program

This volunteer program allows members of the public to become involved in stewardship at many of TBF's projects throughout the watershed. This program began in 2009 and includes over 29,000 hours of volunteer work completed by more than 350 students from over 50 universities throughout the world and over 5,000 general volunteer participants.

Specifically in FY19, TBF will continue to provide monthly opportunities for volunteers, interns, and student participants in TBF projects, and will continue coordination with partner organizations and universities. A minimum of three volunteer events will be completed monthly and ongoing recruitment of volunteers will continue. Examples of volunteer event locations include the LAX Dunes, Stone Canyon Creek, Malibu Lagoon, Ballona Reserve, Loyola Marymount University (LMU) LIONS Garden, and the Culver City Rain Garden. Public events are posted to TBF's events webpage and updated monthly, <http://www.santamonicabay.org/events/>.

3.2c Participate in and provide technical support to stakeholder groups

Effective implementation of the BRP, especially new policies and program initiatives included in the 2013 BRP Update, relies on close coordination and collaboration among organizations, especially those

playing various roles in achieving objectives and milestones as identified in the BRP. Many inter-agency or inter-group task forces and committees already exist and are active in the Bay watershed, addressing issues pertinent to Bay water quality and habitat restoration. Engagement in the activities of these groups in the form of meeting participation and/or technical support are important mechanisms for increasing stakeholder involvement in BRP implementation. Many of them focus on projects directly related to the implementation of BRP objectives and milestones. Appendix D contains a table of the stakeholder groups in which SMBNEP staff will participate in FY19.

Stakeholder Group Participation

In FY18, SMBRC and TBF will continue to participate in multiple stakeholder and technical advisory groups. Appendix D contains more details regarding the names of the groups and the frequency of their meetings.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
3.2a Create and manage communications				
Conduct SMBNEP outreach and communications	SMBRC, TBF	Lead	LMU, SWRCB	Release four press releases annually; release SMBNEP Annual Report; update TBF, SMBRC websites; update TBF social media; release quarterly Baywire
Attend conferences	TBF	Participate	ANEP	Two staff attend ANEP National Conference and ANEP Tech Transfer
3.2b Coordinate the internship and volunteer program				
Implement the internship and volunteer program	TBF	Lead	LMU	Monthly coordination meetings; ongoing student recruitment; coordinate minimum of three volunteer events monthly
3.2c Participate in and provide technical support to stakeholder groups				
Participate in stakeholder groups involved in BRP implementation	SMBRC, TBF	Participate	Multiple stakeholders	Ongoing throughout the work plan time period; see Appendix D for frequency

* Project lead

Linked BRP Objectives and Milestones: All, especially 1.1c, 2.6a, 2.6b, 2.7a, 4.6c

3.3 Support planning, monitoring, and organizational management

An important component of any NEP is a detailed reporting and management strategy and an effective tracking of progress made on BRP implementation. The following sections summarize BRP implementation, funding, and tracking as well as the reporting, planning, and management activities of the entities that make up SMBNEP.

3.3a Conduct BRP Revision

The 2013 BRP identified approaches and strategies intended to make substantial progress toward Bay restoration over the next ten to twenty years. It reflected input from SMBNEP partners with regard to the best strategies and priorities to ensure continued progress and achieve eventual restoration of the Bay and its watershed. SMBNEP has been successful in securing funding for implementing the BRP (e.g., \$63 million through Prop. 12, 50, and 84 bond funds since 2000). TBF and SMBRA have also successfully identified many new sources of grant funding in recent years. However, available resources are still far from meeting the financial needs of full BRP implementation. Sustaining stable sources of funding to ensure continued progress in BRP implementation is an ongoing challenge. Stable sources of funding and financial reserve are also needed to maintain the organizational capacity of SMBNEP. Grant awards received by TBF and SMBRA have supported implementation of many important programs and projects under the FY18 annual Work Plan, and that effort is expected to continue in FY19.

Conduct BRP Revision

The original BRP of 1995 was updated in 2008 and again in 2013. The SMBNEP is currently beginning a major BRP revision which is scheduled to be completed by 2019. EPA’s funding guidance describes a revision as an alteration of the BRP that involves significant changes such as new or significantly altered goals, or to incorporate new information and data, such as from climate change. Updates and revisions are made to the BRP through a public and iterative process with active participation from members of the Governing Board as well as members of the WAC and TAC. The current revision to the BRP is ongoing and will include new information and data obtained since the last update, including the results of the climate change vulnerability assessment project completed in September 2016.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
3.3a Conduct BRP revision				
** NEW: Conduct BRP Revision	SMBRA, SMBRC, TBF	Lead	TAC, public stakeholders, many agencies and organizations	Complete BRP Revision process by 2019

* Project lead

Linked BRP Objectives and Milestones: All, especially 1.5a

3.3b Monitor and report on the Bay's environmental condition

LMU's Coastal Research Institute

The [Coastal Research Institute](#) (CRI) brings together expertise from Loyola Marymount University's Frank R. Seaver College of Science and Engineering and TBF to restore and enhance Santa Monica Bay and local coastal waters. CRI contributes to better understanding of global urban coastal resource management through the execution of projects that stem from TBF's work. TBF and LMU, through CRI, will continue to develop and expand the ever popular internship program, increasing opportunities for students to engage in hands-on action and experiential learning. The program provides firsthand experience in the scientific underpinnings of wetland and beach restorations in the Bay watershed and encourages participation in stream assessment and restorations, rain gardens, dune restoration, kelp restoration, and many other activities. CRI also periodically publishes [Urban Coast](#), a scientific journal which provides a forum for researchers, agencies, advocacy groups, and other science and policy leaders to engage in constructive discussion and information exchange on issues that are pertinent to our coastal environments. In FY19, student internships and faculty fellows will be engaged in supporting research and monitoring efforts for priority projects and to assist in meeting data gaps in the CMP.

CMP Revision and State of the Bay Reporting

The Santa Monica Bay Comprehensive Bay Monitoring Program (CMP) collects data and information needed to track, assess, and report on the environmental results of BRP implementation and overall status and trends of the condition of the Bay's ecosystems. The results are presented in the State of the Bay Reports developed every five years. The State of the Bay (SotB) Report is a science-based comprehensive assessment of the Bay's environmental condition. The goal of the report is to measure progress in restoring the Bay's natural habitats and resources, educate the public about the Bay's valuable natural habitats and resources, and identify and help scientists and managers to address remaining and emerging challenges. More specifically, this report provides information that can be used both to gauge the progress in implementing the BRP and to guide updates of the BRP to meet new and existing challenges.

A major revision of the CMP is projected for completion in FY19 to address new and emerging issues such as climate change and data needs identified in the development of the last SotB Report (2015). In FY19, TBF and SMBRC will also begin to facilitate the implementation of the newly updated CMP, including utilizing and developing new funding and monitoring partnerships, and working with the LARWQCB and permittees to incorporate the newly updated relevant CMP components into the NPDES permits, and monitor implementation progress of the incorporated CMP components. Additional data and information will be gained from connection to the Southern California Bight 2018 Regional Monitoring Program, which is conducted every five years. TBF and SMBRC will compile data collected from the CMP for the next SotB report.

TBF has carried out and will continue to carry out and/or be involved in a significant amount of monitoring activities for several important habitats in the Bay including, but not limited to; wetlands, uplands, rocky-subtidal/kelp, rocky-intertidal, sandy beaches, and coastal dunes. In FY19, TBF monitoring efforts will continue to support refinement of indicators for rocky reefs and sandy beaches. These monitoring efforts contribute directly to implementation of the CMP and to the habitat condition assessments in the next SotB Report.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
3.3b Monitor and report on the Bay’s environmental condition				
LMU’s Coastal Research Institute	TBF	Co-Lead	LMU’s Frank R. Seaver College of Science and Engineering	Summer interns and faculty fellows to support monitoring for CMP data gaps, and research for priority projects such as beaches, dunes, intertidal habitats, and ocean acidification; research published in Urban Coast and through an annual symposium
Update CMP and plan for next SotB Report	SMBRC, TBF	Lead	SCCWRP, State Water Quality Monitoring Council, SCCOOS, SCMI	Ongoing; TAC meetings and periodic engagement from other scientists and scientific stakeholders; final CMP reviewed and completed by Jan 2019

* Project lead

Linked BRP Objectives and Milestones: All, especially 4.7a-e, 8.2c, 9.4a-b, 10.1a, 10.2a, 11.2b

3.3c Support organizational management and improve organizational capacity

SMBRC, SMBRA, and TBF staff will conduct general management and reporting activities following the procedures and protocols that have been established for ensuring SMBNEP's fiscal stewardship and program functions.

BRP Tracking

Progress in BRP implementation is tracked and reported semi-annually through the work plan activity progress report. Progress is further summarized and highlighted annually through development and publication of SMBNEP annual report. The SotB Report developed every five years also presents progress made on BRP objectives and milestones (see Objective 3.3b). In FY19, staff will continue to track BRP implementation progress through the existing semi-annual and annual reporting mechanisms. Staff will also continue to work with the TAC to refine the indicator matrix and improve data collection mechanisms in preparation for the next SotB in 2020. Lastly, the QAPP will be updated on an as needed basis (last update: August 2016).

The annual Government Performance and Results Act (GPRA) reporting requires each NEP program to report on the acres or linear miles of habitat protected and restored, environmental indicators in use, and leveraged resources. SMBRC and TBF staff will compile the information and prepare and submit the GPRA report by September 1, 2019 for the reporting period October 1, 2018 – September 30, 2019. Geographic reference information and photographs for habitat restoration actions will also be provided.

In FY19, progress on meeting BRP goals will also be evaluated through the Program Evaluation conducted every five years by the EPA as well as a partner NEP. The primary purpose of the Program Evaluation process is to help the EPA determine whether the 28 programs included in the National Estuary Program are making adequate progress implementing their Comprehensive Conservation and Management Plans (CCMP) and therefore merit continued funding under §320 of the Clean Water Act (CWA). SMBNEP's CCMP is the Bay Restoration Plan. The Program Evaluation process will help highlight important environmental results of the last five years and highlight strengths and challenges in program management and implementation. The evaluation consists of responses to EPA core elements, a work plan narrative summary, a budget summary and review, and an on-site visit.

**** NEW: Prop. 50 Grants**

In FY19, SMBRC will work with SWRCB and stakeholders to develop projects that protect water quality and enhance/restore habitat. SMBRC has approximately \$3.19 million remaining for project recommendations.

**** NEW: Prop. 12 Grants**

To date, SMBRC has recommended more than \$10 million in Prop. 12 projects to be funded by the State Coastal Conservancy (SCC, lead agency). In FY19, SMBRC and TBF will work with SCC and Santa Monica Bay watershed stakeholders to provide recommendations for projects that restore habitat and protect water quality with the remaining \$6.8 million available from Prop. 12 by 2020.

Board and Committee Support

SWRCB and TBF staff will provide logistical and other staff support for meetings of the Governing Board/Bay Watershed Council, the Executive Committee, the Technical Advisory Committee, and the Watershed Advisory Council. SWRCB and TBF staff will provide support for the meetings of SMBRA

Board of Directors. TBF staff will provide support for the meetings of TBF Board of Directors. Specific tasks include preparation of meeting notices, agendas, staff reports, minutes, and resolutions.

Board and Committees	Meeting Frequency
SMBRC Governing Board	Bi-monthly
SMBRC Executive Committee	Bi-monthly
SMBRC Technical Advisory Committee	Quarterly
SMBRC Watershed Advisory Council	Annually
SMBRA Governing Board	Quarterly or as needed
The Bay Foundation Board of Directors	Quarterly

SWRCB, SMBRA, and TBF staff will conduct general management and reporting activities following the procedures and protocols that have been established for ensuring SMBNEP's fiscal stewardship and program functions. Specific tasks include:

- SMBRC with assistance from TBF develops the SMBNEP's annual work plan
- TBF develops its annual budget, in accordance with a systematic work plan and budget development process and calendar.
- TBF, with assistance from SMBRC, prepares and submits semi-annual progress report to USEPA.
- TBF prepares, oversees, and tracks the progress of USEPA grants and contracts associated with the annual work plan.
- TBF processes grant submittals requesting funding from SMBNEP funding sources.
- TBF retains professional bookkeeping services for its employees' payroll, invoicing, tax filing, and other fiscal operations: e.g. Prepare audits, insurance reviews, updates, etc.
- TBF conducts personnel management, including recruitment, performance assessments, training, and professional development of TBF employees.
- TBF provides supports for its own general office functions, including maintaining mailing lists, photocopying, mailing, fielding public inquiries, and ordering supplies.
- TBF provides support for SMBRC, WAC, and TAC meetings, including securing locations for meetings, managing public notices.
- SMBRC responds to public information requests.

SMBNEP is committed to implementing "green" measures to the fullest extent possible during all grant activities. TBF has already incorporated applicable "green" requirements into its organizational operating, contracting, and procurement policies and procedures. These policies and procedures will be reviewed in accordance with USEPA grant "greening" requirements and updated as necessary.

Task Description	Engaged SMBNEP Entities		Partners	Key Action(s) / Deliverable(s)
	Entities	Role		
3.3c Support organizational management and improve organizational capacity				
BRP tracking	SMBRC, TBF	Lead	Many	Semi-annual reports (April and October); annual report; updated QAPP; GRPA Report on Sept 1, 2019
** NEW: Prop. 50 Grants	SMBRC	Lead	SWRCB, SMB watershed stakeholders	Encumber \$3.19 million remaining by June 30, 2020
** NEW: Prop. 12 Grants	SMBRC, TBF	Participate	Coastal Conservancy*, SMB watershed stakeholders	Support SCC to encumber remaining \$6.8 million by June 30, 2020
Board and Committee Support	SMBRC, TBF	Lead	n/a	See narrative for frequency of meetings

* Project lead

** New task for FY19

Linked BRP Objectives and Milestones: All

Appendix A. Completed, Removed, or Combined Objectives or Tasks from FY18 Work Plan

Objective	Task	Short Description	Completed / Removed / Combined
1.1a Implement stormwater pollution control BMP funded through Prop. 84 bond and other grant programs	Support funding (e.g. Prop. 1) for WMP and EWMP projects	SMBRC and TBF will facilitate availability of Prop. 1 funding for new projects, with a continued focus on projects identified in the Watershed Management Plans (WMPs) and Enhanced Watershed Management Plans (EWMPs) to assist compliance with the Los Angeles County MS4 permit. This task will continue, but will be combined with similar efforts under 1.1b	<i>Combined</i> into a broader task under 1.1b: Water Quality Planning and Funding
1.1b. Promote and participate in integrated watershed-wide water quality improvement planning and implementation	Increase Funding for Water Resiliency	SMBRC and TBF will continue to support the collaborative effort of local environmental, municipal, and business communities to increase funding for water resiliency. SMBRC and TBF will continue to promote timely completion of the LA County Water Resiliency Work Plan and associated efforts	<i>Combined</i> into a broader task under 1.1b: Water Quality Planning and Funding
1.1b. Promote and participate in integrated watershed-wide water quality improvement planning and implementation	Storm Water Strategy, STORMS	In 2016, the SWRCB launched the Storm Water Strategy with the vision that “[s]torm water is sustainably managed and utilized in California to support water quality and water availability for human uses as well as the environment”; it’s mission is to “lead the evolution of storm water management in California by advancing the perspective that storm water is a valuable resource, supporting policies for collaborative watershed-level storm water management and pollution prevention, removing obstacles to funding, developing resources, and integrating regulatory and non-regulatory interests. Starting FY18, SMBRC participated in STORMS by engaging and collaborating with SWRCB and LARWQCB staff, supporting projects where appropriate, and providing updates to partners. This task will continue, but will be combined into a broader task under 1.1b.	<i>Combined</i> into a broader task under 1.1b: Water Quality Planning and Funding
1.1b. Promote and participate in integrated watershed-wide water quality improvement	Sub-Region Steering Committee	SMBRC sits on the IRWMP Steering Committees for the North Bay and South Bay sub-regional watershed groups. SMBRC will continue its role on the Steering Committees to develop and recommend projects for the sub-regions for funding made available for implementation of the IRWMP. This project has been combined with the broader IRWMP task in 1.1b.	<i>Combined</i> with IRWMP

Objective	Task	Short Description	Completed / Removed / Combined
planning and implementation			
1.2a Implement green infrastructure and LID projects	Stormwater monitoring	TBF helped monitor 8 storm events across two wet seasons (2015/16 and 2016/17) in partnership with Loyola Marymount University to assess pollutant removal and water retention of the Ballona Creek Rain Garden LID project. Pollutants measured included <i>E. coli</i> , enterococci, TSS, copper, zinc, lead, total PAHs, and hydrocarbons. The rain garden was highly effective at retaining water, with an average of 91% of all wet weather runoff retained and up to 100% of smaller (<1 in) storm events. Similarly, the garden retained between 83-95% on average of the pollutants measured. This project concluded with multiple scientific presentations and a Master's thesis by Jamie Burkhard at LMU, who completed her work in Spring 2018.	<i>Completed</i> in FY18
1.2b Implement the Boater Education Program	Honey Pot Live, Dockwalker Volunteer Program, and Copper TMDL Outreach	With the goal of decreasing boating related pollutants in Southern California harbors, TBF is implementing a community engagement program about sustainable boating habits and local environmental resources to combat pollutants of concern (i.e. vessel sewage, used oil, aquatic invasive species, dissolved copper, marine debris, and household hazardous waste). The Boater Education Program includes many components, several of which were combined into one task for FY19 entitled "Boating Community Engagement": Honey Pot Live, Dockwalker Volunteer Program, and Copper TMDL Outreach. Several of the programs were also re-named to more accurately reflect the current grant.	<i>Combined</i> into "Boating Community Engagement" task
1.2b Implement the Boater Education Program	Pilot Dye Tablet Program	This program was created in response to Watershed Advisory Committee input from LA County of Public Works. In collaboration with the LA County Public Works Department and LA County Department of Beaches and Harbors, TBF ran a voluntary pilot dye tablet for boaters to self-evaluate their boat's holding tank and sewage management system. Basin E docks were targeted due to historical occurrences of bacterial contamination in this area. The goal of this pilot program was to increase knowledge of the ecological impairments from bacteria at Mother's Beach and back basins on Marina del Rey Harbor. This program is currently being implemented and will be completed in FY18, but program results were not evaluated by the time of the drafting of this FY19 Work Plan.	<i>Completed</i> in FY18

Objective	Task	Short Description	Completed / Removed / Combined
2.1a Promote marine ecosystem protection	MDR Youth Fishing Program	In FY19, TBF will continue to support the Marina Del Rey Anglers Youth Fishing Program. This program provides an opportunity for hundreds of disadvantaged youth annually to go “catch and release” fishing with the anglers and receive presentations on marine stewardship and sustainable fishing practices. Specific actions will include promotion and awareness building for the program. Assistance for Marina Del Rey Anglers in attracting and training interns to staff the fishing trips.	<i>Combined into “Sustainable Fisheries Outreach”</i>
2.1b Support stream protection policies	Promote creation and adoption of stream protection ordinances and/or policies	TBF and SMBRC have previously helped promote the creation and adoption of stream protection policies through conversations, providing technical expertise, and encouraging our partners (e.g. Heal the Bay, Ballona Creek Renaissance, Women of Water) to develop these policies. Recently, the LA City Department of Public Works has spent several years working on a stream protection ordinance for areas within LA City. Based on Watershed Protection Division analysis, there are approximately 462 miles of riparian habitat that would receive some level of protection under the draft ordinance. The ordinance would protect the city’s remaining stream habitat by requiring development buffer zones of 100 feet for soft-bottomed habitat and 30 feet for concrete-lined channels.	<i>Removed due to lack of funding in FY19</i>
2.2a Facilitate restoration of priority wetlands	Ballona Reserve – Draft Environmental Impact Report/Statement	CDFW and US Army Corps of Engineers are the lead agencies for the Ballona Wetlands Restoration Project and they released the Draft Environmental Impact Statement/Report (DEIS/R) in September 2017. TBF assisted the lead agencies with technical review of the draft EIR/S; assistance with review of public comments; and further technical input as requested by the PMT. Additionally, TBF helped disseminate the notice of release of the DEIS/R and the notification for the extension of the public comment review period.	<i>Completed in FY18</i>
2.2a Facilitate restoration of priority wetlands	Ballona Reserve – Public Outreach	TBF has facilitated and promoted ongoing communications in partnership with the lead agencies to advance public involvement in the restoration process through a variety of methods. Specifically, TBF has conducted community outreach through online and print media, conducted tours, given presentations, distributed electronic newsletters, and updated TBF’s website.	<i>Combined into “Ballona Reserve – Support Restoration Planning”</i>

Objective	Task	Short Description	Completed / Removed / Combined
2.2b Facilitate stream restoration and fish barrier removal	Invasive Crayfish Control Efforts	Non-native Louisiana red swamp crayfish are harmful to the ecosystem of the Santa Monica Mountains. Native amphibians and fish are threatened by the presence of this species. SMBRC provided Mountains Restoration Trust with initial funding to develop efficient trapping methods, purchase traps, recruit volunteers, and conduct limited trapping on a short reach of Malibu Creek. This initial funding was instrumental in helping MRT leverage a \$900,000 grant from the Department of Fish and Wildlife to continue crayfish removal efforts in the Malibu Creek and Medea Creek Watersheds. From 2013 through August of 2017, more than 100,000 crayfish have been removed. Recent MRT field work suggests crayfish removal efforts in Las Virgenes Creek (Malibu Creek watershed) is facilitating California red-legged frog expansion downstream through the City of Calabasas.	<i>Completed</i> in FY18
2.2b Facilitate stream restoration and fish barrier removal	Arroyo Sequit Fish Barrier Removal Project	In FY17, the SWRCB provided a grant to California Department of Parks and Recreation (State Parks), at the recommendation of the SMBRC, provided financial support, and TBF provided technical support for removal of a check dam and two Arizona crossings within Arroyo Sequit Creek. These structures were barriers to the federally endangered southern steelhead trout which enter and leave creeks and rivers to complete their lifecycle. Both Arizona crossings have been removed and replaced with free-span bridges, which concludes the removal of all three barriers. Removal of these barriers gives steelhead access to an additional four and a half miles of habitat. Invasive vegetation and replacement with natives will be ongoing. Steelhead trout have already been observed upstream of former barriers.	<i>Completed</i> in FY18
2.2b Facilitate stream restoration and fish barrier removal	Rindge Dam Removal Feasibility Study	The 100-foot tall dam on Malibu Creek is located in Malibu Creek State Park, about three miles from the coast of Malibu, California. State Parks is the agency leading the effort to conduct a feasibility study for its potential removal. It is the largest barrier to fish passage in Malibu Creek. In FY18, the draft feasibility study, including EIR/EIS and public comment, was completed. The document is currently undergoing agency review, with a Record of Decision due in November 2019.	<i>Completed</i> in FY18
2.2b Facilitate stream restoration and fish barrier removal	Topanga Creek Restoration; and Other Stream Restoration and	SMBRC and TBF have supported efforts to restore Topanga Creek, including communications with the project lead agencies (DPR and RCDSMM) to replace the PCH bridge at Topanga Lagoon to allow more area for wetland restoration. Additionally, SMBRC and TBF have opportunistically promoted and supported additional fish barrier	<i>Combined</i> with other stream restoration and fish

Objective	Task	Short Description	Completed / Removed / Combined
	Fish Barrier Removal Projects	removal and stream restoration projects. These efforts will continue as part of other tasks identified in section 2.2b.	barrier removal tasks
2.3a Restore coastal dune and bluff habitats	Monthly LAX Dunes Restoration Events; Dune Restoration Partnership; and Coastal Cleanup Day	Multiple dune restoration tasks were combined into one task for FY19: "Restore LAX Dunes". The previous tasks included separate sections for conducting monthly volunteer restoration events at the LAX Dunes funded by a Coastal Conservancy "Explore the Coast" (ETC) grant, conducting Coastal Cleanup Day (also funded by the ETC grant), and the larger partnership with Los Angeles World Airports (LAWA) to monitor and provide assistance maintaining the northern 48-acre portion of the dune system.	<i>Combined with "Restore LAX Dunes"</i>
2.3b Protect and restore sandy beach habitats	Santa Monica Beach Restoration Pilot Project	The Santa Monica Beach Restoration Pilot Project conducted in partnership with the City of Santa Monica is restoring three acres of sandy coastal habitats on the beaches of Santa Monica to bring back a healthy, diverse coastal plant and wildlife community. Through rigorous scientific monitoring, the project will evaluate increased protection for our coastal infrastructure and residences from sea level rise and erosion, while also providing a vital refuge for invertebrates, birds, and rare coastal vegetation species. This project remains in the work plan and has been combined with other beach restoration projects with coastal resilience as a goal in the same 2.3b objective.	<i>Combined with "Beach Restoration Projects to Improve Coastal Resilience"</i>
2.3b Protect and restore sandy beach habitats	Standardized Sandy Beach Monitoring; and "Healthy Beaches" Research Studies	These tasks aim to expand the development of standardized sandy beach monitoring protocols for the ecological assessment of beaches in California, and utilize community-based and student-based monitoring and research to collect baseline data for an assessment of beaches in the Los Angeles region to inform SMBNEP's State of the Bay Report and Comprehensive Monitoring Program. These tasks have been combined into one, "Beach Monitoring and Research".	<i>Combined into "Beach Monitoring and Research"</i>
2.3b Protect and restore sandy beach habitats	Beach and Dune Restoration Opportunities	In FY18, TBF successfully expanded the sandy shore restoration program through the acquisition of funding from the State Coastal Conservancy to implement the Malibu Living Shoreline Project (summary in "Beach Restoration Projects". This task is continuing in FY19 and combined with other sandy beach tasks.	<i>Combined with other sandy beach tasks</i>

Objective	Task	Short Description	Completed / Removed / Combined
2.4c Reintroduce and restore abalone	Abalone Aquaculture Resilience Research	In recent years, rising sea temperatures have negatively affected farm production of red abalone in California. There is concern among abalone growers that increasing frequency of El Niño events and long-term climate change, may dramatically impact successful abalone aquaculture. In partnership with Cal Poly Pomona, aquaculture production methods developed for red abalone in California and abalone species from other parts of the world will be applied and refined for use in the culture of green abalone.	<i>Combined with "Abalone Research Laboratory"</i>
2.4c Reintroduce and restore abalone	Green Abalone Restoration	In 2015, 846 juvenile green abalone were outplanted into coastal waters off of the Palos Verdes Peninsula. Quarterly monitoring will continue through FY19 to track progress and success of this outplanting event. Outplanting methods will continue to be tested using larval and juvenile green abalone. Additionally, deck spawning trials will continue in FY19. This field method allows for researchers to collect abalone from the wild, induce them to spawn on the deck of a research vessel, and return them to the wild the same day. If successful, deck spawning would allow abalone to be spawned without the need to keep them in captivity indefinitely.	<i>Combined with "Abalone Restoration"</i>
2.4c Reintroduce and restore abalone	White Abalone Restoration	In FY17, TBF expanded the abalone work from green abalone into additional species. The focus of this work will be directed toward restoration of the endangered white abalone (<i>Haliotis sorenseni</i>). In FY18, to begin working on white abalone restoration, TBF will conduct spawning, rearing and outplanting experiments with red abalone, which prefer similar habitat characteristics as white abalone.	<i>Combined with "Abalone Restoration"</i>
3.1a Implement climate change planning and policy improvements	Promote "Softscape" Measures for Climate Change Adaptation	SMBRC and TBF will continue to promote comprehensive sediment management and other "soft" and "living" measures to address the impact of sea level rise in the beach and adjacent ecosystems of the Bay. The Santa Monica Beach Restoration Pilot Project is one example of this soft-scape protection, which restored several acres of sandy coastal habitats on the beaches of Santa Monica to establish a native fore-dune plant community. Projects such as these will showcase and provide valuation information to evaluate the effectiveness of restored natural ecological functions of sandy beaches in protection of coastal infrastructure from sea level rise and erosion, while providing a vital refuge for wildlife. This program is included in other tasks such as in 2.3b.	<i>Combined with other tasks, especially 2.3b</i>

Objective	Task	Short Description	Completed / Removed / Combined
3.1b Conduct research on local impacts of climate change	Impacts of Kelp Forests of Ocean Acidification in Santa Monica Bay	In FY17, a UCLA IoES Senior Practicum group accepted an opportunity to expand and build upon the work of the hydrodynamic study. The hypothesis of this work is that ocean acidification may be suppressed within giant kelp forests as a result of high primary production of the system. The students in this project were supported by TBF staff and researchers from UC Davis and UCLA as they collected water quality samples to inform their hypothesis. A final report summarizing their methods, literature review, data and analyses was produced in June 2017.	<i>Completed in FY18</i>
3.2c Participate in and provide technical support to stakeholder groups	Palos Verdes Shelf Institutional Controls Program and FCEC	SMBRC has been supporting and participating in USEPA's PV Shelf Superfund Site Institutional Control Program, especially the activities of the Fish Contamination Education Collaborative (FCEC). SMBRC and TBF participated in the development of the risk communication message and development and distribution of educational materials. SMBRC will continue to participate in USEPA's contaminated sediment cleanup efforts for the Palos Verdes Shelf. SMBRC and TBF will continue to monitor and participate in other restoration activities overseen by the Montrose Settlement Restoration Program. However, the level of involvement and activity is similar to the support provided to other stakeholder groups; therefore, it is deleted as a stand-alone task and incorporated into Appendix D.	<i>Combined into 'support of other stakeholder groups' (Appendix D)</i>
3.2d Oversee the Public Involvement and Education (PIE) mini-grants program	Raise funding from local sponsors and initiate a new round of PIE program	The PIE program provided seed money for innovative and engaging outreach project implementation in the Santa Monica Bay watershed and, through the program, SMBNEP raises awareness of local environmental issues and inspires the stewardship needed to protect the health of our waters and our communities. However, no funds are available for implementation of this program in FY19.	<i>Removed due to lack of funding in FY19</i>
3.3a Seek and increase funding for BRP Implementation	Increase BRP Implementation Funding	SMBNEP has been successful in securing funding for implementing the BRP, including new sources of grant funding. However, available resources are still far from meeting the financial needs of full BRP implementation. Sustaining stable sources of funding to ensure continued progress in BRP implementation is an ongoing challenge. Grant awards received by TBF and SMBRA have supported implementation of many important programs and projects and TBF and SMBRA will continue to investigate and develop new partnership opportunities and new sources of funding, but this task is already	<i>Combined into other tasks throughout FY19 Work Plan</i>

Objective	Task	Short Description	Completed / Removed / Combined
		integrated throughout the FY19 Work Plan and does not need a repetitive item on its own.	
3.3b Monitor and report on the Bay's environmental condition	State of the Bay Reporting	The State of the Bay (SotB) Report is a science-based comprehensive assessment of the Bay's environmental condition. The goal of the report is to measure progress in restoring the Bay's natural habitats and resources, educate the public about the Bay's valuable natural habitats and resources, and identify and help scientists and managers to address remaining and emerging challenges. More specifically, this report provides information that can be used both to gauge the progress in implementing the BRP and CMP. Thus, it has been combined with the CMP Update task as the two are inextricably linked.	<i>Combined with CMP Update task</i>
3.3b Monitor and report on the Bay's environmental condition	Pilot Deep Reef Surveys and Eelgrass Monitoring	One of the data gaps identified by the CMP is a dearth of data regarding the condition of deep-reef (> 90 feet) habitat, including banks (Short Bank), canyons (Dume, Redondo, and Santa Monica), and rocky outcrops along the edge of Palos Verdes Shelf. Similarly, the expanse and health of eel grass and surf grasses in Santa Monica Bay are poorly understood. Eel grass and surf grass comprise a biogenic structure that provides nursery habitat for numerous species, improves water quality, retains sediment, and are viewed as increasingly important carbon sinks. Thus, a better understanding of the condition, persistence, and presumed expansion of sea grasses in Santa Monica Bay is an important data gap to address, as is the understanding of the extent and condition of deep reef habitats. Both tasks are still included in FY19 Work Plan under the Remote Monitoring task in objective 2.1a.	<i>Combined with Remote Monitoring task in objective 2.1a</i>
3.3c Support organizational management	Government Performance and Results Act Reporting	The annual Government Performance and Results Act (GPRA) reporting requires each NEP program to report on the acres or linear miles of habitat protected and restored, environmental indicators in use, and leveraged resources. This task was combined with "BRP Tracking" and remains in Objective 3.3c.	<i>Combined with "BRP Tracking" task in 3.3c</i>

Appendix B. Prop. 84: details of completed projects from FY17 and FY18.

Lead Implementer	Name	Objective	Project Description	Project Cost	Accomplishments / Deliverables	320 Grant Funds	Long Term Outcomes
California Department of Parks and Recreation	Phase 2 Arroyo Sequit Fish Barrier Removal - Implementation	Restore 2-miles of access for endangered steelhead trout, restore native riparian vegetation.	Remove two crossings and one check dam. Replace crossings with free standing bridges capable of passing 100-year storm event. Remove invasive vegetation and replace with site appropriate native plants upstream and downstream of new bridges.	\$3,024,600	Removal of two at-grade crossings, removal of check dam, construction of two free standing bridges, revegetated riparian area.	0	Restoration of self-sustaining population of steelhead trout, stabilized stream banks, suppression of non-native species.
Los Angeles County	Oxford Retention Basin Water Quality and Multi-Use Enhancement Project	Improve water and habitat quality, aesthetics, and passive recreational activities at Oxford Basin in Marina del Rey.	Construction of a circulation berm, replacement and reprogramming tide gates, installing bioswales and permeable path, replacing non-native vegetation and contaminated soil with appropriate soil and native vegetation, excavating sediment and constructing a parapet wall.	\$14,500,000	Submit draft MP/QAPP, submit final design plans, complete construction	0	Contribute to TMDL compliance in Marina del Rey back basins, improved habitat for native species in Oxford Basin, enhanced environmental education for residents and improved passive recreation opportunities.

Appendix C. Prop. 84: details of ongoing projects. Asterisk indicates the lead grantee entity for each project.

Name	Objectives	Description	Partners	Milestones	Budget	Long-term Outcomes
University Park Rain Gardens	Improve water quality in Ballona Creek by constructing a system to divert and infiltrate or bio-filtrate year-round dry-weather flows and wet-weather low flows from approximately two hundred and nine (209) acres in the University Park area of Los Angeles.	Identify, prioritize, and construct a minimum of 35 rain gardens to capture and treat a three-quarter inch (¾") twenty-four (24) hour storm (minimum) using native vegetation only.	City of Los Angeles*, USC, University Park Neighborhood	Completion of design plans, 2 public meetings, secure contractor, installation of 35 rain gardens	\$600,000	Residents educated about stormwater pollution and potential solutions, contribute to TMDL compliance in Ballona Creek
Milton Street Park Project	Improve water quality in Ballona Creek through Capture, treatment, and infiltration of all dry-weather, and a portion of the wet-weather runoff along a 1,000' section of Milton Street in Los Angeles, in the Ballona Creek watershed.	Install a minimum of 14 vegetated stormwater curb extensions on Milton St. to capture, treat, and infiltrate runoff from Milton St. and an adjacent multi-use park. Project will also install trash screens on storm drains at east and west of project site.	MRCA*	Complete design plans and cost estimates, submit native plant pallet, install vegetated stormwater curbs.	\$655,000	Contribute to TMDL compliance in Ballona Creek.
Culver Blvd Realignment and Stormwater Infiltration / Retention Project	Reduce pollutant loads to Ballona Creek and Santa Monica Bay. Conserve water and increase local water supply.	Capture the runoff from 800 acres of primarily residential and commercial land uses. The runoff will be treated and allowed to infiltrate, with some portion retained for use as irrigation of the median. Designed to capture the 85th percentile, 24-hour storm	City of Culver City*, City of Los Angeles, Bureau of Sanitation	Complete conceptual and final designs. Execute MOU with City of Los Angeles. Complete Hydrologic and Hydrology studies. Release RFP for construction.	\$16,550,000	Improved water quality in Ballona Creek and Santa Monica Bay. Water conservation and increased local water supply.

Name	Objectives	Description	Partners	Milestones	Budget	Long-term Outcomes
		event; and 100% of dry weather flows		Project construction. Performance monitoring.		
Santa Monica Bay Catch Basin Insert Project	Reduce trash pollution to near-shore waters of Santa Monica Bay.	Install Connector Pipe Screen (CPS) units in catch basins that drain into the Santa Monica Bay from streets in the cities of Rancho Palos Verdes, Palos Verdes Estates, and Rolling Hills Estates in the Palos Verdes Peninsula sub-watershed	Rancho Palos Verdes*, Palos Verdes Estates, Rolling Hills Estates	Complete MOU with partner agencies. Issue RFP for construction and installation, Project construction. Performance monitoring.	\$1,012,000	Compliance with Santa Monica Bay Trash TMDL of zero trash.
Ladera Park Water Quality Enhancement Project	Stormwater and dry weather runoff pollutant reduction to Ballona Creek and Santa Monica Bay	Through the combination of pre-treatment, retention, and infiltration facilities, the Project will treat then store and infiltrate the 85th percentile 24-hour storm volume of 5.1 acre-feet of stormwater runoff and all dry weather runoff from 110 acre tributary.	County of Los Angeles Department of Public Works*	Complete project design. Complete CEQA. RFP for construction. Construct project. Performance monitoring.	\$9,600,000	Improved water quality in Ballona Creek and Santa Monica Bay. Water conservation and increased local water supply.
Westwood Neighborhood Greenway Project	Dry weather and some stormwater runoff pollutant reduction to Ballona Creek and Santa Monica Bay	The project will divert runoff from Overland stormdrain via a lift station and pass through screens, hydrodynamic separators and sand filters before flowing through bioswales for additional treatment including natural UV exposure and bioremediation. Flows will return to Overland drain after treatment.	City of Los Angeles Bureau of Sanitation*	Complete project pre-design and final design. RFP for construction. Construct project. Performance monitoring.	\$4,360,000	Improved water quality in Ballona Creek and Santa Monica Bay. Water conservation.

Appendix D. Groups for which SMBNEP staff provide technical support.

Group Name	Engaged SMBNEP entities	Partners	Frequency
GLAC IRWMP	SMBRC	Member entities and agencies	Bi-monthly
Wetland Recovery Project, Wetland Advisory Group	TBF	Wetland scientists and stakeholders throughout CA; WRP, SCC	Quarterly
State Clean Beach Task Force	SMBRC	SWRCB*	As needed
Beach Water Quality Work Group	SMBRC	SWRCB*, Health Depts. Stormwater management agencies throughout Southern California	Quarterly
Jurisdictional Group 5&6	SMBRC, TBF	South Bay Cities*	Bi-monthly
Beach Ecology Coalition	SMBRC, TBF	Pepperdine University*, local beach management agencies, environmental groups, scientists, etc.	Semi-annually
Green LA Urban Ecosystem Strategic Planning Committee	SMBRC	City of Los Angeles*	Quarterly
California Wetlands Monitoring Workgroup (CWMW)	TBF	CWQMC* and many participating agencies and organizations	Quarterly
CWMW, Level-3 Subcommittee	TBF	CWQMC* and many participating agencies and organizations	Quarterly
Palos Verdes Shelf Superfund Investigation Technical Information Exchange Group	SMBRC	USEPA* and many participating agencies and organizations	Semi-annually or as needed
Environmental Life Science Committee	TBF	American Academy of Environmental Scientists*	As needed
Friends of LAX Dunes, Board of Directors	TBF	Los Angeles World Airports*, City of Los Angeles*, other interested stakeholders	Monthly
Southern California Coastal Ocean Observing System (SCCOOS), Joint Strategic Advisory Council	TBF	Many participating agencies and organizations **	Annually

Group Name	Engaged SMBNEP entities	Partners	Frequency
Southern California Marine Institute, Board of Directors	TBF	Ocean Studies institute, California State Channel Islands, Dominguez Hills, Fullerton, Long Beach, Los Angeles, Northridge, Pomona, San Bernardino and San Marco), USC, UCLA, Los Angeles Community College District	Periodically
Loyola Marymount University's Environmental Stewardship and Sustainability Committee	TBF	LMU*	Periodically

* Group lead

** Full list of participating agencies and organizations for SCCOOS: US Coast Guard • California Department of Fish and Game • Pacific Coast Federation of Fishermen's Associations • National Weather Service • Center for Ocean Solutions • Southern California Stormwater Monitoring Coalition • Tijuana River National Estuarine Research Reserve • City of Los Angeles • NOAA Office of National Marine Sanctuaries • USC Sea Grant • California Sea Grant • California Coastal Commission • Naval Air Systems Command (NAVAIR) • San Francisco Bay Conservation and Development Commission • State Water Resources Control Board • Orange County Health Agency • Sam US Geological Survey • California Department of Public Health • Sonoma County Water Agency • California Ocean Science Trust • Marine Exchange of Southern California • Minerals Management Service • Orange County Sanitation District • US Army Corps of Engineers • California Coastal Conservancy •, US Army Corps of Engineers • NOAA Coastal Services Center • City of Encinitas • NOAA Southwest Fisheries Science Center • U.S. Integrated Ocean Observing System