



Santa Monica Bay National Estuary Program Annual Report

2015



The Santa Monica Bay National Estuary Program (SMBNEP) is one of 28 similar programs established under Section 320 of the 1987 Clean Water Act and administered by the U.S. EPA. The SMBNEP's comprehensive plan of action for protecting and restoring Santa Monica Bay, known as the **Bay Restoration Plan (BRP)**, was approved by the State of California and the U.S. EPA in 1995 and updated in 2008 and 2013. The BRP includes goals, objectives, and milestones that guide SMBNEP's programs and projects in three priority areas: water quality, natural resources, and benefits and values to humans. The BRP also identifies the responsible lead and partner entities, and the roles of the SMBNEP in supporting, promoting, and implementing Bay restoration work.

Actions identified in the BRP have significantly improved the environmental quality of the Bay since the establishment of the SMBNEP, but full recovery of the Bay is far from certain. Steady and long-term efforts along with consistent funding are necessary to ensure that we achieve the BRP's goal of a healthy and restored Santa Monica Bay.

The **SMBNEP** is comprised of a partnership of the following entities:

Santa Monica Bay Restoration Commission

The Santa Monica Bay Restoration Commission (SMBRC) is a non-regulatory, locally-based state entity established by an act of the California Legislature in 2002. The SMBRC is charged with overseeing and promoting the Bay Restoration Plan by securing 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.

The SMBRC brings together local, state, and federal agencies, environmental groups, businesses, scientists, and members of the public on its 36-member Governing Board. The SMBRC is also supported by a Technical Advisory Committee, and a broad stakeholder body, the Watershed Advisory Council. (www.smbrc.ca.gov)

Santa Monica Bay Restoration Authority

The Santa Monica Bay Restoration Authority (SMBRA) was created by a joint exercise of powers agreement between the 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 the SMBRC and the District. The purpose of the 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.

The Bay Foundation

The Bay Foundation (TBF)—also known as the Santa Monica Bay Restoration Foundation (SMBRF)—is an independent, non-profit 501(c)(3) organization founded in 1990 and serves as the fiscal partner for the SMBNEP, annually receiving important grants and donations. TBF provides administrative, management and program services to the NEP. The purpose of the Foundation is to contribute to the restoration and enhancement of Santa Monica Bay and other coastal waters and to complement the work of the SMBRC through the BRP, with a focus on obtaining and expending funds not otherwise available to the SMBRC. (www.santamonicabay.org)



Kelp forest canopy in Point Vicente Cove, Palos Verdes, CA, from approximately 20 feet deep.



Volunteers remove invasive vegetation monthly at the LAX Dunes ongoing restoration overlooking Santa Monica Bay in El Segundo.

Welcome! Thank you for your interest in the ongoing work of the Santa Monica Bay National Estuary Program (SMBNEP). In our 2015 Annual Report you'll find: a summary of our accomplishments, highlights from specific programs or projects, and a breakdown of our funding. These results wouldn't be possible without the contributions of persons and organizations dedicated to our mission, *to restore and enhance Santa Monica Bay through actions and partnerships that improve water quality, conserve and rehabilitate natural resources, and protect the Bay's benefits and values.*

This mission is informed by the Bay Restoration Plan and includes the mountains, neighborhoods, beaches and coastline from Ventura/ Los Angeles Countyline to San Pedro and inland to downtown. Since 1987 we've served the people and wildlife of Los Angeles through an integrative approach that includes research, ecological restoration, volunteerism, and investments in public infrastructure. As the executive director of the SMBNEP, I strive to make sure that we are collectively doing the most for our coast!

Our plans for the future of coastal Los Angeles are responsive to the challenges of our young century including: climate change, drought, habitat loss and degradation, while protecting local jobs and public health. I hope that as you read our annual report you'll find your coastal connection through a project or program that touches your heart and serves your community. When that coastal connection is made, please look us up online at www.santamonicabay.org and find a way to get involved with our work. Please join us and experience what it's like to make a difference in the life of millions of people and the wildlife that call LA home.

Sincerely,

Tom Ford

Wetlands and Coastal Habitats

Malibu Lagoon Post-Restoration Monitoring – A long-term comprehensive monitoring program led by the California Dept. of Parks and Recreation evaluating the condition of the post-restoration wetlands through biological, physical, and chemical surveys. The third post-restoration monitoring year was completed in 2015, and a three-year comprehensive monitoring report was drafted and will be completed in May 2016. Ongoing. (SMBRA, TBF)

Ballona Wetlands Ecological Reserve Monitoring – A comprehensive, multi-year monitoring program evaluating the condition of the pre-restoration wetlands and adjacent habitats through biological, physical, and chemical surveys to inform the restoration process and collect baseline data. Several technical memoranda and a final cumulative five-year report were completed in 2015. This program also provides ongoing support and technical evaluations to the Draft EIR/EIS documents (below). Ongoing. (TBF)

Ballona Wetlands Restoration EIR/EIS – A multi-year program to inform a draft of the joint Environmental Impact Report / Environmental Impact Statement (EIR/EIS) led by the California Dept. of Fish and Wildlife and the US Army Corps of Engineers. Tasks include the preparation of technical studies, engineering plans, CEQA/NEPA documents and permit applications (which began in summer 2012) for this regionally significant wetland restoration project. Technical reviews were provided to the project management team, with an estimated release of the draft EIR/EIS documents in summer 2016. Ongoing. (TBF)

Arroyo Sequit Creek Restoration – A Proposition 50 grant-funded project that removed two Arizona crossings and one check dam in Arroyo Sequit Creek to improve habitat for southern steelhead trout. All three barriers were removed in 2015, and formation began of the new upper bridge to restore hydrology and natural sediment movement. Ongoing. (SMBRC, TBF)

Community-Driven Restoration at Ballona Wetlands – A project to restore approximately three acres of the heavily degraded Ballona Wetlands Ecological Reserve through volunteer and community involvement in invasive iceplant removal activities. In 2015, the public stakeholder process was initiated and a Coastal Development Permit was received from the California Coastal Commission. Ongoing. (TBF)

LAX Dunes Restoration Project – A program in partnership with Los Angeles World Airports and the Friends of LAX Dunes conducting monthly volunteer restoration events at the LAX Dunes to remove invasive vegetation and teach the local community about the importance and resilience of coastal dune systems. Ongoing. (TBF)

Santa Monica Beach and Dune Restoration Pilot Project – A pilot project to restore approximately three acres of sandy coastal habitats to the beach in the City of Santa Monica. The project will reestablish native vegetation to the beach in an effort to create sustainable coastal strand and foredune habitat complex resilient to sea level rise. In 2015, outreach for this project began, several interpretive renderings were designed, and an MOU was drafted with the City of Santa Monica. Ongoing. (TBF)

Rindge Dam Removal Study – An assessment to inform the feasibility of restoring and enhancing the Malibu Creek ecosystem through the removal of Rindge Dam in partnership with California Dept. of Parks and Recreation, US Army Corps of Engineers, and other agencies. Ongoing. (SMBRC, TBF)



Stone Canyon Creek restoration, in partnership with UCLA Lab School, attracts monthly volunteers.

Stone Canyon Creek Restoration – A community stream habitat restoration and education program along a Ballona Creek tributary, in partnership with UCLA and adjacent elementary UCLA Lab School. Ongoing. (TBF)

Las Virgenes Creek Crayfish Removal – A restoration project to control invasive red swamp crayfish in the Malibu Creek watershed to improve habitat for native aquatic species, in partnership with Mountains Restoration Trust. Ongoing. (SMBRC, TBF)

New Zealand Mudsnail Survey – An annual survey of invasive New Zealand mudsnails to track the species in streams throughout the Santa Monica Mountains. Ongoing. (SMBRC, TBF)

Coordinated Monitoring Program for Southern California Estuarine Wetlands – A program partnering with the Southern California Coastal Water Research Project and California State University, Channel Islands to develop and expand a regional, site-intensive, coordinated monitoring program for Southern California estuarine wetlands. This program completed a regional monitoring report for Southern California coastal wetlands and a California Estuarine Wetland Monitoring Manual in 2015. Completed. (See p. 7 of the report for expanded information.) (SMBRA, TBF)

Green Neighborhoods

Proposition 84 Grant Program – The allocation of \$18 million in state funding for projects that implement the Bay Restoration Plan, including coastal watershed contamination prevention and coastal and marine habitat restoration. Projects include: City of Torrance Storm Water Basin Enhancement (Completed), City of Calabasas Catch Basin Trash Inserts (Completed), City of Los Angeles University Park Rain Gardens, Milton Park Green Street Storm Water BMPs, and County of Los Angeles Oxford Basin Enhancement. A new request for proposals (RFP) was released in November 2015 making the remaining \$9 million available for implementing storm water pollution control projects in the Bay watershed. Ongoing. (See p. 6 of the report for expanded information.) (SMBRC, TBF)

Clean Bay Certified Program – A program in partnership with watershed cities to certify restaurants that comply with storm water permit requirements and the Program's additional pollution prevention practices. City of Inglewood and City of Culver City joined the program in 2015. Ongoing. (TBF)



Front yard of a Culver City home before and after grass removal and installation of a rain garden funded by a grant from the Metropolitan Water District.

Rainwater Harvesting – A project that installed four residential rain gardens in 2015, funded by a grant from the Metropolitan Water District. Monitoring of the four systems' post-installation performance continues through storm water sampling and collecting water conservation data. Ongoing. (TBF)

Water Quality Monitoring – A project in partnership with Loyola Marymount University at the Culver City Rain Garden to evaluate storm water runoff and the potential for commercial rain gardens to decrease pollution into Ballona Creek. Ongoing. (TBF)

Ocean

Kelp Forest Restoration – A project designed to restore up to 150 acres of the giant kelp forests to create a more resilient ecosystem and sustainable coastal economy. The project utilizes urchin fishermen and volunteer divers to transform urchin barrens back to kelp forests. Over 14 acres of kelp forest were restored in 2015. The project also involves monitoring of the kelp forest habitat, the results of which have demonstrated large increases in the size, number and health of the animals and algae living in the restoration areas. Ongoing. (TBF)

Socio-economic Research Related to Marine Spatial Planning – An aerial-survey based project which maps the location, type, and activity of boats along the southern California coast. The surveys are conducted from small aircraft and encompass the entire mainland coast of southern California (from the U.S. Mexican Border to Point Conception, approximately 990 square miles), to track boater responses to the establishment of the Marine Protected Area network. Ongoing. (TBF)

MPA Outreach – Coordination with other NGOs and stakeholders throughout Southern California to share vital information about the status and management of the Marine Protected Area network in the region. Ongoing. (TBF)

Green Abalone Restoration Pilot Project – A restoration project that continues to develop and refine methodologies to restore populations of green abalone in experimental plots off of our coast. In 2015, 863 juvenile green abalone were successfully outplanted off the Palos Verdes Peninsula, and are being monitored for dispersal and survival. The project involves the creation of a new abalone research facility at the Southern California Marine Institute aimed to improve abalone reintroduction techniques and provide increased capacity for future outplanting efforts. Ongoing. (TBF)

Point Dume Circulation and Sediment Transport – Assisted researchers from UC Davis, Bodega Marine Laboratory in sediment collection and physical instrumentation deployment to characterize the alongshore and cross-shore circulation and sediment transport around Point Dume. Completed. (TBF)

Bilge Pumpout Installation – A state of the art bilge pumpout/oil water separator was installed at Oceanside Harbor. Boaters who use this prevent oily discharge from entering into the ocean. Engineered in Italy, the separator utilizes physical processes eliminating the need for filters or chemical additives. Completed. (See p. 5 of the report for expanded information.) (TBF)

Outreach

Boater Education Program – A multi-faceted program designed to inform and assist boaters in reducing or eliminating pollution emanating from their boats. The program publishes "The Changing Tide" newsletter, and this year "When Nature Calls", which focuses on vessel sewage management. 7,000 Boater Kits were produced and distributed by staff and volunteer Dockwalkers. Related efforts in this statewide effort to address



TBF diver collects a green abalone (*Haliotis fulgens*) off Catalina Island to conduct research on wild abalone spawning patterns.

boat based pollution included a Motorized Boater Survey; expansion of Honey Pot program, including implementation of the Honey Pot Day mobile pumpout program; installation of four Oil Absorbent Exchanges; and coordination of multiple outreach and education events throughout Southern California. Ongoing. (SMBRA, TBF)

Water and Energy Conservation – A water and energy conservation outreach project funded by the LA Department of Water and Power. The project reached over half a million people and produced three high-quality (one award-winning) water and energy conservation Public Service Announcements. Completed. (TBF)

Ballona Wetlands Outreach – A program that includes a wide variety of outreach activities including farmers markets, nature tours, bird walks, science-in-action activities, educational trainings, newsletters, social media, and more. Ongoing. (TBF)

Coastal Cleanup Day – A project coordinating an international Coastal Cleanup Day (CCD) volunteer event. In 2015, TBF coordinated a CCD event at the LAX Dunes in partnership with the Friends of LAX Dunes and Los Angeles World Airports. Over 70 volunteers contributed 235 hours and pulled over one ton (2,002 lbs.) of invasive weeds as part of a long-term habitat restoration project for the LAX Dunes. Completed. (TBF)

Internship Program – A program in partnership with Loyola Marymount University to coordinate student and postgraduate research and volunteer efforts through multiple restoration and scientific data collection projects. Ongoing. (TBF)

Urban Coast – A multidisciplinary journal providing a forum for information exchange and to highlight research on pressing issues and policies that affect the conditions of urban coastal resources. This year's special issue featured the State of the Bay 2015 report. Ongoing. (See p. 5 of the report for expanded information.) (TBF)

State of the Bay Conference – A conference featuring presentations and panels addressing a wide range of topics informative and critical to the future health of our coastal environment. The event was held at Loyola Marymount University on Sept. 9, 2015 and attended by over 200 people. Completed. (See p. 5 of the report for expanded information.) (SMBRC, TBF)



This year, The Bay Foundation moved its Coastal Cleanup Day from Marina del Rey to the LAX Dunes, where over 70 volunteers pulled over a ton of invasive weeds.

Urban Coastal Research Symposium – An annual symposium catering to scientists, agency representatives, elected officials, students, and members of the public. This year's symposium was held in partnership with the Southern California Academy of Sciences Annual Meeting. A diverse set of symposia were organized including wetland research, marine research, and pressing issues such as climate change. Ongoing. (SMBRC, TBF)

Palos Verdes Shelf Fish Contamination Education Collaborative – A collaborative group that aims to educate local fishermen and consumers about the health risks of contaminated seafood, in partnership with U.S. EPA, local agencies, and community based organizations. Ongoing. (SMBRC, TBF)

Planning and Policy Development

State of the Bay Report – A science-based comprehensive assessment of the environmental conditions of Santa Monica Bay and its watershed, developed in partnership with the SMBRC Technical Advisory Committee and in collaboration with local research institutions. Released every five years, the latest report was released in January 2016. Completed. (See p. 5 of the report for expanded information.) (SMBRC, TBF)

Climate Change Vulnerability Assessment – A project funded by U.S. EPA to assess how climate change will affect the goals, priorities, and objectives of the Bay Restoration Plan (BRP). The first steps of the assessment were taken in 2015 and involved consolidation of information and over 70 tools from climate change projects throughout the region. The next step will be to identify climate change "risks" applicable to the BRP goals and milestones, with subsequent prioritization. (See p. 6 of the report for expanded information.) (SMBRC, TBF)

Climate Change Adaptation – A program in partnership with USC Sea Grant, Los Angeles Regional Collaborative for Climate Action and Sustainability, and Heal the Bay to facilitate and assist coastal jurisdictions in developing strategies for adapting to climate change impacts including sea level rise and increased storm activity. Ongoing. (See p. 6 of the report for expanded information.) (SMBRC, TBF)

Financial Capacity Development – A program to increase The Bay Foundation's cash reserve and diversify funding sources. Ongoing. (TBF)

Integrated Regional Water Management Plan – Participation in the Greater Los Angeles County Integrated Regional Water Management Planning Process. Ongoing. (SMBRC)

BEP Collaboration Delivers State-of-the-Art Bilge Pumpout Facility

In December 2015, a project conceived and led by TBF's Boater Education & Outreach Program (BEP), collaborating with various partners, came to fruition at the public unveiling of a bilge pumpout facility in Oceanside Harbor. The Oceanside bilge pumpout and oil-water separator uses the latest technology and is valued at over \$82,000. There are only two other public bilge pumpout facilities in southern California, located in Santa Barbara and Channel Islands Harbors.



(L to R) TBF's Victoria Gambale, City of Oceanside Harbor Manager Paul Lawrence, City of Oceanside Deputy Mayor Chuck Lowery, business partner Michele with oil separator company founder Michele Sanseverino, and TBF's Grace Lee and Georgia Tunioli with samples of oil and water separated out from oily bilge water.

The bilge is the lowest compartment on a vessel, and can collect rain and wash water, as well as oil, fuel, antifreeze, and other hazardous materials from the engine. Typically, when water reaches a certain level in the bilge, an automatic pump activates and discharges the water overboard. When that water is mixed with enough oil to cause a film or sheen on the surface of the water or discolor the water, the only lawful option for disposal of this mix of water and hazardous materials is using an oil absorbent pad or pumping it into containers for disposal at a certified Household Hazardous Waste collection facility.

The bilge pumpout and oil-water separators provide a convenient and sustainable solution for boaters to properly dispose of oily bilge water, and the method will directly improve water quality. If disposed of in the ocean, one pint of oil can produce a slick of approximately one acre on the surface of water. TBF hopes that this installation will not only benefit Oceanside Harbor and the adjacent waters but serves as a catalyst for the comprehensive installation of these bilge treatment devices in all harbors in southern California. This will allow the thousands of boaters who enjoy the coastal ocean an efficient and impactful way to protect the coast.

Project partners: CalRecycle, KECO Pump & Equipment, City of Oceanside

State of the Bay 2015 Reports Habitat Improvements, and Priority Areas for Restoration Work

The State of the Bay 2015 (SOTB) report, a science-based comprehensive assessment of the environmental conditions of Santa Monica Bay and

its watershed, was published for free as a special issue of Urban Coast, accessible online at: <http://urbancoast.org/>. The Report celebrates progress in categories such as water resources management and improving habitat conditions as a result of restoration efforts. It also examines the work still to be done in these areas, and identifies emerging issues we must begin to tackle in the next five years.

The fifth SOTB published since 1993, the 2015 report is informed and largely prepared by the SMBRC's Technical Advisory Committee (TAC), a group of experts in their respective fields, gathered to apply the best available science and management strategies to SMBNEP's restoration work and to the SOTB report. The SMBRC TAC's strong commitment to the process included the development of a new assessment framework that improved upon the ranking system used in the 2010 report. The result is a framework that can be applied to all major types of habitats in the Bay in a consistent manner, across four indicator categories that help determine habitat health, they are: extent, vulnerability, structure and disturbance, and biological response.

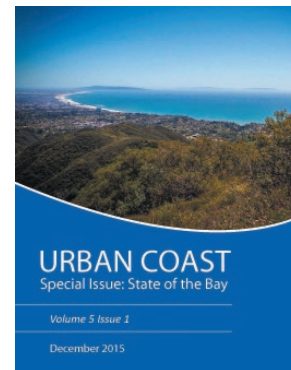
Prof. Richard Ambrose, UCLA Institute of the Environment and Sustainability and Department of Environmental Health Science, who chaired the TAC, praised the "tremendous efforts of TAC members and many local experts. This SOTB report is our clearest view yet of the condition of the natural resources in Santa Monica Bay."

The SOTB 2015 report includes discussion and articles pertaining to seven habitats—Freshwater Aquatic and Riparian, Coastal Wetlands, Sandy Shores, Rocky Intertidal, Rocky Reefs, Soft-Bottom Benthos, and Coastal Pelagic—with status, trends, and suggested improvement projects for each habitat.

September's sold-out State of the Bay Conference, held at Loyola Marymount University, preceded the report's release. Attended by over 200 scientists, members of the public, agency representatives, non-profit organizations, students, and media, the day included presentations and panels addressing topics informative and critical to our coast's future in the context of climate change. Presentation topics included coastal resilience, water resource and quality management strategies, health of streams and wetlands, wildlife and biodiversity protection in the urban environment, ocean chemistry and living resources, and marine protected areas.

California Natural Resources Secretary John Laird gave the keynote speech. He shared his personal accounts about the top environmental challenges facing California and the State's efforts to address sea level rise and drought, prepare the State's water resources for the future, and protect marine and fishery resources. He particularly noted why good scientific work is pivotal for planning. Using science as the basis, he also cited success stories of how local grassroots organizing efforts can guide legislative action, lead to new public policy, investments, and restoration projects on the ground. Secretary Laird's full speech is accessible on TBF's YouTube page.

For the complete State of the Bay 2015 report, please visit <http://urbancoast.org/>.





Dr. Cindy Lin, U.S. EPA, moderates a State of the Bay conference panel on WMPs and EWMPs with panelists Eric Stein/SCCWRP, Shahram Kharaghani/LA Sanitation, Chris Compton/OC Public Works, Paul Alva/LA County Dept. of Public Works and Dr. Rita Kampalath/Heal the Bay.

Climate Change is at SMBNEP's Core for All Projects Moving Forward

There has been broad consensus that climate change will have significant impacts on local communities, and that preparation must be made to adapt to these impacts. In 2015, the SMBNEP was awarded grants from the U.S. EPA and State Coastal Conservancy to steer planning and on-the-ground research related to climate change.

U.S. EPA awarded TBF two grants totaling \$85,000 to study the impacts of climate change and develop adaptation strategies for ecosystems and communities that may be affected by climate change.

The first grant will be used to conduct a broad, risk-based, climate change vulnerability assessment of the Santa Monica Bay Restoration Plan (BRP), identifying strengths and weaknesses of existing milestones in order to manage and adapt to the impacts of climate change, such as sea level rise, warmer water, warmer weather, increasing drought and storminess, and ocean acidification. The SMBNEP will also identify, as needed, new climate change adaptation strategies and projects for future incorporation into the BRP, which is revised every five years.

Project partners: UCLA, Loyola Marymount University, USC Sea Grant, AdaptLA, and NASA

The second grant will be used to install a high precision, high frequency autonomous pH and pCO₂ marine sensing package off the coast, in Santa Monica Bay. These sensors will provide valuable time-series information, advancing scientific understanding on status and local trends associated with ocean acidification and hypoxia. The best location for installation of these sensors is being determined in conjunction with local partner organizations. The data will also be made available to, and shared widely with, public agencies and research institutions, including members of the California Current Acidification Network (C-CAN).

Project partners: Los Angeles County Sanitation District, City of Los Angeles Environmental Monitoring Division, Southern California Coastal Water Research Project, Scripps Institute of Oceanography



Aerial photo of a section of Palos Verdes. Areas like this are being studied to determine how waves and currents can be affected by the presence of kelp forests. Photo courtesy of TBF and LightHawk.

In addition, the SMBNEP and 11 local coastal jurisdictions and organizations launched the regional AdaptLA project. Funded by a grant from the State Coastal Conservancy and California Coastal Commission, this multi-year project will gather data to model future regional shoreline changes, as well as model and assess Los Angeles coastal region's exposure to sea level rise and other coastal processes. The AdaptLA project will also help coastal jurisdictions utilize this new information in adaptation planning through training workshops, webinars, and other outreach activities.

Project partners: City of Santa Monica, Los Angeles Regional Collaborative on Climate Action and Sustainability (LARC), California State Coastal Conservancy, Heal the Bay, Santa Monica Bay Restoration Commission, United States Geological Survey, TerraCosta Consulting Group, ESA PWA, Thalassa Research and Consulting LLC.

Proposition 84 Grant Program to Award up to \$9 Million

On November 2, 2015 the SMBRC began accepting applications for the Proposition 84 Santa Monica Bay Restoration Grant Program to support capital projects that protect and restore Santa Monica Bay.

Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006, allocates \$90 million to the State Water Regional Control Board (SWRCB) for coastal water quality improvement projects pursuant to the Clean Beaches Program (PRC \$30915). Of this amount, \$18 million was made available for projects that protect Santa Monica Bay beaches and coastal waters, including projects to prevent contamination and degradation of coastal waters and watersheds, and projects to protect and restore the Bay's marine, freshwater, and terrestrial habitats. The SMBRC reviews proposals and the Governing Board recommends to the SWRCB that it funds appropriate projects. To date, the SMBRC Governing Board has recommended 10 projects totaling \$9,220,500 to the SWRCB for funding. Projects approved and funded by the SWRCB are jointly managed and overseen by the State Water Board and the SMBRC.

Consistent with Proposition 84's purpose, the new solicitation will provide approximately \$9 million for capital projects that restore and protect the Bay's water quality and help to achieve one or more of the following goals in accordance with the Santa Monica Bay Restoration Plan (BRP) (available at www.smbrc.ca.gov):

- Improve water quality through enhancement of current federal and state framework and collaborative, integrated watershed wide planning and implementation.
- Improve water quality through pollution prevention and source control.
- Protect and enhance water quality through the restoration of wetlands, streams, and riparian zones.
- Protect public health through the achievement of no beach closures and postings at Santa Monica Bay beaches.
- Maintain/increase natural flood protection through ecologically functioning floodplains and wetlands.
- Conserve water and increase local water supply.

Priority will be given to projects that assist responsible agencies in implementing the requirements of the new Los Angeles County Municipal Separate Storm Sewer System Permit (MS4 Permit) and achieve water quality goals through the implementation of capital projects identified in Enhanced Watershed Management Programs (EWMPs) or Watershed Management Programs (WMPs).

Ballona and Beyond: Regional Evaluations of Coastal Wetlands

2015 was a big year for wetlands monitoring in the SMBNEP—two major multi-year programs were concluded, producing valuable data and evaluations for coastal wetlands throughout southern California. In December, TBF published the *“Regional Monitoring Report for Southern California Coastal Wetlands: Application of the U.S. EPA Three-Tiered Monitoring Strategy”* and the *“Ballona Wetlands Ecological Reserve Comprehensive 5-Year Monitoring Report”*.

Regional Monitoring Report

Funded by a U.S. EPA Wetland Monitoring Program Development Grant, TBF performed extensive research at five coastal wetland systems in southern California in conjunction with partners such as the Southern California Coastal Water Research Project (SCCWRP), wetland scientists from across the region, multiple universities, and interns and volunteers from TBF’s intern program. Additionally, the California State Coastal Conservancy funded supplemental site-intensive research at the Ballona Wetlands Ecological Reserve to support restoration planning.

There were two primary objectives of the regional wetland monitoring project. The first was to provide critical baseline data of the health and function of regional estuarine wetlands while informing adaptive management opportunities and long-term restoration plans for several of the individual systems (e.g. Ballona Wetlands Ecological Reserve (Reserve), Ormond Beach Wetlands, and Los Cerritos Wetlands complex). The second goal was to field-test a series of Level 3 site-intensive protocols to help standardize evaluations of wetlands throughout California.

The project compiled and analyzed existing assessment procedures, developed proposed standardized approaches in coordination with technical advisors throughout California, explored the covariance between new site-intensive protocols and existing assessment tools (i.e. California Rapid Assessment Method, or CRAM), and developed standardized protocol documents and training materials to facilitate information transfer to other projects. The effort has been an impressive example of a statewide



The difference between a relatively healthy wetland, Steamshovel Marsh (left), and a highly degraded wetland (Ballona Reserve, right). For details and data results on both wetland systems and more throughout southern California, review the [Regional Monitoring Report](#).

collaborative effort, with a regional focus on the degraded wetlands of the Southern California Bight, to inform adaptive restoration efforts for these coastal wetland systems.

Results from the regional program indicated that many of the degraded wetland systems had significant anthropogenic modifications such as armored levees or concrete culverts. To some degree, connection to estuarine waters, or hydrological connectivity, was an accurate predictor of which wetland areas had the highest condition score results. The sites with the most significant modifications (levees, fill placement) had both the lowest condition scores and large areas dominated by non-native vegetation. Specific results for individual sites are described in detail in the [Regional Monitoring Report](#).

The resulting technical reports and publications—including the [Regional Monitoring Report’s](#) complementary Manual—are publicly available on TBF’s website and are being used by wetland researchers and practitioners throughout California.

Project Partners: Southern California Coastal Water Research Project, California State University Channel Islands, US Environmental Protection Agency, Loyola Marymount University, Tidal Influence, Inc., Cooper Ecological Monitoring, Inc.

BWER 5-Year Monitoring Report

The primary goal of this project, was to comprehensively survey the biological, chemical, and physical characteristics needed to inform the State’s restoration planning process. Several clear conclusions emerged based on more than five years of data collection at the Reserve, literature reviews of previous site evaluations, and input from scientists throughout California. Notably, data indicate that the Reserve is experiencing slowly deteriorating conditions across most of the areas that are hydrologically disconnected from tidal influence. Examples of this degradation include invasion of non-native plants, increases in impacts, and reductions in biotic condition score metrics, to name a few. Based on the standardized CRAM condition scores, several of the severely impacted areas on site received scores comparable to the lowest publicly recorded scores in the state of California, scientifically strengthening and supporting the need for active restoration. Conversely, the areas that have had some restoration management actions occur over the last several decades (i.e. the tidal channels in Area B) received higher relative condition scores and were dominated by primarily native vegetation. The final report is publicly available on TBF’s website.

Project Partners: California Department of Fish and Wildlife, California State Coastal Conservancy, Loyola Marymount University, Cooper Ecological Monitoring, Inc.

Funding Sources for The Santa Monica Bay National Estuary Program

The Bay Foundation:

Federal Grants and Contracts, \$1,269,955.

Non-Federal Grants and Contracts, \$540,579

Other Sources, \$220,524

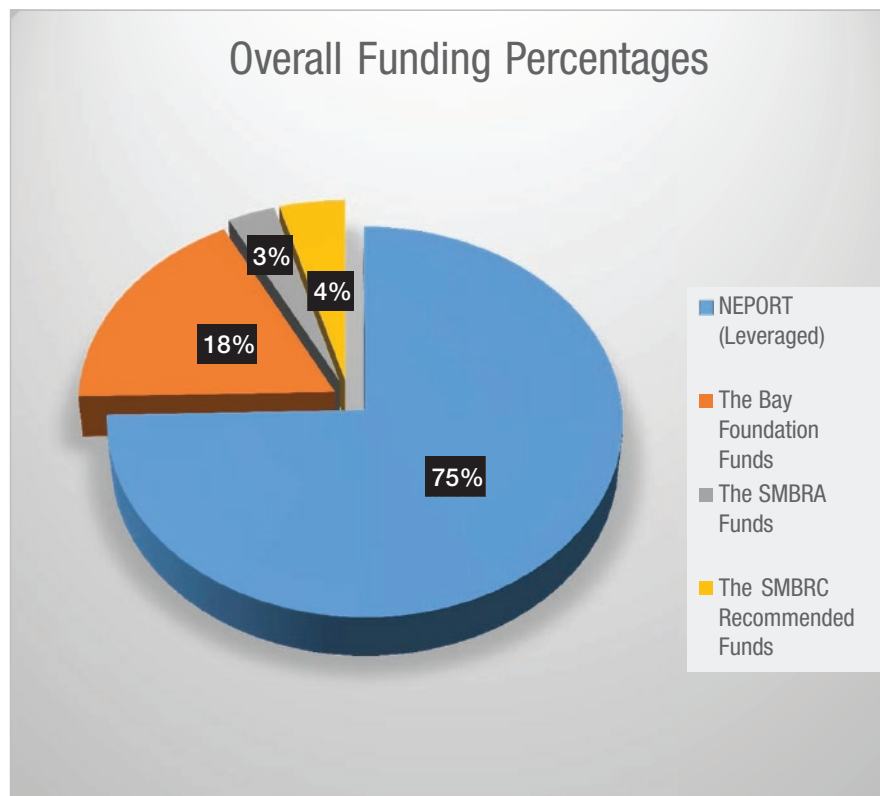
SMBRA:

Federal Grants and Contracts, \$95,481

Non -Federal Grants and Contracts, \$266,899

SMBRC Recommended Bond Funds: Prop 50, \$500,000

OTHER Funds: Leveraged Non -Federal, State, local, private \$8,464,174



The financial summary on this report was not prepared by a CPA. The numbers provided here are intended to provide a general overview of the resources of the Santa Monica Bay National Estuary Program and may not meet GAAP standards.

COMMISSION GOVERNING BOARD

Executive Committee

Micheál O'Leary	Chair of the Governing Board, Ballona Creek Watershed Cities (Culver City)
Joan Cardellino	California Coastal Conservancy
Bruce Reznik	Public Member (Environmental/Public Interest), Los Angeles Waterkeeper
Francine Diamond	California Regional Water Quality Control Board, Los Angeles
Gloria Gray	At-Large Member, West Basin Municipal Water District
Sarah Sikich	Public Member (Environmental/Public Interest), Heal the Bay
Sheila Kuehl	Supervisor, LA County Board of Supervisors, 3rd District

Members

Ben Allen	State Senator, 26th District
Rich Ambrose	Technical Advisory Committee, Chair
Richard Bloom	State Assembly Member, 50th District
Dayna Bochco	California Coastal Commission
Charlton H. Bonham	Director, California Dept. of Fish & Wildlife
Mike Bonin	Councilmember, Los Angeles City Council, District 11
Autumn Burke	State Assembly Member, 62nd District
Charles Caspary	Las Virgenes Municipal Water District
Bryant Chesney	NOAA-NMFS Southwest Division
Joe Edmiston	Santa Monica Mountains Conservancy
Gail Farber	LA County Department of Public Works
Eric Garcetti	Mayor, City of Los Angeles
Robert Godfrey	At-Large Member, Marina Del Rey Anglers
David Hadley	State Assembly Member, 66th District
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All photos are courtesy of TBF, unless otherwise noted.



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