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STATE OF THE BAY 2015 Five-Year Report Assesses Santa Monica Bay Habitat Improvements, Identifies Priority Areas for Restoration Work

Jan. 7, 2016 (LOS ANGELES, CA) - The *State of the Bay 2015* (SOTB) report, produced by the Santa Monica Bay National Estuary Program (SMBNEP) over a five-year period, is published and released today for **free** as a special issue of *Urban Coast*: <http://urbancoast.org/>. The *SOTB* report is a science-based comprehensive assessment of the environmental conditions of Santa Monica Bay and its watershed. The report's primary goals are: to measure progress in restoring the Bay's natural habitats and resources, to educate the public about the Bay's valuable natural resources, and to identify the challenges facing scientists and managers charged with the protection and management of the Bay and its watershed. This *SOTB* is the fifth such report published by the SMBNEP since 1993.

The *SOTB 2015* report celebrates progress in categories such as water resources management and improving habitat conditions as a result of restoration efforts. The report 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 report is informed and largely prepared by SMBNEP'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 report points out that most habitats in most areas of the Bay and its watershed are degraded to *some* degree due to human disturbances. With a continuously growing population, it would be nearly impossible for this not to be the case. 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.

Key findings of the [SOTB 2015](#) report include:

- **Restoration efforts** in habitats such as Malibu Lagoon and Palos Verdes Kelp Forest have resulted in marked improvements in ecosystem structure and function. Thus far, monitoring data show that restoring coastal and marine habitats through the removal of non-native and over-abundant species, planting of native species, and other adaptive management strategies at the restored sites are working to improve the biodiversity, ecosystem structure, and function of these important habitats.



- Levels of harmful **bacteria found on beaches** in Santa Monica Bay have been greatly **reduced** during dry weather conditions due to municipalities' efforts to reduce runoff and improve water quality. These efforts include both water conservation and Low Impact Development stormwater management strategies. The result is a measurable improvement in beach water quality.
- Agencies and organizations working in the Bay are increasingly coordinating to improve **water resources management**. Careful consideration has been given to the inputs and outputs of traditional water management, with an understanding that drought, climate change, and water pollution need to be considered collectively as we look to improve water security and a healthy environment in L.A. and in Santa Monica Bay.
- **Beaches** as habitats are greatly impacted due to human traffic and beach grooming. Beaches are naturally dynamic, eroding and building due to storms and other factors. Many man-made barriers, now limit the ability of our beaches to remain resilient in the face of rising seas and increased storm action leaving private and public infrastructure vulnerable. SMBNEP has taken action to improve beach management in key areas, with significant improvements in protecting grunion and sandy intertidal organisms. To achieve greater protection for our coast and to improve habitat values we need to expand efforts to restore our beaches. Accordingly, best practices for Santa Monica Bay beaches will continue to be a high priority for the SMBNEP.
- The **Soft-Bottom** habitat of the Bay is continuing to improve—physically, chemically and biologically—with no dead zones, primarily due to reductions in DDT, PCB and mercury concentrations in the sediment, coupled with considerable reduction in suspended solids in wastewater treatment effluent. These results are based upon decades-long monitoring.
- The quality of effluent discharged from wastewater treatment plants in the Bay has improved steadily since the 1980s. However, human population growth has increased the **human-derived nutrient loading** into the ocean as part of the treated wastewater. With approximately 225 million gallons/day discharged from the Hyperion outfall alone, our nutrient contributions to the ocean are almost equivalent to what the ocean brings into the Bay naturally. The nutrients are influencing ecological conditions in the Bay and the rest of the Southern California Bight in ways that alter the planktonic community and may limit the ability of marine organisms to produce calcium carbonate shells (i.e. snails, clams and sea urchins). These nutrients also directly contribute to harmful algal blooms and hypoxia. Preventing harmful algal blooms and finding innovative solutions to nutrient loading in the Bay continue to be a major goal for SMBNEP and our partners.
- The many **creeks and streams** in the Santa Monica Bay watershed continue to be impacted by pollution. Heavy metals, toxins, chemicals and trash continue to impact creeks and streams limiting their ability to support healthy ecosystems. These streams also convey land-based sources of pollution to coastal ecosystems and Santa Monica Bay beaches. There are ongoing efforts across various groups to monitor trash and pollution to better understand the sources and impacts of these pollutants on fresh water systems. New



regulations that require trash free creeks and streams will reach full effect in 2021, with expected corresponding reductions in other pollutants.

Increasing the rigor of the assessment process from that used for the 2010 report was a high priority for Prof. Richard Ambrose, UCLA Institute of the Environment and Sustainability and Department of Environmental Health Science, who chaired the TAC. The committee and outside experts developed a new assessment 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: extent, vulnerability, structure and disturbance, and biological response.

"Thanks to 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," states Ambrose. "This latest report uses more data and a clearer process for determining the condition of the Bay's habitats, and provides a scientific foundation for ongoing and future efforts to protect and enhance the Bay."

Divided into sections covering Water Resources, Habitat, Biodiversity, and Looking Ahead, the *SOTB 2015* report follows closely the three priority issues addressed by the SMBNEP's guiding document, the [Bay Restoration Plan](#) (BRP): water quality, natural resources, and benefits and values to humans. The report's results will continue to inform the BRP and the work by the SMBNEP and its many partners.

"The *SOTB 2015* report is a great achievement for the SMBNEP. I am deeply grateful for the efforts of our TAC and partners who generously dedicated their time and expertise to inform and author the many sections and articles of this report," states TBF Executive Director Tom Ford. "What stands out to me is the clear connection that a science based approach to understanding environmental issues can lead to successful projects. The *2015 SOTB* report clearly describes the progress that we have made, making Santa Monica Bay a better place for people and wildlife alike. The report also outlines many remaining challenges for us to address in the near future. I am confident that we will approach these challenges with genuine curiosity and objective analysis to determine the best course of action to continue to improve the Bay's benefits and values."

The *State of the Bay 2015* report is a special issue of the multidisciplinary scientific journal [Urban Coast](#). The report is produced by SMBNEP partners [The Bay Foundation](#) (TBF) and the [Santa Monica Bay Restoration Commission](#) (SMBRC), along with the [Center for Santa Monica Bay Studies at Loyola Marymount University](#) (LMU), a joint program of TBF and the Seaver College of Science and Engineering at LMU. The *SOTB* conference in September, held at LMU, presented some of the findings, articles and methodology that comprise the report.

About the Santa Monica Bay National Estuary Program

The Bay Foundation: www.santamonicabay.org

SMBRC: www.smbrc.ca.gov

Center for Santa Monica Bay Studies:

<http://admin.lmu.edu/greenlmu/education/thecenterforsantamonicabaystudies/>