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The Bay Foundation's New Grants Will Inform Climate Change Planning & Strategies for Santa Monica Bay

Los Angeles, CA (August 6, 2015) – The Bay Foundation (TBF) has recently been awarded key climate change-related grants. Every aspect of TBF's work takes into consideration the potential effects and mitigation of climate change in the 266 sq. mile Santa Monica Bay and the 400 sq. mile watershed that drains to the Bay. With 5,000 species of animals, fish, birds and plants making their home in the Bay and its watershed, along with millions of people who visit, live and work here, TBF is intent on garnering grants that can help keep the Bay's resources healthy and resilient.

TBF is one arm of the Santa Monica Bay National Estuary Program (SMBNEP), one of 28 similar programs administered by the U.S. Environmental Protection Agency (U.S. EPA). These National Estuary Programs are one of the most effective **on-the-ground programs** of the U.S. EPA and to that end, grants received by these programs have great potential to create impactful local change.

"In California we're fortunate, climate change is widely accepted and resources and smart people are ready and able to help with funding, research, modeling, and planning," states TBF Executive Director Tom Ford. "Our association with local Universities, Government Agencies and Non-profits is really starting to pay off. Through these collaborations, we've identified critically important issues we need more information on, like ocean acidification and sea level rise adaptation. We've found the right partners, who've all contributed to finding the grants we need to gather data to inform and refine our plans for the near future."

Here follow some important questions and explanations of how awarded grants can help all life in the Bay respond to climate change.

What Our Coastline will look like in 2030, 2050, and 2100 based on Projected Sea Level Rise and Storm Surge Scenarios and how should we prepare?

To answer these questions, TBF helped to convene a partnership of 11 local coastal jurisdictions and organizations and launched the regional [AdaptLA](#) project. Funded by a grant from the state Coastal Conservancy and Coastal Commission, this multi-year project will gather data and model future beaches by examining regional shoreline change, and model and assess Los Angeles coastal region's exposure to sea level rise and other coastal processes. The modeling results will be especially useful for identifying coastal vulnerability because they will both be based on sea level rise scenarios, and consider local water levels and waves, especially waves coinciding with conditions such as high tides, storm surges and El Niño, when projecting inundation, erosion, flooding, and other damage potential. The AdaptLA project will also help coastal jurisdictions to utilize this new information in adaptive adaptation planning through training workshops, webinars, and other outreach activities.

Do our Kelp Forests help protect the shoreline?



That's a long term question for TBF, and other coastal resource managers in California. TBF, with Universities in LA and the Central Coast, is working on a study to measure the ability of our recently restored kelp forests (see more [HERE](#)) to attenuate wave energy, influence currents and alter the flow of sediment. This study will advance our understanding of how kelp forests may reduce erosion and protect our coastlines. If we are able to demonstrate that kelp forests can protect the coast, the restoration and reestablishment of them up and down the coast would be another approach used to adapt to sea level rise and increased storminess due to climate change. The project has been funded by the State Coastal Conservancy as part of the Conservancy's larger Climate Ready Grant Program.

Is there more acidification and less oxygen in our Bay?

The root cause of Ocean Acidification is global atmospheric emissions of human-generated CO₂. Localized input of nutrients into coastal waters can also have an additive effect by lowering oxygen and increasing CO₂ from excessive production of micro-algae, (plankton) and their subsequent decomposition.

The U.S. EPA awarded a grant to TBF to install high-precision, high-frequency pH and pCO₂ sensors with project partners. These sensors will gather much-needed non-stop measurements of acidification and oxygen deficiency, helping us understand the trend of how much more acidic the ocean is becoming and how fast. With this information we can start to explore how the acidification is affecting the amount, health and distribution of marine life. These findings might lead to further examination as to the need for the continued reduction of nutrients into Santa Monica Bay, from sources such as sewage treatment plants, urban runoff and aerial deposition.

TBF is currently coordinating with local partner organizations to determine the best location for installation of these sensors. 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),

How should the Bay Restoration Plan milestones be tweaked to serve the Bay best, or are they fine as they are?

TBF competed and was awarded another U.S. EPA grant to support the review of the Bay Restoration Plan, the SMBNEP's comprehensive plan of action for protecting and restoring Santa Monica Bay. This grant directs us to determine whether our goals and investments are consistent with predicted climate change for our region. We will review the BRP, with experts from the U.S. EPA, for vulnerabilities and opportunities towards increasing resilience against sea level rise, warmer water, warmer weather, increasing drought and storminess, and ocean acidification. The SMBNEP will identify, as needed, new climate change adaptation strategies and projects to develop for the next BRP update. The BRP is updated every five years (last in 2013).

These grants provide opportunities that expand TBF's focus on climate change and help communities, agencies and elected officials plan for a more climate resilient Los Angeles. Adding valuable information about Santa Monica Bay, attained because of the grants, to findings focused on other parts of the region by many organizations and the City of Los Angeles creates a bigger picture and greater potential for good management moving forward.



About The Bay Foundation (TBF)

The Bay Foundation (TBF) is a 501(c) 3 non-profit environmental group founded in 1991 to contribute to the restoration and enhancement of the Santa Monica Bay (LA-Ventura county line to the Palos Verdes Peninsula) and local coastal waters. TBF and the Santa Monica Bay Restoration Commission are partners in the Santa Monica Bay National Estuary Program (SMBNEP), one of 28 entities that comprise the National Estuary Program established pursuant to Section 320 of the Clean Water Act. TBF raises and expends funds for research, education, planning, cleanup efforts and other priorities identified in the SMBNEP's *Bay Restoration Plan*. As advocates for the Bay, TBF works collaboratively with a broad group of stakeholders, including government agencies, industry, environmental groups, and scientists, to implement innovative policies and projects that clean up the waterways, create green spaces and natural habitats in the Los Angeles region. TBF conducts research and mentors student interns and volunteers through its Center for Santa Monica Bay Studies at Loyola Marymount University. (www.santamonicabay.org)

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