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## **The Bay Foundation Conducts Comprehensive Study of Vegetation Distribution in Ballona Wetlands Ecological Reserve for Draft Environmental Impact Report**

Los Angeles, CA (October 15, 2014) – The Bay Foundation (TBF) has found that over half, approximately 60%, of the areas covered by plants (vegetated habitats) on the Ballona Wetlands Ecological Reserve (BWER) are dominated by plants that are either not native to the region or invasive. Much of the BWER has had fill dumped on site, raising the elevation of the ground above wetland elevations. These areas covered by fill soils are no longer connected to the ocean by tidal waters or Ballona Creek, and are among those most impacted by non-native vegetation. These findings are part of a comprehensive, site-wide GIS mapping study conducted by TBF throughout 2013, and represent one of many significant scientific, data-driven studies that TBF has contributed to the upcoming Draft Environmental Impact Report (DEIR) for the Reserve, which will be released in 2015 for public comment.

For the study, “Ballona Wetlands Ecological Reserve Vegetation Alliance and Habitat Crosswalk” (found at [BallonaRestoration.org](http://BallonaRestoration.org)), over 800 distinct areas were classified, making the survey the highest resolution vegetation study performed on the approximately 600-acre site to-date.

Over the last six years, Foundation staff have been tasked with conducting a comprehensive monitoring and assessment program to provide an in-depth evaluation of the existing conditions of the BWER, also referred to as the Reserve, all of which are contributing to the DEIR. The program has intensively researched a broad suite of biological, chemical, and physical components at the BWER, which, in addition to vegetation, included fish, birds, algae, water quality, mammals, invertebrates, amphibians, reptiles, soil, marine sediments, vertebrate mortality, and physical characteristics. Full reports are available at [www.ballonarestoration.org](http://www.ballonarestoration.org).

While there have been other vegetation studies conducted over the last 30 years, this is the first to incorporate additional non-native habitat categories which most accurately reflect the current conditions across the Reserve’s approximately 600 acres. The impacts to the BWER over time have made the habitats highly susceptible to non-native plant invasions. For instance, since the late 1800’s, 3.1 million cubic yards of fill have been placed on top the former wetland, burying the former wetland under as much as 25 feet of dirt, and significantly changing the type of plants, or species, that could live there.

The study’s resulting habitat categories represent distinct ecological communities. A similar survey was conducted in 2007 by the California Department of Fish and Wildlife (DFW), which manages the Reserve. When comparing findings from the new survey to the 2007 surveys, some key findings could be summarized:



- The largest change from native to non-native habitats from 2007-2013 occurred in areas of the site with fill soils.
- There was a 360%, or 6-acre, increase of the aggressive, non-native herb, *Euphorbia terracina*, since 2007.
- There was a 20% increase of iceplant since 2007, with over 35 acres mapped in the 2013 survey. Iceplant is a highly invasive species according to the California Invasive Plant Council.
- 14 acres of formerly native salt marsh have become primarily 'ruderal' marsh (including non-native plants that are among the first to colonize disturbed land) and monocultures of invasive species. Non-native plants continue to invade areas disconnected from the tides.

TBF Watershed Programs Manager Ivan Medel led the vegetation mapping surveys from May-October 2013. He and his team used GIS (geographic information systems) technology to divide the Reserve into "georeferenced polygons" based on the dominant plant communities found on the Reserve. Each area (or polygon) is classified as a habitat type based on both the plant community and physical characteristics such as soil and hydrology.

The surveys are part of a broader, regional, site-intensive assessment to determine the health and functioning of estuarine wetlands throughout the Southern California Bight, from those remaining to degraded systems like Ballona. According to a recent study, the LA region has lost over 95% of its wetlands. "This level of detail in data collection is vital to understanding a system as complex as Ballona," states Karina Johnston, Director of Watershed Programs for TBF. "Even though these surveys have taken thousands of hours, we feel that the results will serve as essential components of the environmental assessment process and inform the DEIR." "We are incredibly grateful to the students, professional experts, academic researchers, staff, and volunteers who have contributed their time for the past five years to make these comprehensive baseline surveys possible."

"Unfortunately, the data from this study continue to show how unhealthy the BWER is today." says Tom Ford, TBF Executive Director. "Over the decades, the Reserve has been negatively affected by being buried, cut off from the Pacific Ocean and from Ballona Creek. Most of the Reserve doesn't support wetlands anymore and it is these places that we find non-native invasive weeds taking over. Our data suggest that change is necessary to save the healthy native areas that still remain in spite of all these impacts."

Surveys for the "Vegetation Alliance and Habitat Crosswalk" study were conducted in accordance with methods created by the DFW's Vegetation and Classification Mapping Program and supplementary information incorporated from previous monitoring surveys (2009-2013). When applicable, categories of vegetation were also categorized according to the Manual of California Vegetation (2nd Ed). Habitat categories and the final crosswalk were reviewed and approved by a technical advisory team (ICF, WRA, TBF, and DFW).

#### **About The Bay Foundation (TBF)**

The Bay Foundation, also known as the Santa Monica Bay Restoration Foundation, is a 501(c) 3 non-profit environmental group founded in 1990 to restore and enhance the Santa Monica Bay (from the LA-Ventura county line to the Palos Verdes Peninsula) and local coastal waters. The Foundation is the non-profit partner of the Santa Monica Bay Restoration Commission, raising and expending funds for research, education, planning, cleanup efforts and other priorities identified in the Commission's *Santa Monica 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 intern and volunteers through its Center for Santa Monica Bay Studies at Loyola Marymount University. ([www.santamonicaBay.org](http://www.santamonicaBay.org))

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