

Habitat Assessment, Restoration Design, and Biological Monitoring

Machado Lake Harbor City, CA

Client:

City of Los Angeles, Bureau of Sanitation and Environment
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Focus: Coastal Wetlands Habitat Restoration Planning; Vegetation Mapping; Agency Coordination

Project Overview: Ken Malloy Regional Park and Machado Lake are important natural areas in a highly urbanized part of Los Angeles and are critical resources for the public. To ensure public safety and enjoyment, the water quality in Machado Lake needs to be acceptable and vector issues need to be managed. Since 2022, Tidal Influence has been the subconsultant managing and assessing biological issues at Machado Lake 5 years after a large-scale restoration project was completed.

Several aspects of the restoration project needed to be assessed in order for the City to determine an approach to optimizing the project and correcting deficiencies in the initial design. Tidal Influence performed a detailed assessment of the lake shoreline, treatment wetland, woodland habitat, and two wetlands designed to convey water to the Lake. This was accomplished with numerous field visits using Esri Survey123 software to analyze the functionality of these assets. Our team also used Esri Field Maps to collect spatial data on invasive plants and the native plant communities. These data were compiled into a Technical Memo that provided recommendations for how the City can make



adjustments to the restoration project in order to improve issues with vector control, water quality, hydrology, protection of biological resources, and prevention of non-beneficial uses.

Tidal Influence utilized a variety of methods to communicate our recommendations to LASAN staff. These included clearly written technical documents, photologs, GIS maps, cost estimates, and workshops between the consulting team and LASAN staff. These recommendations have been well received by City staff and we are currently working to have them implemented.

Biological field work was a large part of this work, and our team was capable of surveying and identifying all of the plant species within this large and dynamic freshwater wetlands ecosystem. We also performed numerous bird surveys including focused surveys for least Bell's vireo. Finally, we specifically mapped the population of a highly invasive aquatic plant called water primrose and developed recommendations for its control. Our team also filled the role of biological monitor during the removal of vegetation from the site's treatment wetland.

We have become trusted advisors to the project while working closely with the engineering team to introduce practical solutions to the site's complex issues. We are drafting two more guiding documents, the Vector Plan and the Lake Management Plan. These documents will provide guidance for Operations and Maintenance.

Our involvement in this project demonstrates Tidal Influence's ability to swiftly analyze a restoration project and develop reasonable recommendations for solving large problems within a short period of time.