

Estuarine Wetland Monitoring Manual: Application and Assessment of USEPA Three-Tiered Monitoring Strategy to Southern California Coastal Wetlands

K Johnston¹, I Medel¹, S Anderson², E Stein³, C Whitcraft⁴, and J Crooks⁵

¹*The Bay Foundation, Los Angeles, CA, US*

²*California State University, Channel Islands, CA, US*

³*Southern California Coastal Water Research Project Authority, Costa Mesa, CA, US*

⁴*California State University, Long Beach, CA, US*

⁵*Tijuana River National Estuarine Research Reserve, Imperial Beach, CA, US*

ABSTRACT

Monitoring and assessment strategies developed by the State of California and USEPA universally call for coordinated and consistent approaches. Unfortunately, our former ability to meet this goal was limited. Although progress has been made over the last decade in developing standardized rapid assessment methods (i.e. Level 2) for California, there have been fewer resources and attention dedicated to standardized site-intensive (i.e. Level 3) assessment methods. Compared to Level 2 methods, intensive assessment methods provide information on ecological function and process, are more diagnostic of restoration performance and regulatory compliance, and are important as validation measures for rapid assessment methods. The lack of consistent approaches to intensive assessment has limited our ability to share information between projects, precluded use of Level 3 data in ambient monitoring and regional health assessments, and fostered redundancy as each project developed independent protocols. Major coastal wetland restoration projects are planned throughout the southern California Bight, and the development and testing of standardized Level 3 assessment procedures is imperative. This program prioritized coastal estuarine systems to facilitate baseline information transfer to several imminent large-scale restoration projects and developed standardized protocols for several indicators and parameters for the implementation of site-intensive assessments. This program took the first regional steps by compiling and analyzing existing site-intensive California estuarine wetland assessment procedures, developing proposed standardized approaches with scientific review, exploring the covariance between these Level 3 protocols and existing Level 2 (i.e. CRAM) assessment tools, and developing protocol documents and implementation recommendations to assist the development of comparative monitoring programs and facilitate information transfer to other projects.

Full text: [880_L3EstuarineWetlandManual.pdf](#)