



bay restoration authority

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Wetlands Monitoring Program Summary EPA Wetland Program Development Grant

Abstract:

Monitoring and assessment strategies developed by the State of California and the US Environmental Protection Agency (EPA) universally call for coordinated and consistent approaches to monitoring and assessment. Unfortunately, our ability to meet this goal is limited. Although we have made progress over the last several years in developing standardized rapid (i.e. Level 2) assessment methods, there has been significantly less attention paid to standardized intensive (i.e. Level 3) assessment methods. Intensive assessment methods provide information on ecological function and process, are more diagnostic of restoration performance and regulatory compliance, and are important as a validation measure for rapid assessment methods. The lack of consistent approaches to intensive assessment limits our ability to share information between projects, precludes use of Level 3 data in ambient monitoring, and fosters redundancy as each project develops its own protocols and assessment techniques. With eight major coastal wetland restoration projects currently being planned along the Southern California Bight, timing is optimal for development and testing of standardized Level 3 assessment procedures. This program sets out to accomplish that goal by compiling and analyzing existing assessment procedures, developing proposed standardized approaches in coordination with technical advisors, exploring the covariance between these new Level 3 protocols and existing Level 2 (i.e. California Rapid Assessment Method) assessment tools, and developing protocol documents and training materials to facilitate information transfer to other projects.

Specific project tasks are as follows:

Task 1: Develop Indicators and Preliminary Protocols

This task will build on previous work conducted by the Wetlands Recovery Project members to develop indicators for Level 3 assessment of coastal wetlands. Existing monitoring plans and reports, state and federal guidance documents, and peer-review journals will be compiled and reviewed.

Task 2: Refine Level 3 Monitoring Protocols

The preliminary protocols developed in Task 1 will undergo Technical Advisory Committee (TAC) review to develop final Level 3 protocols for field testing as part of this task. Public meetings of the TAC will provide direct feedback and discussion of the proposed protocols, and will serve as an opportunity to engage science experts and agencies' staff and to refine protocols. Additionally, a Quality Assurance Project Plan will also be prepared and submitted to the EPA as part of this task.

Task 3: Field Test Level 3 Protocols



Sites will be selected to cover the diversity of habitats and conditions, including levels of degradation and restoration, represented in southern California wetlands. Protocols will be selected for each wetland based on habitat (e.g. does the site have submerged aquatic vegetation) and conditions (e.g. muted or restricted tides). Initial field testing will determine feasibility, level of effort, field or lab time, and cost of each protocol. Field protocols will be implemented at all sites over an 18-month period to capture seasonal variability, and allow some repetition of protocols. In addition to reporting on application of the protocols, data will be summarized to produce an initial Level 3 assessment of condition in the study wetlands. These results will be compared to Level 2 data previously collected to demonstrate an integrated assessment of coastal wetland health.

Task 4: Develop Level 3 Monitoring Manual

The final monitoring and assessment documents prepared under Task 3 will undergo TAC review to develop a Level 3 monitoring and assessment manual for southern California coastal wetlands as part of this task. The final Level 3 monitoring manual will be developed through an iterative, public process and the final document will include detailed protocols, recommended priority for implementation (e.g. whether to monitor vegetation or birds), level of effort, field and lab time required to implement protocols.

Task 5: Outreach

Program partners will present the progress and results of the Level 3 protocol development and the Level 3 manual throughout the program period. Presentation will be made at state and national scientific conferences to discuss and receive feedback on the process to develop Level 3 protocols. In addition, program partners will meet directly with monitoring practitioners to discuss the benefits and application of Level 3 monitoring protocols.