

Site 1 Impoundment Monitoring Plan Review

Prepared by RECOVER 10/03/05

1.0 Introduction and Purpose of the Evaluation

The Site 1 Project Team has prepared a draft monitoring plan and requested that Restoration Coordination and Verification (RECOVER) conduct a consistency review to identify any potential inconsistencies or duplication with the Monitoring and Assessment Plan (MAP) and other relevant RECOVER documents. The role of RECOVER is to organize and apply scientific and technical information in ways that are most effective in supporting the objectives of the Comprehensive Everglades Restoration Plan (CERP). The RECOVER Assessment Team (AT) is charged with the responsibility of conducting the consistency reviews of project-level monitoring plans. The purpose of this consistency review is to: (1) ensure the design and implementation of project-level monitoring plan components are consistent, complimentary, and compatible with the MAP, (2) identify any duplication of monitoring efforts or reliance on the MAP by the project team, and (3) identify potential information developed by the project team that may be incorporated into future system-wide assessment reports. The project team is responsible for determining if the monitoring plan is scientifically sound and is supported by project goals and objects.

2.0 Background

The Site 1 Impoundment Project is located in Palm Beach County. The purpose of the project is to improve environmental conditions in Water Conservation Area 1 (WCA-1), which is contained within Loxahatchee National Wildlife Refuge, and Water Conservation Area 2A (WCA-2A) by providing a supplemental water supply for deliveries to southern Palm Beach County and northern Broward County. In general, the project is designed to capture and store water currently discharged to tide via the Hillsboro Canal and WCA-2A. This supplemental delivery in conjunction with other CERP components is intended to reduce water supply demands on Lake Okeechobee and the WCAs.

3.0 Review Comments

Identified below are comments generated from RECOVER's review of the Site 1 Monitoring Plan:

1. Zone of Influence – The project team has assumed all benefits to the natural environment from the Site 1 project will occur outside the project footprint and consequently RECOVER should be responsible for monitoring ecological parameters. According to CERP guidance memo 40 (CGM 40), project teams are encouraged to coordinate with RECOVER to insure that biological and ecological monitoring is sufficiently being conducted in the region to evaluate anticipated benefits. Monitoring and assessment will be conducted throughout the Everglades at both the landscape (system-wide) and project-level scales to assess the performance of CERP projects as they are brought online. At the landscape level, a system-wide monitoring network exists which aims to capture baseline conditions and changes in the system over the 30-year of CERP restoration. The system view includes the integration of all projects as well as those areas outside the direct influence of CERP. System-wide sampling includes water quality, hydrology, biology, ecology, as well as landscape level features such as ridge and slough, and tree island patterning. Project-level monitoring on the other hand is required

to meet regulatory requirements as well as determine local effects of project implementation in meeting project-level performance expectations and described benefits. Currently there is no clear definition of the project's "zone of influence" or consistency in determining zones of influence from one project to another. In some cases the zone of influence may extend well beyond the footprint of the project (upstream and downstream). The project team should clarify the zone of influence for the Site 1 Impoundment project and re-verify that RECOVER should be responsible for performing all biological and ecological sampling.

2. *Additional Sampling for MAP* – the project team has deferred downstream estuarine sampling to RECOVER and has recommended additional water quality sampling be included in the MAP. Because this monitoring is of system-wide influences of the Hillsboro Canal and not project specific, RECOVER concurs that it would not be appropriate for the project to undertake this monitoring. The RECOVER AT team will evaluate the existing monitoring programs in MAP and other ongoing efforts and consider the recommendation for additional monitoring.

3. *Additional Sampling for Project Monitoring Plan* - Pursuant to confirmation from science staff at the Loxahatchee National Wildlife Refuge, it may be advisable to expand the parameters of interest listed in Table 5.3.3B of the Monitoring Plan, "Operational Monitoring", flow events (row 2), to include hardness. Water sources for WCA1 have primarily been rainfall dominated, thus water diverted from the Hillsboro Canal should be monitored for this parameter.

4. *Assessment Activities and Protocol* – the only mention of assessment activities and protocol in the monitoring plan is that "RECOVER will assess system-wide effects for the purposes of demonstrating the project success in contributing to the CERP and for RECOVER's team process of adaptive assessment." Because RECOVER does not intend to assess the performance of individual projects this may be an issue in assessing the performance of the Site 1 Impoundment Project. The project team should provide hydrological and operational information and coordinate with the RECOVER AT to assess to the extent possible the future performance of the Site 1 Impoundment project.

5. *Consistency with MAP* – because the monitoring plan is dependent upon the MAP and other ongoing efforts for measuring system-wide effects, and the MAP covers all aspects of the project's effects, there is no duplication or inconsistencies between proposed project-level and system-wide monitoring efforts.

4.0 Conclusion

The Site 1 Impoundment monitoring plan has deferred all biological and ecological sampling outside the project footprint to RECOVER monitoring efforts covered by the MAP or other ongoing monitoring efforts expected to continue into the future. Additionally, the project team has recommended additional monitoring for inclusion in the MAP for system-wide effects in the downstream estuary, outside the project level effects. The RECOVER AT will evaluate the need for the additional monitoring and appropriate incorporation into the MAP. The project monitoring plan has been reviewed by RECOVER and is deemed to be consistent, complimentary, and compatible with the MAP and CGM 40, and does not duplicate monitoring efforts. The project team and RECOVER should continue to coordinate and resolve any issues or changes regarding the project monitoring plan.



The photograph on the cover is provided courtesy of Steve Sutterfield.



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