

**2006 Greater Everglades
Ecosystem Restoration Conference
Planning, Policy and Science
June 5-9, 2006 • Lake Buena Vista, FL**

PRE-CONFERENCE WORKSHOP: Monday & Tuesday, June 5 & 6, 2006

Applications of Remote Sensing Technologies for Adaptive Ecosystem Assessment: Monitoring System-Wide Change

Workshop Background:

The Comprehensive Everglades Restoration Plan (CERP) provides a framework and guide to restore, protect, and preserve the water resources of central and south Florida, including the Everglades. The goal of CERP is to redirect freshwater inflows for restoration of the Everglades ecosystem while still providing for critical regional water-related requirements, including water supply and flood protection. Monitoring the complex hydrologic, floral and faunal changes associated with restoration activities is an enormous task. Many physical, chemical and biological parameters have been identified as measures, or indicators, of overall performance of proposed restoration activities. Carefully designed and methodically implemented system-wide monitoring strategies are required to successfully quantify both short- and long-term changes within the interdependent landforms, vegetation assemblages and animal communities. Due to the vastness of the Greater Everglades, including the surrounding agricultural and urban environments, fixed monitoring stations (e.g., stage gages, water quality collection sites) and vegetation/soil field sampling schemes (e.g., points, transects) cannot yield the high density of sampling data needed to adequately characterize and model the diverse ecosystems. Remotely sensed data, which is able to cover large areas with uniformly distributed high density data points, has been and will continue to provide the essential synoptic view of restoration activities and their effects.

Workshop Objective:

The overall objective of the proposed workshop is to develop realistic and attainable strategies to expand the effective utilization of remotely sensed data for CERP system-wide adaptive monitoring and assessment. This must be accomplished through cooperative participation among the diverse teams of biologists, chemists, hydrologists and engineers that are responsible for quantifying landscape changes and teams of geospatially enabled scientists and engineers.

Technical presentations will focus on matching potential remote sensing technologies (sensors and analysis techniques) with the required monitoring data (i.e., performance measures). The characteristics that will determine the utility of each sensor include:

- Passive vs. Active technologies,
- Sensor Resolutions (spatial, spectral, radiometric, temporal), and
- Direct vs. Indirect parameter measurement/estimation.

The adaptive monitoring requirements will be stratified within the following system-wide ecological topics:

- Landscape Change (vegetation patterns, invasive species, habitat change),
- Hydrology (stage, topography, hydroperiod), and
- Environmental Quality (water quality, habitat suitability).

Who Should Attend:

The intended audience for this workshop includes scientists, engineers and program managers with an interest in ecosystem restoration monitoring and assessment. In particular, investigators responsible for the delineation and quantification of directly measurable surface features (e.g., vegetation types, vegetation spatial and seasonal variations, hydro patterns and dynamics) should be aware of the types of remotely sensed data currently available. Discussions will include project costs and the benefits of the utilization of remotely sensed imagery.

Workshop Agenda:

Monday, June 5, 2006:

1:00pm	Pre-Registration
1:30pm – 5:00pm	Workshop Session I
3:00pm – 3:30pm	Break

Tuesday, June 6, 2006:

8:30am	Pre-Registration
9:00am – 11:00am	Workshop Session II
11:00am	Workshop Concludes

For more information, contact the Workshop Organizer:

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Mr. Campbell is a member of the Remote Sensing Sub-team under the Restoration Coordination and Verification (RECOVER) Assessment Team. RECOVER is an arm of CERP responsible for linking science to a set of system-wide planning, evaluation and assessment tasks. RECOVER organizes and applies scientific and technical information to support the goals and objectives of CERP. The Remote Sensing Sub-team is responsible for investigating the use of remote sensing technologies to augment RECOVER monitoring and assessment activities.