South Florida ecosystem restoration efforts and related observations

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“Everglades restoration is not rocket science. It is much harder.”

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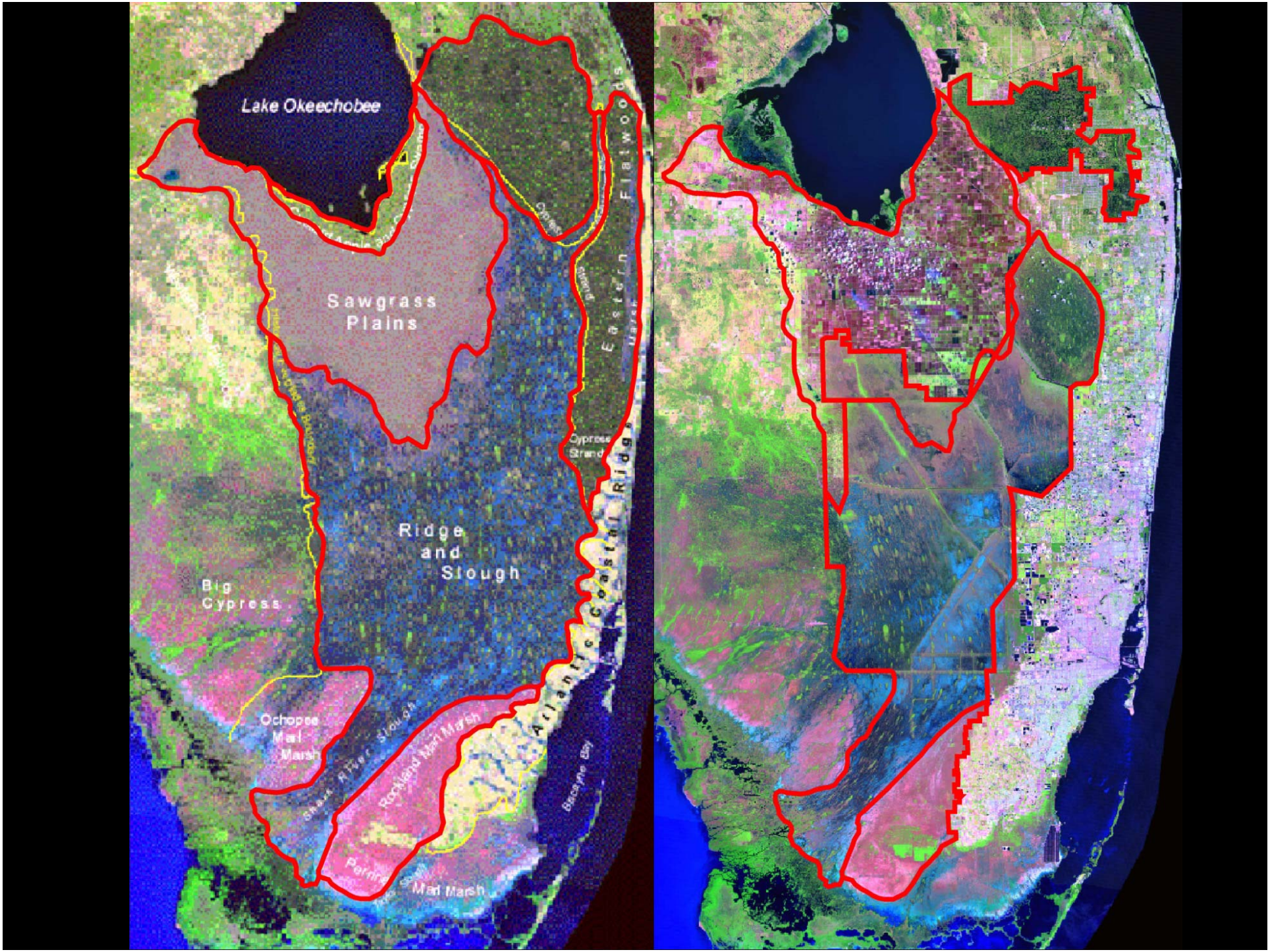
Lake Okeechobee
Sawgrass Plains
Eastern Flatwoods
Cypress Strand
Ridge and Slough
Big Cypress
Ochopee Marl Marsh
Shark River Slough
Rocky Glade Marl Marsh
Atlantic Coastal Ridge
Marl Marsh

Some random observations

- CALFED has a rich science history and an early focus on adaptive management.
- Program is staffed by highly committed, dedicated, and capable individuals.
- Faces threats common to all aquatic restoration programs -- changing hydropatterns, water qualtiy deterioration, increased invasion by non-native species, land use threats, and climate change.

More random observations

- In the Everglades, focus is to “get the water right” and the ecology will follow. Heated discussions about approaches: “Let ‘er rip” vs a more managed system to achieve restoration objectives.
- CALFED may need to consider the importance of water movement across the landscape. Early on in the Everglades, we focused on depths, distribution, quantity, and timing of flows – not the importance of the actual movement of water.
- Flow for restoration estimated from Natural Systems Model and paleoecological research (we have enough water at least for one-half of the year, but it is being wasted).
- CALFED held up as a good example of how science efforts should be organized as part of a large-scale restoration effort.

Even more random observations

- Adaptive management has not yet lived up to its potential in some restoration efforts.
- CALFED's March 2002 workshop is an example of how adaptive management should work.
- Major hurdles for use of adaptive management -- does not fit with governmental processes, especially NEPA and budgeting processes.
- Also, the adaptiveness and long timeframes associated with adaptive management do not fit well within a system requiring immediate results.

Do

- CALFED is poised to take significant forward steps, based on recent legislation and other factors.
- The Kissimmee River restoration may be the best example of a successful restoration effort in south Florida. Why? Simple concept (fill in the ditch); no additional engineered systems required, few landowner issues. The initial drive began in the early 1980s, and the last stage of restoration will not be finished until at least 2012. So, don't underestimate the time needed to successfully implement even a relatively simple project.

Do

- Pick one or two doable, straightforward, lightly engineered projects, focus on them, and stick with them.
- With respect to climate change, especially sea level rise, plan for non-linearity in changes.

Don’t …

- Don’t have unrealistically high expectations for complex water quality and landscape modeling.
- Don’t assume major problems that are on the critical path to restoration will be solved later. In south Florida, CERP assumed the water quality issues would be solved before hydrological restoration began.
- Don’t ignore endangered species conflicts.

Don’t …

- Don’t let new science money replace existing agency budgets. New money should be additive – not a zero-sum concept.
- Don’t force restoration programs to fit within existing governance structures.
- The Everglades are in critical condition and irreversible changes are underway.

Some good reading material

- The Swamp: the Everglades, Florida, and the politics of paradise – Michael Grunwald
- http://www.evergladesplan.org
- http://www.sfwmd.gov
- http://sofia.usgs.gov

“The Everglades (Bay Delta) is a test. If we pass, we get to keep the planet.”

Joe Podgor, Friends of the Everglades