



- A sense of urgency, but not despair
- Current declines can be mitigated or reversed
- Significant new science since 2000 that is relevant to CEPP (wetter Everglades, greater flows, targets, and super colonies)
- There are new and improved tools, particularly models
- A practical focus on what this next increment can accomplish

Please Put on your 3-D Glasses
Red on Left Eye

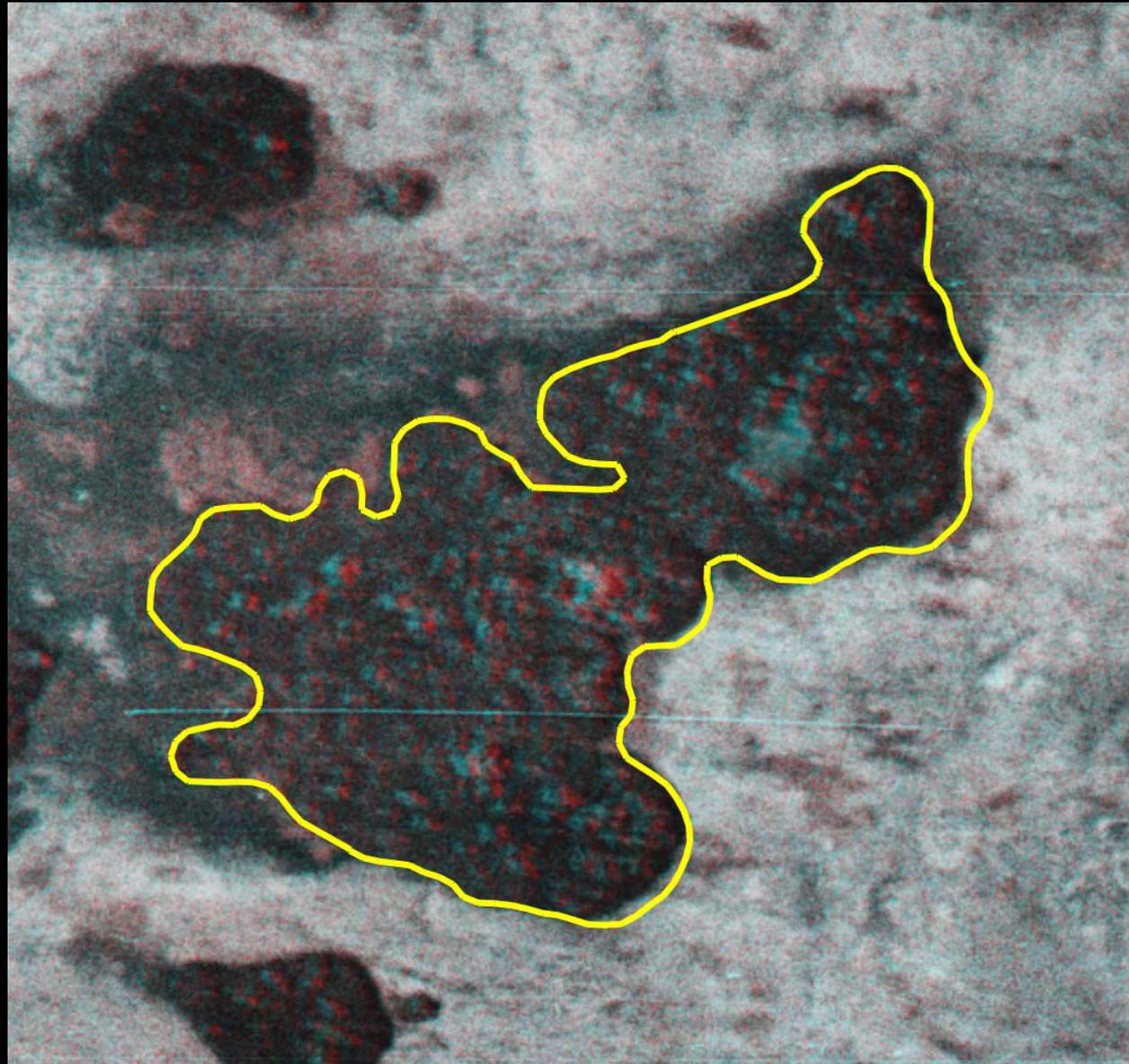


RECOVER Tree Island Mapping – Mapping Examples

3-D Vision Test (Ted Schall, USACOE)



RECOVER Tree Island Mapping – Near S-12B 1960

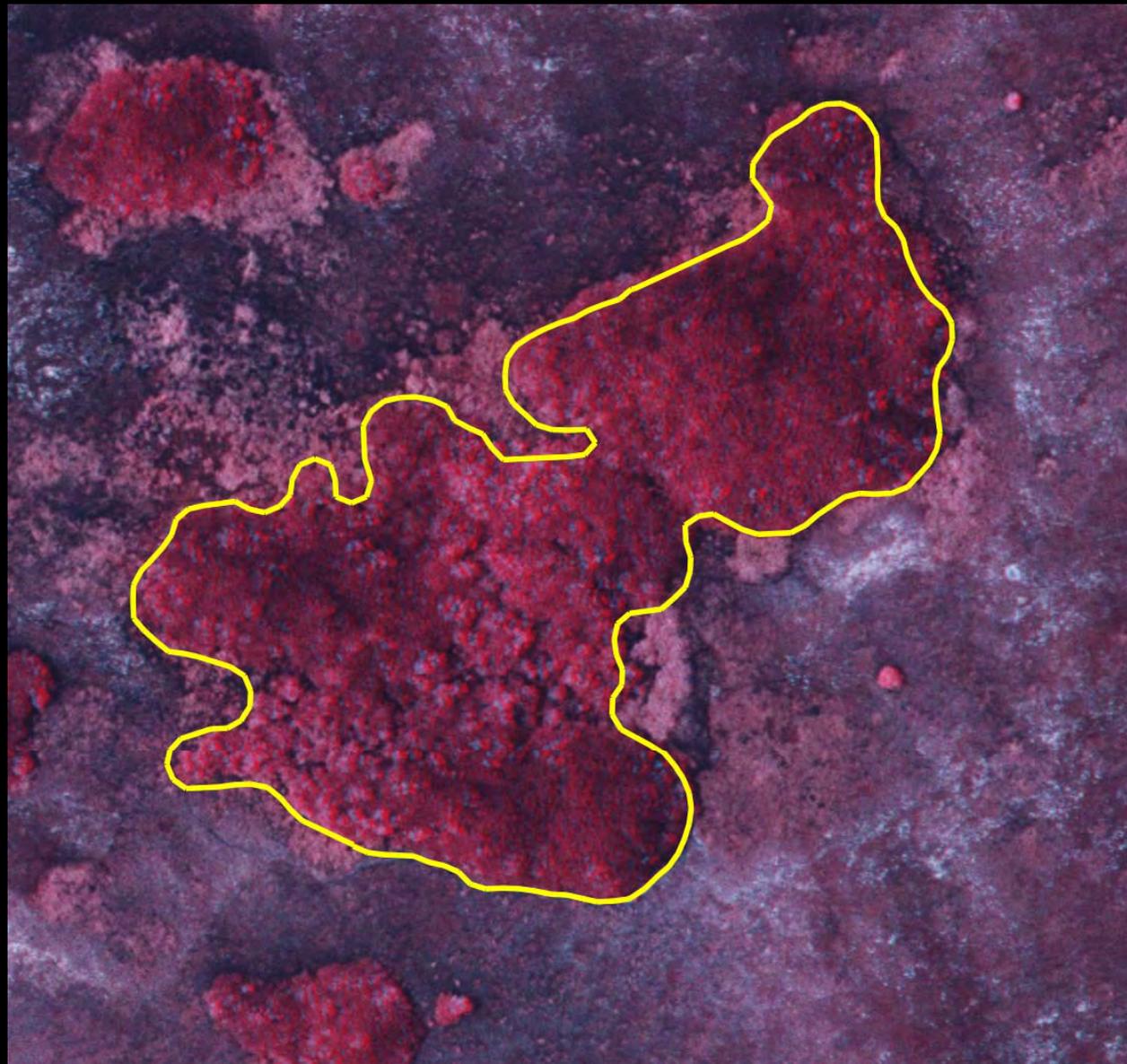


Flight
Direction



N →

RECOVER Tree Island Mapping – Near S-12B 2004



Flight
Direction



N →

RECOVER Tree Island Mapping – Southern SRS

1984

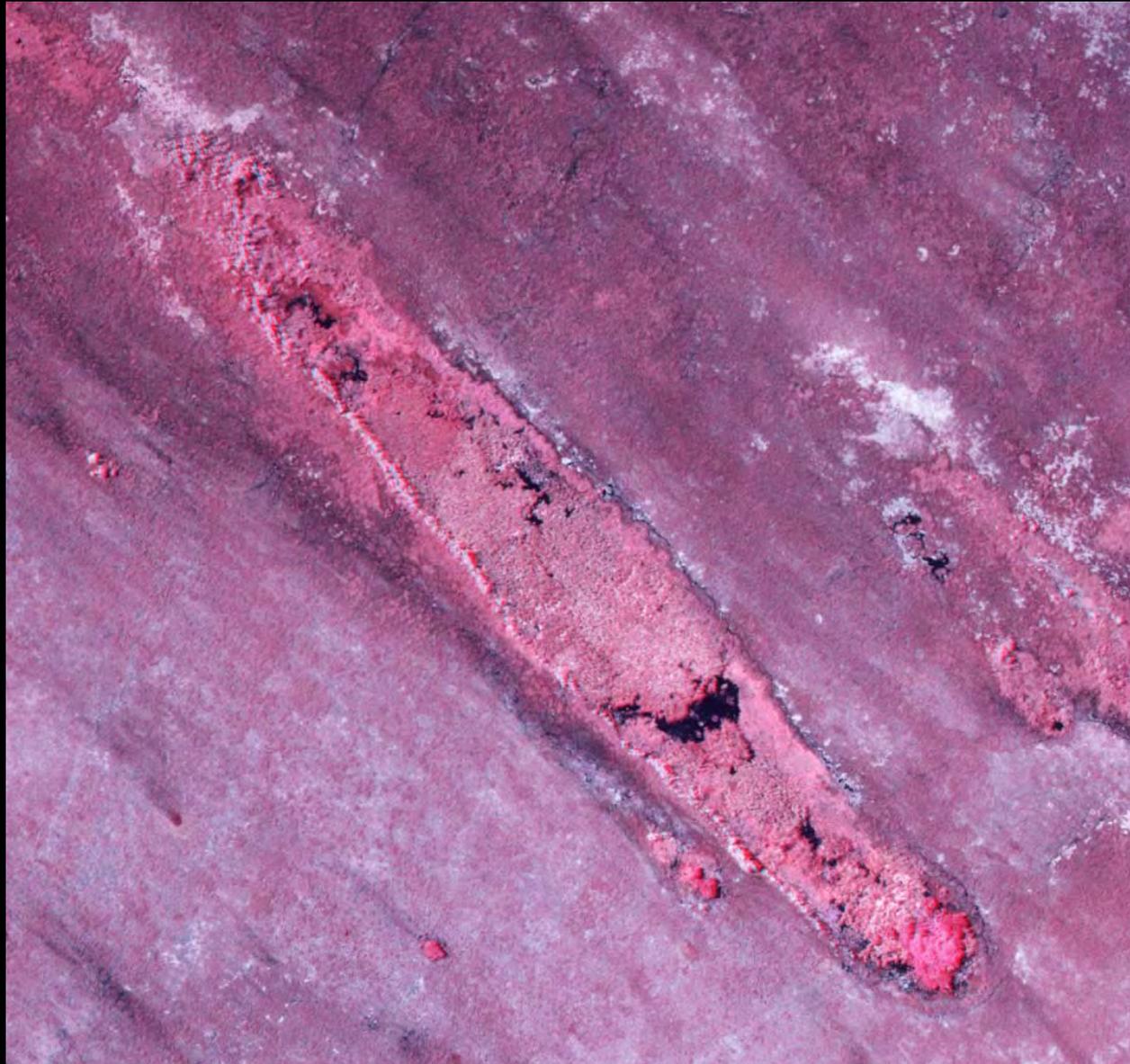


Flight
Direction



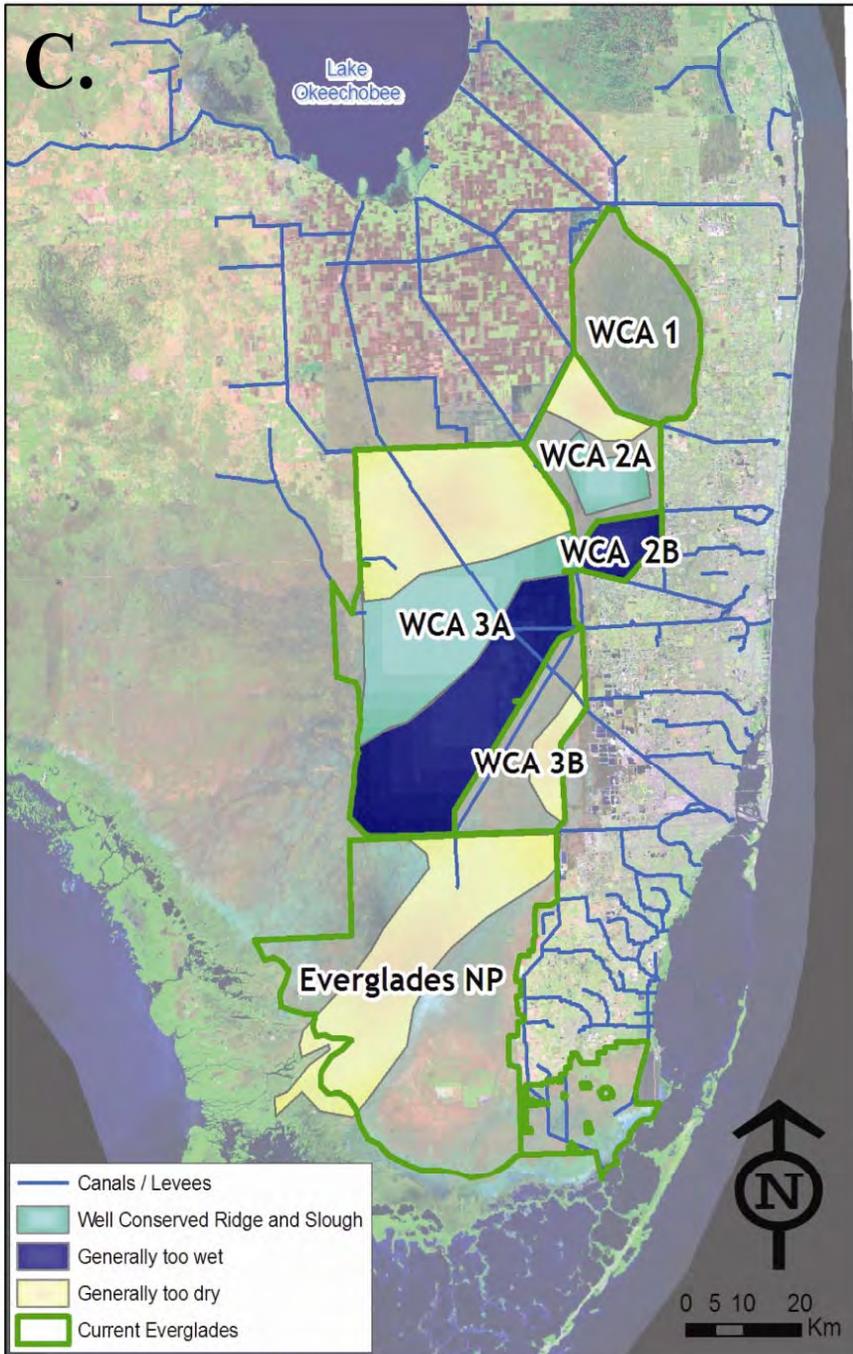
N →

RECOVER Tree Island Mapping – Southern SRS



Flight
Direction





**Prioritize restoration
in areas that are
most in peril, but
that have high
potential to respond
to increased flows**

The most effective way to preserve high functioning ridge-slough will be through careful water depth management with pulsed flow releases that maximize water surface slope for weeks per year.

Larsen, Harvey, and Crimaldi, *Ecological Engineering*, 2009

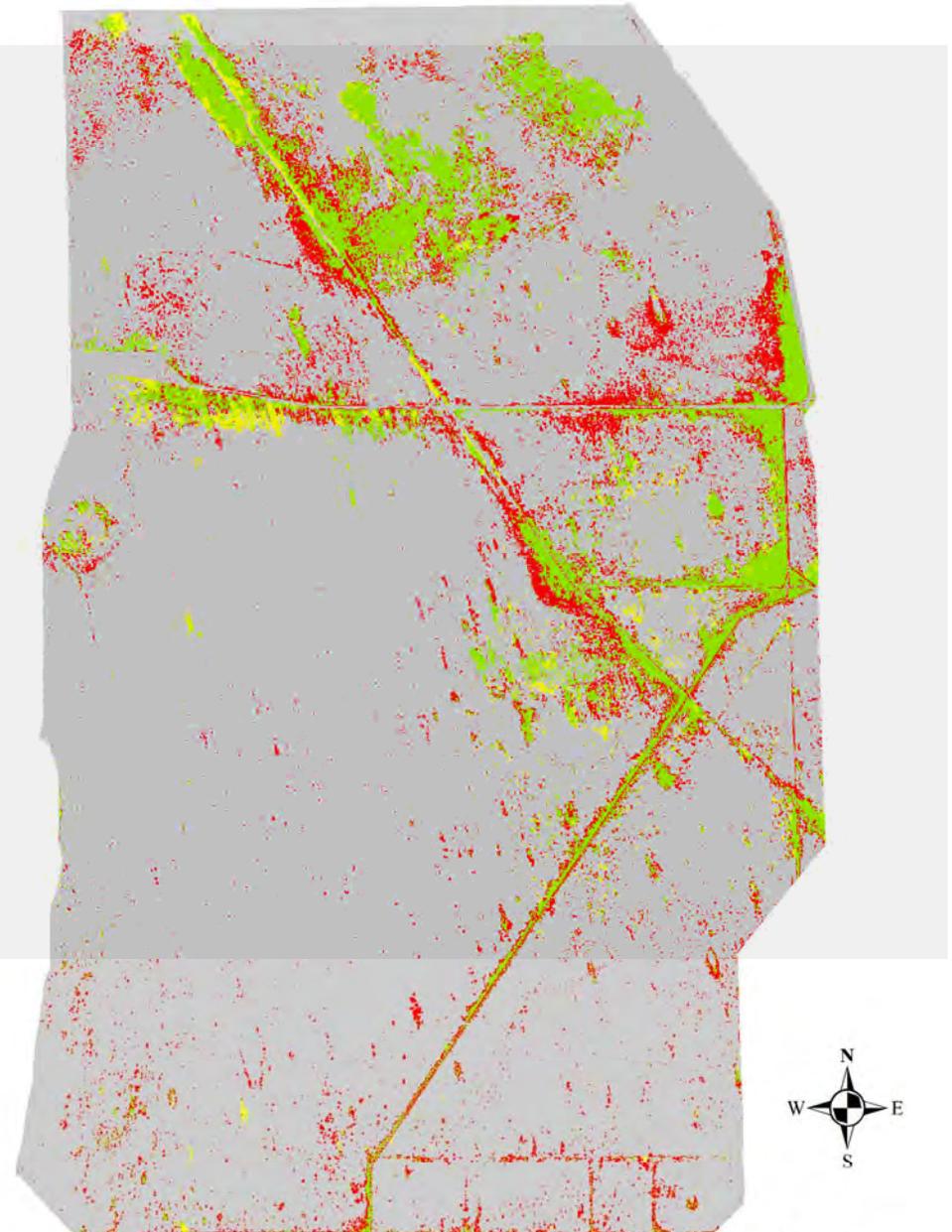
Wetter Everglades, Greater Flow Volumes and Targets

- The pre-impact Everglades was significantly wetter than previously thought -- flow through Taylor Slough may have been 4 times greater than present, and some sloughs never dried out
- The water surface was parallel with the sediment surface (no ponding upstream of barriers)
- Water and sediment transport is critically important for the ridge and slough landscape
- Flow should reach 2.5-3.5 cm/sec for weeks per year to maintain the landscape

The *heart* of the Everglades has a high cholesterol (cattail) problem

1. Cattails are expanding along canals and downstream of point sources
2. Cattails are now popping up all over WCA-3

Change in cattail extent 1995 - 2004

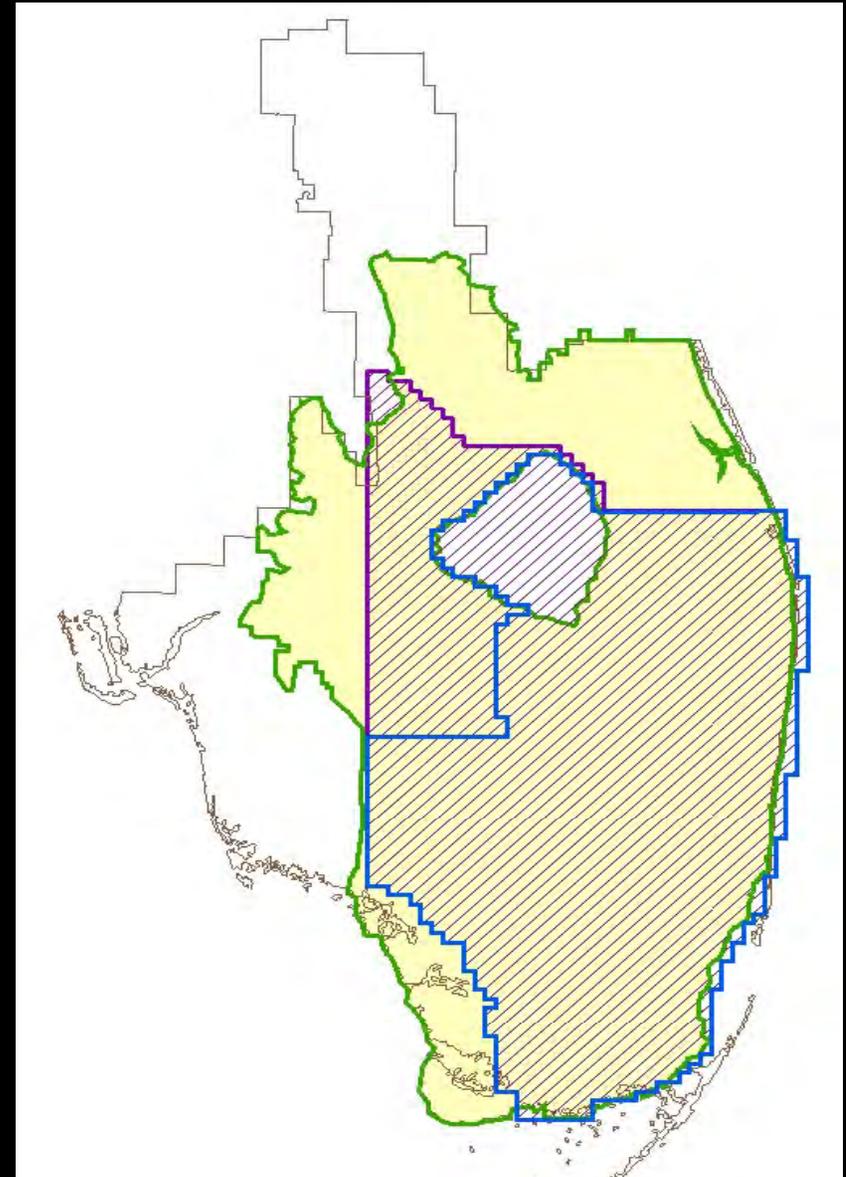
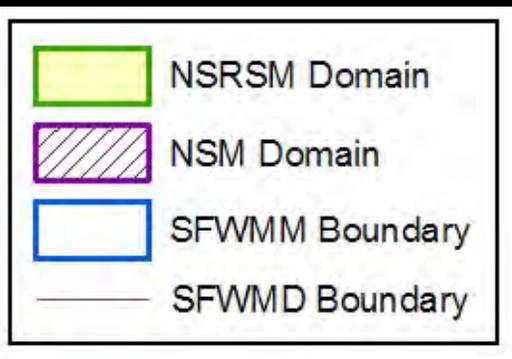


Legend

NEW Tools

Model Comparison

- **NSM 9,000 mi²**
 - 2328 2x2 mile grid cells
- **SFWMM 7,000 mi²**
 - 1,746 2x2 mile grid cells
- **NSRSM 12,000 mi²**
 - 7,438 Triangular (variable mesh) cells ranging 0.75 miles per side to 5.5 miles per side



CENTRAL EVERGLADES

- Restoration objectives for the Lake and the estuaries are consistent with those for the Greater Everglades
- A practical focus on what this next increment can accomplish

