

Active Marsh Improvement:

A decade of rehabilitating cattail impacted areas

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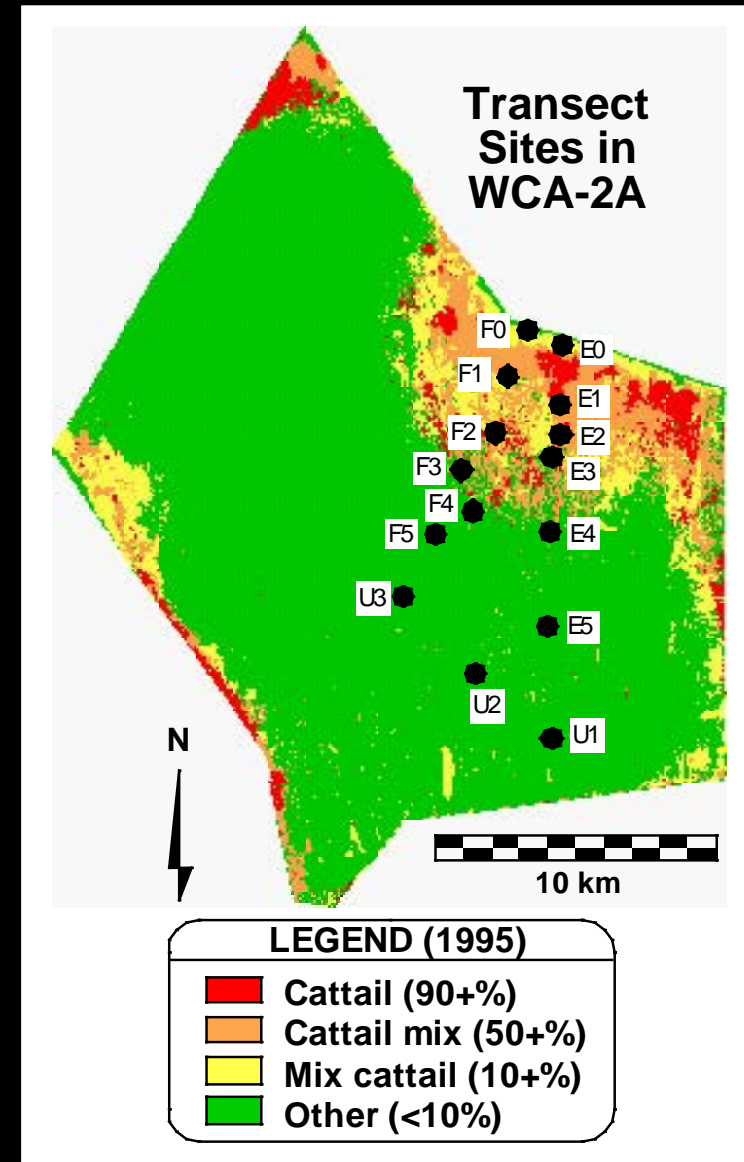
² Land Resources Bureau, SFWMD

** Current: National Center for Environmental Assessment, EPA*

The Long Term Plan for Achieving Water Quality Goals- 2003

Enhancements and expansion of STAs, BMPs integration with CERP, Also-

- Natural recovery of the Everglades has been deemed “too lengthy”; thereby, accelerated recovery must be investigated.
- “At the present time there are no specific management activities that have been demonstrated to accelerate recovery at a large scale. In addition, there are some concerns that active management in impacted areas may exacerbate phosphorus movement, particularly if not carefully investigated prior to implementation.”



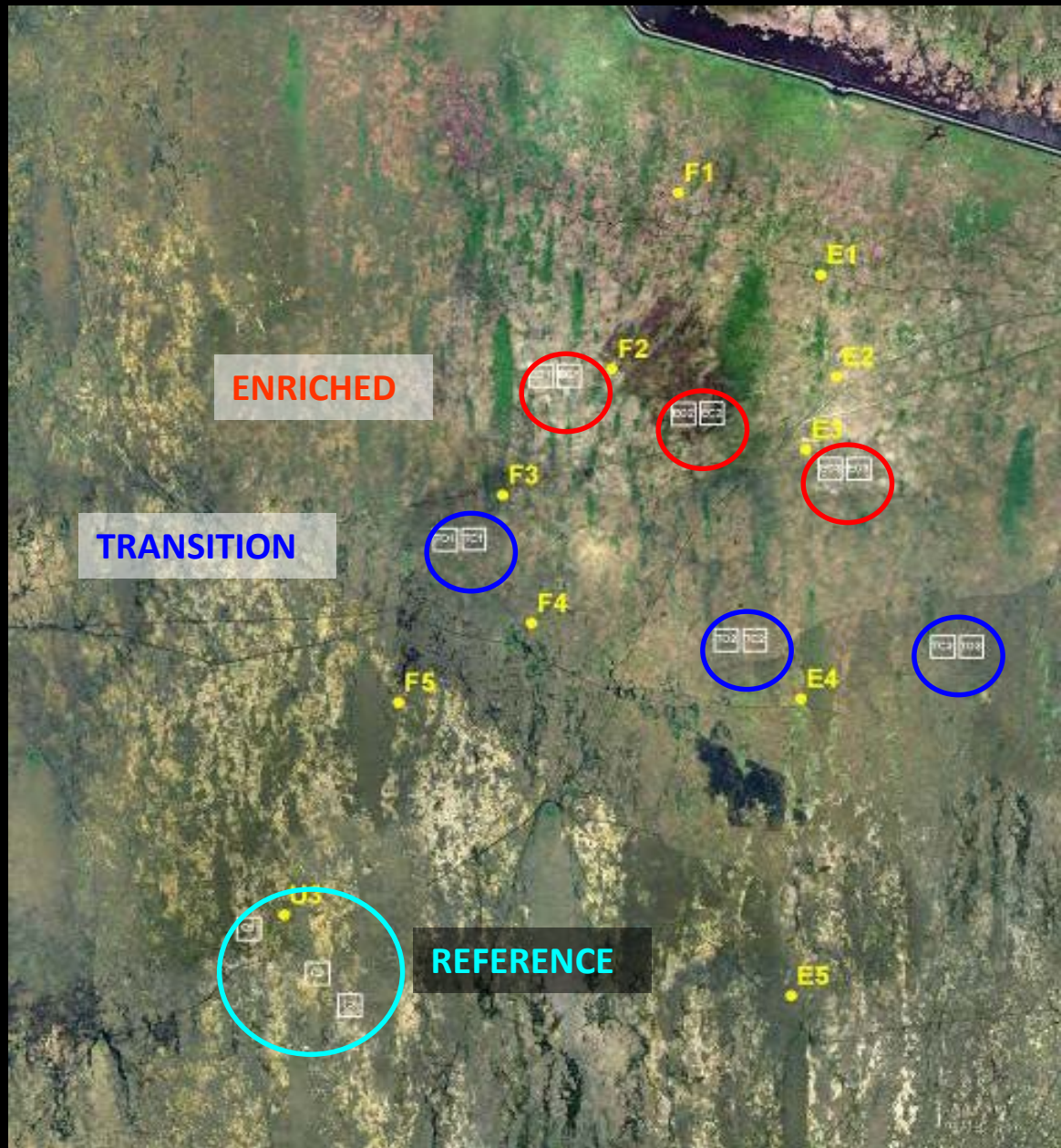
Active Marsh Improvement Projects

1. Cattail Habitat Improvement Project (CHIP)
2. Landscape Pattern Restoration (AMI-1)
3. Slough Restoration (AMI-2)



Cattail Habitat Improvement Project (CHIP)

- Rehabilitate cattail areas?
- Multiple tropic level sampling
- Method – herbicide and prescribed fire
- Control and Reference comparisons



Approximate Location of Cattail Habitat Improvement Plots (n=15) and Transect Sites in WCA2A

CHIP plot creation

March 2006 @ TO1 - Firebreaks



June 2006 @ TO2 - Aerial spray



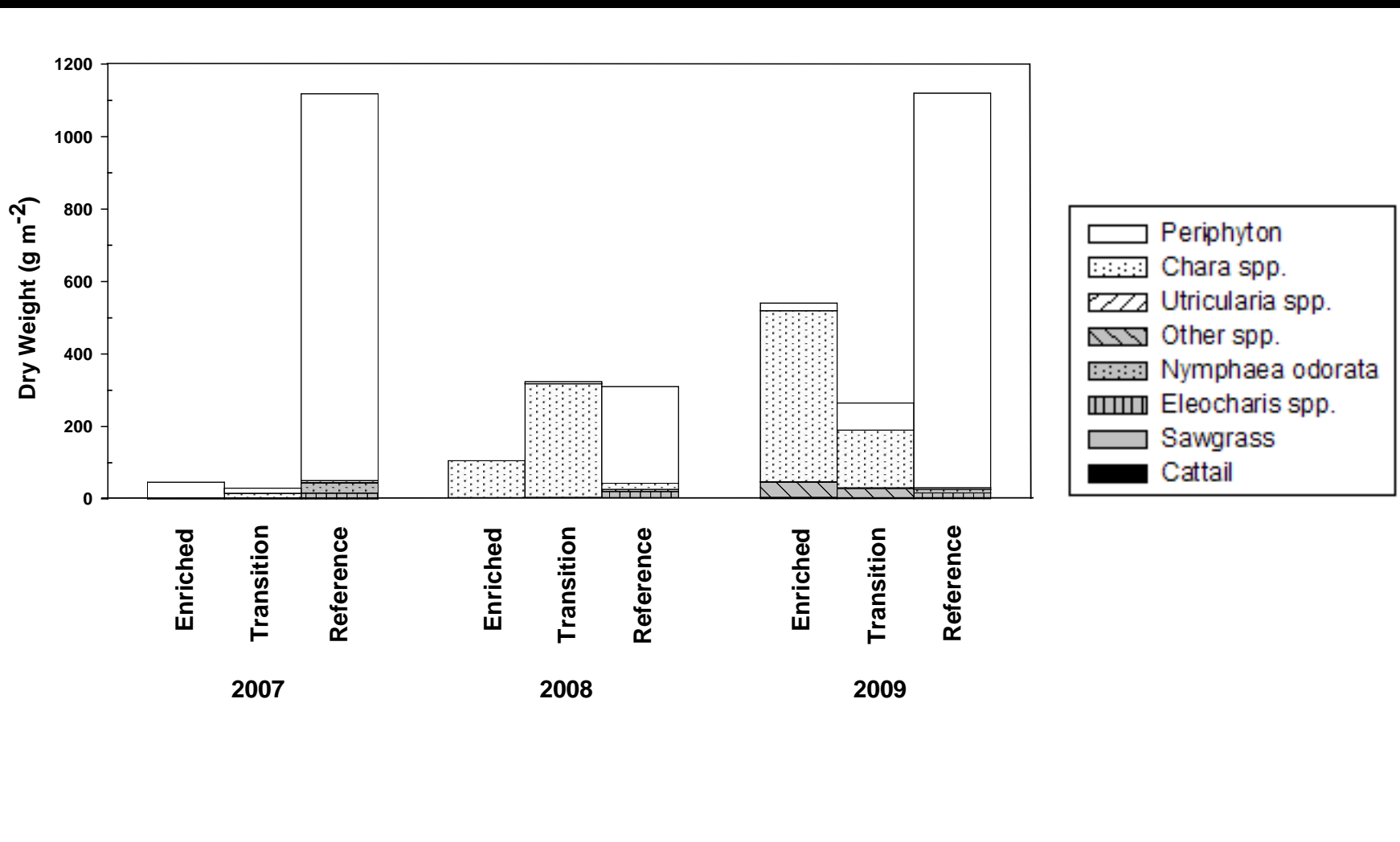
July 2006
@ TO1 - Fire



October 2008 @ TO1 - SAV marsh



CHIP Experimental and Reference plot above-ground live biomass (g/m²) for 2007-2009



TO1

April 2012



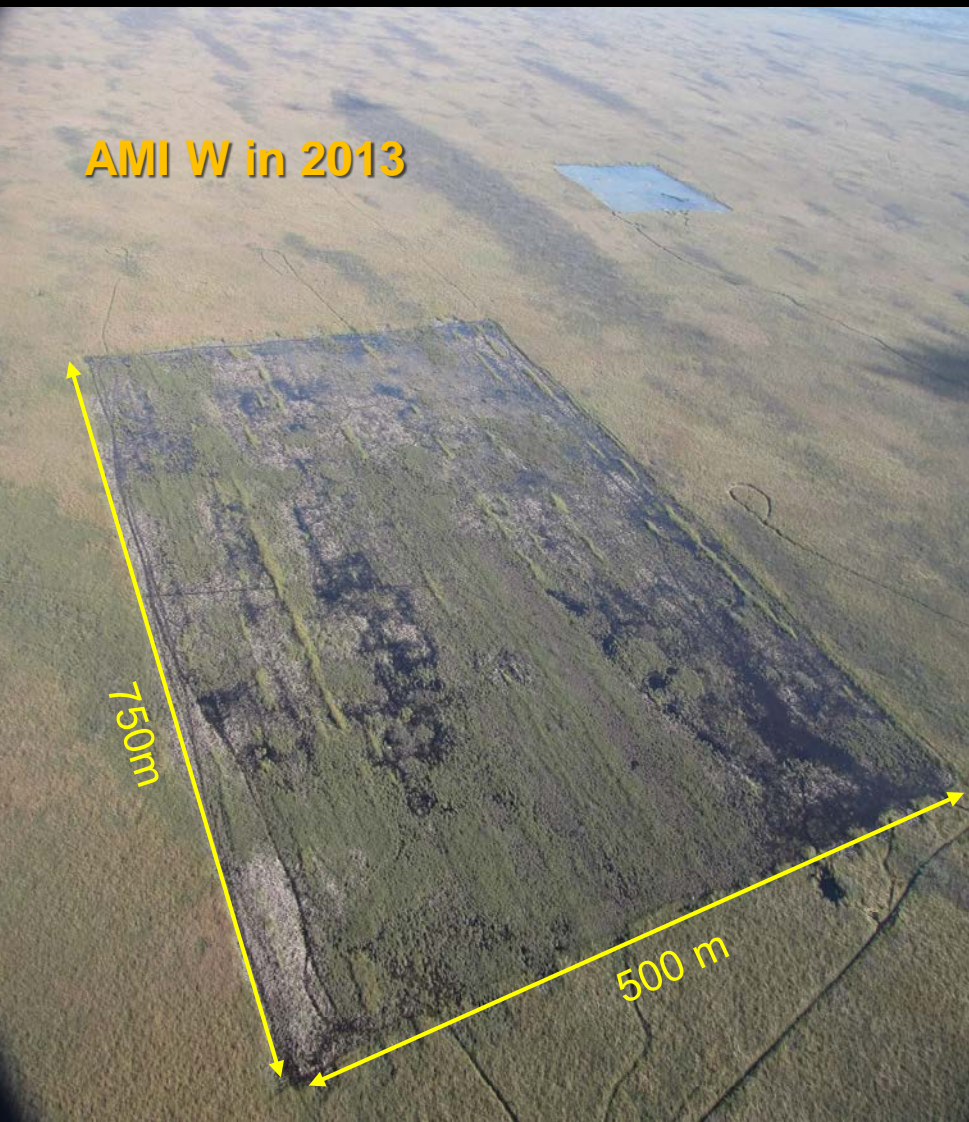
May 2014



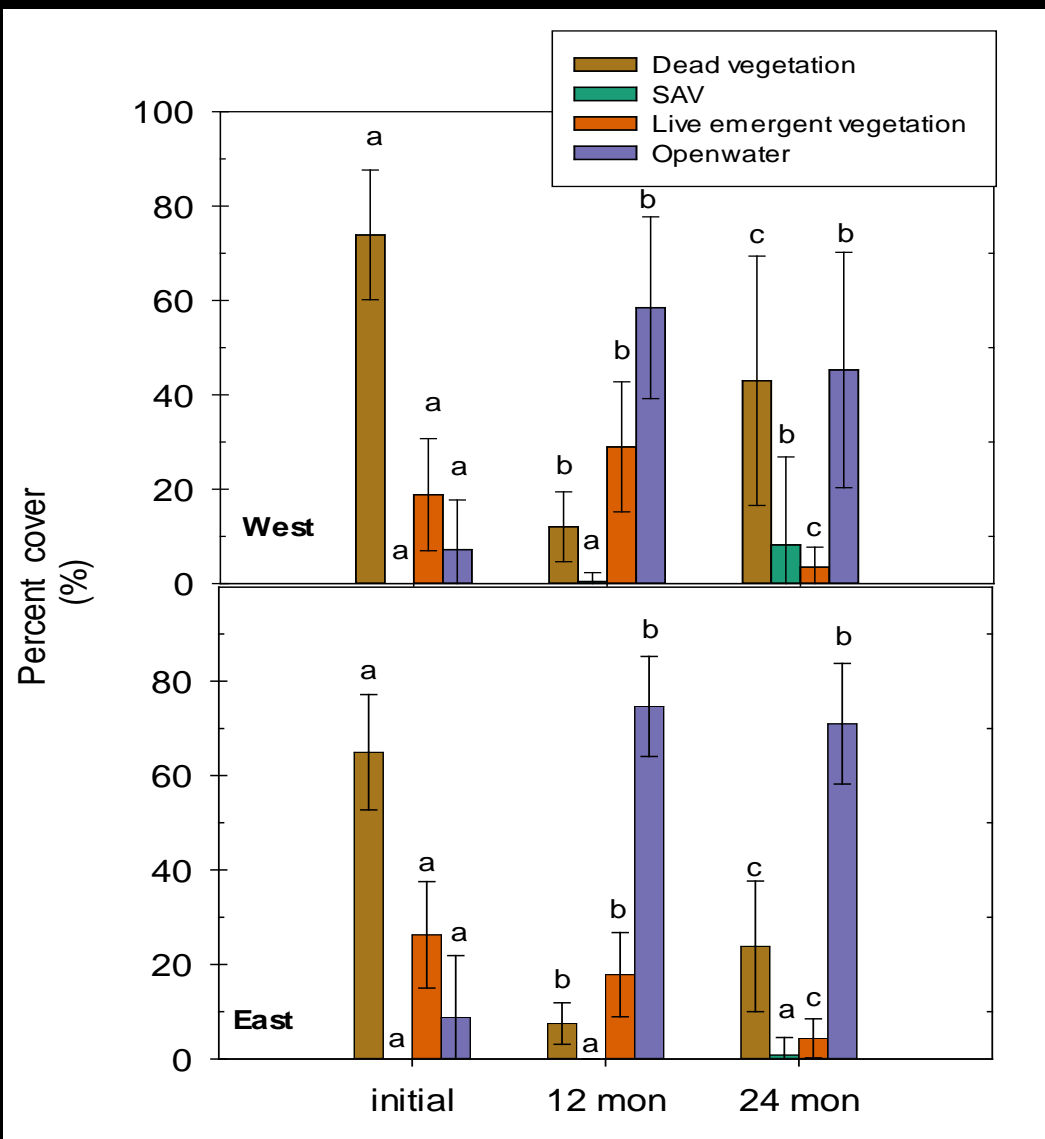
September 2015



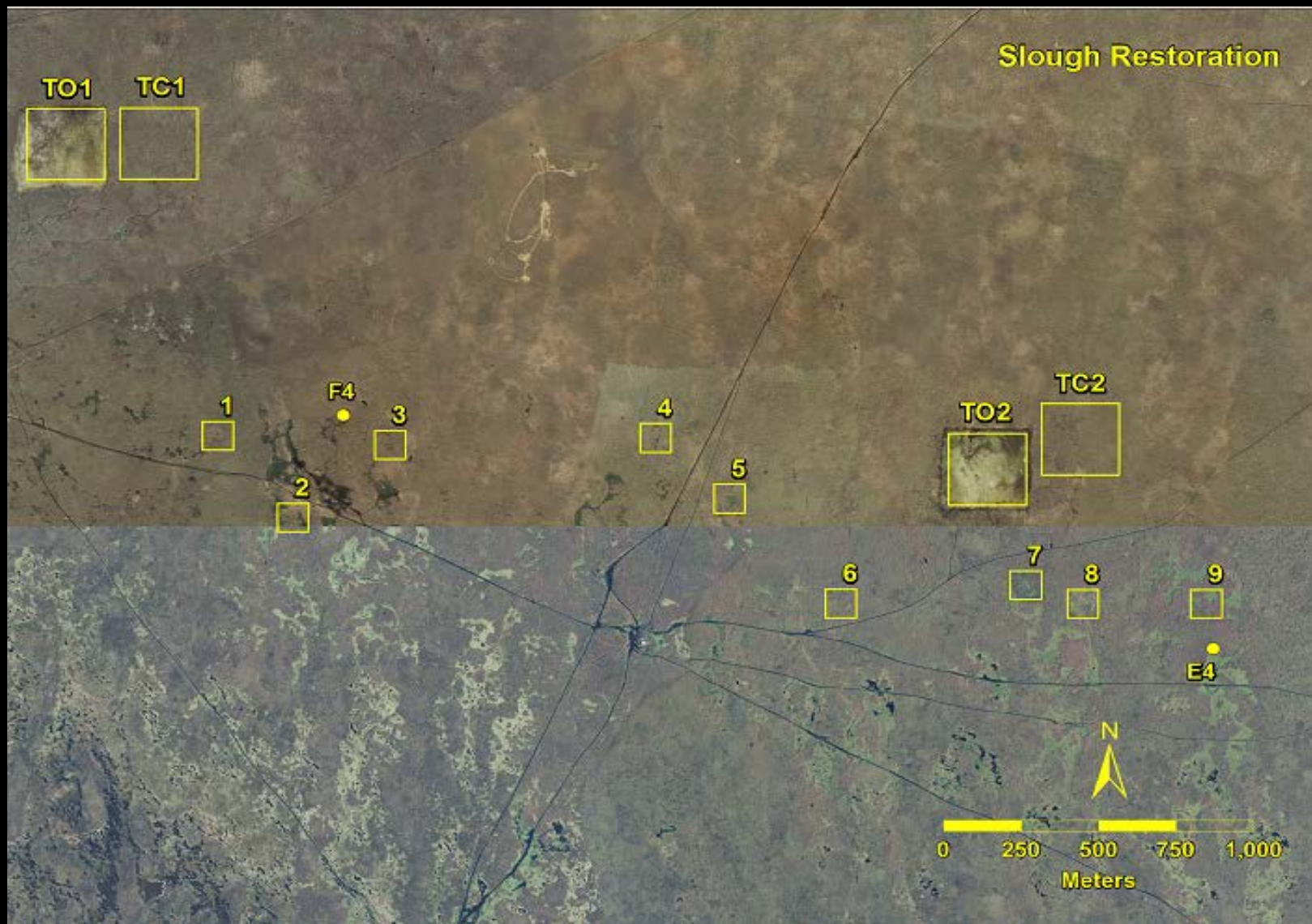
Landscape Pattern Restoration (AMI-1)



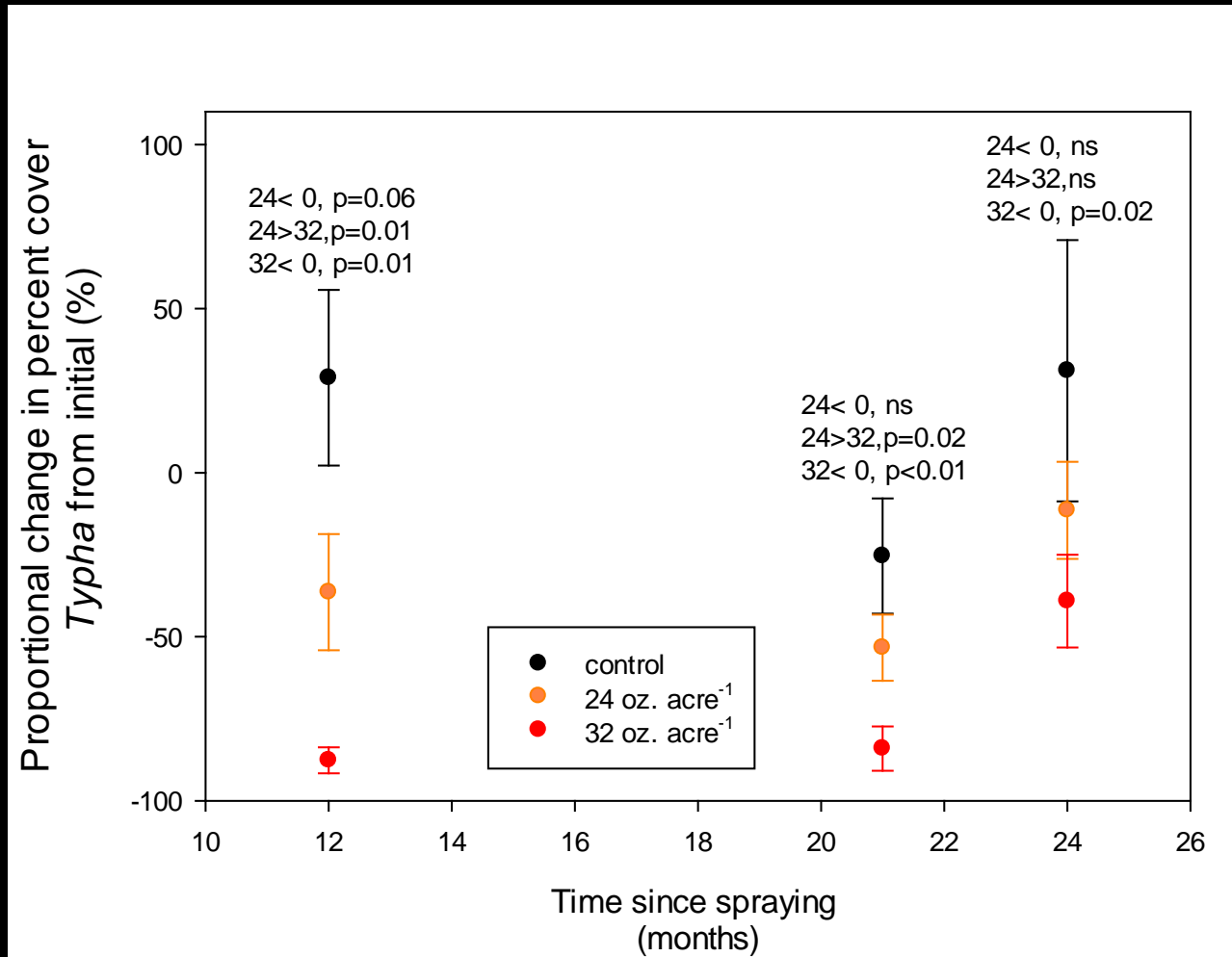
Vegetation type cover change in Landscape Restoration plots with 12 and 24 month applications. $\alpha = 0.05$.



Slough restoration (AMI2)



Slough restoration (AMI2)



32 oz. acre⁻¹



Initial



12 months



24 months



24 oz. acre⁻¹

In Conclusion

- Control cattail/ Desirable vegetation
- Glyphosate and fire best for eliminating all vegetation
- Imazamox is good for keeping patterning
- 32 oz dose is the most effective balance



Acknowledgements

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