Active Marsh Improvement:
A decade of rehabilitating cattail impacted areas

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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 Experimental and Reference plot above-ground live biomass (g/m²) for 2007-2009
Landcape Pattern Restoration (AMI-1)

AMI W in 2013

AMI E in 2013
Vegetation type cover change in Landscape Restoration plots with 12 and 24 month applications. $\alpha = 0.05$. 
Slough restoration (AMI2)
Slough restoration (AMI2)

![Graph showing the proportional change in percent cover of Typha from initial levels over time after spraying with different concentrations of herbicide. The x-axis represents time since spraying (months) ranging from 10 to 26, and the y-axis represents the proportional change in percent cover. The graph includes data points for control and two different herbicide concentrations: 24 oz. acre\(^{-1}\) and 32 oz. acre\(^{-1}\). Significant differences are indicated by p-values (e.g., 24<0, p=0.06; 24>32, p=0.01; 32<0, p<0.01).]
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
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