Landscape scale multiyear evaluation of aquatic vegetation control

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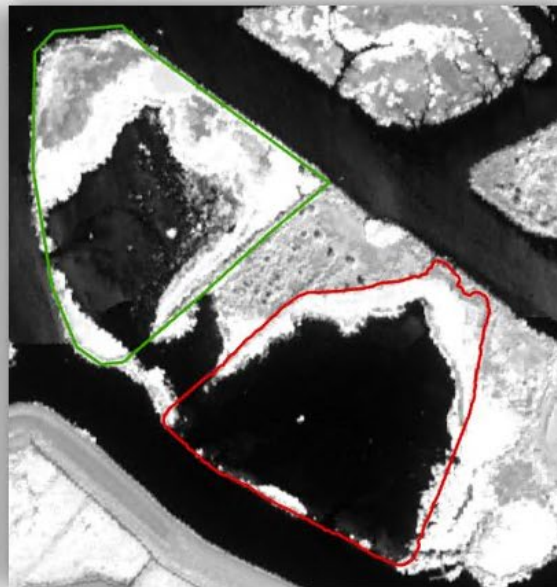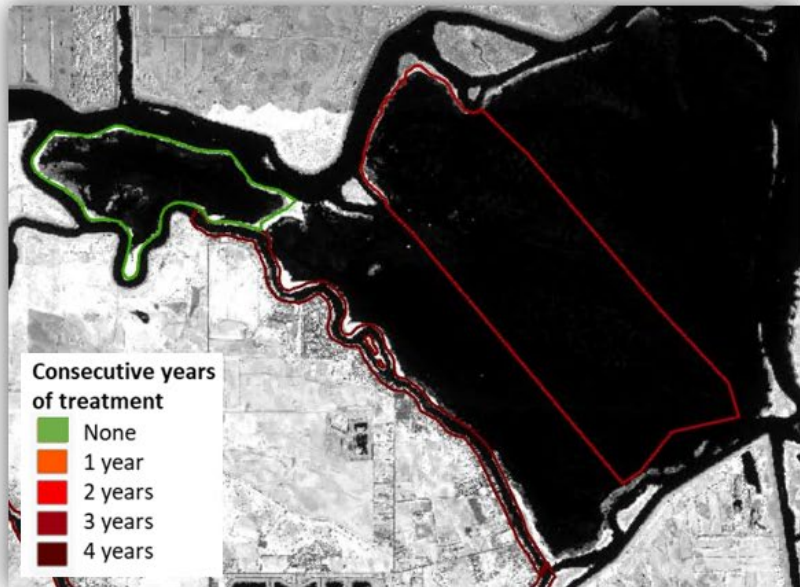
ADAPTIVE MANAGEMENT FORUM

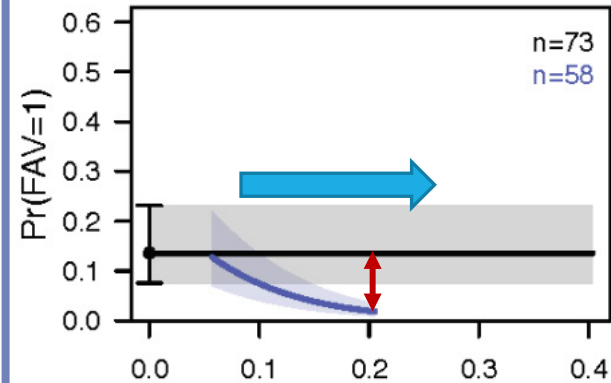DELTA STEWARDSHIP COUNCIL

4TH FEBRUARY 2021

Treatment data from DBW & control sites

❖ FAV: 461 sites; 10 years

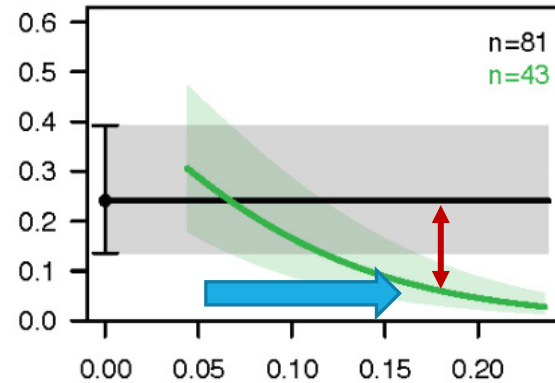❖ SAV: 133 sites; 5 years

❖ Control and treatment sites vary by year

Consecutive years of treatment
- None
- 1 year
- 2 years
- 3 years
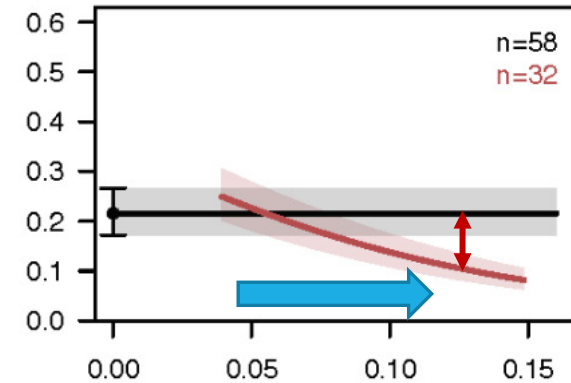- 4 years

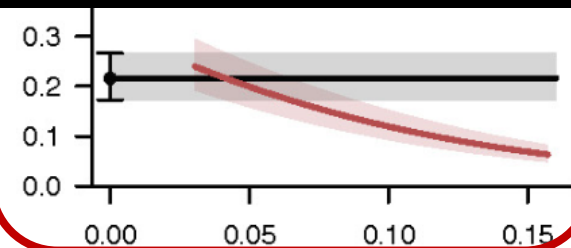# Water hyacinth control using 2-4,D: 2004-2008

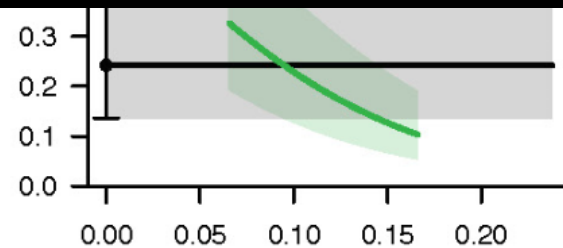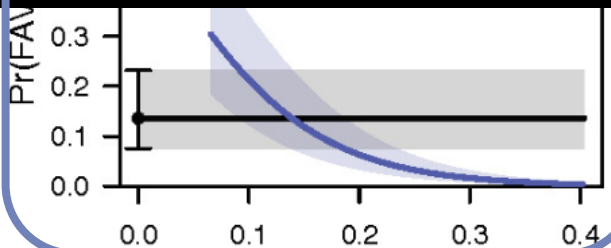**Channel**

Slow Shallows

2 years consecutive treatment
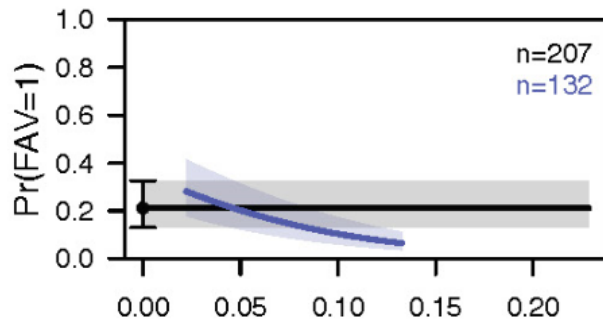
Flooded Islands

- Treated sites have lower cover than control sites

- Repeat visits within same treatment season increase effectiveness

- Generally, effectiveness increases with consecutive years of treatment

- 2,4-D is effective in flooded islands and channels

Water hyacinth control using both: 2014-2018
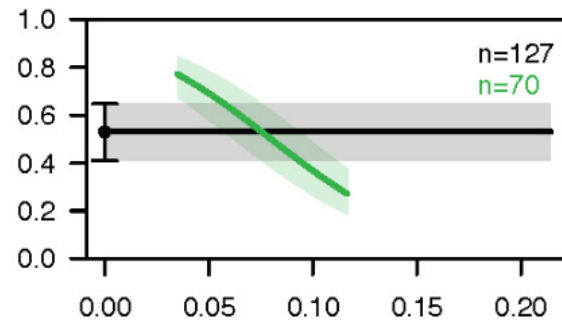

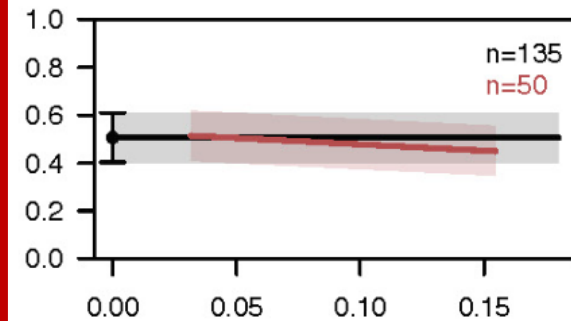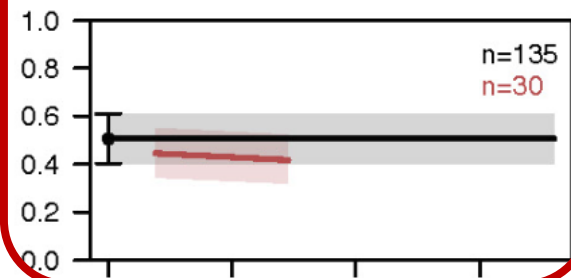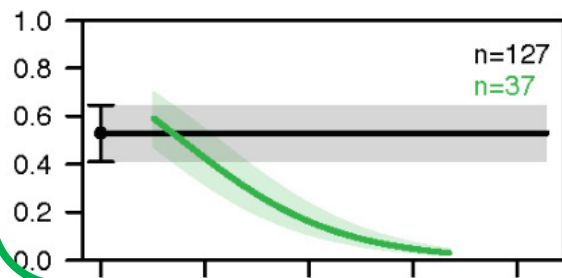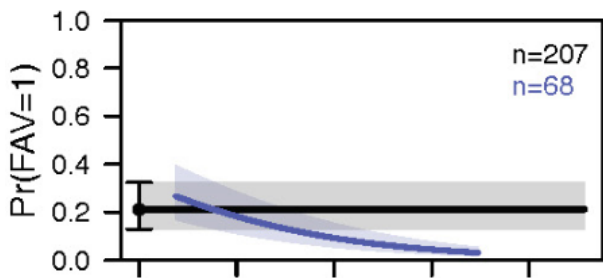- Glyphosate is effective in slow shallows but ineffective in flooded islands

- Next steps: explore the effect of each herbicide and their interaction

- Determine minimum application of herbicide per unit area for efficacy

Model results for SAV: 2014-2018

o Treated sites have lower cover than control sites **– YES (~10%)**

o Effect of treatment may last longer (at least a year) **– NO**

o Consecutive years of treatment will be more effective **– NO**

(8% reduction in 2017; 3% in 2018)

What this means for Adaptive Management?

❖ To evaluate the treatment program:
- Consistent monitoring and reference sites are key for evaluating efficacy
- Performance metrics need to be developed to meet 1^0 and 2^0 objectives

❖ Recommendations based on current study:
- FAV: Which herbicide is effective in which habitat
- FAV: What is the effective frequency of application
  - Within a treatment season
  - In consecutive years of treatment
- SAV: CET guidelines for tidal environments need re-evaluation
- SAV: Adapt plan based on forecast for the year
  - In drought years, prevent SAV from taking over new habitat; need bigger budget
  - SAV: In wet years, focus on nurseries of SAV; need smaller budget

Acknowledgements

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