

Aquatic Weed Control

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History

- Water hyacinth 1880's
- Water lettuce <1760's (?)
- Hydrilla 1958

Characteristics of Florida Lakes

- Shallow
- Nutrient
- Warm
- Moderate pH





Water hyacinth
Eichhornia crassipes
Photo by David Sutton
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Floating Plants

- Herbicides: 2,4-D \$20-50/A
glyphosate
diquat
- Mechanical: 2-3 acres/day \$700/A
- Biocontrol: insects not effective

Why Control Floating Plants

- Rapid growth- 1 plant → 1 acre/yr
- 20 tons dry wt/acre (200-300 tons fresh)
- Destruction of natives
- Anaerobic conditions
- Access
- Bridges/structures
- Succession- trees
- Organic decomposition







Hydrilla
Hydrilla verticillata
Photo by Vic Ramey
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Hydrilla Control

- Contact herbicides: \$300-600/A
- Systemic herbicides: \$50-100/A
- Mechanical removal: \$400-600/A
- Biocontrol: none selective

Why Control Hydrilla

- Anaerobic
- Access, fish populations
- Nutrient pump(?): 2mg P/m^2
- Organic deposition
- Monocultures







Agasicles hygrophila
Alligatorweed flea beetle
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Impacts

- Phytoplankton, oxygen, flow, sediment, shade, wind, zooplankton, fish, pH, nutrients, temperature, etc., etc.,
- Impact determined by degree of infestation

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