

Lake Apopka

Rapid Dewatering
Demonstration (2010)



Objectives

- Evaluate new/innovative methods of rapidly dewatering dredged sediments
- Remove 10,000 cubic yards of organic material
- Monitor sediment accumulation in dredged areas





















Lake Apopka

2012 Appropriation



2012 Appropriation

- \$4,800,000 to be used for habitat improvements and access
- Representatives from various agencies met to evaluate project proposals and allocate funds



Initial Projects

- FDEP - \$600,000 for innovative phosphorus removal demo
- SJRWMD - \$2,000,000 for access dredging at Winter Garden
- UF - \$1,150,000 for access dredging at Magnolia Park
- FWC – \$1,000,000 for habitat projects



Challenges

- Poor light penetration – secchi typically 1 foot or less.
- Large deposits of flocculent mud.
- Limited littoral areas – < 1% of lake
- Extreme wind fetches – Over 10 miles in distance across the lake.



Spatterdock Planting Zones



Spatterdock planting



Spring/Summer 2013

Planted 30,000 plants



Bulrush Planting

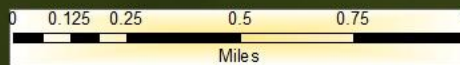
- Installed 317,000 plants in fall 2012 – spring 2013 for \$78,000.



Lake Apopka Projects
FL Fish & Wildlife Commission
August 2013

Legend

- Bulrush
- Spatterdock



Sources: Esri, DigitalGlobe, GeoEye, Earthstar, USDA, USGS, AEX, Geomatics, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Planting Bulrush



Fish Attractors

- Forty one 1/4 acre brush fish attractors were installed in Lake Apopka during 2013
- Total cost is \$120,909



Largemouth Bass Stocking

- UF will determine timing for stocking largemouth bass in Lake Apopka.
- Stock phase II largemouth bass spring 2014
- Projected cost \$625,000



Projects being developed

- New habitat creation - \$1.5M
- Habitat protection using geotubes/brush – 1.5M
- Floating wetlands - \$200,000
- Access dredging - \$560,000



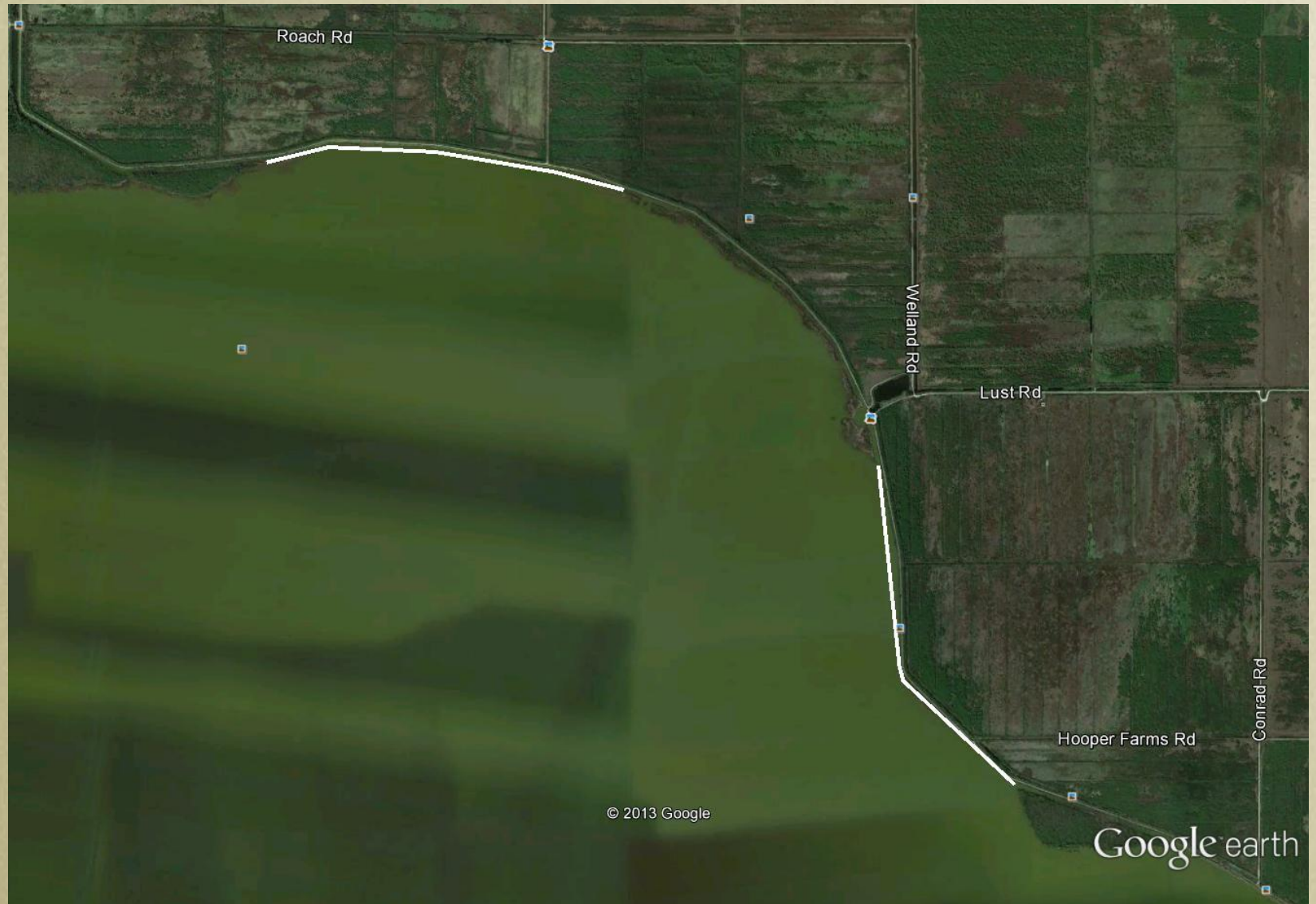


Diagram of Littoral Area

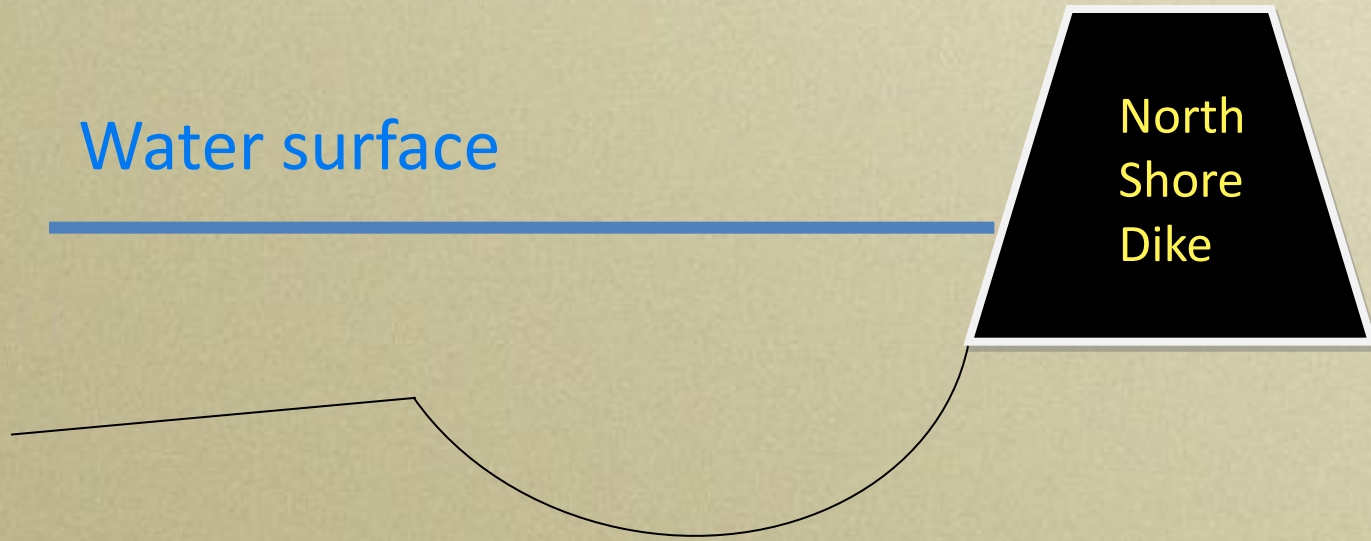
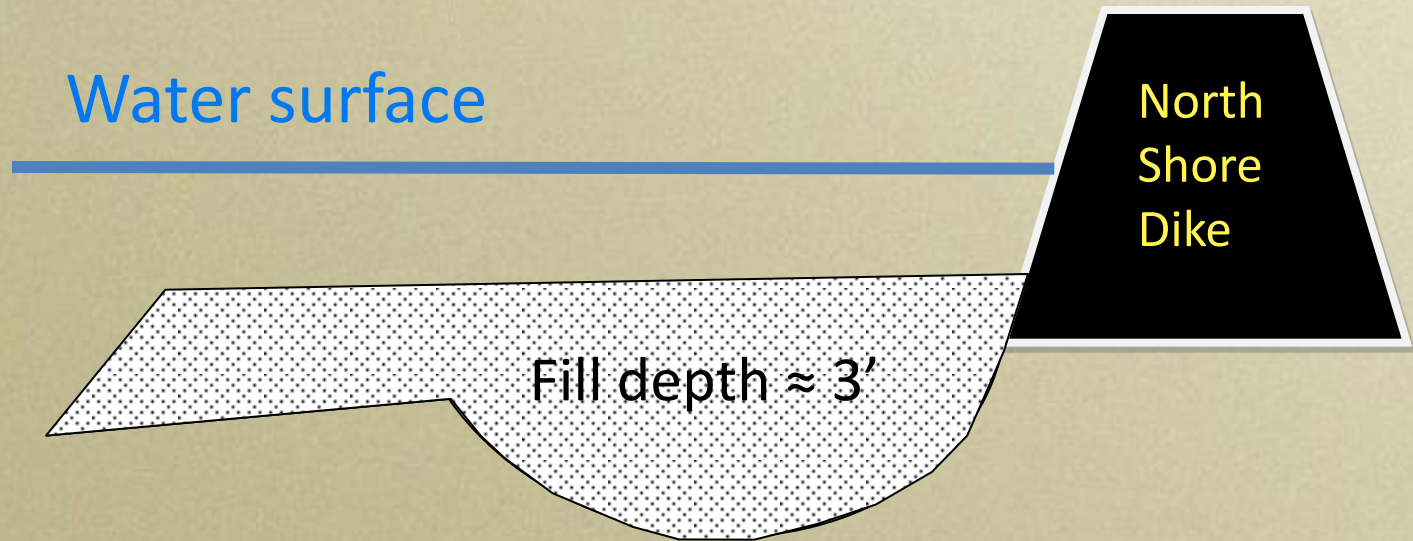


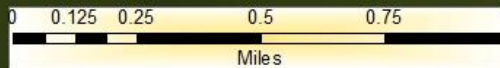
Diagram of Littoral Area with Fill



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Legend

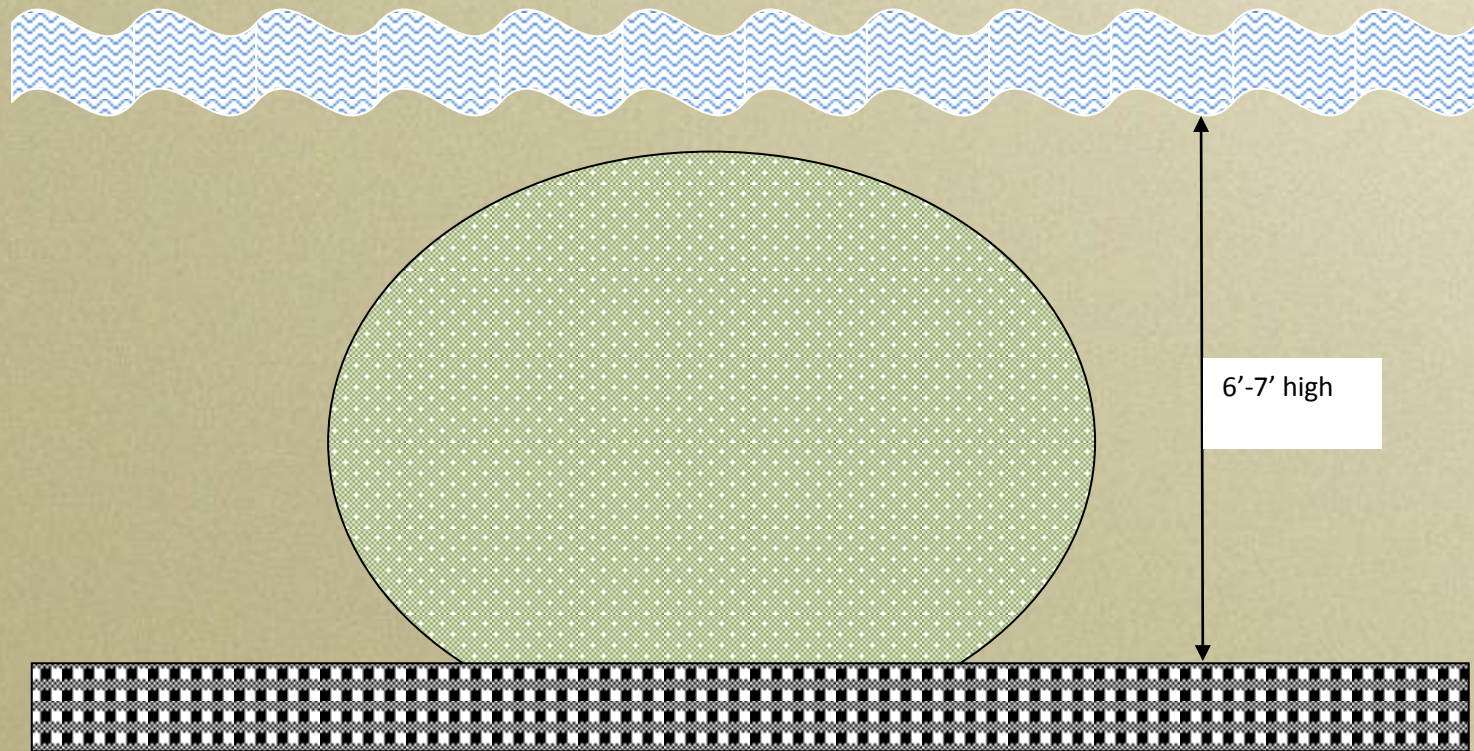
- Bulrush
- Spatterdock



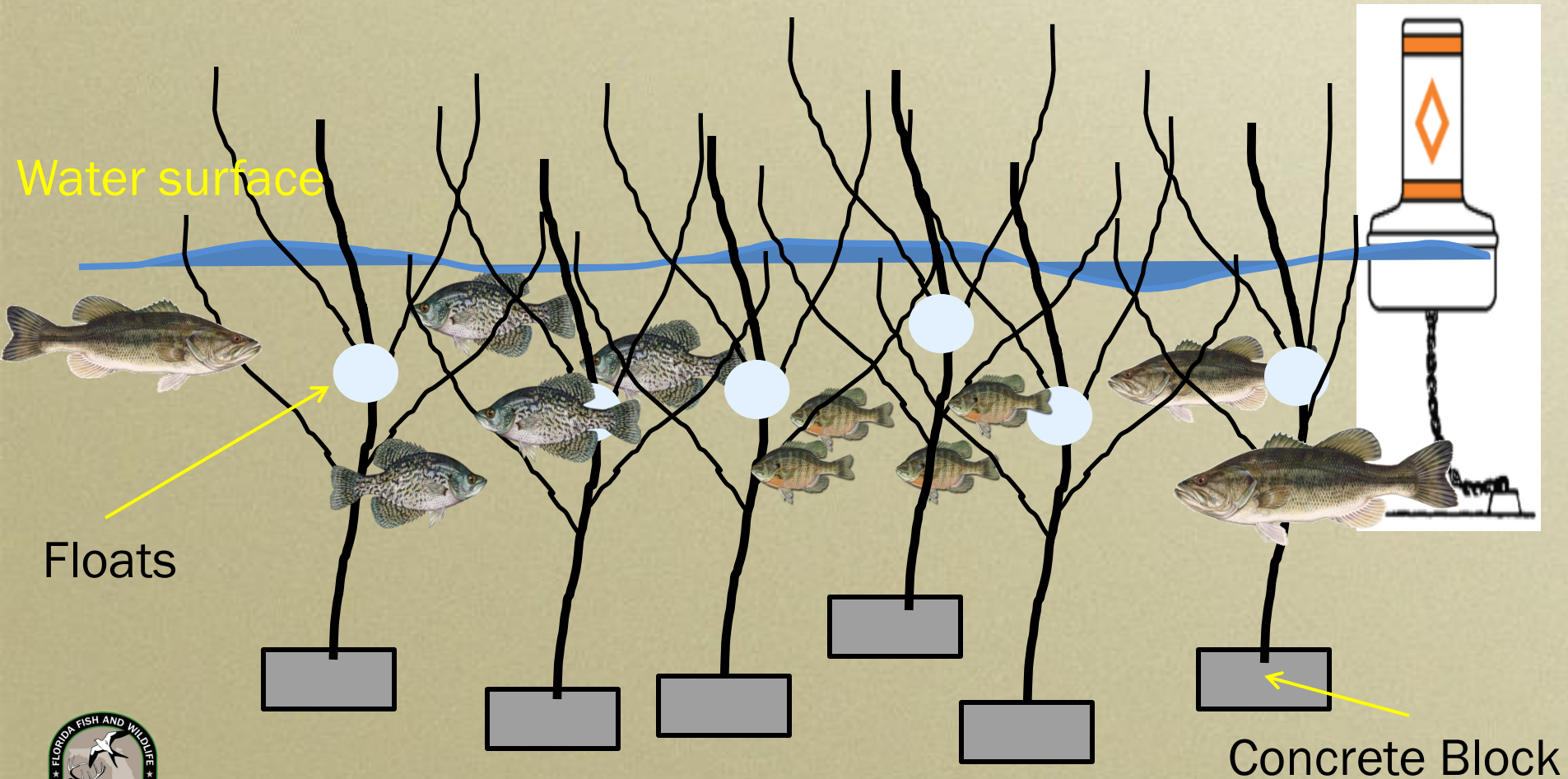
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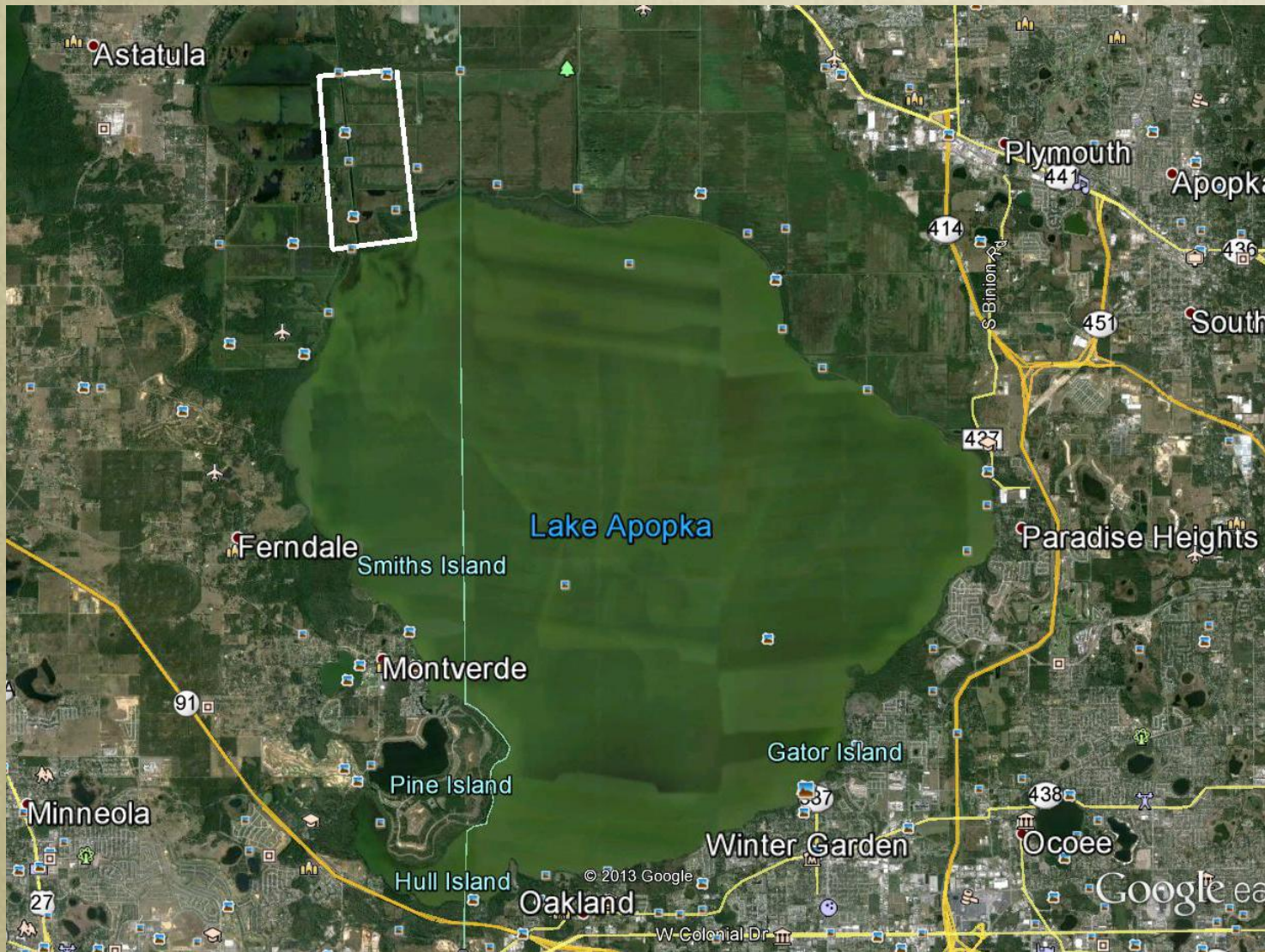


Geotube wave attenuator



Brush Wave Attenuator/Fish Attractor Design







A photograph of a sunset over a body of water. The sky is filled with clouds, some of which are illuminated from below by the setting sun, creating a vibrant orange and yellow glow. The water reflects this light, and the foreground shows dark silhouettes of trees and grass. The word "Questions?" is written in a large, yellow, serif font across the center of the image.

Questions?