

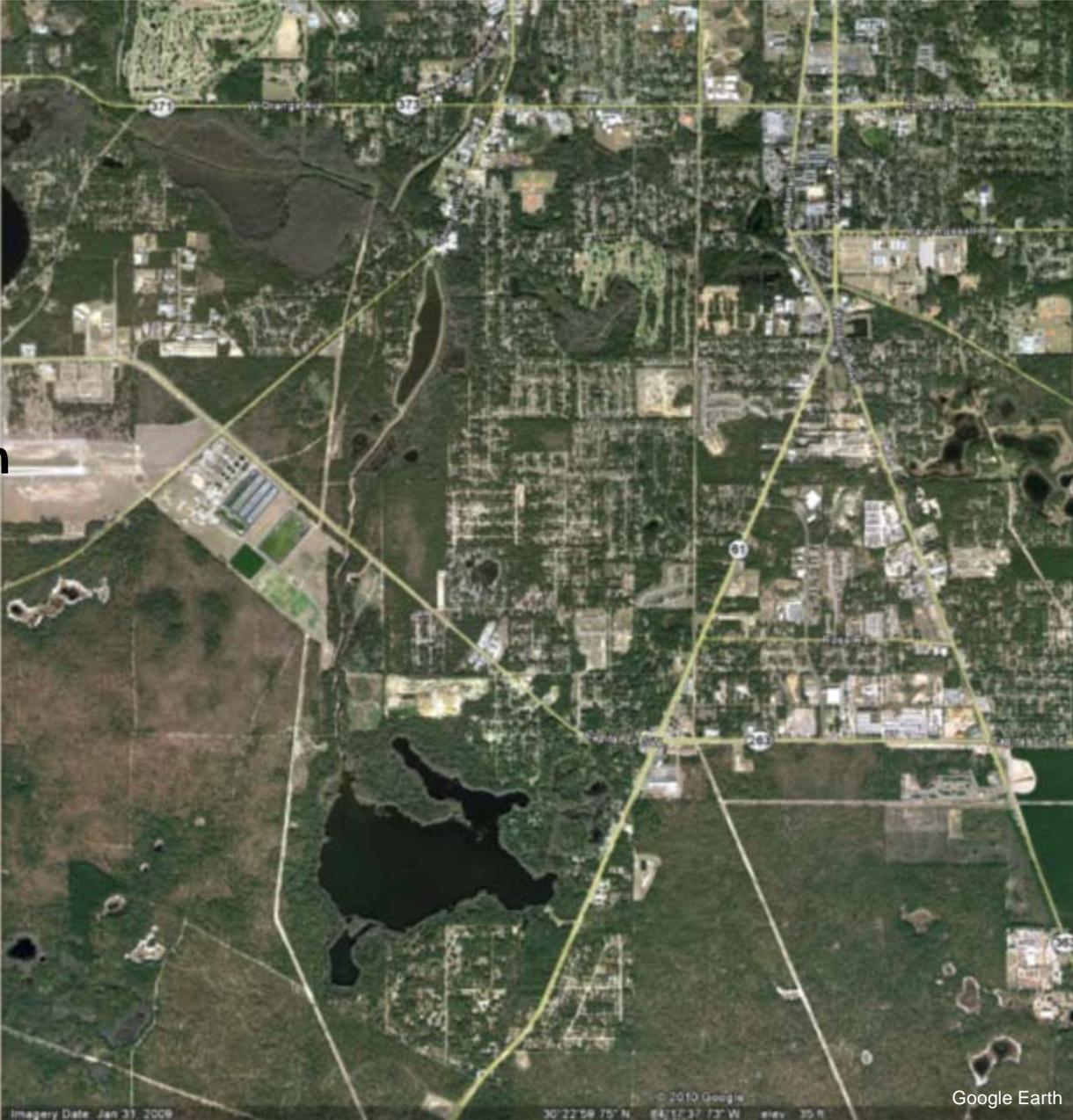
LAKE MUNSON 2010 DRAWDOWN



**Text and Photographs by: Michael Hill
FWC Fisheries Biologist
Aquatic Habitat Restoration and Enhancement Sub-Section
September 2010**

**60%-80%
of Stormwater
that falls on
Tallahassee, FL**

Drains to Lake Munson



MUNSON DRAWDOWN - 2010

- Should begin mid October 2010
- Last 8 months
- Refill planned on May 31, 2011



Limpkin

Roseate Spoonbill



American alligator





**LAKE MUNSON WATER CONTROL STRUCTURE
IN NEED OF REPAIRS – LEON COUNTY**



HISTORICAL BACKGROUND



Blue-green
Algae



Hydrilla



- Originally a cypress swamp, impounded for mill operations
- Stabilized water levels and luxurious plant growth, especially water hyacinths, began the muck build-up process.
- Numerous fish kills occurred and active hyacinth spraying dominated work in the 1970's.
- Hydrilla was introduced in the 1980's creating a topped out, weed-choked lake.
- Leon County began the Lake Henrietta resurrection, Munson Slough re-alignment, and Delta removal during a planned complete drawdown in 1999-2000.

HISTORICAL BACKGROUND

(CONT.)

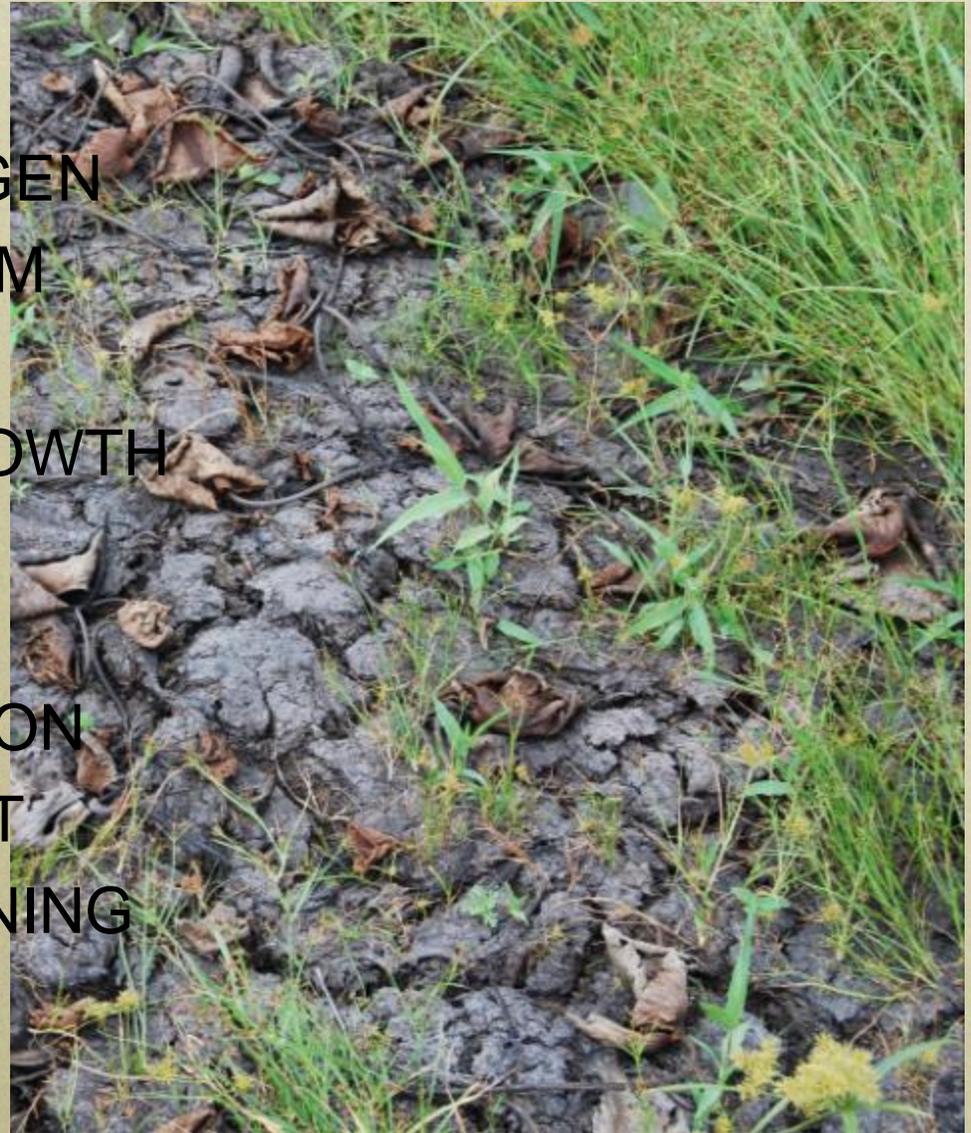
- Upon refill, a strong fishery response resulted in high numbers of largemouth bass being produced.
- The return of Hydrilla, prompted DEP to implement noxious aquatic plant treatments.
- The exotic, Island Apple Snail, infested the lake and contributed to the massive reduction of submersed aquatic plants.
- Released nutrients allowed for extremely high densities of blue-green algae to flourish.
- Muck depth bathymetry and sediment analysis funded by FWC revealed muck depths up to 8 feet thick.



Sinkhole area of Lake Munson in SW corner of the lake.

MUCK IS A NATURAL ACCUMULATION OF DEAD AQUATIC PLANTS BUT TOO MUCH MUCK CAN...

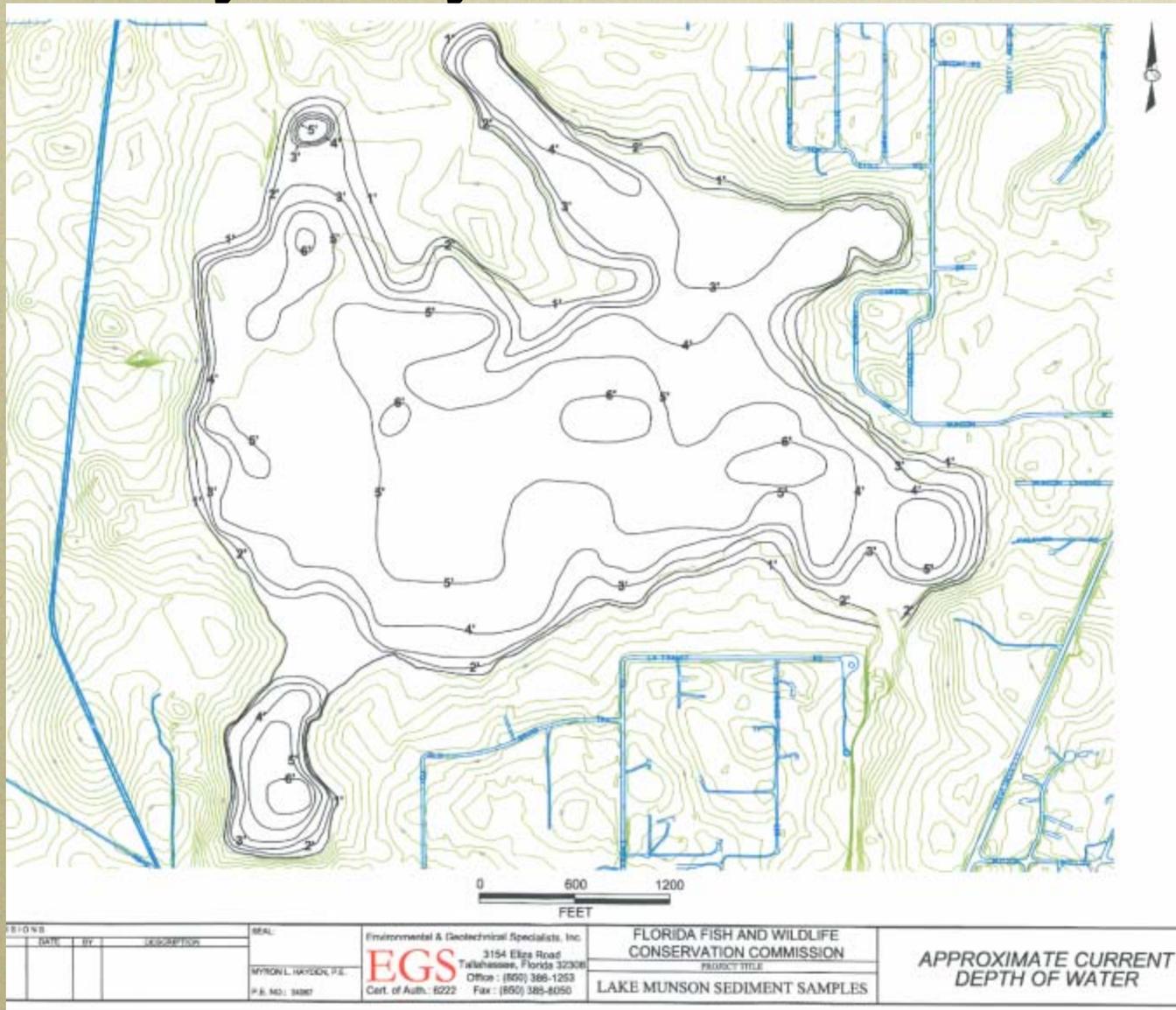
- REDUCE DISSOLVED OXYGEN
- INCREASE TURBIDITY FROM
WAVE ACTION AND BOATS
- PROMOTE EXCESSIVE GROWTH
OF AQUATIC PLANTS
AND ALGAE
- HINDER BED CONSTRUCTION
OF SUNFISH SPECIES THAT
FISH NEED DURING SPAWNING



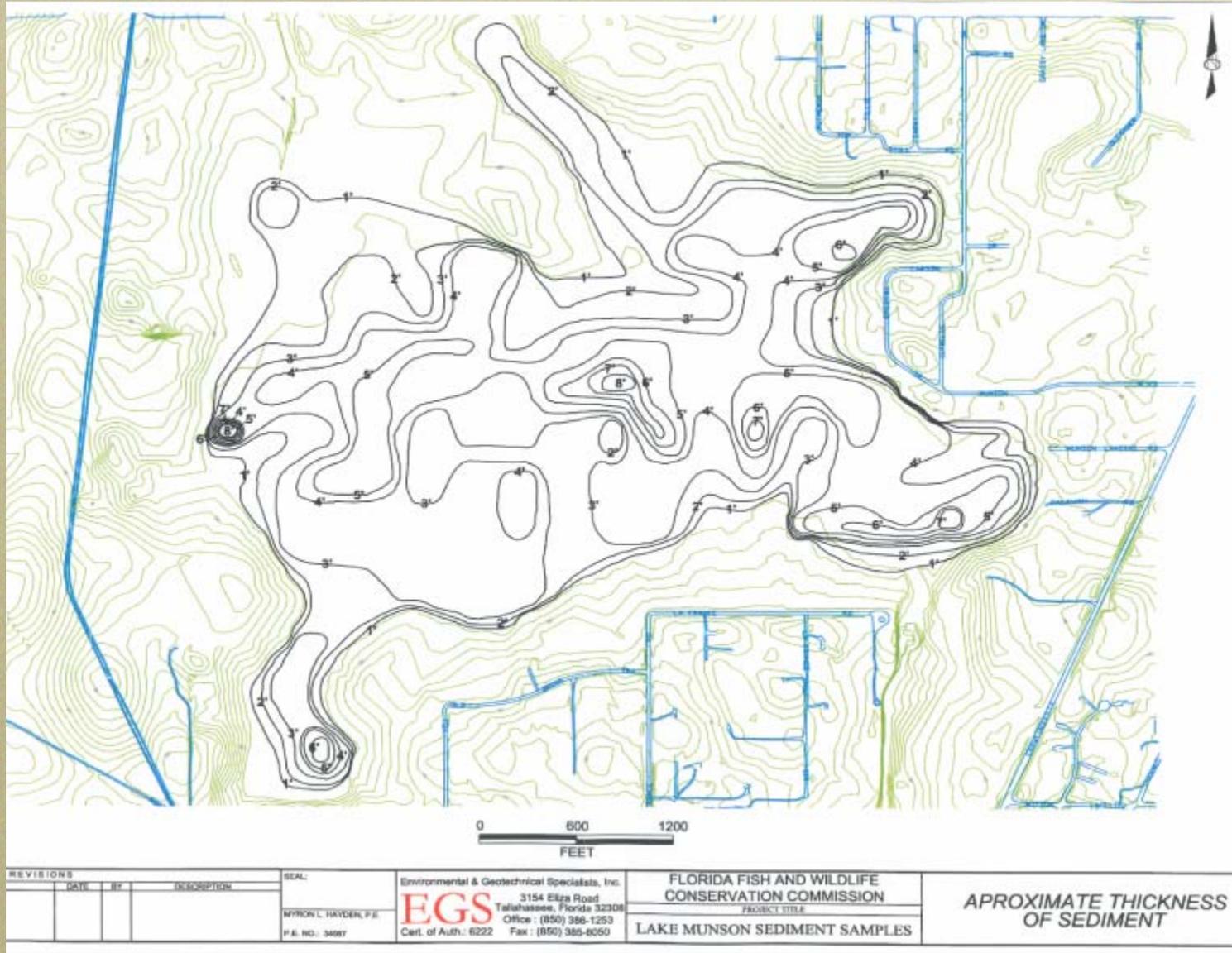
Dried muck after 2000 drawdown.



Bathymetry of Lake Munson



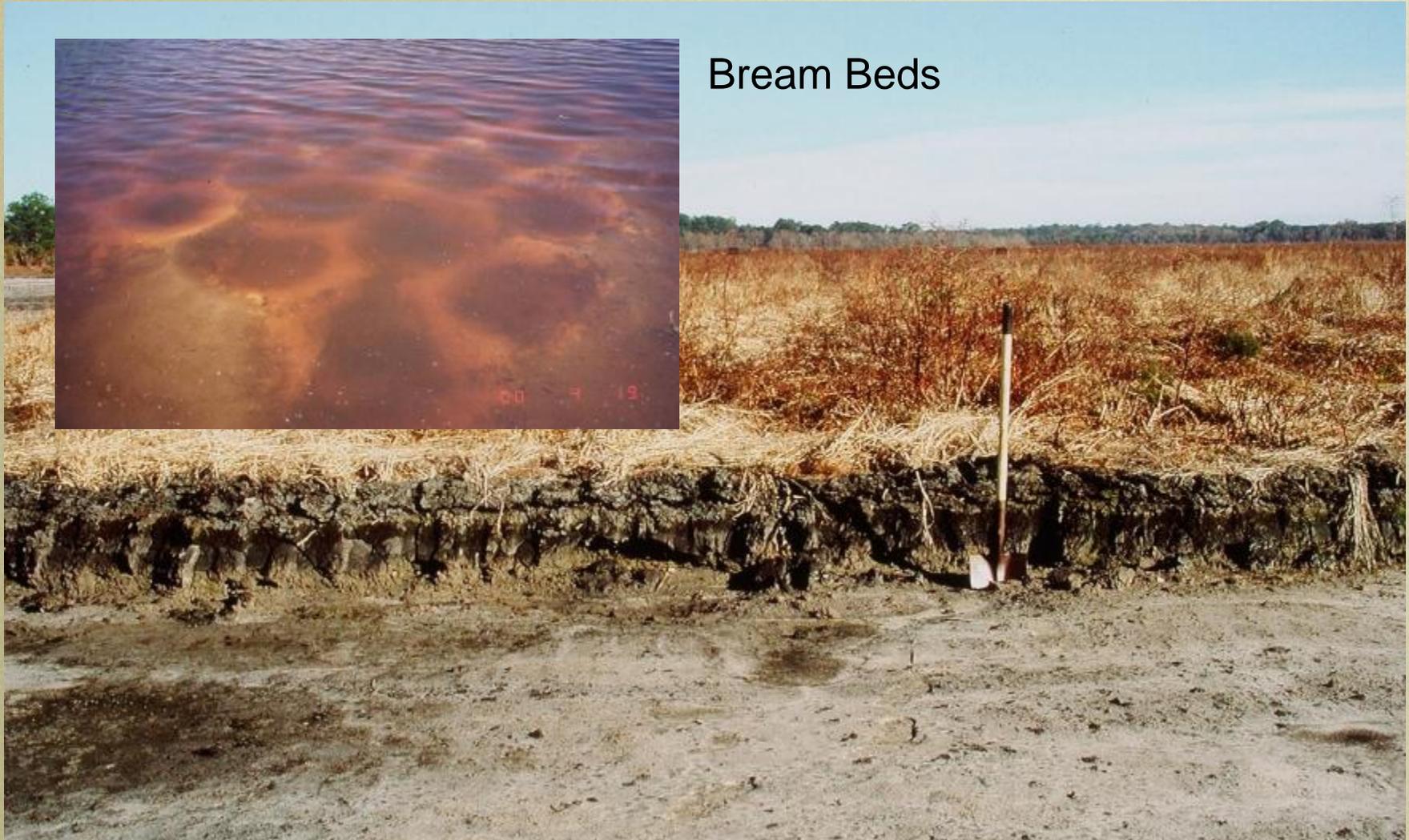
Thickness of Organic Sediments



TWO FOOT THICK MUCK – LAKE IAMONIA 2001



Bream Beds

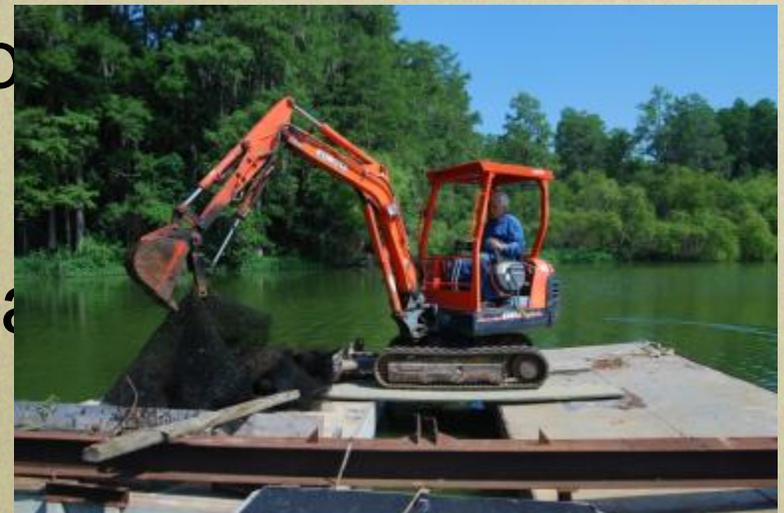


Can you imagine 4'-8' of muck in Lake Munson?

Drawdowns

“The Most Powerful and Useful Tool Available”

- Improved water quality
- Improved fish spawning substrate
- Lake bottom compaction and oxidation
- Stimulate healthy aquatic plants
- Improved esthetics
- Cypress tree roots rejuvenation
- Relatively inexpensive

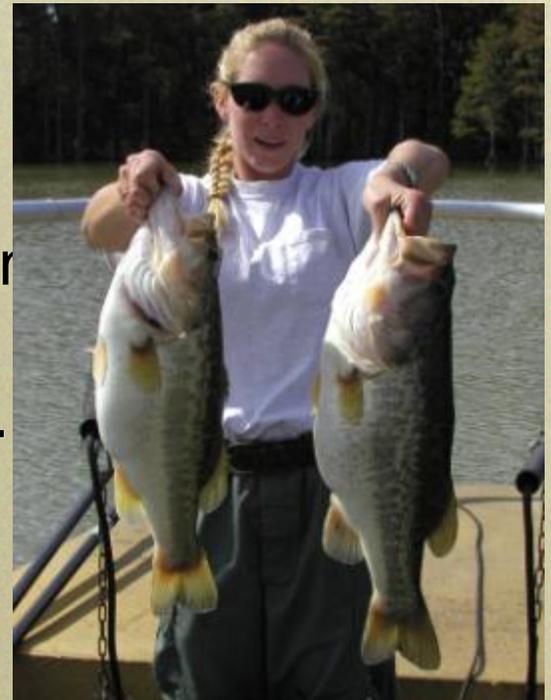


Mr. Bill Grimes removes plastic matting from Lake Munson – 2010



• Can be repeated as needed

- Muck removal is probably no longer an option, until water quality from Munson Slough improves substantially.
- Massive funding cuts in FWC AHRES budget prevents FWC muck removal projects without multiple funding partners.
- The best environmental improvement to the lake was when Leon County implemented an extreme drawdown during the 2000 delta removal.
- A trophy bass fishery can develop in Lake Munson with bass over 10 pounds common.
- When conditions are aligned, a massive fish kill can/may occur throughout the lake.



Current Recommendations:

- Follow TMDL EPA/DEP guidelines to drastically reduce phosphorus and nitrogen levels.
- Conduct another extreme drawdown, like the 2000 event
- Plant emergent plants at locations along the cypress fringe (bulrush, pickerel weed, duck potato, etc.)
- Conduct regularly scheduled draw-downs, perhaps every 5-10 years; during the cooler months.



Exotic Island Apple
Snail laying eggs



Exotic snail egg masses



Other Wildlife that benefit during drawdowns:



Sandhill Cranes



Raccoons



Bald eagles



Wood storks



American alligators





CONTACT: David F. Zierden, (850) 644-3417; zierden@coaps.fsu.edu
James O'Brien, (850) 459-1938; jim.obrien@coaps.fsu.edu

Sept. 27, 2010

FLORIDA CLIMATE CENTER: SOUTHEAST PREPARING FOR DROUGHT IN FACE OF STRONG LA NIÑA

TALLAHASSEE, Fla. □□ Florida needs more rain to fend off **an expected drought** with the return of a strong La Niña, according to officials at the Florida Climate Center at The Florida State University.

The Florida Climate Center is predicting a high likelihood of a warm and dry fall, winter and spring for Florida and the Southeast United States, thanks to La Niña, said David Zierden, climate scientist at Florida State University's Center For Ocean Atmospheric Prediction Studies (COAPS) and state climatologist of Florida.



FWC Contact Information

Panama City Regional Office – 850-265-3676

Regional Fisheries Biologist – Chris Paxton



Websites and Phone Numbers

Florida Fish and Wildlife Conservation
Commission

www.MyFWC.com 850-265-3676

Leon County Public Works

www.leoncountyfl.gov 850-606-1500



Phone Numbers (cont.)

Docks or Dredge and Fill Questions

Leon County

Growth and Environmental Management

850-606-1300

Dept. of Environmental Protection

850-245-2984

