



**OCHLOCKONEE RIVER
SOIL AND WATER CONSERVATION DISTRICT
And the
Leon County Science Advisory Committee.**

SERVING ALL OF LEON COUNTY

October 5, 2009:

Scott Matteo
Chair
Supervisor
District II

RE: Summary of the June 26, 2009 Lake Munson Workshop.

The Ochlockonee River Soil and Water Conservation District and the Tallahassee-Leon County Science Advisory Committee hosted the Lake Munson Workshop on June 26, 2009 at the Leon County Agricultural Extension Office. Mr. Darrell Johnson, the regional NRCS Agent prepared a fine lunch for the group. There were 65 attendees representing almost all of the state and local agencies and environmental groups. Dr. Bill Landing, Department of Oceanography, FSU, the Chair of the Tallahassee-Leon County Science Advisory Committee, moderated the workshop.

Blas Gomez
Supervisor
District I

Mission: To continue and expand protective and restorative efforts of Lake Munson/Munson Slough water quality and biological health. The goal is to return Lake Munson to healthy water quality levels.

Misty Penton
Supervisor
District III

Objectives: Soliciting major concerns from various agencies to acquire a condensed list of issues.

Brian Acosta
Supervisor
District IV

Jess van Dyke spoke of the necessity to accomplish something now. He advised the Lake Munson Action Team that authored a Lake Management Plan in 1994. This plan called for restorative efforts, including sediment removal, 15 years ago.

Sean McGlynn
Supervisor
District V

The presentation by Johnny Richardson, Leon County Water Quality Scientist, used Leon County's water quality monitoring data to show that the water quality in Lake Munson is actually worse than the inflow water quality. He discussed the complexities and expenditures involved with removing sediments contaminated with PCBs. Mr. Richardson mentioned the invasive exotic Island Apple Snail (*Pomacea insularum*) recently established throughout the Lake Munson watershed.

The presentation by John Cox, City of Tallahassee Stormwater, mentioned numerous water quality improvement projects the City has planned for the *Lake Munson Watershed and an equally impressive expenditure of funds.*

Matt Phillips, FWC Biologist, Invasive Plant Management Section, stated that

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Attachment # 5
Page 2 of 4

SERVING ALL OF LEON COUNTY

there are essentially no aquatic plants remaining in Lake Munson, only algae and some exotic *Colocasia esculenta*.

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District II

The presentation by Richard Weikowicz, author and modeler for the Lake Munson TMDL, retired from FDEP, mentioned that pollution reduction goals would be required in the Munson Watershed, these range from to 60% to 80% reductions in nutrients and fecal bacteria. He also pointed out that the water in Lake Munson eventually descends into the aquifer via a sinkhole. Some of this water has been traced to Wakulla Springs and other areas, like Indian Springs.

Blas Gomez
Supervisor
District I

Margaret Fogg of Munson Inc., the local homeowners group, stated that she was ready for a clean Lake Munson now. She also mentioned that Jesse Brown, the other co-founder of Munson Inc. is gravely ill. This workshop is dedicated to her.

Misty Penton
Supervisor
District III

Sean McGlynn, a water quality consultant mentioned that the combined City of Tallahassee, Leon County and Blueprint 2000 planned water quality improvement projects in the Lake Munson Watershed are expected to cost over 100 million dollars over the next 20 years. This could yield significant water quality improvements for Lake Munson. He suggested that it might be prudent to model these improvements to determine how effective they are before construction. He said we should plan and coordinate a phased sediment removal strategy, over the next 20 years, during the drawdowns, and this could begin at the southern portion of the lake, where PCB contamination and disposal expense would be minimal.

Brian Acosta
Supervisor
District IV

Sean McGlynn
Supervisor
District V

The presentation by Michael Hill, FWC Fisheries Biologist, Division of Habitat and Species Conservation, Aquatic Habitat Restoration and Enhancement Sub-Section, discussed periodic drawdowns, which caused significant water quality improvements in Lake Munson during previous drawdown. A timetable of 3 to 7 years was discussed. Michael Hill explained that drawdowns have numerous beneficial effects on lake sediment and water quality. The exposed sediments dry out, oxidize, and compact yielding a "crust" that serves as suitable substrate for fish spawning after the lake re-fills. The crust is a barrier to retard upward diffusion of nutrients from deeper sediment. Drawdowns should be in late fall and winter to minimize the growth of woody plants on the exposed sediment. To avoid triggering fish kills, drawdowns should not be attempted in late summer when dissolved oxygen levels are low. Low oxygen and low water are a prescription for fish

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mortalities. Periodic drawdowns reduce the need to remove the nutrient and organic-rich sediments. Mr. Hill also brought up the idea that Lake Munson could be restored to the marsh habitat, its original state, as an 'out of the box management concept.' The dam that impounds the water in the lake could be removed. This would greatly improve treatment in the basin. Ponds could be built in the basin to enhance treatment and wildlife habitat. Mr. Hill and a consensus of the participants thought that this is an intriguing idea but it would be difficult to achieve.

**Bias Gomez
Supervisor
District I**

After the invited speakers finished a group discussion ensued. The following items were generally agreed upon:

**Misty Penton
Supervisor
District III**

1. Lake Munson is a valuable environmental and community resource that should be improved and protected. Many different agencies ("stakeholders", including residents on the lake) are interested and involved in this effort, and an open and continuing dialog among all of the stakeholders is necessary. All governmental and non-governmental agencies should work together, either as a formal task-force or on an ad-hoc basis, to inform the public and each other about their plans for current and future projects that will affect Lake Munson and the Lake Munson watershed.

**Brian Acosta
Supervisor
District IV**

2. Water quality improvement is a major concern in Lake Munson and the Lake Munson watershed. In coordination with Blueprint 2000, Leon County, and the City of Tallahassee, current and future projects in the Lake Munson watershed will influence the quantity, quality, and timing of stormwater input to Lake Munson. Effective planning should include water quality modeling to assess the combined effects of each project and maximize water quality improvement for Lake Munson.

**Sean McGlynn
Supervisor
District V**

3. There should be an effort to re-establish macrophytes in Lake Munson as this would enhance nutrient assimilation, stabilize the sediments, and provide fish habitat in Lake Munson. The herbivorous invasive exotic Island Apple Snail seems to consume most native aquatic plants, however there are some resistant plant species worthy of investigation. Control of the snails is difficult. Leon County and BP2K have a snail control project in the Martha Wellman Pond (in the Lake Munson Drainage Basin). Over 4 tons of snails were removed from this pond with traps over two years. While the population was controlled and the aquatic plants re-established, eradication is difficult because most of the Lake Munson Drainage Basin is infested with these exotics and

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they can be reintroduced from other parts of the drainage basin. At this time it is not clear how best to address the Island Apple Snail problem; snail control efforts seem to require some continued maintenance to stop re-infestation.

**Scott Matteo
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4. There should be a planned drawdown regime for Lake Munson. A drawdown in late 2009 or early 2010 should be associated with plans by Leon County Public Works to conduct repairs on the dam. The timing of the drawdowns was discussed and should be at least every seven years and possibly as often as every three years.

**Bias Gomez
Supervisor
District I**

5. A sediment removal or treatment program for Lake Munson could be phased into future drawdown regimes. Sediment removal and disposal would be the most challenging and expensive part of any restoration effort, but all of the agencies involved should continue to work together to develop a sediment improvement plan that could be accomplished if funding were made available in the future.

**Misty Penton
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