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Board of County Commissioners

Leon County, Florida

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Agenda Item Executive Summary

Tuesday, March 23, 2010

<p>Title: Acceptance of the Science Advisory Committee Summary Statement for the Lake Munson Workshop</p>
<p>Staff: Parwez Alam, County Administrator Vincent S. Long, Deputy County Administrator David McDevitt, Growth and Environmental Management Director</p>

Issue Briefing:

The Board directed staff to establish a restoration committee for Lake Munson, chaired by Dr. Bill Landing, Chairman of the Science Advisory Committee (SAC), to bring back a restoration plan to the Board. On June 26, 2009, the SAC and the Ochlockonee River Soil and Water Conservation District (ORSWCD) hosted a Lake Munson Workshop. The SAC provided a Summary Statement for the Lake Munson Workshop that contains recommendations for periodic drawdowns to improve the water quality in the lake (Attachment #1).

Fiscal Impact:

This item has no fiscal impact to the County.

Staff Recommendation:

Option #1: Accept the Science Advisory Committee Summary Statement for the Lake Munson Workshop and direct staff to implement the Lake drawdown recommendations.

Report and Discussion**Statement of Issue:**

The Science Advisory Committee (SAC) provided a Summary Statement for the Lake Munson Workshop that contains recommendations for periodic drawdowns to improve the water quality in the Lake (Attachment #1).

Background:

Public Works staff provided a Status Report on Lake Munson Restoration at the May 13, 2008 Board Meeting (Attachment #2). In that report, it was determined that restoration funds from the Florida Fish and Wildlife Conservation Commission (FWC) are potentially available, but typically accounts for less than 10% of the project costs. Until such time as other agencies participate in its funding, FWC could not justify allocating funds to the Lake Munson project. There were no other funding sources available. The Board then directed staff to establish a restoration committee, chaired by Dr. Bill Landing, Chairman of the SAC, to bring back a restoration plan.

Analysis:

On June 26, 2009, the SAC and the Ochlockonee River Soil and Water Conservation District (ORSWCD) hosted a Lake Munson Workshop. The summary of the workshop is provided in Attachment #3.

The organic and nutrient rich sediments that have accumulated over time in Lake Munson are contributing significantly to poor water quality. These sediments need to be removed; however, this would be extremely expensive. PCB contamination in some areas would make disposal even more expensive. Additional funding sources have not been identified.

An interim recommendation is to allow periodic drawdowns for the restoration and protection of Lake Munson. The drawdown concept is not new; periodic drawdowns have occurred on Lake Talquin in an effort to improve water quality. In addition, natural drawdowns occur periodically, such as those recently experienced in Lake Jackson and Lake Iamonia, due to drought. Historically, this has been proven beneficial to the health of these lakes, as the sediments de-water, oxidize, and form a crust over the lake bottom. In the case of Lake Munson, this could serve to "cap" the underlying sediment and provide habitat for fish spawning. The general consensus was that the simplest and least expensive restoration option is to simply drain Lake Munson to allow this process to occur.

The SAC worked with the FWC to determine parameters for the drawdown. These parameters are as follows:

- It was determined that a complete drawdown was most beneficial by maximizing sediment exposure. The drawdown needs to be performed carefully, as protection of downstream flooding is the first priority. The above average rainfall experienced this Winter makes a Fall drawdown more practical. The ideal drawdown time would be a minimum of five months, starting in October and lasting through the winter, as these are the driest months and cooler water would provide increased dissolved oxygen for the biota that move to the sinkhole. If the rains were to hold off into the following Spring, the resulting extended drawdown would allow for more sediment oxidation and compaction to occur. Since the longer drawdown would be the most beneficial, staff would rely on FWC to determine the latest date for refilling the Lake based on conditions at that time.
- The frequency of the drawdowns should be every 7 to 10 years.
- It was determined that seeding the exposed sediment was not necessary. The seed bank already in place on the bottom sediment is considerable and should provide a natural vegetative response.

The more detailed recommendations provided by the SAC were reviewed and supported by the Leon County Countywide Water Resources Citizens Advisory Committee (WRC), as shown in Attachment #4. Upon Board authorization, the Public Works Department will coordinate the recommended drawdown with FWC staff. It is anticipated that the Public Information Office will assist in providing notice to adjacent property owners and lake users regarding the timing and duration of the drawdown.

In conclusion, there was a general consensus that sediment removal from Lake Munson was extremely important. The organic and nutrient-rich muck sediments are contributing to poor water quality. The FWC established a precedent with the sediment removal from Lakes Iamonia and Miccosukee during the recent drought. Consequently, it is appropriate to request FWC to serve as the lead agency in pursuing sediment removal at Lake Munson.

Options:

1. Accept the Science Advisory Committee Summary Statement for the Lake Munson Workshop and direct staff to implement the Lake drawdown recommendations.
2. Do not accept the Science Advisory Committee Summary Statement for the Lake Munson Workshop and direct staff to implement the Lake drawdown recommendations.
3. Board Direction.