SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: Agriculture Committee

BILL:	CS/SB 502
SPONSOR:	Environmental Preservation Committee and Senator Alexander
SUBJECT:	Lake Okeechobee Protection Plan
DATE:	March 3, 2005 REVISED:

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Molloy	Kiger	EP	**Fav/CS**
2.	Akhavein	Poole	AG	**Favorable**
3.			GA	
4.				
5.				
6.				

I. Summary:

This committee substitute establishes legislative findings that in order to achieve the goals and objectives of the Lake Okeechobee Protection Program and to effectively implement the Lake Okeechobee Watershed Phosphorus Control Program, the state must expeditiously implement the Lake Okeechobee Protection Plan. It establishes that a continuous source of funding is needed to implement a phosphorus control program that targets the most significant phosphorus sources within the watershed, and also establishes the Legislature's intent to provide funding on a continuous basis for the purposes of implementing the Lake Okeechobee Protection Plan and achieving phosphorus loading reductions.

The Department of Agriculture & Consumer Services (DACS), the Department of Environmental Protection (DEP), and the South Florida Water Management District (SFWMD), also defined in statute as the coordinating agencies, are jointly responsible for implementing the Lake Okeechobee Protection Plan. The coordinating agencies are directed to jointly establish annual funding priorities and must assign the highest priority to programs and projects that address sources having the highest relative contribution to phosphorus loading and the greatest potential for phosphorus reduction.

This committee substitute substantially amends section 373.4595 of the Florida Statutes.

II. Present Situation:

Lake Okeechobee Protection Program - Lake Okeechobee, the second largest freshwater lake in the continental United States, has a surface area of 730 square miles, an average depth of 8.6 feet, and a drainage basin that covers more than 4,600 square miles. Lake Okeechobee is used as a public and agricultural water supply source, and has natural system and recreational uses. Over

the years, excessive phosphorus loads from farms surrounding the lake, harmful high and low water flows, and an increased spread of exotic vegetation have all created significant water quality issues within the watershed. A 1999 report entitled the "Lake Okeechobee Action Plan" identified both watershed phosphorus loading and internal phosphorus loading as two of three major issues affecting the lake. In response, the 2000 Legislature enacted ch. 2000-130, Laws of Florida, to create the Lake Okeechobee Protection Program.

The Lake Okeechobee Protection Program has eight program components which include:

- The *Lake Okeechobee Protection Plan* completed by the South Florida Water Management District in January, 2004.
- The *Lake Okeechobee Watershed Phosphorus Control Program* that is designed to be a multi-faceted approach to reducing phosphorus loads by improving the management of phosphorus sources within the watershed.

Lake Okeechobee Protection Plan (Plan) - Section 373.4595 (3) (a), F.S., provides for the Plan, developed by the coordinating agencies and completed in January, 2004, to provide an implementation schedule for subsequent phases of phosphorus load reduction consistent with the required total maximum daily load. The January 2004 Final Plan contains owner-implemented best management practices which are primarily operational changes, cost-share best management practices which are primarily structural changes, and regional projects outside of the Comprehensive Everglades Restoration Plan (CERP). The Plan must be re-evaluated every 3 years to incorporate any new or updated information.[1]

Lake Okeechobee Watershed Phosphorus Control Program (Program) - Section 373.4595 (3)(c), F.S., provides for a multi-faceted approach to reducing phosphorus loads by improving the management of phosphorus sources within the Lake Okeechobee watershed. Efforts include the continued use of existing best management practices (BMPs), the development and implementation of improved best management practices, improving and restoring the hydrologic function of natural and managed systems, and the use of alternative technologies for nutrient reduction, as applied to both agricultural and non-agricultural contributors of phosphorus loading.

Watershed phosphorus control programs include:

- Agriculture programs such as the Agricultural Nutrient Management Assessments for more than 37,000 acres of dairy lands (both active and former dairies) within the Lake Okeechobee watershed which were completed in 2002 and used to develop Agriculture Nutrient Management Plans (ANMPs). The ANMPs had two specific goals: whole-farm nutrient balance and edge-of-farm phosphorus discharge concentrations of 150 parts per billion (ppb). The estimated cost for implementing the plans across all dairies in the watershed is $105 million.
- Non-agriculture programs such as BMPs to reduce phosphorus loading from animal feed, fertilizer distributors, golf courses, and failing wastewater systems.

[1] Lake Okeechobee Protection Plan, January 2004, South Florida Water Management District, the Department of Environmental Protection, and the Department of Agriculture & Consumer Services, pg. E-2.

- Phosphorus Source Control Grants funded by DEP for early implementation of phosphorus reduction projects. The grant program has 13 projects funded at just more than $7 million in 2002.
- Regional Projects/Public-Private Partnerships used to fund public-private projects that reduce phosphorus loads within the watershed. Project proposals are reviewed by the coordinating agencies using program criteria and ranked for funding.

Total Daily Maximum Load (TMDL) - As provided in s. 403.031, F.S., a TMDL is the sum of the individual wasteload allocations for point sources of pollution, and the load allocation for nonpoint and natural background sources of pollution. Prior to determining individual allocations, the maximum amount of pollutant that a water body or water segment can assimilate from all sources of pollution without exceeding water quality standards must first be calculated.

The Lake Okeechobee TMDL was adopted in May 2001 and established at 140 metric tons of phosphorus[2], including atmospheric deposition, to be achieved by 2015. In water year 2004[3], the annual measured phosphorus load to Lake Okeechobee was 549 metric tons. In water year 2003, the annual measured load was 642 metric tons, and in water year 2002, the annual measured load was 621 metric tons. The 5-year average measured load from water year 2000 to water year 2004 was 528 metric tons which exceeds the Lake Okeechobee TMDL by 388 metric tons.[4] Attainment of the TMDL is calculated using a 5-year rolling average of monthly loads calculated from measured flow and concentration values. As new research and data become available, the TMDL for Lake Okeechobee will be re-evaluated.

State Funding - $66 million during fiscal years 2001-2005
Fiscal Year 2001-2002:
DACS - $15 million
Dairy Nutrient Management Assessments & Implementation, Nutrient Management for cow/calf operations, UF-IFAS[5] education, research, and demonstration project, phosphorus removal.

SFWMD - $23.5 million
Phosphorus source control grant program, Grassy Island project, restoration of isolated wetlands, structure retrofit and dredging.

Fiscal Year 2002-2003:
SFWMD - $10 million
In-lake restoration, apple replanting, DEP non-ag collaboration, isolated wetlands research, sediment removal, stormwater/wastewater plan updates, watershed assessments, vegetation replanting, regulatory assessments, optimization of BMPs for beef cattle ranching.

Fiscal Year 2003-2004:
SFWMD - $7.5 million

[2] See Rule 62-304.700, Florida Administrative Code
[3] Water year runs from May 1 through April 30.
[4] The 2005 South Florida Environmental Report, February 2005, South Florida Water Management District, Vol. II, Chapter 3, pg. 3-4.
[5] University of Florida - Institute of Food and Agricultural Sciences

Alternative phosphorus reduction technologies, pilot stormwater treatment area optimization, Lake Okeechobee Protection Plan development, public/private partnerships, best available technologies for dairies, former dairy restoration, water quality/alternative water supply, lake restoration activities, optimization of BMPs for beef cattle ranching.

Fiscal Year 2004-2005:
DACS - $5 million
Environmental Quality Incentive Program (cost-share), Eagle Island Tailwater recovery project, structure replacements, Seminole project, dairy stormwater management, Buck Island.

FDEP - $700,000
Pahokee Wastewater Treatment Plant improvements

SFWMD - $4.3 million
Nubbin Slough Stormwater treatment area expansion project.

III. Effect of Proposed Changes:

Section 1. Amends s. 373.4595, F.S., to establish legislative findings that in order to achieve the goals and objectives of the Lake Okeechobee Protection Program, and in order to effectively implement the Lake Okeechobee Watershed Phosphorus Control Program, the state must expeditiously implement the Lake Okeechobee Protection Plan.

Establishes legislative findings that a continuous source of funding is needed to effectively implement a phosphorus control program initially targeting the most significant sources contributing to phosphorus loads within the Lake Okeechobee watershed and addressing other sources as necessary to achieve the phased phosphorus reductions required under the Lake Okeechobee Protection Program.

Establishes the Legislature's intent to provide funding on a continuous basis for the implementation of the Lake Okeechobee Protection Plan, and for achieving phosphorus load reductions consistent with TMDLs established pursuant to s. 403.067, F.S.

Redefines the "Lake Okeechobee watershed" to provide that the basins surrounding the watershed as provided in the Lake Okeechobee Protection Plan dated January 1, 2005, and deletes a reference to the SFWMD SWIM Plan updated August 8, 1997.

Repeals outdated and obsolete provisions.

Provides for the implementation of the Lake Okeechobee Protection Plan by requiring that:
- The coordinating agencies shall be jointly responsible for implementation of the Plan.
- Annual funding priorities be jointly established.
- Highest priority be assigned to programs and projects addressing phosphorus sources with the highest relative contribution to phosphorus loading and the greatest potential for phosphorus reduction.

- The coordinating agencies consider the need for regulatory compliance, the extent to which a program or project is ready to proceed, and the availability of federal matching or other nonstate funding when determining funding priorities.
- Federal and other nonstate funding be maximized to the greatest extent practicable.

Section 2. Provides that the act shall take effect on July 1, 2005.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Economic Impact and Fiscal Note:

A. Tax/Fee Issues:

None.

B. Private Sector Impact:

None.

C. Government Sector Impact:

DEP estimates that the total cost to implement the Lake Okeechobee Protection Plan and meet the established TMDL of 140 metric tons of phosphorus by 2015, is $391.7 million, adjusted for inflation. The state's share of the total is estimated at $130.8 million which is in addition to the $66 million appropriated through fiscal year 2004-2005.

VI. Technical Deficiencies:

None.

VII. Related Issues:

None.

VIII. Summary of Amendments:

None.