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Carol Wehle
Executive Director
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL
Via Email: cwehle@sfwmd.gov

Subject: Lake Okeechobee Protection Plan 2011 Update Recommendations

Dear Ms. Wehle:

It is our understanding that the Lake Okeechobee Protection Plan (LOPP) draft update will be released for public comment in November, 2010. We hope that the plan becomes a true blueprint for moving forward with recovering the health of the Lake, its watershed and the Northern Everglades of which it is a part. Carol, I remember standing with you on the shores of Lake Okeechobee several years ago when Governor Bush announced the LOER program, parts of which became law in 2007. Much of what we are focused on today was predicted by those proposals that you helped advance.

The Lake Okeechobee Protection Plan should be a list of policy and spending recommendations that will guide the Legislature and agencies in crafting the laws, rules and budgets necessary to meet the plan's goals. It is our hope that the plan will avoid vague goals and focus on bold and specific policies and spending. Audubon of Florida offers suggestions regarding source control, water quality treatment, and dispersed water management (DWM) for the LOPP draft update for your consideration.

1. Source Control

Improving water quality in the Northern Everglades by 2015 is mandated in the Lake Okeechobee Protection Act and is an essential priority for Everglades restoration. Source control offers the least expensive solution to improve water quality in the Northern Everglades. Audubon makes the following suggestions for the LOPP draft update Section 6.2:

Nutrient Source Control from Agricultural Sources

Pursuant to 373.4595(3)(c)(1)(a), consult with the Florida Department of Agriculture and Consumer (DACS) to amend Agricultural Best Management Practices (BMP) rules, such as 5M-11, 5M-3, "Water Quality Best Management Practices for Florida Cow/Calf Operations" DACS P-01280, or alternatively, draft new regulations pursuant to Fl. Stat. 373.4595(3)(c)(3) to:

- Base phosphorus application rates on water quality goals for receiving waters rather than on agronomic rates of fertilizer use. Work with DACS to revise the BMPs to reduce phosphorus loading in the basin to meet the TMDL number when implemented.
- Restrict the addition of phosphorus in feedstock and fertilizer by working with DACS to develop "nutrient balance" methodologies. The "pounds in = pounds out" formula would allow for the application of phosphorus in fertilizer or feedstock only where the same amount of phosphorus is removed from the basin.
- Report the level of BMP implementation in several categories. Suggested levels are:
The total amount of acreage with:
 - Level 1 = fully implemented and functioning cost-shared BMPs
 - Level 2 = fully implemented land-owner BMPs without functioning cost share for further work
 - Level 3 = signed letters of intent, with incomplete implementation.
- Develop Edge of Farm treatment requirements for BMPs that fail to achieve appropriate reductions.
- Develop formulas for water management requirements for BMP certification, calculating short and long term storage, runoff rates, and water recycling requirements.
- Require manure spreading from animal operations to follow the same nutrient balance and tissue testing requirements as for human wastes.
- Pursue implementation of the Dairy Best Available Technologies Program at all dairies.

Amend Rule 40E-4 FAC to:

- Develop and specify Edge of Farm treatment methods appropriate for the commonly occurring agricultural operations in the Northern Everglades that are not meeting tributary water quality goals.

Work with the DEP to amend Rule 62-304.700, or adopt a new rule relating to tributaries to:

- Utilize the basin nutrient load model developed by the SFWMD to determine the amount of phosphorus additions allowable in each basin based on attaining the TMDL loading number. Translate the number into an appropriate loading/concentration target number for all tributaries.

Allocate funds in the FY 2011- 2012 budget to support the development, rulemaking, and implementation of the above suggestions.

Biosolid Controls

Work with the DEP to amend the Biosolids Rule 62-640 FAC to:

- Revise BMP criteria for AA biosolids to require fertilization rates to assure TMDL compliance. Establish a balance between basin nutrient inputs and exports.

- Require wastewater plant operators shipping AA material to sites within the Okeechobee, Caloosahatchee and St. Lucie Basins to document the proper agronomic soil and plant tissue tests for phosphorus and nitrogen indicating a need for the application of that fertilizer.

Draft an interagency agreement between the SFWMD and the DEP, and work with the DEP to amend 62-640, FAC to:

- Train and deploy SFWMD field personnel to help enforce the Class B land spreading prohibition in the Okeechobee, Caloosahatchee and St. Lucie River Basins. Coordinate on tracking the remaining Class B permits.
- Document and annually report the amount of Class B biosolids imported to the basin under old permits and the amount of Class AA biosolids imported to the basin.
- Improve the tracking mechanism for the limited uses of Class AA allowable in the basin. Report AA use for SFWMD boundaries, and Okeechobee watershed boundaries, rather than county totals.

Revise the Phase II Technical Plan of the Lake Okeechobee Watershed Construction Project (LOWCP) to:

- Phase out the use of AA material entirely within the Okeechobee, St. Lucie and Caloosahatchee basins.

Controlling Urban Nutrient Sources

Amend the Environmental Resource Permit (ERP) rule 40E-4, FAC to:

- Require the monitoring of phosphorus and nitrogen above certain threshold sizes as an ERP permit condition in the Okeechobee basin.
- Require “Low impact development” techniques and use “Florida Friendly” native landscaping to avoid the need for supplemental irrigation.

Undertake independent rulemaking to:

- Establish specific TMDL related stormwater criteria for the Okeechobee basin, requiring nutrient monitoring for both phosphorus and nitrogen in all ERP permits above certain threshold sizes.
- Provide “safe harbor” provisions, such as “no discharge = no monitoring,” or “100% native vegetation & no irrigation = no monitoring.”
- Provide incentives to property owners who construct stormwater systems with a PRE/POST reduction outcome, to include nutrient reduction credits that can be traded in a “stormwater mitigation” scenario.
- Require that development projects not add nutrient loading to the system for PRE/POST development requirements.

Revise Rule 40E-24, FAC, and work with the DEP to amend 62-520, FAC to:

- Make special provisions for the use and distribution of reclaimed water in the Okeechobee basin. Discourage the use of reclaimed water for residential and commercial landscape irrigation unless there is an affirmative demonstration that the wastewater will not add nutrients to downstream waters.

Continue providing strategic support and input to the DEP for the development of the Unified Statewide Stormwater Rule, 62-347, FAC, urging them to adopt the above suggestions.

2. Treatment

Water quality treatment is an expensive alternative to prevention, uses land that could be put to other uses, and requires major investments of public and private funds. For example, this year the SFWMD allocated \$111.5 million for the continued construction of stormwater treatment areas, over \$15 million for the Lakeside Ranch Phase III projects, and almost \$27 million for long term operations and maintenance. Audubon suggests the following strategies for improving treatment and reducing costs in specific provisions of LOPP Section 6.2:

Stormwater Treatment Areas/ Hybrid Wetland Technologies

- Include critical decision points and basin prioritization schedule for the design, construction and implementation of additional treatment areas. Pinpoint optimal treatment construction locations through the nutrient loading model.

Pursuant to Fl. Stat. 373.453(6) and Fl. Stat. 373.459(2):

- Contract with private investors/landowners to construct water quality treatment features and pay them for phosphorus removal on a “payment for services” basis. Provide design specifications for water quality feature construction. Establish a “price per pound” for phosphorus removal to serve as a basis for private investment. Evaluate results and compare performance/cost basis with known results of District constructed STAs.

Alternative Treatment

- Emphasize technologies to remove phosphorus and nitrogen through chemical precipitation, algal turf scrubbers, physical removal and other mechanisms on a “Pay for Performance” basis.
- Expedite funding for the evaluation and demonstration of technologies that could harvest algae biomass and suspended sediments from Lake Okeechobee’s water column.
- Organize proposals for alternative treatment technologies into separate tracks for 1). existing STAs, 2). in-lake phosphorus laden sediments, and 3). concentrated inflow points of phosphorus discharge to Lake Okeechobee.

3. Dispersed Water Management

LOPP revisions should substantially increase the use of DWM using Payments for Environmental Services (PES), easements, or other incentives. Audubon offers the following suggestions for the LOPP update Section 6.3:

- Articulate a plan for between 350,000 to 400,000 acre feet of DWM projects. Implement the plan within the next 5 years.
- Implement a PES approach that considers acre feet of water impounded within projects, pounds of phosphorus sequestered in projects, or both as a payment platform.
- Prioritize the Kissimmee watershed for projects because it provides approximately half of inflows to Lake Okeechobee and is under the greatest threat from new development pressure.
- Target a specific basin for intense DWM implementation and monitoring. Consider the Fisheating Creek basin, including lands recently subject to projects under the USDA program, and other suitable lands in the basin with willing landowner participants.
- Utilize resources of the USDA Natural Resources Conservation Service (NRCS) Wetlands Reserve Program as another mechanism for payment for environmental

services. Organize and present large scale proposals for easement acquisition to USDA NRCS integrated with the DWM effort.

- For the budget planning process for FY 2011-12, shift emphasis previously placed on funding regional reservoirs to funding the implementation of DWM projects. Provide for yearly incremental increases in funding. We deeply appreciate your staff's efforts increasing the FY2010-11 budget for DWM projects from \$4.2 million to \$8,752,297, as seen on FY2011 Annual Work Plan, pg. 39, and encourage the SFWMD to increase funding to at least \$20 million annually starting in FY 2011-12.
- Fund research on the phosphorus release phenomenon observed at some locations when DWM projects newly flood previously phosphorus enriched soils. Analyze soil types and situation parameters to isolate the circumstances where this effect occurs and provide guidance for design and management of projects to avoid or minimize the effect.
- Fund monitoring of projects to document performance and compliance.

We hope these recommendations are favorably considered as components of the LOPP update. Our staff and volunteers will work with the District staff and Governing Board to make the case for these suggestions. We will work to build support from the public and elected decision makers for an aggressive approach to solving Lake Okeechobee's water quality and water management challenges.

Sincerely,

Eric Draper



Executive Director
Audubon of Florida