SOUTH FLORIDA WATER MANAGEMENT DISTRICT

January 9, 2017

Tom Van Lent, Ph.D.
Everglades Foundation
18001 Old Cutler Road, Suite 625
Palmetto Bay, FL 33157

Dear Dr. ~~Van~~ Tom Lent:

The scientists and engineers of the South Florida Water Management District (District) have reviewed the modeling (model code and input assumptions) which was the basis of the Oct. 26, 2016 article, "*A comparison of the Benefits of Northern and Southern Everglades Storage*" by you and R. Paudel, Ph.D., published by the Everglades Foundation[1].

The assumptions you made in the model input were obviously selected to reduce performance of northern storage and create an outcome in favor of southern storage. In fact, the entire article claims findings based on irresponsible science, which presents a false choice not reflective of South Florida's current water management system.

It is important to incorporate current information and science into any analysis that informs and prioritizes proposed work. Your plan ignores a base condition that accounts for the existing A-1 Flow Equalization Basin (FEB) and proposed A-2 FEB included in the Congressionally authorized Central Everglades Planning Project (CEPP). By ignoring these features, your analysis is more an academic exercise than a realistic tool to support informed policy and decision making.

Contrary to claims presented in your article, the model code used by the Everglades Foundation is not the official version of the "SFWMM 2x2 Model" that has been consistently used for evaluation of the Comprehensive Everglades Restoration Plan (CERP) and other projects conducted by the District and U.S. Army Corps of Engineers. In fact, you modified the model code without the knowledge or consent of the copyright owner -- the District. It is imperative that you acknowledge this for all future reporting, as it is misleading for you to state that your results were produced by the District's model.

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[1] You have compared 360,000 acre-feet of storage south of Lake Okeechobee versus 200,000 acre-feet of storage north of Lake Okeechobee, numbers that appear in the 2000 CERP. The current plan being studied in the Lake Okeechobee Watershed Planning Project (LOWP) includes northern storage features which consider an average of 1.9 million acre-feet of water.

Below is a summary of key findings from our review of your work that were not disclosed in your article:

- Contrary to the assertions in your article, your model runs do not use CERP assumptions. First, you manipulated the footprint and depth assumptions for the defined CERP storage features. Second, you modified Lake Okeechobee operations, thereby artificially improving southern storage's ability to affect estuary releases, while reducing northern storage performance. In other words, your assumptions dictate your preferred outcome.
- Your model runs describe a plan that cannot be implemented in reality. Your plan adversely impacts water quality, unlawfully takes water from existing legal users and risks the continued existence of endangered species.
- Your claim of an "almost" 50 percent reduction in estuary releases in the southern storage scenario is based on assumptions that defy reality by ignoring the system's constraints such as the Stormwater Treatment Areas' capacity for sending clean water south, thus violating water quality standards.
- You assumed a dramatic expansion of Everglades Agricultural Area (EAA) canal capacity. This is one of a number of costly infrastructure changes not clearly identified, but needed to achieve your touted performance.
- You only rely on a single metric, reduction in flows to the estuaries. You do not distinguish between beneficial lower flows and damaging high flows. For example, flows to the Caloosahatchee Estuary are often beneficial during dry season, and your metric takes "credit" for reducing such beneficial flows.

Any accurate metric for defining success must include not just the volumetric reduction, which is important, but also the frequency of damaging discharges, which is critical and paramount to the sustainability of estuaries and the opportunity for these systems to recover between occurrences.

A combination of both north and south storage, as CERP and the 2015 University of Florida Water Institute study envisioned, performs better than southern storage alone. While there is currently a great deal of southern storage both implemented and planned, northern storage must be planned, funded and constructed before the full benefits of existing and planned storage features to the south can ever be realized.

In summary, your plan as modeled is not a realistic means to store and send water south. To successfully convey water from Lake Okeechobee through the Water Conservation Areas to Everglades National Park and, subsequently, to Florida Bay you cannot:

- Ignore water quality standards.
- Ignore water supply for the environment and existing legal users.
- Ignore the Endangered Species Act.

Releasing a report in this form is a misrepresentation of the facts.

We appreciate the opportunity to review your work, and I am available should you have any questions about this review.

Sincerely,

Akintunde O. Owosina, P.E.
Bureau Chief - Hydrology and Hydraulics