

Gary Goforth, P.E., Ph.D.¹ January 31, 2017

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Background: The State of Florida suffers significant economic, public health and environmental damages resulting from harmful Lake Okeechobee discharges to the estuaries. ***The single most important project that can be implemented to reduce damaging discharges to the estuaries and restore flow to the Everglades is completion of the EAA Storage Reservoir, which has been an integral component of Everglades restoration plans for more than 20 years.*** Several combinations of location, configuration, land area and water depth can achieve the storage and flow objectives of the EAA Storage Reservoir, and Florida Senate President Joe Negron has proposed a willing seller program to acquire the necessary land and to construct the 120-billion gallon reservoir.

The EAA Storage Reservoir project has been an integral component of every Everglades restoration plan since it was unanimously adopted by the 1996 *Governor's Commission on Sustainable South Florida*. The project was an essential component of the Comprehensive Everglades Restoration Plan (CERP), and was authorized by Congress and approved by the President in 2000. Land was purchased for the reservoir, and construction began on Phase 1 (62 billion gallons) in 2006. However, construction was stopped in 2008 while negotiations took place between the State of Florida and U.S. Sugar for the acquisition of 187,000 acres of U.S. Sugar land. In 2012, Gov. Scott declared that the Phase 1 reservoir would be abandoned, and the land and construction project would be converted to yet another public-funded facility to clean up primarily EAA stormwater as part of the State's \$880 million Restoration Strategies program. In 2016, Senate President Negron sponsored the Legacy Florida Act to initiate the provisions of the Florida Water and Land Conservation Initiative, (Amendment 1), passed by an overwhelming majority of Florida voters in 2014. Later that year he proposed the purchase of up to 60,000 acres south of Lake Okeechobee and the construction of the 120-billion gallon EAA Storage Reservoir. On January 26, 2017, Senator Bradley introduced legislation to carry out President Negron's proposal. President Negron's proposal has been criticized by a statewide campaign of significant misinformation, and much of that misinformation is rebutted below.

1. *Myth: Senator Negron's proposal is a new project, and the state policy is to finish existing projects that are in CERP first before new projects are funded.*

Reality:

- a. Sen. Negron's proposal is not a new project – The EAA Storage Reservoir is an integral part of the original restoration plan that was developed by the 1996 *Governor's Commission on Sustainable South Florida* when 47 stakeholders

¹ Gary Goforth, LLC

throughout south Florida unanimously agreed to its inclusion. It was also part of the recommendations from the subsequent joint state-federal 1996 *Restudy of the C&SF Project* that evolved into CERP. The EAA Storage Reservoir was one of the initial set of thirteen CERP projects authorized by Congress and approved by the President in 2000. Land was acquired for the project, and construction began on Phase 1 of the project in 2006. In 2012, after spending almost \$500 million in land and construction, the SFWMD abandoned the partially constructed storage reservoir. The project was then repurposed as a shallow water component to provide additional water quality treatment for primarily EAA runoff.

- b. The reservoir would not need any additional land had the CERP Plan been followed:
 - i. If the state hadn't abandoned the 62-billion gallon storage reservoir that was under construction in 2006-2008, and then later removed this project from CERP for use in the Restoration Strategies program that primarily benefits EAA landowners, and
 - ii. If the state hadn't taken the 55-billion gallon Phase 2 EAA Storage Reservoir and reduced the storage depth by almost 70% in the Central Everglades Planning Project (CEPP) planning process.
- c. Finishing existing CERP projects before starting new projects is not state policy, only rhetoric. Proponents of this misinformation conveniently ignore that the EAA Storage Reservoir was under construction – then abandoned by the state – despite it being an existing CERP project. In addition, the State has committed almost a billion dollars in new projects that were not in the CERP:
 - i. The state is implementing the \$880 million Restoration Strategies program that is not a CERP project, designed to clean up water primarily from the EAA.
 - ii. In addition, over \$100 million has been earmarked for dispersed water management projects that are not in CERP – many of which have negligible benefits to reducing discharges to estuaries, reducing pollution loads to Lake Okeechobee, or increasing flows to the Everglades. (Note - some dispersed water management projects are effective – e.g., the Caulkins Water Farming Project).
- d. Adaptive management is a central principle of CERP, and new information indicates even more storage is required than contemplated for at least 2 reasons:
 - i. The National Academies of Science, Engineering and Medicine recently reported that the storage projects in CERP were sized based on lower

than expected rainfall, and stated that even more storage would be required to achieve the Everglades Restoration goals.

- ii. CERP included 200 Aquifer Storage and Recovery (ASR) wells around Lake Okeechobee to provide significant storage. After extensive field testing, the Corps determined that only 78 ASR wells would be feasible, resulting in a loss of 52.5 billion gallons of storage. This storage will need to be replaced in order to reduce the harmful Lake discharges to the estuaries as envisioned in CERP.

2. *Myth: Storage north of the lake is as good as or better than storage south of the lake in reducing lake releases to the estuaries and providing additional water to the Everglades.*

Reality:

- a. Modeling has shown that the EAA storage reservoir is more effective in reducing harmful discharges to the estuaries than the contemplated storage reservoir north of the Lake, with approximately 50 percent reduction in discharges for the EAA reservoir compared to approximately 6 percent reduction in discharges for the northern reservoir (van Lent 2017).
- b. While opponents to Sen. Negron's proposal contest the above, there has been no dispute that only storage south of the Lake provides additional water to the Everglades.

3. *Myth: The proposed 120-billion gallon EAA storage reservoir will not eliminate harmful discharges to the estuaries, and would have done little to help the massive 2016 Lake releases to the estuaries.*

Reality:

- a. The EAA reservoir is the single most important and effective project the State of Florida can implement to reduce damaging releases to the estuaries (see No. 2 above, van Lent 2017).
- b. After completion of CEPP and the other CERP projects, destructive discharge to the estuaries will be eliminated in most years. Modeling completed for CERP suggests that after completion of all projects, harmful discharges the St. Lucie and Caloosahatchee Estuaries would be reduced to an average of about 10.4 billion gallons per year, which is a reduction of about 96% of the 1980-2016 average of 244 billion gallons per year.
 - i. harmful discharges the St. Lucie Estuary would be reduced to an average of about 4.2 billion gallons per year, which is a reduction of about 94% of the 1980-2016 average of 75 billion gallons per year.

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- ii. harmful discharges the Caloosahatchee Estuary would be reduced to an average of about 6.2 billion gallons per year, which is a reduction of about 96% of the 1980-2016 average of 169 billion gallons per year.
 - c. Had the proposed reservoir been in place in 2016, at least 120 billion gallons of Lake water would have been kept out of the estuaries, preventing an estimated 1.4 million pounds of nitrogen, 110,000 pounds of phosphorus, and 12 million pounds of sediment from contaminating these critical coastal environments. With enhanced operation of Lake Okeechobee and completion of other CERP projects, the benefits would have been even greater.
- 4. *Myth: You can't buy the land until the planning process is complete.*
Reality:
 - a. Throughout the implementation of Everglades restoration projects, tens of thousands of acres have been acquired prior to planning process being completed.
 - b. One specific example is that the land for the original EAA storage reservoir, the so-called Talisman property, was obtained in 2000, prior to completing the final planning of the project.
- 5. *Myth: The Central Everglades Project (CEP) includes a provision to increase the storage features if the full EAA storage reservoir benefits are not being achieved, hence there is no need to move out on the EAA storage reservoir independent of CEP process.*
Reality:
 - a. CEP includes a provision to assess whether the anticipated 68 billion gallons/yr of new water is being realized, and if not, then operational revisions will be recommended. There is no provision within CEP or the 2016 WRDA to increase the storage to the full 120 billion gallons of the EAA Reservoir. (2014 *Chief of Engineer's Report* – pp 6-7).
- 6. *Myth: Revision to the Lake Okeechobee Regulation Schedule (LORS) can't occur until after CEP is completed.*
Reality:
 - a. The 2014 Chief's Report for CEP is very clear that revision to LORS should occur prior to CEP: "the CEPP PIR anticipates that the need for modifications to the LORS will be initially triggered by non-CEPP actions and that these actions will occur earlier than implementation of CEPP."

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7. *Myth: Sending Lake water south through an EAA Reservoir won't help Florida Bay.*

Reality:

- a. From SFWMD: "Historically, Lake Okeechobee combined with direct rainfall to hydrate the entire Everglades ecosystem, including Florida Bay." (SFWMD <https://www.sfwmd.gov/our-work/florida-bay>)
- b. Reservoir releases moving south could contribute flow through WCA-3A and on to Florida Bay directly through Taylor Slough via recently completed and planned construction projects, and to a lesser extent indirectly through Northeast Shark River Slough.

8. *Myth: Negrón's proposal will flood Glades communities with polluted water.*

Reality:

- a. Corps and SFWMD planning and design documents indicate that flood protection within the EAA will likely improve – and not be reduced - as a result of the reservoir. (Corps 2006)

9. *Myth: Negrón's proposal will put thousands of people out of work and put agriculture out of business.*

Reality:

- a. Corps and SFWMD documents projected that the reservoir will offset jobs lost from land acquisition, will create hundreds of construction jobs for local residents, and should bring millions to the local economy. (SFWMD 2007)
- b. The EAA Reservoir has been evaluated for more than 20 years – including evaluation of socioeconomic impacts; the Corps and SFWMD planning and design documents indicate no adverse socioeconomic impacts to the Glades communities. (Corps 2006)
 - i. From the original EAA reservoir PIR:

The selected alternative plan would affect 3 farm parcels covering about 33,135 acres, would displace a maximum of 20 resident non-owners. It would not impact any known historic or cultural resources. There would be no adverse impacts on minority or disadvantaged populations. (Corps 2006)
- c. Negrón's proposal is for the purchase of up to 60,000 acres of land – less than 15% of EAA, and less than 1/3 of the U.S. Sugar proposal to sell 187,000 acres.
- d. Following the precedent of 1994 Everglades Forever Act that authorized the Stormwater Treatment Areas, state legislation can include hiring provisions to ensure preference is given to jobs displaced by reservoir project. From the EFA:

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- i. The Legislature further recognizes that the EAA and adjacent areas provide a base for an agricultural industry, which in turn provides important products, jobs, and income regionally and nationally. It is the intent of the Legislature to preserve natural values in the Everglades while also maintaining the quality of life for all residents of South Florida, including those in agriculture, and to minimize the impact on South Florida jobs, including agricultural, tourism, and natural resource-related jobs, all of which contribute to a robust regional economy.
- ii. The District shall give preferential consideration to the hiring of agricultural workers displaced as a result of the Everglades Construction Project, consistent with their qualifications and abilities, for the construction and operation of these STAs.
- e. Jobs are lost, businesses are closed, public health issues arise and other adverse impacts result from discharge of polluted Lake Okeechobee water to the estuaries.
- f. Sugar cane production is expanding rapidly outside the EAA. In Martin County alone, over 10,000 acres of former citrus groves have been converted into sugar cane production, creating local source of air pollution, water pollution and increased truck traffic on Martin County roads, particularly State Road 76 (Kanner Highway), as cane is transported to mills in the EAA.

10. Myth: There is no need to send water south because 90% of water entering Lake Okeechobee comes from the north.

Reality:

- a. Modulating inflows to the Lake from north in a northern reservoir won't increase the capacity to send sufficient clean water south, and won't significantly reduce the destructive discharges from the lake to the estuaries (see No. 2 above).
- b. Stopping pollution of Lake Okeechobee is important, and will require the SFWMD to enforce existing discharge permits (Rule 40E-61), and to enhance the permitting program as directed by the 2007 Florida Northern Everglades and Estuaries Protection Act. In addition, it will require FDEP to accelerate their load reduction programs.

11. Myth: The C-44 Reservoir/STA will take care of Lake discharges to the St. Lucie Estuary.

Reality:

- a. The C-44 Reservoir/STA was designed to capture and treat C-44 Basin runoff – not Lake discharges.

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- b. The C-44 Reservoir/STA is a flow-through facility, meaning that the vast majority of water that enters the project will continue on to the St. Lucie Estuary.
- c. There may be incidental capture of Lake discharges moving down the C-44 canal, however, this will not significantly reduce the volume of Lake discharge to the estuaries.

12. *Myth: Sen. Negron's proposal only benefits wealthy coastal millionaires by sending their polluted water to poor coastal communities.*

Reality:

- a. The EAA Storage Reservoir project will bring economic benefits to the Glades communities. The projects will create hundreds if not thousands of jobs and may bring millions of dollars into the local economy.
- b. No aspect of Sen. Negron's proposal would send runoff from coastal communities to the Glades communities – a hydrologic impossibility.

13. *Myth: The hundreds of thousands of septic tanks draining into the St. Lucie Estuary are the real problem [Palm Beach Post, and "**The real challenge is local,**" board member **Melanie Peterson said of Martin County. "Something like 80 percent of the impact on the river comes from septic tanks."** – quote attributed to SFWMD Board member Peterson.]*

Reality:

- a. The primary pollution from Lake Okeechobee to the estuaries includes toxic algae, sediment (muck), water that lowers salinity levels in the estuary, nitrogen, and phosphorus. Septic tanks do not contribute toxic algae, sediment, or significant quantities of phosphorus or water that lowers salinity levels in the estuary.
- b. A limited number of septic tanks contribute nitrogen to the estuary, and both Martin and St. Lucie Counties have programs underway to address this issue.
- c. According to the Florida Department of Health, in 2015 there were only 16,172 known septic tanks in Martin County, and many of these are in watersheds that do not drain to the St. Lucie Estuary. The City of Stuart and Martin County have already spent more than \$28 million to replace over 2,400 septic tanks and 70 small wastewater treatment plants with connections to centralized sewers, and is continuing this aggressive effort. (Fielding 2016, City of Stuart 2017)
- d. According to the Florida Department of Health, in 2015 there were only 27,052 known septic tanks in St. Lucie County, and many of these are in watersheds that do not drain to the St. Lucie Estuary. The city of Port St. Lucie has already converted over 5,500 septic tanks to centralized sewers and is continuing this aggressive effort. (Ye and Sun 2013)

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- e. During 2016, septic tanks contributed an estimated 4% of the total nitrogen entering the St. Lucie Estuary. By contrast, Lake discharges contributed 100% of the toxic algae, 44% of the water, 47% of the nitrogen load, 28% of the phosphorus load and 79% of the sediment load.
- f. Over the period 1980-2016, Lake discharges contributed an average of 26% of the water inflow, 29% of total nitrogen load, 16% of total phosphorus load, and 64% of sediment load to the St. Lucie Estuary (not to mention toxic blue green algae).

14. Myth: You can't buy land before the planning is complete.

Reality:

- a. False – numerous examples include: purchase of Talisman property prior to final designs of EAA Storage Reservoir, expansion of STA-2 and STA-5/6

15. Myth: Deep Injection Wells (DIWs) are cheaper and quicker alternatives that will eliminate harmful discharges to the estuaries.

Reality:

- a. DIW technology has been demonstrated at small scale, but “possibly cost-prohibitive” – Kissimmee pilot ASR project report Oct 2015 from Corps and District.
- b. You would need 690 15 MGD (23 cfs) DIWs at an estimated cost of \$11.9 billion in order to match the daily outflow capacity from Lake Okeechobee to the estuaries (approximately 16,000 cfs).
- c. Injecting Florida's water into the ground using this technology is wasteful – and violates a fundamental provision of good water management (and CERP) – to reduce wasteful discharge of water.
- d. DIW technology contains uncertain risks of environmental impacts.

16. Myth: When the Lake is full, the water conservation areas (WCAs) will be full and the reservoir can't be used for Lake discharges.

Reality:

- a. The assumption that it rains the same south of the Lake as it does north of or on the lake is flawed. Rainfall conditions vary north of the Lake, on the Lake and south of the Lake. During Water Year 2015 (May 1, 2014 – April 30 2015) – more than 580,000 acre feet (190 billion gallons) of Lake water was sent south. Since the heaviest rain fell over the Lake and to the north of the Lake – not to the south of the Lake, the Lake was high at the same time the WCAs were not full – they had capacity to take the Lake water.

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- b. The key to managing Lake and reservoir operations is to send Lake water south all year round – not just when the Lake is high. This helps lower Lake stage, minimizes crisis management of the Lake, and reduces damaging discharges to the estuaries.

17. Myth: There is no need for project, as there is enough capacity to send a lot of lake water south.

Reality:

- a. Even during Water Year 2015, a year with very large Lake releases to the STAs and WCAs, almost 190 billion gallons of polluted Lake water was sent to estuaries (SFWMD 2016).
- b. The science is clear and consistent - additional storage south of the Lake is needed to reduce damaging discharges to the estuaries and provide more flow to the Everglades.