

Key Apparent Discrepancies Between “System Constraints”¹ and Other District Documents

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The South Florida Water Management District (District) is to be commended for sending historic volumes of treated Lake water to the Everglades over the last year. However, many statements in the “System Constraints” document conflict with actual flow data, STA performance and system design reports. The actual data demonstrate a very different message than the one contained in the “Constraints” document: *in fact, there is sufficient capacity in the existing system to send significantly more Lake water to the Everglades than in the past.* With the completion of the A-1 Flow Equalization Basin in the near future, the storage and treatment capacity will increase even more. That being said, additional storage, treatment and conveyance will still be needed to minimize the destructive Lake releases to the estuaries. A properly constructed “Constraints” document provides fundamental engineering justification for the State to purchase available lands within the EAA in order to add to the storage and treatment necessary to achieve this long-term goal.

Because of the significance attached to the “Constraints” document, these inconsistencies need to be acknowledged and corrected, and the document should be revised accordingly. Some of the major discrepancies in the “Constraints” document are summarized below.

1. Slide 4: *“The existing structures are not sufficient to pass high volumes from the Lake to the Everglades”*

District data indicate: By sending a steady supply of Lake water to the STAs year-round (and not just during the wet season) the District was able to send more treated water to the Everglades than ever before – more than 500,000 acre feet in the last 12 months.

[Note: from a historical perspective, during one 12-month period in 1992-1993, the District sent over 1 million acre feet of Lake water to the Everglades, concurrent with sending over 1.5 million acre feet of EAA runoff to the Everglades. Since this was before the STAs were completed, this water was untreated and there were unintended environmental consequences as far south as Florida Bay. Today’s STAs would provide significant treatment which would reduce the environmental impacts. While I’m not advocating sending 1 million acre feet of Lake water to the Everglades with today’s system, this one year’s volume of Lake water represents the enormous magnitude of water that was sent south with then-existing hydraulic constraints.]

2. Slide 5: *“Making large releases from the Lake to the Water Conservation Areas (WCAs) would require a significant enlargement of the primary EAA canals.”*

District data indicate: By sending a steady supply of Lake water to the STAs year-round (and not just during the wet season) the District was able to send more treated water to the Everglades than ever before – more than 500,000 acre feet in the last 12 months.

3. Slide 7: *“Sustained large Lake releases to the south result in water depths and nutrient loading that could cause substantial damage to the treatment works.”*

¹ Kivett, J., “System Constraints” dated February 2, 2015, presented to WRAC on February 5, 2015.

District data indicate: **STA performance has improved** with the delivery of historic volumes of Lake water in a slow and steady year-round operation. Over the last 12 months, the STAs received more than 500,000 acre feet of Lake water, and the cumulative flow-weighted mean outflow TP concentration from STA-1E, STA-1W, STA-2 and STA-3/4 has improved by 4 parts per billion (ppb), decreasing from 21 ppb to 17 ppb. The only STA that has not exhibited a performance improvement was STA-5/6 which did not receive any Lake water.

4. Slide 3: *“There is NO current flexibility in the schedule that would allow temporary relief from high discharges to the estuaries that occurred in 2013.”*

Improved collaboration between the District and Corps show: District operations to move water south provided the U.S. Army Corps of Engineers, which manages the lake level, with increased flexibility to prevent releases to the St. Lucie Estuary.

5. Slide 2: *“No ability to reduce the water that is coming into the Lake from the North”*

District actions: District has spent millions for dispersed water management projects designed to reduce the water coming into the Lake from the North.

6. Slide 8: *“Both the structural changes and operational costs associated with moving significant Lake releases to the Everglades would be very expensive.”*

District data indicate: The existing system has sufficient structural and operational capability to send significant Lake releases to the Everglades. By sending a steady supply of Lake water to the STAs year-round (and not just during the wet season) the District was able to send more treated water to the Everglades than ever before – more than 500,000 acre feet in the last 12 months. Also, although it is rarely acknowledged in most District publications, moving large volumes of untreated Lake releases to the estuaries has significant economic impacts to the coastal regions, in addition to devastating environmental impacts to rivers, estuaries, lagoons and near-shore reefs.

7. Slide 9: *“Thus, one of the five STAs (STA-5/6) cannot physically receive water from Lake Okeechobee.”*

District data and design documents indicate: STA-5/6 can, and has, received Lake water in the past. That being said, options for increasing the conveyance capacity for Lake water to be delivered to the front end of STA-5/6 should be evaluated; the opportunity exists with the purchase of available U.S. Sugar property in accordance with the previous negotiations between District staff and U.S. Sugar, and as recommended by the UF Water Institute Report.

8. Slide 9: *“Only STA-5/6 has untapped capacity to treat additional Lake water under certain conditions.”*

District data indicate: Operational and performance data from the last 2 years demonstrate that, relative to prior years, all the STAs had untapped capacity to treat additional Lake water.

9. Slide 19: *“The system has been designed to send Lake Okeechobee water east and west to the Atlantic Ocean and the Gulf without hydrologic constraints”*

System design reports and federal water control plans indicate the system was designed to send Lake water south, east and west, and with the construction of the STAs, there exists the capability to send significantly greater volumes of Lake water to the south. Sending Lake water to the east

and west has hydrologic constraints, including providing flood protection to landowners and businesses within the C-43 and C-44 basins.

10. Slide 19: *“In normal years, some water can be sent south when the various constraints allow it”* (emphasis added)

District data indicate: District documents and data document the delivery of **significant** volumes of Lake releases, rather than “some water”, to the Everglades, e.g., during the last 12 months, more than 500,000 acre feet of Lake water has been delivered to the Everglades.

In addition to inconsistent statements, descriptions of constraints in the document appear to be incomplete, potentially leading to misinterpretations by policy makers and the public.