

MEMORANDUM

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DATE: April 30, 2015

SUBJECT: Operational Position Statement for April 28 – May 4, 2015

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance (2008 LORS). The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD Operational Planning internet page.

This Position Statement is for the period from April 28 – May 4, 2015. The SFWMD recommendation to the USACE is to follow the release guidance of 2008 LORS, which currently suggests that releases of up to 3,000 cfs measured at S-79 and up to 1,170 measured at S-80 may be made. A pulse type pattern is less harmful and suggested daily discharge rates for multi-day pulses are provided in Table 1 at the end of this memorandum.

The most recent Climate Prediction Center outlook for Central and South Florida indicates equal chances of above-normal, normal and below-normal for the month of May and above-normal precipitation for the three-month window May to July. Rainfall on April 28 brought SFWMD monthly rainfall to 79% above average, with Broward and Miami-Dade counties recording rainfall basin average in excess of 2.0 inches. In the months from April to June, El Niño plays a less dominant role in south Florida climate variability but still contributes to a risk of higher than normal precipitation. Rainfall forecast for the next two weeks is above normal.

The lake stage remains within the lower third of the Low Sub-band and the 30-day recession rate is 0.38 feet, down from a recession rate of 0.91 feet three weeks ago. Over the 7-day period from April 13 to April 20, 2015, approximately 4,100 ac-ft of Lake Okeechobee releases were sent south and treated by STA-2 and STA-3/4 prior to entering Water Conservation Areas (WCA) 2A and 3A. C-10A releases from the Lake to tide via L-8 and C-51 canals were resumed this week.

2008 LORS Release Guidance (Part C): Given the current Lake Okeechobee stage position, Part C of the 2008 LORS suggests “Up to Maximum Practicable to the WCAs if desirable or with minimum Everglades Impacts”.

Consistent with the LORS release guidance, the USACE is requesting the SFWMD to continue maximum practicable Lake Okeechobee regulatory releases to the WCAs. Flows to the STAs have been gradually reduced due to increased agricultural demands, phosphorus loading concerns and vegetation rehabilitation activities. Flows through STA-2 will be discharged into WCA-2A while flows from STA-3/4 will be discharged into WCA-2 through S-7 pump station and to NW WCA-3A using G-

404. All WCAs experienced stage reversal this week and achieving and maintaining a more favorable recession rates is a priority and discharge to tide should be used if needed and capacity is available.

2008 LORS Release Guidance (Part D): The outcome from Part D of the 2008 LORS release guidance is: "S-79 up to 3,000 cfs and S-80 up to 1,170 cfs". Release guidance did not change compared to previous weeks. Consistent with the 2007 SEIS analysis of the selected plan and the 2008 Water Control Plan language on page 7-15, when lake stage is in the lower third of the Low sub-band, releases should be limited to 2,000 cfs at S-79 and 730 cfs at S-80.

The USACE started implementation of a 7-day pulse release averaging 1,800 cfs at S-79 and 300 cfs at S-80 at 0700 hours on April 24, 2015, ending at 0659 hours on May 1, 2015. However, presence of an algae bloom near structure S-308 prompted of suspension of releases from the lake into the St. Lucie Canal. Releases through S-79 to the Caloosahatchee Estuary continued as planned. The current release implementation is measured at S-79 for the Caloosahatchee Estuary and S-80 for the St. Lucie Estuary, requiring that the Lake Okeechobee releases (at S-77 and S-308) be reduced to account for any local runoff into the Caloosahatchee River (C-43) between S-77 and S-79 or the St. Lucie Canal (C-44) between S-308 and S-80. This accounting is performed on a daily basis. Over the past week, there were no flows through S-80, while flow at S-79 averaged 1,961 cfs with 809 cfs released from the lake.

SFWMD Lake scientists have reported the annual winter/spring recession in Lake stage remains stalled for more than two weeks due to a combination of increased rainfall and inflows, and decreased outflows. It is important to maintain the recession and avoid reversals in the trend of Lake level decline at this time of year to support wading birds, snail kites, and apple snail reproduction. Operations that promote reestablishment of the spring recession are preferred.

SFWMD Estuary scientists have indicated that there is no ecological benefit associated with further increases in releases into both the Caloosahatchee and St. Lucie Estuaries from Lake Okeechobee at this time.

Considering current lake levels, anticipated rainfall, and spawning/recruitment of many important estuarine organisms such as oysters, it is recommended by estuary scientists that the current releases at S-79 be maintained in the range 1200-1700 cfs and that the total inflows into the St. Lucie Estuary including S-80 do not exceed a maximum average of 1,000 cfs. The releases at S-79 and S-80 should be conducted in a pulse pattern, insofar as possible considering basin runoff, and varying in both the magnitude and duration among the pulses to mitigate potential stratification and phytoplankton accumulation in the water column. This will also help avoid deposition of organic matter in localized areas due to a repetitive flow pattern. If necessary, weekly changes in pulse releases should be kept relatively low (200-300 cfs). Suggested pulse schedules are given below in the Table 1.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance

This week the SFWMD is not applying the Lake Okeechobee Adaptive Protocol release guidance flowchart since the Lake Okeechobee stage is above the Base-flow Sub-band of the 2008 LORS. The Adaptive Protocols process is documented in the District publication Final Adaptive Protocols for Lake Okeechobee Operations (September 16th, 2010).

For additional information pertaining to operations history and past recommendations, refer to the archives of LORS-2008 Release Guidance outcomes and operational position statements at www.sfwmd.gov under the Operational Planning topic.

Table 1. Schedules for 7-day pulses at S-80 and S-79

7-day pulses at S-80								
Day	200 cfs	300 cfs	500 cfs	650 cfs	730 cfs	950 cfs	1100 cfs	1170 cfs
1	200	300	500	650	800	950	1200	1290
2	600	700	900	1100	1200	1400	1600	1800
3	300	500	800	900	1000	1200	1400	1500
4	200	300	600	800	800	1100	1200	1300
5	100	200	400	600	600	900	1000	1000
6	0	100	300	400	500	700	800	800
7	0	0	0	100	210	400	500	500
7-day pulses at S-79								
Day	1500 cfs	1700 cfs	2000 cfs	2300 cfs	2500 cfs	2600 cfs	2900 cfs	3000 cfs
1	2000	2200	2500	2800	3000	3100	3400	3500
2	2400	2600	3100	3500	3800	3900	4200	4300
3	2100	2300	2600	3000	3300	3400	3700	3800
4	1400	1600	1900	2200	2400	2500	2800	2900
5	1200	1400	1700	2000	2200	2300	2600	2700
6	900	1100	1400	1700	1800	2000	2300	2400
7	500	700	800	900	1000	1000	1300	1400