

MEMORANDUM

TO: Laureen Borochaner, Chief, Engineering Division (USACE)
FROM: John Mitnik, Chief District Engineer (SFWMD)
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DATE: April 20, 2023
SUBJECT: Operational Position Statement April 18, 2023 to April 24, 2023

This Position Statement is to provide operational input for the one-week period from April 18, 2023 to April 24, 2023 based on system conditions and data observed during the previous Monday to Sunday 7-day period. On April 17 Lake Okeechobee stage was 14.26 feet NGVD, which placed it within the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (LORS). Lake stage decreased by 0.02 feet over the preceding 7-day period.

District April to date rainfall is much, much above normal (~247% of normal). By noon on April 12, 2023, an area centered around Ft. Lauderdale-Hollywood International Airport (coastal Broward County) experienced 24-hr rainfall depths near a 1-in-1,000-year rain event, according to the NWS. Rainfall District forecast (issued April 19) calls for slightly below normal to normal rainfall for the coming 7-day and normal to much above normal for the following 7-day period.

Precipitation Outlook: The most recent CPC precipitation outlooks for South Florida for April 2023 and for the 3-month window of Apr-Jun are for equal chances of below normal, normal and above normal rainfall. The 3-month windows of May-Jul and Jun-Aug indicate slightly increased chances of above normal rainfall for south Florida. All the 3-month windows from Jul-Sep to the end of 2024 Wet Season show equal chances of below normal, normal and above normal rainfall. The precipitation outlook for the transition to the 2023-2024 Dry Season indicate slightly increased chances of above normal rainfall for the northern half of the Kissimmee area. The 3-month window of Dec 2023 – Feb 2024 is for slightly increased chances of above normal rainfall for south Florida.

2008 LORS Release Guidance (Part C): With Lake Okeechobee stage within the Low Sub-band and the Tributary Hydrologic conditions in the Dry category, Part C of the 2008 LORS suggests “No Releases to WCAs”.

Over the 7-day period from April 10, 2023 to April 16, 2023, no regulatory releases were sent from Lake Okeechobee south to the Water Conservation. Lake regulatory releases in the amount of 300 acre-feet reached the Lake Worth Lagoon through the C-51 canal during this period. Stage in WCA-1 is above regulation schedule in Zone A1, stage in WCA-2A is above regulation schedule, and WCA-3A stage is below regulation schedule in Zone B. For the coming operational period, based on the 2008 LORS 2022-2023 Dry Season strategy, USACE is requesting maximum practicable regulatory releases be sent south from Lake Okeechobee towards the WCAs, using the lake releases volume banked during previous weeks when actual releases were less than the LORS 2008 maximum releases allowed.

2008 LORS Release Guidance (Part D): With Lake Okeechobee stage within the Low Sub-band and the Tributary Hydrologic conditions in the Dry category, Part D of the 2008 LORS suggests “S-79 up to 450 cfs and S-80 up to 200 cfs”. In addition, Lake Okeechobee stage is slightly above the upper line of the Ecological Envelope.

For the 7-day period April 10, 2023 to April 16, 2023, total discharge to the St. Lucie Estuary was about 900 cfs with approximately 200 cfs coming from Lake Okeechobee. The 7-day average salinity in the middle estuary was within the optimal range (10-25) for adult eastern oysters. Total inflow to the Caloosahatchee Estuary averaged approximately 2,050 cfs with about 1,100 cfs coming from Lake Okeechobee through S-77. Salinities in the upper estuary were within the optimal range (0-10) for tape grass. The 7-day average salinities were in the optimal range for adult eastern oysters at Cape Coral (10-25) and in the upper stressed range at Shell Point and Sanibel (>25).

Since the end of November, both local basin runoff in the Caloosahatchee Watershed and lake releases through S-77 have maintained salinity in the Caloosahatchee Estuary. Scientists are observing the beginning of oyster spawning and with the warm temperatures, expect spawning to increase rapidly. In an effort to bring Lake Okeechobee to recede inside the Ecological Envelope while also protecting the oyster spat, the District recommends that USACE follow 2008 LORS 2022-2023 Dry Season strategy, and implement a non-harmful release to the Caloosahatchee Estuary with an average discharge of 1,800 cfs (7-day pulse) as measured at the S-79 structure and zero lake releases to the St. Lucie, using the lake releases volume banked during previous weeks when actual releases were less than the LORS 2008 maximum releases allowed. The District will continue to implement maximum practicable regulatory releases south from Lake Okeechobee towards the WCAs. The USACE typically implements the releases to the estuaries starting on Saturday and ending on Friday. The Corps should continue to track Red Tide and Blue Green Algae conditions, and should conditions change during this operational period, the Corps should look to reassess releases as needed.