

MEMORANDUM

TO: Laureen Borochaner, Chief, Engineering Division (USACE)
FROM: John Mitnik, Chief District Engineer (SFWMD)
Akin Owosina, Chief, Hydrology & Hydraulics Bureau (SFWMD)
DATE: May 11, 2023
SUBJECT: Operational Position Statement May 9, 2023 to May 15, 2023

This Position Statement is to provide operational input for the one-week period from May 9, 2023 to May 15, 2023 based on system conditions and data observed during the previous Monday to Sunday 7-day period. On May 8 Lake Okeechobee stage was 14.11 feet NGVD, which placed it within the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (LORS). Lake stage decreased by 0.18 feet over the preceding 7-day period.

District May rainfall to date is much, much below normal (~13% of normal). Rainfall District forecast (issued May 9) calls for near to above normal for the coming 7-day and the following one.

Precipitation Outlook: The most recent CPC precipitation outlooks for South Florida for May 2023 indicates increased chances of above normal rainfall. The 3-month windows of May-Jul and Jun-Aug outlooks are for slightly increased chances of above normal rainfall. The 3-month windows of Jul-Sep to Sep-Nov indicate equal chances of below normal, normal and above normal rainfall for south Florida. The 3-month windows Oct-Dec and Nov-Jan 2024 show slightly increased chances of above normal rainfall for Lake Okeechobee and areas north, and equal chances of below normal, normal and above normal rainfall for the rest of the District. The 3-month window Dec-Feb 2024 indicate increased chances of above normal rainfall for areas north of Lake Okeechobee and slightly increased chances of above normal rainfall for the remainder of the District.

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 May 1 to May 7, 2023, no regulatory releases were sent from Lake Okeechobee south to the Water Conservation Areas. No Lake regulatory releases reached the Lake Worth Lagoon through the C-51 canal either 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, 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 May 1 to May 7, 2023, total discharge to the St. Lucie Estuary was about 400 cfs with no releases 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 1,650 cfs with about 1,150 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 USACE 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 Estuary, 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.