MEMORANDUM

TO: Laureen Borochaner, Chief, Engineering Division (USACE)

FROM: John Mitnik, Chief District Engineer (SFWMD)
Akin Owosina, Chief, Hydrology & Hydraulics Bureau (SFWMD)

DATE: May 25, 2023

SUBJECT: Operational Position Statement May 23, 2023 to May 29, 2023

This Position Statement is to provide operational input for the one-week period from May 23, 2023 to May 29, 2023 based on system conditions and data observed during the previous Monday to Sunday 7-day period. On May 22 Lake Okeechobee stage was 13.72 feet NGVD, which placed it within the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (LORS). Lake stage decreased by 0.19 feet over the preceding 7-day period.

District May rainfall to date is below normal (~61% of normal). Rainfall District forecast (issued May 23) calls for much above normal for the coming 7-day period and below to much below normal for the following one.

Precipitation Outlook: The most recent CPC precipitation outlooks for South Florida for June 2023 is for increased chances of above normal rainfall. The 3-month window of Jun-Aug shows 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 on indicate slightly above normal rainfall for the transition and the first half of the 2023-2024 dry season, with the caveat that the 3-month window Nov 2023 – Jan 2024 shows equal chances of below normal, normal and above normal rainfall for Lake Okeechobee and areas south of the lake.

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 15 to May 21, 2023, close to 900 acre-feet of regulatory releases were sent from Lake Okeechobee south to the Water Conservation Areas through STA-2. No Lake regulatory releases reached the Lake Worth Lagoon through the C-51 canal during this period. Stage in WCA-1 is slightly above regulation schedule, 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 above the upper line of the Ecological Envelope by 0.42 feet.

For the 7-day period May 15 to May 21, 2023, total discharge to the St. Lucie Estuary was about 250 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 1,850 cfs with about 1,300 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.