

MEMORANDUM

TO: Lauren Borocharner, Chief, Engineering Division (USACE)
FROM: John Mitnik, Chief District Engineer (SFWMD)
Akin Owosina, Chief, Hydrology & Hydraulics Bureau (SFWMD)
DATE: December 21, 2022
SUBJECT: Operational Position Statement for December 20, 2022 to January 2, 2023

This Position Statement is to provide operational recommendations for the two-week period from December 20, 2022 to January 2, 2023 based on system conditions and data observed during the previous Monday to Sunday 7-day period. On December 19, Lake Okeechobee stage was 16.41 feet NGVD, which placed it within the Intermediate Sub-band of the 2008 Lake Okeechobee Regulation Schedule (LORS). Lake stage did not change over the preceding 7-days period.

District December rainfall to date is below normal (~82% of normal). Rainfall forecast (issued December 20) calls for above average rainfall for the coming 7-day period and the following one.

Precipitation Outlook: The most recent CPC precipitation outlook for South Florida for January 2023 indicates increased probabilities of below normal rainfall. The 3-month outlooks for 3-month windows Jan – Mar and Feb – Apr call for increased chances of below normal rainfall. All the 3-month windows from Mar– May well into the transition to the 2024 Dry Season show equal chances of below, normal and above normal rainfall.

2008 LORS Release Guidance (Part C): With Lake Okeechobee stage within the Intermediate Sub-band, Part C of the 2008 LORS suggests “Maximum Practicable Releases to the WCAs” as long as stages in all downstream WCAs are below the maximum of the upper schedule plus 0.25 ft.

Over the 7-day periods from December 12, 2022 to December 18, 2022 no regulatory releases from Lake Okeechobee were sent south to the STAs. No Lake regulatory releases reached the Lake Worth Lagoon through the C-51 canal. 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, the USACE is requesting maximum practicable regulatory releases be sent south from Lake Okeechobee towards the WCAs.

2008 LORS Release Guidance (Part D): With Lake Okeechobee stage within the Intermediate Sub-band, and the Tributary Hydrologic conditions in the Normal category, Part D of the 2008 LORS suggests “S-77 up to 4000 cfs and S-80 up to 1800 cfs”. In addition, Lake Okeechobee is above 15.5 feet NGVD, which is the upper line of the Ecological Envelope for this time of the year.

For the 7-day periods December 12, 2022 to December 18, 2022 total discharge to the St. Lucie Estuary was about 650 cfs with no flow 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 2,300 cfs over the past week 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 salinity was in the optimal range (10-25) for adult eastern oysters at Cape Coral and in the upper stressed range (>25) at Shell Point and Sanibel.

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. At this time the District recommends the USACE follow 2008 LORS and release two 7-day pulses, to cover the upcoming 14-day operational window, with an average discharge of 2,000 cfs each as measured at the S-79 structure to work towards bringing Lake Okeechobee back into the Ecological Envelope. No flows from the lake to the St. Lucie Estuary are recommended at this time. The USACE typically implements the releases to the estuaries starting on Saturday and ending on Friday. The Corps should continue to track Red Tide conditions in the estuary, and should conditions change during this operational period, the Corps should look to reassess releases as needed.