

MEMORANDUM

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DATE: August 21, 2013

SUBJECT: Operational Position Statement for the Week of August 20-26, 2013

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's [Operational Planning](#) internet page.

Recommendation to the USACE

This week the SFWMD recommends the USACE follow the 2008 LORS release guidance to manage the Lake stage. This week the Lake stage has receded 0.27 feet and is quickly approaching the Low Subband. Part D suggests "S-77 up to 4000 cfs, and S-80 up to 1800 cfs". Part C of the 2008 LORS suggests "No releases to WCAs" as WCA-2A and WCA-3A stages are more than 0.25 feet above the maximum of their upper regulation schedules.

SFWMD estuary scientists recommend that the S-79 average flow rate should not exceed 1500 cfs frequently. Average flows that exceed 2800 cfs should be minimized because flows greater than this can cause salinity near Shell Point to drop to levels that threaten many species in the area including oysters and seagrasses.

SFWMD scientists also suggest that given the amount of recent inflow of freshwater from local runoff and Lake inputs and current salinity conditions, the estuary has received too much inflow. A maximum inflow rate of 1800 cfs or less is recommended to allow the estuary to recover. Further details are provided below.

The SFWMD will continue to follow the 2008 LORS and USACE release guidance and not make Lake regulatory discharges to the WCAs. However, the SFWMD is maximizing releases from S-352 in an effort to pass treated flows through WCA-1 to tide. Much of the S-352 flow has been meeting irrigation needs along the WPB Canal, and some has passed through WCA-1 via S-39 after treatment by STA-1E. This operation is not continuous due to a variety of factors, but the key point is that S-352 releases are being maximized (roughly 1200 cfs).

Weather and Climate

Rainfall during the past week totaled 0.99 inches district wide (through 7 a.m. August 20th). About 0.84 inches of rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall during the past 30 days totaled 5.40 inches (26% below average).

The combined Upper and Lower Kissimmee Basins received rain averaging about 1.4 inches during the past week. For the past 30-days the upper basin received about 12% below-average rainfall, while the lower basin received about 15% above-average.

The SFWMD short-term weather forecast indicates near-average rainfall for the next 5 days (through Saturday) with increased rainfall chances Thursday-Saturday. Below-average rainfall is expected the following 5 days (through 22-Aug), although there is relatively high uncertainty this time of year. The available (15-Aug) Climate Prediction Center (CPC) outlook for September shows equal chances of above-normal, normal or below-normal rainfall for central and southern Florida. For the three-month windows through Oct-Nov-Dec, the available CPC outlook (18-July) shows equal chances of above-normal, normal or below-normal rainfall for central and southern Florida. The three-month window (Nov-Dec-Jan) indicates increased chances of below-normal rainfall for central and southern Florida.

Current Conditions and Operations

The August 19, 2013 Lake Okeechobee stage (reported by the USACE on August 20th) was 15.74 feet NGVD, 0.27 feet lower than last week. The Lake stage is 0.38 feet higher than it was a month ago and is about 3.5 feet higher than it was a year ago. The August 19th stage was 1.69 feet above the historical average for this date. The stage is in the Intermediate Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) and is quickly receding; the stage will likely cross into the Low Subband Friday or Saturday.

Current average daily release rates (August 21st) at the Lake structures are 6,600 cfs at S-77 (including the lock) and 4,200 cfs at S-308 (including the lock). And at the tidal structures, current rates are about 10,800 cfs at S-79 and 4,800 cfs at S-80. C-43 and C-44 basin runoff have decreased, but continue to contribute to the total flow to the estuaries.

Water releases from the WCAs to the lower east coast continue, to assist the USACE in lowering high water levels in the WCAs. Specifically WCA-2A and WCA-3A stages are above their respective regulation schedules and discharges through S-38 and S-31 are being made when downstream capacity is available. When conditions are conducive, Lake Okeechobee regulatory discharges are passing through WCA-1 to tide via S-39. The SFWMD is maximizing releases from S5AE, to the extent the capacity of the structure and available downstream stages and capacities (S-155A and S-155) allow, and now that the L-8 basin's runoff has decreased, practicable discharges from Lake Okeechobee (via C-10A) are being made.

2008 LORS Release Guidance (Part C): This week Part C suggests "No releases to WCAs" as stages in WCA-2A and WCA-3A are above the maximum of their upper schedule plus 0.25 feet. The Tributary Hydrologic Condition (THC) remains in the very wet classification. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. Since July 9th the Lake O Net Inflow has been in the very wet classification, and as of this week the Palmer Index is in the normal classification (2008 LORS classifications).

WCA-2A and WCA-3A stages currently exceed their respective regulation schedules, and WCA-3A exceeds its regulation schedule by more than 0.25 feet; therefore the LORS does not allow Lake O releases to the WCAs. WCA-3A water levels rose above the top of its regulation schedule in late May (Zone A), therefore the SFWMD discontinued Lake O regulatory discharges to WCA-3A per the 2008 LORS and USACE guidance.

The SFWMD will continue to follow the 2008 LORS and USACE release guidance and not make Lake regulatory discharges to the WCAs. However, the SFWMD is maximizing releases from S-352 in an effort to pass treated flows through WCA-1 to tide. Much of the S-352 flow has been meeting irrigation needs along the WPB Canal, and some has passed through WCA-1 via S-39 after treatment by STA-1E. This operation is not continuous due to a variety of factors, but the key point is that S-352 releases are being maximized (roughly 1200 cfs).

System conditions continue to be monitored closely. Lake O regulatory discharges to WCA-3A will resume per Part C guidance when the WCA-3A stage recedes below Zone A and when conveyance and STA treatment capacities are available.

2008 LORS Release Guidance (Part D): This week Part D suggests "up to maximum discharge capacity to tidewater". Currently Lake releases are 6,600 cfs at S-77 (including the lock) and 4,600 cfs at S-308 (including the lock), which are the maximum practicable releases at this time. The USACE has reported that they will continue to make these releases until the Lake levels fall into the Low Subband of the 2008 LORS.

For the St. Lucie Estuary, SFWMD estuary scientists state that, given the amount of existing inflow of freshwater from local runoff and current salinity conditions, the estuary has received too much inflow. Total water inflows

exceeding 2,000 cfs for more than two weeks will likely cause mortality of adult oysters, therefore releases that cause this number to be exceeded should be avoided. For example, assuming that the current combined mean discharge of about 2500 cfs from S-49, S-97 and the Gordy Road structure and an additional ground water input of about 250 cfs continue for the next week, then the total discharge to the St. Lucie Estuary would continue to exceed 2000 cfs even if no lake releases at S-308 were made.

For the Caloosahatchee Estuary, SFWMD estuary scientists recommend that the average flow rate should not exceed 1,500 cfs frequently. Average flows that exceed 2,800 cfs should be minimized because flows greater than this can cause salinity near Shell Point to drop to levels that threaten many species in the area including oysters and seagrasses.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance: This week the SFWMD's Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart is not applicable since the 2008 LORS release guidance suggests releases higher than baseflow releases.

Note that the AP release guidance flowchart was designed primarily to guide release recommendations for circumstances when the Lake stage is within the Baseflow Subband or lower. The USACE's Water Control Plan (WCP) for Lake Okeechobee and the EAA recognizes that the SFWMD may allocate water to the environment through its "Adaptive Protocols" or other SFWMD authorities. The WCP provides guidance as to releases, including Adaptive Protocol recommendations, in the various Lake schedule subbands.

There are two primary branches of the AP release guidance flowchart. The upper branch pertains to the 2008 LORS baseflow (aka, regulatory) releases while the lower branch pertains to environmental water supply releases. It is important to recognize that the AP was developed primarily to guide the water supply balance between Caloosahatchee Estuary, permitted water users, and other water supply purposes of the water control system. The water supply balance achieved by following the AP release guidance was evaluated by the Water Resources Advisory Commission and the SFWMD Governing Board, leading to board acceptance in September, 2010. Final Adaptive Protocols for Lake Okeechobee Operations (September 16, 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.