

MEMORANDUM

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FROM: Susan Sylvester, Chief, Water Control Operations Bureau
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DATE: July 26, 2013

SUBJECT: Operational Position Statement for the Week of July 23-29, 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 continue to follow the 2008 LORS release guidance to manage the Lake stage. This week the Lake stage is rising within the Intermediate Subband. Part D suggests releases up to 6,500 cfs at S-77 and up to 2,800 cfs at S-80. Part C of the 2008 LORS suggests up to maximum practicable releases to the WCAs if all downstream WCA stages are less than 0.25 feet above the maximum of their upper regulation schedules.

The SFWMD recognizes that the Water Control Plan (WCP) for Lake Okeechobee and the EAA contains provisions that allow higher release rates to be made when the Lake stage is near the LORS subband limits. The SFWMD further understands that the USACE is using this provision of the WCP to make "up to maximum discharge capacity to tidewater".

SFWMD estuary scientists indicate that S-79 flow rates greater than 1,500 cfs are more likely to cause Caloosahatchee Estuary salinity to fall within a harmful range for some organisms. Average flow rates exceeding 2,800 cfs should be minimized since they will likely cause salinity near Shell Point to drop to levels that threaten many species in the area including oysters and seagrasses.

SFWMD scientists also suggested avoiding total inflows to the St. Lucie Estuary in excess of 2,000 cfs for longer than two weeks since such flow rates will likely cause mortality of oysters. The total inflow is measured as the sum of S-80, S-49, S-97, and from Ten Mile Creek at the Gordy Road weir. Further details are provided below.

All WCA stages continue to be above their respective regulation schedules; therefore the SFWMD will continue to follow the 2008 LORS and USACE release guidance and not make Lake regulatory discharges to the WCAs.

Weather and Climate

Rainfall during the past week totaled 2.68 inches district wide (through 7 am July 23rd). About 2.67 inches of rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall since April (past 113 days) totaled 29.81 inches (52% above average), and is the wettest Apr-July since 1982. So far, 2013 is the 5th wettest April-July (since the 1932 record started). July will be our fourth month in a row with above average rainfall. The last time this happened was in 1997.

The combined Upper and Lower Kissimmee Basins received rain averaging about 3.4 inches during the past week. For the past 106-days the upper basin received about 41% above-average rainfall, while the lower basin received about 64% above-average.

The SFWMD short-term weather forecast indicates above-average rainfall for the next week. Near-average rainfall is expected the following week although there is relatively high uncertainty this time of year. The available (18-July) Climate Prediction Center (CPC) outlook for August shows increased chances of above-normal rainfall for central and southern Florida. For the three-month windows through the 2013 wet season (October), the available CPC outlook (18-July) shows increased chances of above-normal rainfall for central and southern Florida.

Current Conditions and Operations

The July 22, 2013 Lake Okeechobee stage (reported by the USACE on July 23) was 15.53 feet NGVD, 0.52 feet higher than last week. The Lake stage is 1.61 feet higher than it was a month ago and is about 3.46 feet higher than it was a year ago. The July 22 stage was 1.87 feet above the historical average for this date. The stage is within the upper third of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) and is rising at an average rate of about 0.05-0.1 feet per day. As of the July 22 the Lake stage is within 0.28 feet of the High Sub-band, and within 0.72 feet of the High Lake Management Band (top of 2008 LORS).

Water releases from the WCAs to the lower east coast continue to assist the USACE in lowering high water levels in the WCAs. Specifically, while WCA-1, WCA-2A, and WCA-3A stages are above their respective regulation schedules discharges through S-39, S-38, and S-31 are being made when downstream capacity is available. 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, in order to minimize the L-8 Basin's discharges into Lake Okeechobee (via C-10A).

2008 LORS Release Guidance (Part C): This week Part C suggests 'Release up to maximum practicable to the WCAs if all downstream WCA stages are below 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 the Palmer Index is within the wet classification (2008 LORS classifications).

All WCA stages currently exceed their respective regulation schedules, and WCA-3A exceeds its regulation schedule by more than 0.25 feet. 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. WCA-1 is now (1300 on 26-July) at 16.09 feet NGVD (GA18C) which is below the top of the A-1 Zone, however, the rain that is forecast for Friday, Saturday, and Sunday is expected to cause the stage to rise back above the A-1 Zone of the schedule.

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 releases up to 6,500 cfs at S-77 and up to 2,800 cfs at S-80. However, the USACE is utilizing the provision in the WCP that allows higher release rates to be made when the Lake stage is rising near the LORS subband limits. Section 7-03 (page 7-11) of the WCP states:

When operating near band and sub-band limits, up to 30-day forecasts will be made and releases will be scheduled to lower or maintain Lake Okeechobee at the desired level during the 30-day period. Scheduling of releases may include the adjustment of band/sub-band limits when determining the release to implement. Factors considered in adjusting the band/sub-band limits would include but not be limited to: availability of STA treatment capacity, SFWMD designated lands, CERP reservoirs, and the condition of tributary basins. The band/sub-band adjustment is

meant to transition into and out of sub-bands by allowing flows to gradually increase or decrease between sub-bands. An example of this adjustment would be: a condition above is occurring, lake level is 0.2 feet below the Intermediate Sub-Band and projected to rise into the Intermediate Sub-Band, then the allowable Lake Okeechobee release would be determined by following Part D (Figure 7-4) with the lake level considered to be in the Intermediate Sub-Band (not 0.2 feet below the Intermediate Sub-Band).

The USACE is using this provision of the WCP to make “up to maximum discharge capacity to tidewater”.

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 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.