

MEMORANDUM

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FROM: Susan Sylvester, Chief, Water Control Operations Bureau
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DATE: November 15, 2013

SUBJECT: Operational Position Statement for the Week of November 12-18, 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. The Lake stage receded about 0.13 feet during the past week to a stage of 14.96 feet, NGVD, and is within 0.5 feet of the Baseflow Subband.

The 12-November outcome from Part C of the 2008 LORS suggests "Up to Maximum Practicable to WCAs IF desirable or with minimum Everglades Impacts". The USACE has stated a desire to further manage Lake O stages by initiating regulatory discharges to the WCAs per the current LORS release guidance. Water levels in WCA-1, WCA-2A and WCA-3A are declining. WCA-1 stage is about 0.3 feet below the top of the A2 Zone. WCA-2A stage is receding about 0.5 feet above and parallel to its regulation schedule. WCA-3A stage is receding and is about 0.1 feet below the top of its regulation schedule.

As communicated during the 14-Nov WCA-3A Periodic Scientists Teleconference, the SFWMD, USFWS, ENP, FFWCC, and Miccosukee Tribe indicated Lake O regulatory releases to northwestern WCA-3A would have some benefit at this time and would not cause adverse impacts. The 14-Nov ERTTP Multispecies management meeting also reported undesirably fast recession rates in WCA-3A. And, at the 13-Nov USFWS quarterly water coordination meeting, Loxahatchee National Wildlife Refuge (LNWR) staff noted relatively low and receding stages in the LNWR and are contemplating a recommendation for Lake O regulatory releases to the LNWR (WCA-1) after treatment by STA-1W and/or STA-1E.

The SFWMD has assessed the capability of the system to convey and treat Lake regulatory discharges and, with USACE concurrence, is planning initiation of Lake O regulatory releases to northwest WCA-3A early next week.

The outcome from Part D of the 2008 LORS release guidance is the same as last week: "S-79 up to 450 cfs, and S-80 up to 200 cfs". The USACE continues to release 650 cfs at S-79 and no releases at S-80, consistent with the Water Control Plan.

For the St. Lucie Estuary, SFWMD estuary scientists reported that salinity is improving in the estuary and local sources (runoff and ground water) are sufficient to meet requirements for freshwater. Therefore releases of freshwater from Lake Okeechobee are not recommended.

For the Caloosahatchee Estuary, SFWMD estuary scientists reported salinity conditions in the lower estuary are improving and salinity is beginning to increase in the vicinity of Ft. Myers. They recommend continuing the 650 cfs baseflow release in order to allow salinity to continue to improve in the lower estuary while maintaining conditions conducive for SAV in the estuary upstream of Ft. Myers.

Further details are provided below. C-43 basin runoff has decreased and the SFWMD scientists suggest baseflow pulse releases should be delivered in patterns provided on page 3.

Weather and Climate

Rainfall during the past week totaled 0.21 inches district wide with a focus over the Lower East Coast and WCAs (through 7 a.m. November 12th). Minor rain (0.01") fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall during the past 30 days totaled 0.70 inches (78% below-average). The Upper and Lower Kissimmee Basins averaged 0.03" during the past week. For the past 30 days the Upper Basin received about 11% of average rainfall, while the lower basin has received about 20% of average rainfall.

The SFWMD short-term weather forecast for the next week is for above-average rainfall. Week two is forecast to have at least two rain events but average rainfall is expected. Average weekly rainfall this time of year is about 0.5 inches. The available (31-Oct) Climate Prediction Center (CPC) outlook for November shows equal chances of below-normal, normal and above-normal rainfall for central and southern Florida. The available (17-Oct) three-month windows through Jan-Feb-Mar all indicate increased chances of below-normal rainfall for central and southern Florida.

Current Conditions and Operations

The November 11, 2013 Lake Okeechobee stage (reported by the USACE on November 12th) was 14.96 feet NGVD, 0.13 feet lower than last week. The Lake stage is 0.8 feet lower than it was a month ago and is about 0.6 feet lower than one year ago. The November 11th stage was 0.03 feet below the historical average for this date. The stage continues to recede and is within 0.5 feet of the Baseflow Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS). Statistics on the October recession rate indicate 2013 had the fastest October recession (0.8 feet) in the past 30 years.

Daily release rates, averaged for the past week, at the Lake structures were about 1,100 cfs at S-77 and 200 cfs at S-308. S-308 releases were to maintain C-44 stages and were not discharged at S-80. S-80 remains closed. At the tidal structures, average daily discharges were about 1,150 cfs at S-79 and 0 cfs at S-80. S-80 was closed the morning of 21-Oct and S-79 remains open to release target baseflow rates of 650 cfs. Average rates during the past 7-days have exceeded the 10-day target mainly because the majority of the target pulse occurs in the first 7 days.

The E RTP Multi-species Management Strategy guidelines recommend a January 1 three-gauge average stage of 10.4 feet for WCA-3A and 13.0 feet at gauge 17 in WCA-2A. Currently, stages are already close to those targets. The U.S. Fish and Wildlife Service and the SFWMD recommend reducing discharges as the dry conditions persist to help WCAs attain the January 1, 2014 target stages for wildlife and ecosystem needs. The northern portions of WCA-3A (Site 62) are already declining at a rate of about 0.12 feet per week. The Southern area (along Tamiami Trail) is currently declining at a rate of about 0.18 feet per week but this area is meaningfully deeper. As required for protection of the Cape Sable Seaside Sparrow S12A, S343A, S343B, and S343 were closed November 1, 2013, which reduced the discharge from southern WCA-3A.

Irrigation demands are being supplied by Lake Okeechobee via S-351, S-352 and S-354. The releases have been relatively high to maintain canal stages. C-10A releases have been made to assist with dewatering the L-8 Flow Equalization Basin as well as supplying water needs of the City of WPB and the LWDD. Water supply releases to maintain coastal canal stages are also being from WCA-1 and WCA-2A via G-94B and S-38.

2008 LORS Release Guidance (Part C): Part C of the 2008 LORS suggests "Up to Maximum Practicable to WCAs IF desirable or with minimum Everglades Impacts". The USACE has stated a desire to further manage Lake O stages by initiating regulatory discharges to the WCAs per the current LORS release guidance. Water levels in WCA-1, WCA-2A and WCA-3A are declining. Northwestern WCA-3A stages were reported to be receding at faster than ecologically-recommended rates. However, Lake Okeechobee recession rates were also reported to be faster than ecologically-desirable rates. WCA-1 stage is about 0.3 feet below the top of the

A2 Zone. WCA-2A stage is receding about 0.5 feet above and parallel to its regulation schedule. WCA-3A stage is receding and is about 0.1 feet below the top of its regulation schedule.

The SFWMD has assessed the capability of the system to convey and treat Lake O regulatory discharges and, with USACE concurrence, is planning initiation of Lake O regulatory releases to northwest WCA-3A early next week.

The Tributary Hydrologic Condition (THC) remains in the normal classification this week. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. The Lake O Net Inflow remains in the dry classification. The Palmer Index remains well-within the normal classification (2008 LORS classifications) and is likely to remain above the -1.5 dry class threshold for the next several weeks.

2008 LORS Release Guidance (Part D): The 12-November outcome from Part D of the release guidance is “S-79 up to 450 cfs, and S-80 up to 200 cfs”.

For the St. Lucie Estuary, SFWMD estuary scientists reported that salinity is improving in the estuary and local sources (runoff and ground water) are sufficient to meet requirements for freshwater. Therefore releases of freshwater from Lake Okeechobee are not recommended.

For the Caloosahatchee Estuary, SFWMD estuary scientists reported salinity conditions in the lower estuary continue to improve and salinity is beginning to increase in the vicinity of Ft. Myers. They recommend following the Lake Okeechobee Regulation Schedule release guidance and continuation of the 650 cfs release target at S-79 should allow salinity to continue to improve in the lower estuary while maintaining conditions conducive for SAV in the estuary upstream of Ft. Myers.

To mitigate potential stratification and phytoplankton accumulation in the water column, SFWMD scientists recommend the release from S-79 should be pulsed. Suggested pulse schedules are below.

10-day			7-day		
Day	450	650	Day	450	650
1	1100	1300	1	1000	1450
2	1600	1900	2	1200	1700
3	850	1300	3	600	900
4	500	900	4	350	500
5	350	700	5	0	0
6	100	400	6	0	0
7	0	0	7	0	0
8	0	0			
9	0	0			
10	0	0			

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 Lake Okeechobee stage is above the Baseflow Subband. Recent projections indicate the Lake O stage could recede into the Baseflow Subband within the next 2 weeks if dry conditions persist and the current recession rate continues.

However, note that the AP document included recommendations to conserve water in the beginning of the dry season when the Lake stage is in the Low Subband to ensure availability for later in the dry season when all water demands tend to be at their highest. Specific language on page 12 is shown here for convenience: “One of the fundamental tenets of adaptive protocols for Lake Okeechobee operations is to limit the 2008 LORS Low subband maximum release rate during the early part of the dry season to help conserve water and increase its potential availability for later in the dry season when the demand is largest. To implement this precept, when the lake stage is within the Low subband in the early part of the dry season, the weekly operations guidance may recommend to the USACE to limit the release volumes to no more than 50 percent of the maximum allowable. Factors that may influence this recommendation include lake stage trend, and weather and water condition forecasts.”

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.