

## MEMORANDUM

**TO:** Tommy Strowd, Director, Operations, Maintenance & Construction Division  
Terrie Bates, Director, Water Resources Division

**FROM:** Susan Sylvester, Chief, Water Control Operations Bureau  
Linda Lindstrom, Chief, Applied Science Bureau  
Dean Powell, Chief, Water Supply Bureau

**DATE:** December 12, 2012

**SUBJECT:** Operational Position Statement for the Week of December 11-17, 2012

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. 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 recommendation to the USACE is to follow the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) release guidance, which suggests baseflow releases up to 450 cfs at S-79 and up to 200 cfs at S-80.

The SFWMD recommends the following:

S-80: no Lake Okeechobee regulatory discharge. Discharge C-44 Basin runoff as required.

S-79: up to 450 cfs per 2008 LORS Water Control Plan guidance (USACE's Water Control Plan provides flexibility to discharge 650 cfs at S-79 if they make no Lake regulatory discharges via S-80).

Further details are provided below, which include a suggested S-79 pulse-release pattern from SFWMD scientists.

### Weather and Climate

Rainfall during the past week totaled about 0.56 inches district wide (through 7 am December 10<sup>th</sup>).

0.82 inches fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for November totaled 0.29 inches, which was 88% below average. November 2012 was one of the driest Novembers in the SFWMD's 81-year rainfall record and was effectively tied with the 0.30 inches recorded 1940 and 1944.

The SFWMD short-term weather forecast indicates showers and thunderstorms Tuesday and Wednesday. Scattered showers are expected to linger over the southern areas Thursday after a passing cold front exits the area. Reduced rainfall amounts are expected as the weekend progresses.

The 30-Nov Climate Prediction Center (CPC) outlook shows increased chances (40%) of below-normal rainfall for December. For the December-April period, the available outlook (15-Nov) shows equal chances (33%) of below-normal, normal, and above-normal rainfall. The CPC's precipitation outlooks reflect the expectation that El Nino conditions will not likely develop and contribute to above-average dry season rainfall.

## Current Conditions and Operations

The December 11, 2012 Lake Okeechobee stage (reported by the USACE on Dec 10<sup>th</sup>) was 15.11 feet NGVD, 0.02 feet higher than it was last week. The Lake is 0.43 feet lower than it was a month ago and is 1.36 feet higher than it was a year ago. The current stage is about 0.36 feet higher than the historical average for this date. The stage rose slightly last week due to direct rainfall, but has been generally receding and is within the bottom third of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS). The current stage is about 0.8 feet above the top of the Baseflow Sub-band.

2008 LORS Release Guidance (Part C): Part C suggests “up to maximum practicable releases to the WCAs if desirable or with minimum Everglades impacts”. During the past month such releases were not desirable due to relatively high stages in the WCAs. WCA-2A regulation stage remains relatively high at about 0.6 feet above, and receding parallel to, its regulation schedule. WCA-3A regulation stage (3 gage average) is about 0.1 feet above the top (elev. 10.5 feet, NGVD) of its new (ERTP) regulation schedule; however northwestern WCA-3A was reported to be receding at faster than ecologically-recommended rates. The regulation stage for WCA-3A is likely to reach or fall below the top of the WCA-3A regulation schedule before the end of December. Due to the 11-November rainfall event in the EAA, STA-3/4 and WCA-3A, the SFWMD is delaying a recommendation to initiate Lake Okeechobee regulatory discharges to WCA-3A. It is anticipated that within the next 2-3 weeks, conditions will allow regulatory discharges to be made.

2008 LORS Release Guidance (Part D): Because of persistent and forecast dry conditions the 2008 LORS release guidance (Part D) continues to suggest baseflow release rates instead of the higher release rates that are characteristic of the Low Subband. Since mid-November the USACE has been consistently discharging up to 650 cfs at S-79 consistent with the 2008 LORS release guidance.

SFWMD Lake Okeechobee Adaptive Protocol (AP) Release Guidance: This week the SFWMD’s Lake Okeechobee Adaptive Protocol (AP) release guidance flowchart suggests baseflow releases at S-79 up to 450 cfs (or up to 650 cfs depending on conditions in the rest of the system). Caloosahatchee Estuary salinity at Val-I75 is forecast to rise above the 5 psu threshold within the next 2 weeks if no Lake releases are made. December Lake Okeechobee stage projections indicate nearly a zero chance of the Lake stage falling below elevation 11.0 feet, NGVD, before 1-Jun-2013. So there is very low risk of a Lake O MFL exceedance or a water shortage.

While the 2008 LORS release guidance suggests 450 cfs baseflow discharge at S-79, a flow rate of 450 cfs or more (up to 650 cfs) for the next week may be more effective to moderate the increasing salinity in the Caloosahatchee Estuary. Therefore the SFWMD estuarine scientists, at the request of the USACE, have prepared a ten-day pulse schedules for both 450 and 650 cfs average rates at S-79.

<b>Day</b>	<b>450 cfs</b>	<b>650 cfs</b>
1	1100	1300
2	1600	1900
3	850	1300
4	500	900
5	350	700
6	100	400
7	0	0
8	0	0
9	0	0
10	0	0

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](http://www.sfwmd.gov) under the Operational Planning topic.