

## 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:** May 15, 2013

**SUBJECT:** Operational Position Statement for the Week of May 14-20, 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. 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, but suggests the USACE not release up to the maximum rates allowed. This week Part D suggests releases up to 3000 cfs at S-79 and up to 1170 cfs at S-80. However, since the stage is in the lower third of the Low Subband, the USACE's Water Control Plan provides further guidance: S-79 up to 2000 cfs, and S-80 up to 730 cfs. Part C of the 2008 LORS suggests up to maximum practicable releases to the WCAs if desirable or with minimum Everglades impacts.

The SFWMD recommends the following:

S-80: Maintaining the current flow rate at S-80 of about 250 cfs will not likely reduce salinity to harmful levels.

S-79: 450 cfs is an adequate flow rate to maintain an acceptable salinity regime for the next week, according to SFWMD estuarine scientists. However if the USACE needs to make higher Lake O discharges to manage Lake stages per the 2008 LORS, then the SFWMD estuary scientists recommend not exceeding 1500 cfs since an average flow rate greater than 1500 cfs could be damaging to some estuary resources.

WCAs: Per USACE request, the SFWMD will initiate Lake O regulatory discharges to WCA-3A Thursday, 16-May. SFWMD everglades scientists indicate northwest WCA-3A can take some excess Lake water without adverse impacts, and STA-3/4 has some limited treatment capacity. G-372 will pump one unit (925 cfs) for a normal day shift during weekdays until further notice. This will amount to 200-220 cfs average flow rate. STA-3/4 outflow will be directed to northwest WCA-3A via the G-404 pump station. Hydrologic conditions and STA-3/4 treatment capability will be monitored and discharges adjusted as necessary.

Further details are provided below, which includes suggested S-79 pulse-release patterns from SFWMD estuary scientists.

## Weather and Climate

Rainfall during the past week totaled 0.81 inches district wide (through 7 am May 14<sup>th</sup>). 0.89 inches of rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for the past 30 days totaled 5.50 inches, which was 81% above-average. The combined Upper and Lower Kissimmee Basins received averaged about 0.6 inches of rain during the past week and for the past 30-days received about 80% above-average.

The SFWMD short-term weather forecast indicates below-average rainfall from Tuesday through the weekend. Chances for rain increase for next week, but are likely to be near average. The 30-Apr Climate Prediction Center (CPC) outlook for May shows increased chances of above-normal rainfall. For the three-month windows through the 2013 wet season, the available CPC outlook (18-Apr) also shows equal chances of above-normal, normal, and below-normal rainfall for central and southern Florida.

## Current Conditions and Operations

The May 13, 2013 Lake Okeechobee stage (reported by the USACE on May 14<sup>th</sup>) was 13.55 feet NGVD, 0.03 feet lower than last week. The Lake stage is 0.09 feet lower than it was a month ago and is about 2 feet higher than it was a year ago. The current stage is 0.23 feet above the historical average for this date. The stage is within the bottom third of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS). The current stage is about 0.3 feet above the top of the Baseflow Sub-band and about 2.8 feet above the Water Shortage Band.

Water supply/irrigation releases from Lake O to the EAA, and from the WCAs to the lower east coast, have occurred at lower-than-typical rates and between the recent rainfall events. Water supply releases are expected to continue with the expected dry weather this week. Releases from C-10A have been made for several weeks and continue. The releases were serving water supply needs of the L-8 Basin, the City of West Palm Beach via the M-Canal, and the Lake Worth Drainage District via S-5AE and S-155A. The SFWMD continues to discharge water from the southern end of the L-8 Canal (S-5AE/S5AW) to provide a dilution flow for water discharge by the Design Build Contractor (Archer Western) for the L-8 Flow Equalization Basin (FEB) {inflow structure, outflow structure and revetment}. The SFWMD expects to continue this operation until the wet season begins.

2008 LORS Release Guidance (Part C): This week Part C suggests "Releases to the WCAs if desirable or with minimum Everglades impacts". The Tributary Hydrologic Condition (THC) remains in the normal classification. The THC is determined by the wetter of the Palmer Index and the Lake O Net Inflow. Both the Lake O Net Inflow and the Palmer Index are in their respective normal classifications.

SFWMD everglades scientists report some ability to receive excess Lake water in northern WCA-3A without impacts, and some limited treatment capability exists in STA-3/4. Due to nesting Black-necked stilts in STA-2, no Lake O regulatory discharges will be directed to STA-2. The WCA-3A stage is in Zone E1 of its regulation schedule, and slightly below the maximum release zone. WCA-3A releases are currently being made per the Rainfall Plan via S-12C, S-12D, and S-333.

The proposed Lake regulatory releases to northwest WCA-3A are likely to last only until the wet season begins and WCA-3A stage increases to Zone A of its regulation schedule. The relatively small Lake O regulatory discharges (~200 cfs) are not likely to affect the 3-gage average stage. However the stage at the Deer Gage (Gage 62) is currently relatively high (within 0.3 feet of the regulation stage); therefore there is some risk that S-339 and S-340 may open soon. Conditions in the WCAs and STAs continue to be monitored and assessed.

2008 LORS Release Guidance (Part D): This week Part D suggests releases up to 3000 cfs at S-79 and up to 1170 cfs at S-80. However, since the Lake stage is within the lower third of the Low Subband, Page 7-15 of the Water Control Plan for Lake Okeechobee and the EAA indicates the target discharges are up to 2000 cfs at S-79 and up to 730 cfs at S-80.

SFWMD estuary scientists have stated that the estuary does not need supplemental inflows, but maintaining the current flow rate at S-80 of about 250 cfs will not likely reduce salinity to harmful levels.

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.

SFWMD estuary scientists recommend that, given the time of year, an average flow rate of about 450 cfs using a 10-day pulse pattern at S-79 is sufficient to maintain an acceptable salinity regime for the next two weeks.

SFWMD estuary scientists also recommend not exceeding 1500 cfs since larger discharges could be damaging to some estuary resources. Average flow rates between 450 cfs and 1000 cfs are not likely to be harmful. The releases should be made with a 10-day pulse pattern at S-79. Suggested options are below. However if the USACE needs to make higher Lake O discharges to manage Lake stages per the 2008 LORS, the SFWMD estuary scientists recommend not exceeding 1500 cfs since an average flow rate greater than 1500 cfs could be damaging to some estuary resources.

Day	450 cfs	650 cfs	1000 cfs	1500 cfs
1	1100	1300	1700	2100
2	1600	1900	2300	2700
3	850	1300	1800	2300
4	500	900	1400	2000
5	350	700	1100	1700
6	100	400	800	1400
7	0	0	600	1100
8	0	0	300	800
9	0	0	0	600
10	0	0	0	300

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.