

MEMORANDUM

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

FROM: Susan Sylvester, Chief, Water Control Operations Bureau
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DATE: January 16, 2013

SUBJECT: Operational Position Statement for the Week of January 15-21, 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 recommendation to the USACE is to follow the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) release guidance. Part D suggests baseflow releases up to 450 cfs at S-79 and up to 200 cfs at S-80, and Part C suggests up to maximum practicable to WCAs if desirable or with minimum Everglades impacts.

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).

Lake O regulatory discharges to WCA-3A via STA-3/4 will continue this week. 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 include a suggested S-79 pulse-release pattern from SFWMD scientists. Please note that SFWMD's Coastal Ecosystems Section personnel are conducting sampling of various ecological responses to the estuary release patterns. In order to get good data, it would be best if the same pulse pattern could be repeated for at least one 10-day release period. Therefore as the Lake regulation schedule guidance and conditions allow, we are requesting a consistent release pattern through the end of the baseflow pulse release that began this week.

Weather and Climate

Rainfall during the past week totaled about 0.07 inches district wide (through 7 am January 15th). 0.06 inches fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for the past 75 days totaled 2.61 inches, which was well below-average (49% below average).

The SFWMD short-term weather forecast indicates below average rainfall is likely through January.

The 31-Dec Climate Prediction Center (CPC) outlook shows equal chances (33%) of below-normal, normal, and above-normal rainfall for January. For the January-March period, the available outlook (20-Dec) shows increased chances (40%) of below-normal rainfall for south Florida. 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 January 15, 2013 Lake Okeechobee stage (reported by the USACE on Jan 14th) was 14.97 feet NGVD, about the same as last week. The Lake is only 0.20 feet lower than it was a month ago and is 1.51 feet higher than it was a year ago. The current stage is about 0.26 feet higher than the historical average for this date. The stage has been slowly receding and remains near the middle of the Low Sub-band of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS). The current stage is about 1.2 feet above the top of the Baseflow Sub-band and almost 3 feet above the water shortage band.

2008 LORS Release Guidance (Part C): This week Part C suggests “up to maximum practicable releases to the WCAs if desirable or with minimum Everglades impacts”. Prior to late December such releases were not desirable due to relatively high stages in the WCAs. WCA-2A regulation stage remains relatively high at about 1.1 feet above its regulation schedule. WCA-3A regulation stage (3 gage average) is about at elevation 10.2 feet, NGVD, 0.3 feet below the top (elev. 10.5 feet, NGVD) of its new (ERTP) regulation schedule. Northwestern WCA-3A was reported to be receding at faster than ecologically-recommended rates. Lake O regulatory discharges to northwestern WCA-3A were initiated on January 11th. Effects on northwestern WCA-3A have not been observed yet.

2008 LORS Release Guidance (Part D): Because of persistent and forecast dry conditions the 2008 LORS release guidance (Part D) suggests 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 (estuary salinity for Val-I75 is forecast to exceed the 5 psu threshold for at least the next 2 weeks if no Lake releases are made). However the SFWMD recognizes that the USACE is making the Baseflow releases consistent with the 2008 LORS in order to manage the Lake stage. Therefore the SFWMD supports the USACE’s decision to continue baseflow releases.

While the 2008 LORS release guidance suggests baseflow regulatory discharges to manage the Lake stage, there is potential for the releases to have incidental environmental benefits to the Caloosahatchee Estuary. SFWMD scientists recommend an average flow rate of 450 cfs is adequate to maintain the 30-day average salinity at Val I75 below 5 psu for the next two weeks. However, an average flow rate of 650 cfs may moderate salinity within the lower estuary. The releases should be made with a 10-day pulse pattern at S-79. The following release rates & patterns are suggested options.

Day	450 cfs	650 cfs
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

Staff from the SFWMD's Coastal Ecosystems Section plan to continue their sampling of various ecological responses to the estuary release patterns. In order to get good data, it would be best if the same pulse pattern could be repeated through at least the end of January.

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.