

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: February 13, 2013

SUBJECT: Operational Position Statement for the Week of February 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. 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 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 at the top of the lower third of the Low Subband and receding, 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 to the 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: 650 cfs is an adequate flow rate 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 detrimental by causing low salinity shock to the estuarine biota. With the forecast rainfall for Thursday and Friday, the SFWMD recognizes the USACE may need to discharge C-43 Basin runoff in excess of the target flow.

Lake O regulatory discharges to WCA-3A via STA-3/4 will continue this week if capacity is available in the Miami Canal (rainfall is forecast for Thursday and Friday). 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. SFWMD scientists are evaluating the feasibility of using portions of STA-2 to treat Lake O regulatory discharges.

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

Weather and Climate

Rainfall during the past week totaled 0.01 inches district wide (through 7 am February 12th).

No rain fell directly over Lake Okeechobee during the past 7-days. District-wide rainfall for the past 30 days totaled 0.21 inches, which was well below-average (90% below average).

The SFWMD short-term weather forecast indicates above average rainfall for the next week and below average rainfall for the following week. The SFWMD precipitation forecast for Thursday and Friday indicates up to 1-2.5 inches could fall over the southeastern portion of the SFWMD, with a focus mainly south of Lake O. The 31-Jan Climate Prediction Center (CPC) outlook shows increased chances (40%) of below-normal rainfall for February. For the January-March period, and all subsequent three-month windows through the end of 2013, the available CPC outlook (17-Jan) shows equal chances for south Florida.

Current Conditions and Operations

The February 11, 2013 Lake Okeechobee stage (reported by the USACE on Feb 12th) was 14.35 feet NGVD, 0.18 feet lower than last week. The Lake is 0.65 feet lower than it was a month ago and is 1.13 feet higher than it was a year ago. The current stage is 0.23 feet below the historical average for this date. The stage is receding and is at the bottom of the middle 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 and about 2.5 feet above the water shortage band. Water supply/irrigation releases from Lake O have been increasing with the lack of rainfall. Releases from C-10A have been made for several weeks. The releases are 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.

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 has receded to about 0.3 feet above its regulation schedule. WCA-3A regulation stage (3 gage average) is about at elevation 9.8 feet, NGVD, slightly above the bottom of its new (ERTP) regulation schedule. In December, 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. Beginning February 5th, SFWMD Everglades scientists reported observing benefits from this operation regarding hydration of a broad spatial extent of northwestern WCA-3A, particularly west of the Miami Canal.

2008 LORS Release Guidance (Part D): Similar to last week, this week the 2008 LORS release guidance (Part D) suggests higher than baseflow release rates. Part D suggests regulatory discharges up to 3000 cfs at S-79, but since the stage is within the bottom of the lower third of the Low Subband, the Water Control Plan suggests S-79 releases up to 2000 cfs and S-80 releases up to 730 cfs.

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 scientists recommend an average flow rate of 650 cfs is adequate to maintain the 30-day average salinity at Val I75 below 5 psu for the next two weeks. SFWMD estuary scientists also recommend not exceeding 1500 cfs since an average flow rate greater than 1500 cfs could be detrimental by causing low salinity shock to the estuarine biota. The releases should be made with a 10-day pulse pattern at S-79. The following release rates & patterns are suggested options.

Day	650 cfs	1000 cfs	1500 cfs
1	1300	1700	2100
2	1900	2300	2700
3	1300	1800	2300
4	900	1400	2000
5	700	1100	1700
6	400	800	1400
7	0	600	1100
8	0	300	800
9	0	0	600
10	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 under the Operational Planning topic.