

M E M O R A N D U M

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SUBJECT: Operational Position Statement for the Week of Feb 28 – Mar 5, 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

The Adaptive Protocol guidance suggests releases at S-79 up to 450 cfs, supplemented as needed from Lake Okeechobee. The past eleven weeks of 450 cfs (or more) average release have helped to limit high salinities at Val-I75, however there is a rising trend in daily salinities and a slightly increasing trend in the 30-day moving average salinity.

Therefore, the SFWMD recommends that the USACE continue the current 450 cfs average release at S-79 for the 10-day period that started at 07:00 Monday, February 27th, and will end at 07:00 on Wednesday, March 7th. A 10-day release is recommended to allow relatively larger discharge rates during the first half of the 10-day period. The recommended daily S-79 release schedule is provided below. It is likely that next week the SFWMD will recommend a third 10-day release with a similar release pattern. SFWMD scientists think a third 10-day release would provide enough time and data to adequately observe and record the response of the system to the 10-day releases.

The SFWMD also recommends that the USACE continue their standard operation to allow runoff from the C-44 basin (S-308 to S-80) to backflow to Lake Okeechobee via S-308 rather than discharge to tide via S-80.

Day #	Day	Start Date & Time	S-79 cfs
1	Mon	2/27/2012 07:00	1100
2	Tue	2/28/2012 07:00	1600
3	Wed	2/29/2012 07:00	850
4	Thu	3/1/2012 07:00	500
5	Fri	3/2/2012 07:00	350
6	Sat	3/3/2012 07:00	100
7	Sun	3/4/2012 07:00	0
8	Mon	3/5/2012 07:00	0
9	Tue	3/6/2012 07:00	0
10	Wed	3/7/2012 07:00	0
		10-day Sum	4500
		10-day Mean	450

Weather and Climate

Rainfall during the past week totaled 0.37 inches district wide (through 7am Feb 28th). February rainfall has totaled 1.70 inches, which is 78% of average to date. For the past 30 days rainfall has been 72% of average. The SFWMD precipitation outlook for the next ten days (Feb 29-Mar 8) is below-average with low confidence. The 16-Feb CPC precipitation outlook for March indicates increased chances of below-normal rainfall. For the remainder of the 2011-2012 dry season, the CPC outlook continues to show increased chances for below-normal rainfall.

Upper and Lower Kissimmee Basins

Stages in the Kissimmee Chain of Lakes are at or within 0.5 feet (below) their respective flood regulation schedules or the temporary snail kite recession targets. The temporary snail kite recession targets have been implemented for Lakes Toho, East Toho, Kissimmee, Cypress and Hatchineha. Lake Kissimmee stage continues to recede due to the dry weather and S-65 environmental releases, which are made to the Kissimmee River per the Interim Operational Schedule and Release Rules for Lake Kissimmee-Hatchineha-Cypress. Discharge at S-65 to the Kissimmee River averaged about 1030 cfs for the week ending Feb 26th, down slightly from last week's 1070 cfs. Discharge from the Kissimmee River to Lake Okeechobee via S-65E averaged about 840 cfs for the week ending Feb 26th, similar to last week's 845 cfs.

Lake Okeechobee Stage and Regulation Schedule

The Feb 27th, 2012 Lake Okeechobee stage (reported by the USACE on February 28th) was 13.00 feet NGVD, 0.12 feet lower compared with 7-days ago. The February 27th stage was about 0.3 feet lower than it was a month ago and about 0.8 feet higher than a year ago. The current stage remains about 1.5 feet lower than the historical average for this date.

This week the Tributary Hydrologic Conditions is again in the "dry" classification (LORS-2008 classifications). The 14-day average Lake Okeechobee Net Inflow was -855 cfs (dry) through February 26th. The latest Palmer Index was -3.14 (very dry). The February 27th Lake stage was about 0.4 feet above the bottom of the Baseflow Sub-band and about 1.1 feet above the Water Shortage Management Band.

The LORS-2008 release guidance suggests no releases to the WCAs due to the dry tributary hydrologic conditions. LORS-2008 release guidance also suggests up to 450 cfs at S-79, and up to 200 cfs at S-80. Those releases are baseflow releases designed to regulate Lake stages. The SFWMD's Adaptive Protocol provides the necessary guidance for the appropriate release amount. Refer to the recommendations section below.

Water Supply Risk Indicators

The risk status for Lake Okeechobee Area is the same as last week. Five of the six LOSA water supply risk indicators are in the "medium risk" category; only the Palmer Index is within the "high risk" category. The CPC precipitation outlook for the upcoming 3 months improved from the "high risk" to the "medium risk" category. The risk status for all WCAs and Lower East Coast service areas remains within the "low risk" category.

The South Florida Water Management District Governing Board voted on November 10 to rescind a series of water shortage orders that restricted landscape irrigation and placed mandatory reductions of agricultural and other large water uses. The action was taken in response to improved water resource conditions throughout the District's 16-county region following the fourth-wettest October on record. With long-term forecasts still calling for below-average rainfall during the 2011-2012 dry season, the Governing Board also declared a water shortage warning to encourage continued vigilance and voluntary water conservation.

Groundwater Levels

Groundwater levels decreased over most of the District this week due to below-average rainfall. Most of the United States Geological Survey (USGS) real-time wells in the Kissimmee Basin within the District boundaries are at their lowest 10th to 30th percentile levels for this time of year; a few remain at median levels. Stages in the Upper East Coast (UEC) canals C-23, C-24, and C-25 are at 22.00, 19.61, and 21.25 ft NGVD, respectively, well above the 14 ft NGVD agricultural cutoff level. Groundwater levels in the UEC in most wells are at median levels for this time of year. Biscayne aquifer water elevations in the Lower East Coast (LEC) declined in USGS stations this week. Levels dropped from 0.1 to 0.2 ft in many wells; however, about half of LEC wells remain in their highest 10th to 30th percentile range for this time of year, and the rest are at median levels. Only one LEC well, G-1183 in Homestead, has dropped to the lowest 10th percentile. For more detailed information, refer to the Feb 28, 2012 Water Supply Report, which is posted at www.sfwmd.gov.

Everglades WCAs

During the past week WCA water levels at the gages used for the regulation schedules receded. Rainfall amounts ranged from 0.00 inches in the WCAs to 0.16 inches in ENP. WCA-1 marsh stage is about 0.5 feet below its lower (Zone B) regulation schedule. WCA-2A marsh gage (2-17) is about 0.6 feet above schedule. WCA-3A stage has receded to just above the bottom of the regulation schedule's Zone E1.

Water releases from WCA-3A to ENP per the Shark Slough Rainfall Plan continue. The Rainfall Formula amount this week is 203 cfs; target flow is also 203 cfs since the average WCA-3A stage is below the transition zones of the regulation schedule, thus requiring no regulatory/supplemental flow component. Target flow is down from last week's 258 cfs. S-333 is open to deliver 55% of the target flow to Northeast Shark River Slough (stage at G-3273 is 5.93 ft, is below the trigger stage of 6.8 feet, NGVD). S-12D is open to pass 45% of the target flow. S-12A, S-12B and S-12C are closed per the federal operating rules (Interim Operating Plan {IOP}).

St. Lucie Estuary

The estuary received no inflow via S-80 from Lake Okeechobee during the past week. No inflow from C-23 and C-24 occurred. 7-day average salinity conditions in the SLE have increased during the past week, and the 30-day moving average remains within the preferred range at the US-1 Bridge; conditions are classified as good for oysters for this time of year. It is recommended that the estuary should not receive inflows from the Lake or from C-44 basin runoff. To conserve water supplies it is recommended that the USACE continue their current operation to direct C-44 basin runoff westward to Lake Okeechobee, and not eastward through S-80 to tide.

Caloosahatchee Estuary

Releases have been made from the Lake via S-77 and to the Caloosahatchee Estuary via S-79 during the past eleven weeks (since December 16, 2011) per the Lake Okeechobee Adaptive Protocol (AP) recommendation. The 30-day moving average surface salinity has risen to about 6.9 psu at Val I75 (was 7.1 psu last week) and 14.0 psu at Ft. Myers (was 13.9 psu last week). Salinity conditions in the estuary are considered to be poor for tape grass and fair for oysters considering their salinity preference and location in the estuary. Releases at S-79 averaged about 495 cfs during the past week. Flow releases of 450 cfs and greater have not been sufficient to lower salinity at Val I75 below 5 psu. The February 28th salinity forecast (assuming baseflow releases stop) indicates the 30-day moving average salinity at Val I-75 will increase during the next two weeks, and will continue to exceed 5 psu.

The following describes the release guidance per the [Final Adaptive Protocols for Lake Okeechobee Operations \(September 16, 2010\)](#). Each Tuesday the Coastal Ecosystem Section

reviews the salinity conditions in the Caloosahatchee estuary and forecasts the predicted salinity for 14 days into the future at Val I75. The criterion for when the estuary needs water depends on the two week predicted salinity at Val I75 being at least 5 psu. Therefore according to the salinity criterion, the estuary needs freshwater inflow at S-79, supplemented from Lake Okeechobee as necessary.

The upper branch of the Adaptive Protocol release guidance flowchart applies since the stage is within the Baseflow Subband of the regulation schedule. Currently there is less than a 50% chance that the Lake stage will fall below elevation 11.0 ft, NGVD, before the end of the dry season. Correspondingly, the release guidance suggests releases up to 450 cfs at S-79, supplemented as needed with Lake Okeechobee releases at S-77.