

## MEMORANDUM

**TO:** John Mitnik, Division Director, Operations, Engineering, and Construction

**THROUGH:** Peter Kwiatkowski, Section Administrator, Resource Evaluation

**FROM:** SFWMD Staff Water Supply Advisory Team

**DATE:** December 6<sup>th</sup>, 2016

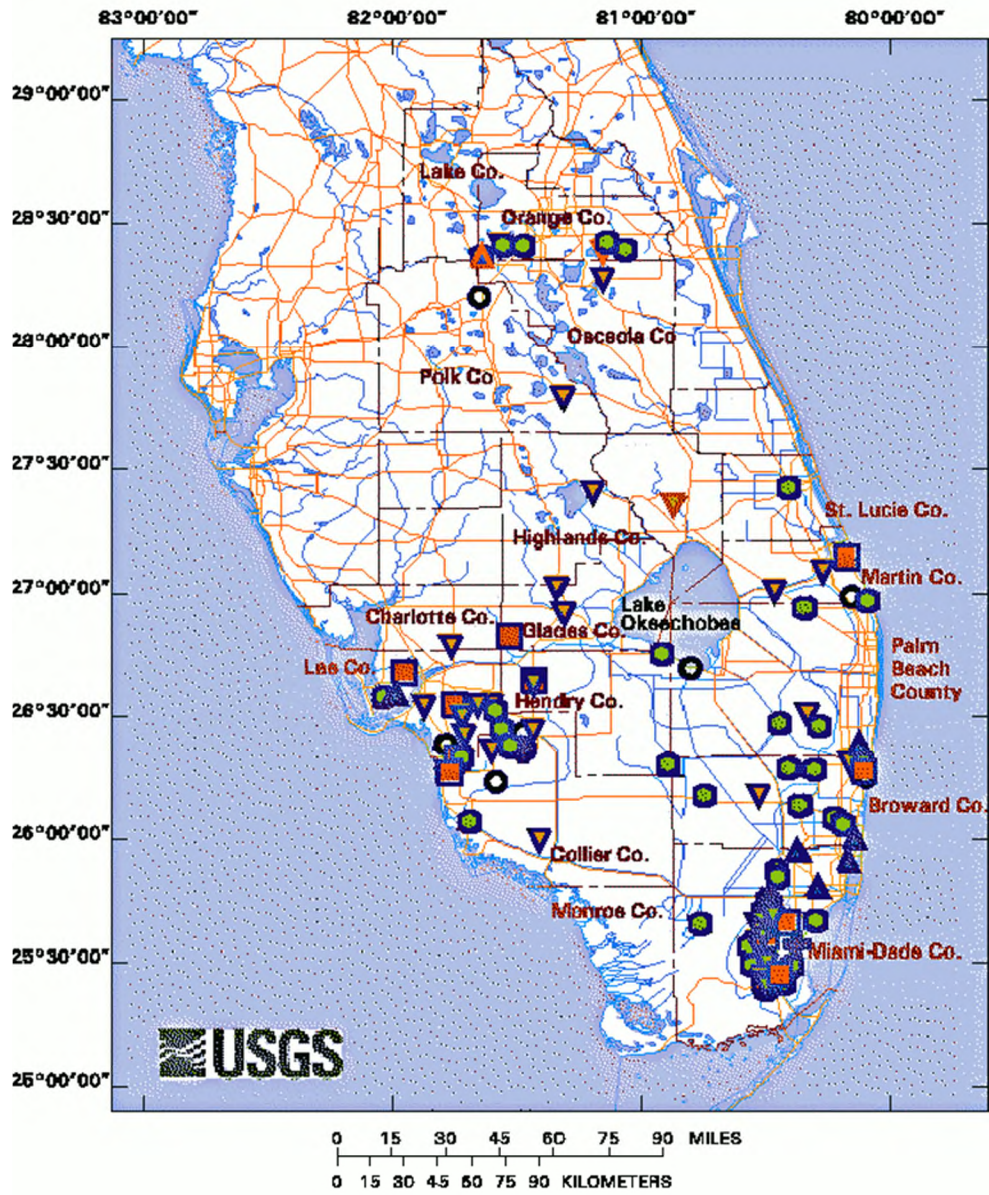
**SUBJECT:** Water Supply Report

### **District-wide Conditions**

Surface and groundwater levels showed mixed trends throughout the District over the last week. Approximately half of United States Geological Survey (USGS) real-time wells in the Kissimmee Basin (KB) within the District boundaries are at median levels for this time of year. The remainder are in the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range. Most of the surface and groundwater stations across the KB recorded decreases in water levels during the last seven days. Stages in the Upper East Coast (UEC) canals C-23, C-24, and C-25 were at 21.44, 19.34, and 17.68 feet, respectively, well above the 14 feet NGVD agricultural cutoff level. About half of UEC surficial aquifer wells are in the median percentile range for this time of year. Surface and groundwater levels decreased in over fifty percent of the stations in the Biscayne aquifer. Approximately three quarters of the USGS Biscayne aquifer monitor wells are in their median percentile range or higher at this time. The remainder is mostly in the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range.

In the Lower West Coast (LWC), groundwater levels decreased in the majority of the monitor wells over the last seven days. Approximately sixty percent of the wells in the Surficial aquifer are in the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range, with the remainder at median levels. About half of the Lower Tamiami aquifer wells are at median levels, with the rest in the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range. Approximately fifty percent of the Sandstone aquifer monitor wells are in the median percentile range for this time of year, again with the remainder mostly in the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range. About half of the Mid-Hawthorn aquifer monitor wells are at median levels or higher for this time of year, with the remainder split between the lower 10<sup>th</sup> to 30<sup>th</sup> percentile range and the lowest 10<sup>th</sup> percentile range. Figure 1 is a USGS map showing conditions on December 5<sup>th</sup>, 2016, from a 7-day running average of daily recorded water levels compared to the statistical distribution of daily water levels for the period of record for selected sites in southern Florida.

PROVISIONAL DRAFT -- Subject to Revision



- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li> Rivers and canals</li> <li> Roads and highways</li> <li> County boundaries</li> <li> Telemetry site</li> <li> No telemetry, monthly download</li> </ul> | <p>Water level compared to historical data, without trend analysis:</p> <ul style="list-style-type: none"> <li> Insufficient information available to compute water-level statistics</li> <li> In lowest 10 percent of past water elevations</li> <li> Within lowest 10 to 30 percent of past water elevations</li> <li> Within 20 percent of the median of past water elevations</li> <li> Within highest 10 to 30 percent of past water elevations</li> <li> In highest 10 percent of past water elevations</li> </ul> |
|---|--|

**Water levels at selected sites in South Florida,  
Based on PROVISIONAL DATA, as of December 5, 2016.**

**Figure 1. Current Water-level Conditions in South Florida (source: USGS, [http://www.sflorida.er.usgs.gov/ddn\\_data/index\\_ndt.html](http://www.sflorida.er.usgs.gov/ddn_data/index_ndt.html))**

## **Water Supply Technical Input to LORS2008**

The Palmer Index for Lake Okeechobee (LOK) Tributary Conditions is -0.93, classified as “normal,” and is in the “low” risk category. The LOK stage for the next two months is projected to be in the Low Flow Sub-Band, and the risk to water supply is categorized as “low.” The Climate Prediction Center’s (CPC) Precipitation Outlook is projected as “below normal” for one month and “below normal” for three months, leaving both the one month outlook and the three month outlook in the “moderate” risk category. The LOK Seasonal Net Inflow Forecast is in the “extremely dry” range, with “high” risk to water supply. The Multi-Seasonal Net Inflow Forecast is projected as “normal” with “moderate” risk to water supply. The stages in the Water Conservation Areas are all above line 1 and are in the “low” risk category. Groundwater levels in LEC Service Areas are in the “low” risk category. The Year-Round Irrigation Rule is in effect for the LEC Service Areas. **Figure 2** summarizes the water supply risk indicators.

**LORS2008 Implementation on 12/5/2016 (ENSO La Nina Condition):**

**Status for week ending 12/5/2016:**

District wide, Raindar rainfall was 0.00 inches for the week. Lake stage on 12/5/2016 was 14.69 ft, down 0.11 ft from last week.

The updated November 2016 SFWMM Dynamic Position Analysis [percentile graph](#) for Lake Okeechobee show that the current lake stage is in the Low Operational Sub-Band.

The LORS2008 tributary [indices](#) are classified as **Normal**. The PDSI indicates normal condition and the LONIN is Dry. The classification is based on the wetter of the two.

**Water Supply Risk Evaluation**

Area	Indicator	Value	Color Coded Scoring Scheme
LOK	Projected LOK Stage for the next two months	Low Sub-Band	L
	Palmer Index for LOK Tributary Conditions	-0.93 (Normal)	L
	CPC Precipitation Outlook	1 month: Below Normal	M
		3 months: Below Normal	M
	LOK Seasonal Net Inflow Outlook	-0.25 ft (Extremely Dry)	H
	ENSO La Nina Years		
	LOK Multi-Seasonal Net Inflow Outlook	2.78 ft (Normal)	M
ENSO La Nina Years			
WCAs	WCA 1: Site 1-7, Site 1-8T, & Site 1-9 Average	Above Line 1 (16.59 ft)	L
	WCA 2A: Site 2-17 HW	Above Line1 (12.60 ft)	L
	WCA-3A: 3 Station Average (Site 63, 64 and 65)	Above Line 1 (10.04 ft)	L
LEC	Service Area 1	Year-Round Irrigation Rule in effect	L
	Service Area 2	Year-Round Irrigation Rule in effect	L
	Service Area 3	Year-Round Irrigation Rule in effect	L

Note: The water supply risk classification based on the Palmer index, as well as the LOK seasonal and multi-seasonal net inflow outlooks use slightly different classification intervals than those used by the 2008-LORS.

**Figure 2. Water Supply Risk Indicators**