

MEMORANDUM

TO: Governing Board

FROM: Megan Wetherington, P.E., Water Resources Engineer

THRU: Jerry A. Scarborough, Executive Director
Kirk B. Webster, Deputy Executive Director

DATE: February 9, 2007

RE: January 2007 Hydrologic Conditions Report for the District

The Hydrologic Conditions Report is compiled from data collected from four water resource-monitoring networks. The four networks are rainfall (radar-derived rainfall estimate), groundwater levels (101 wells), lake levels (17 lakes), and river levels (31 stations on 8 rivers).

RAINFALL

The District received, on average, 3.95 inches of rain during January. The average January rainfall is 4.38 inches. Total rainfall for the past 12 months is 41.30 inches. The long-term average annual rainfall is 55.6 inches. Eleven of the last twelve months had below-average precipitation. As of January 31, the District had a twelve-month rainfall deficit of 14.30 inches, making this period the sixth driest since 1931. Most of the District is experiencing abnormally dry conditions, according to the United States Department of Agriculture/U.S. Drought Monitor. The National Weather Service long-term forecast indicates that the predicted El Niño weather pattern, responsible for bringing wetter conditions to the Southeast, may be weakening. However, above-average rainfall is still predicted for February. A summary of rainfall by county and a comparison of monthly rainfall versus the long-term average are provided in Table 1 and Figure 1, respectively. Figure 2 shows the radar-derived rainfall distribution. January rainfall data are provisional, and subject to revision. Statistics are updated as revised data become available.

GROUNDWATER

Groundwater levels in 82 wells rose by an average of 7 inches. Levels remain lower than average. All but three wells within the network were below the 50th percentile of all January readings. Thirty wells were between the 25th and 50th percentile, while fifty wells were below the 25th percentile. The percentile is the percentage of the monthly average groundwater levels that are equal to or below this month's level. See Figure 3 for a generalized representation of District groundwater levels.

SURFACEWATER

Lake levels within the District's monitoring network increased by an average of 3.6 inches, the second consecutive monthly increase. Lake levels are shown compared to historic lake data in Table 2.

In the first two weeks of January, river levels generally rose slightly in response to late December-early January rains, then fell back to nearly December levels through the end of the month. Rivers in the Suwannee and Coastal Rivers basins were below the 30th percentile for January. The Santa Fe River at Fort White tied a record January low level observed in 2002. No all-time record low river discharges or levels were observed. January river levels at selected monitoring stations are provided in Table 3.

WATER CONSERVATION

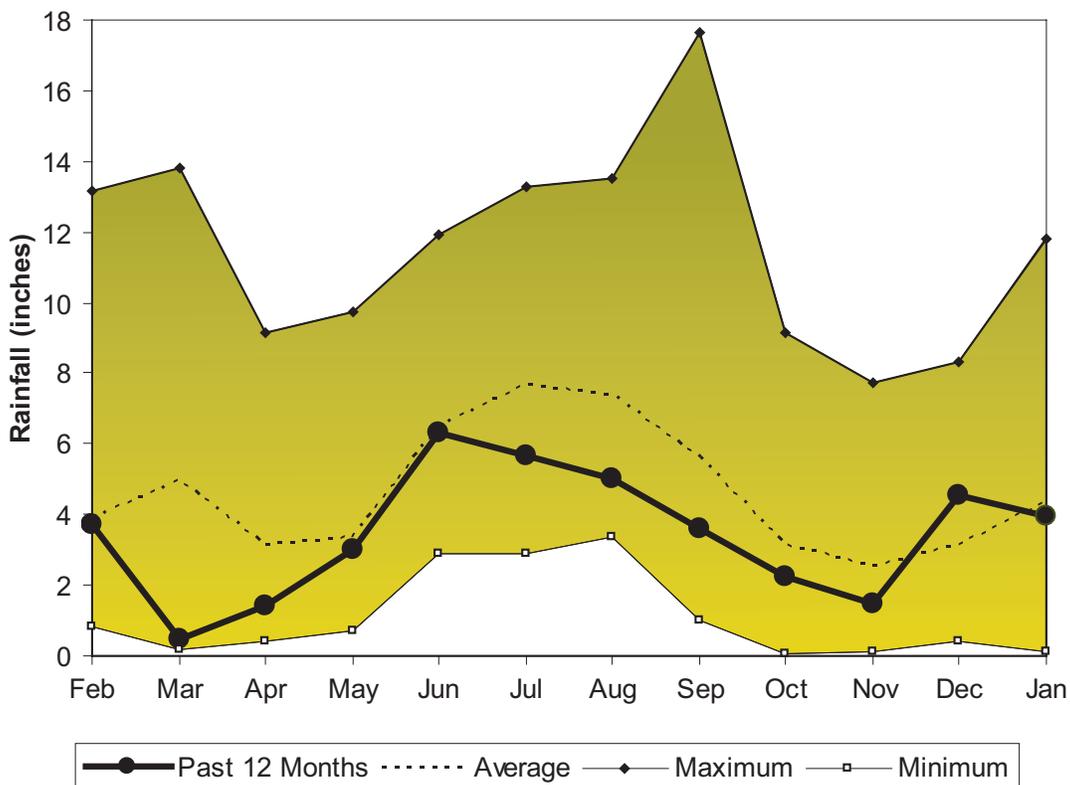
While recent rains and cool weather have increased surfacewater and groundwater levels, the District's water resources remain in a state of recovery. The District recommends that water conservation be an ongoing activity for all water users. The Governing Board declared a Phase I Water Shortage Advisory on November 14, 2006, requesting voluntary reductions in water use. This advisory remains in effect. The District has a variety of free water conservation information available to the public, including a Home Water Use Survey and conservation tips, wastewater reuse, and xeriscape publications. Water is conserved by using the minimum amount needed for specific applications and by irrigating lawns, plants, and crops only when necessary and in the morning before 10 a.m. and in evening hours after 4 p.m., when lower temperature and wind velocity reduce the amount of water lost to evaporation.

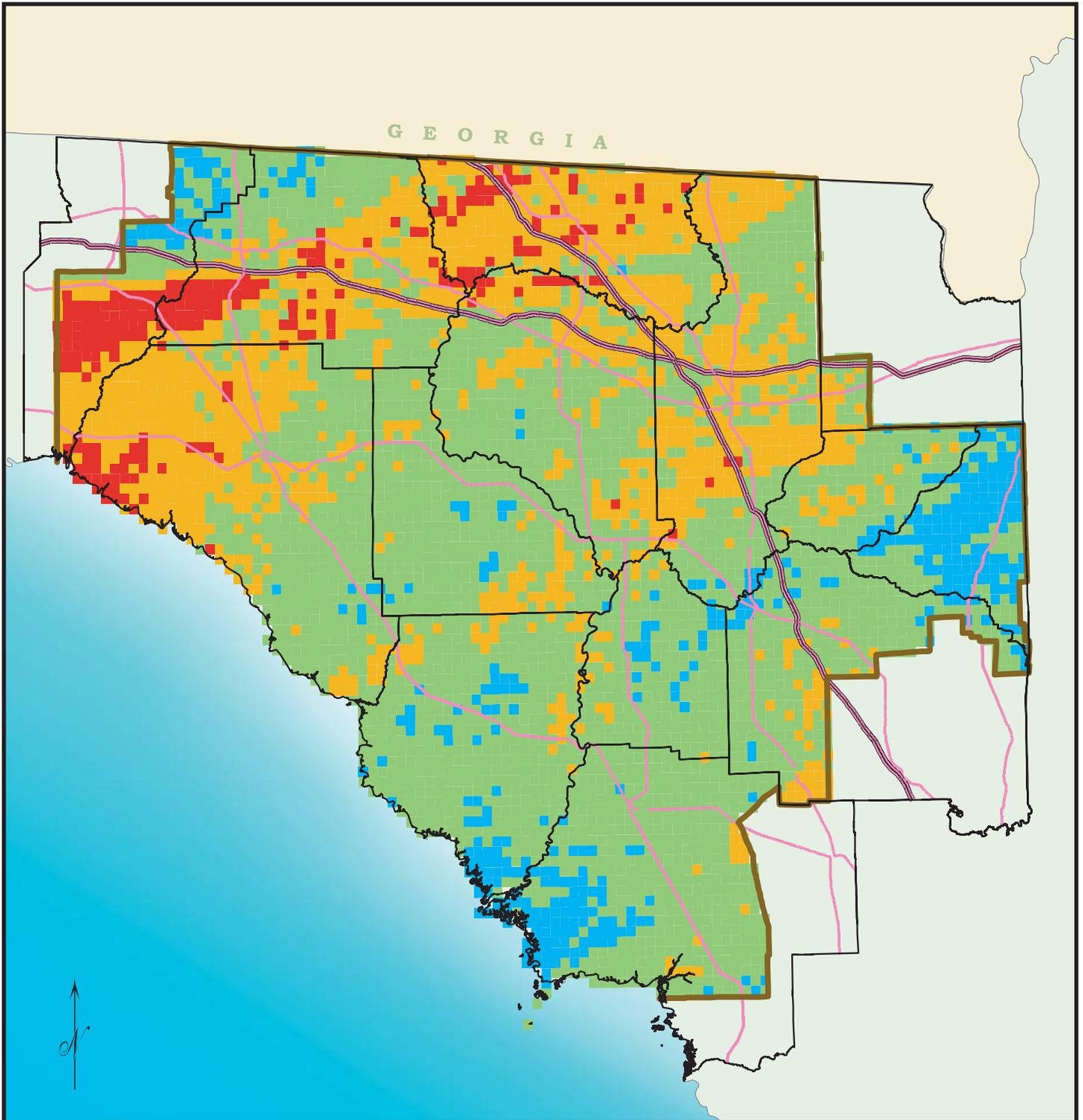
/dd

Table 1. County and District-wide Rainfall Totals

County	Jan-2007	Jan-2006	Average
		(inches)	
Alachua	3.51	2.84	3.73
Baker	3.93	3.28	3.89
Bradford	2.88	2.73	3.93
Columbia	3.87	3.76	3.97
Dixie	3.37	2.81	4.23
Gilchrist	3.75	3.27	4.58
Hamilton	4.36	3.51	4.65
Jefferson	4.79	3.79	4.87
Lafayette	4.32	3.42	4.62
Levy	3.66	1.81	4.32
Madison	4.47	3.83	4.99
Suwannee	4.18	3.75	4.76
Taylor	4.48	4.05	4.72
Union	3.76	3.15	4.00
District January 2007 Average			3.95
District Historical January Average			4.38
District Historical 12-month Average			55.62
Cumulative District 12-month Rainfall			41.32
Cumulative District 12-month Deficit:			-14.30

Figure 1: Comparison of District Monthly Rainfall





Major Roads

-  Interstate
-  US
-  District Boundary
-  County Boundaries

Rainfall

-  2 to 3 inches
-  3 to 4 inches
-  4 to 5 inches
-  More than 5 inches

**January 2007
Estimated Rainfall**

Figure 2



Note: This map was created by the Suwannee River Water Management District (SRWMD) to be used for planning purposes only. SRWMD shall not be held liable for any injury or damage caused by the use of data distributed as a public records request regardless of their use or application. SRWMD does not guarantee the accuracy, or suitability for any use of these data, and no warranty is expressed or implied. For more information please contact the SRWMD at 386-362-1001.

Groundwater Levels

January, 2007

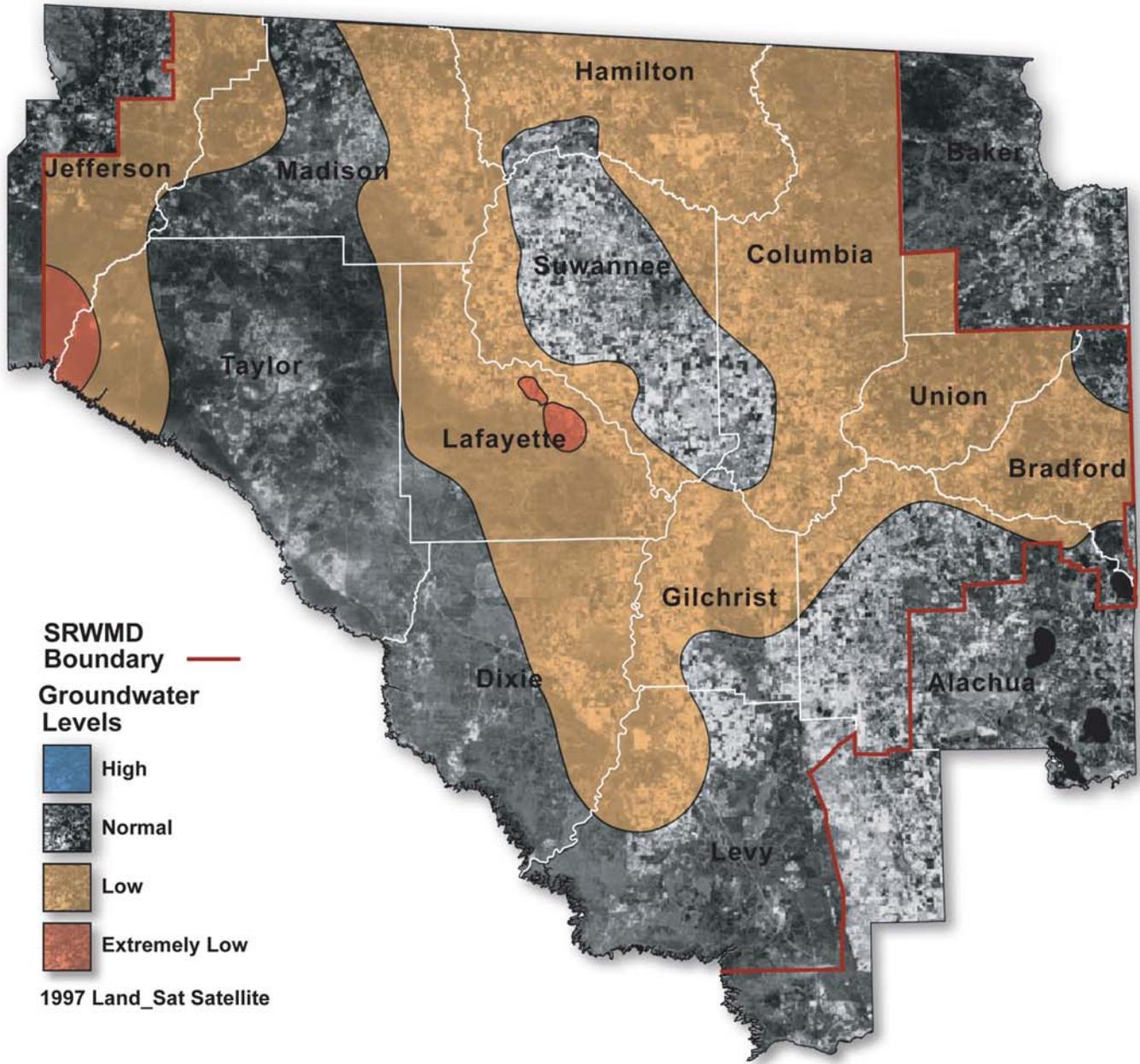


Figure 3

Table 2. Lake Levels within SRWMD.

Lake	Beginning Record	2007 January	2006 December	2006 November	2006 January	Monthly Change	Record Low	Record High
Lake Octahatchee	Nov-74	102.0	BG	BG	106.06	N/A	95.6 (3/89)	107.9 (3/05)
Cherry Lake	Nov-74	151.67	151.47	151.21	151.79	0.20	150.8 (11/90)	154.0 (9/75)
Andrews Lake	Nov-74	76.89	76.52	76.23	77.72	0.37	73.3 (12/01)	78.4 (12/94)
Palestine Lake	Aug-75	141.90	141.76	141.38	143.84	0.14	139.3 (10/02)	145.2 (10/92)
Ocean Pond	Dec-74	152.82	152.62	152.62	155.10	0.20	150.9 (8/02)	156.6 (2/98)
Governor Hill Lake	Nov-74	48.02	47.77	47.34	52.91	0.25	46.8 (1/02)	54.3 (2/98)
Alligator Lake	Sep-65	94.42	93.76	93.46	96.77	0.66	90.2 (4/68)	100.8 (9/04)
Lake Francis	Jun-99	140.43	140.20	139.87	140.13	0.23	139.0 (12/01)	141.7 (9/04)
Lake Butler	Jul-57	128.55	128.22	128.38	131.23	0.33	126.8 (7/02)	134.0 (9/64)
Hampton Lake	Feb-89	128.18	128.14	128.08	130.46	0.04	124.5 (5/02)	133.4 (3/98)
Lake Sampson	Jul-57	130.26	129.99	129.87	131.74	0.27	129.5 (12/77)	136.2 (3/59)
Lake Crosby	Feb-89	129.17	129.13	128.98	131.99	0.04	128.3 (5/01)	135.4 (10/04)
Waters Lake	Jul-72	BG	BG	BG	72.71	N/A	55.1 (2/82)	79.7 (9/04)
Low Lake	Nov-74	148.35	147.87	147.38	147.84	0.48	146.8 (7/00)	150.3 (6/94)
Santa Fe Lake	Jul-58	138.62	138.61	138.47	141.03	0.01	135.7 (10/02)	142.8 (1/98)
Lake Altho	Mar-76	138.09	138.08	137.98	139.78	0.01	136.8 (7/01)	141.5 (2/98)
Snead's Smokehouse Lake	Dec-76	80.00	79.22	78.86	80.73	0.78	78.4 (5/96)	85.4 (4/84)

Bold indicates record measurement.

* - BG indicates lake level below gage.

N/A - Data missing

Table 3. River Levels within SRWMD.

	January 2007	Average January	January 2006	January Lowest	January Highest	Historic Low	Historic High
<u>SUWANNEE RIVER AND TRIBUTARIES</u>							
SUWANNEE RIVER @ White Springs	50.80	59.53	56.62	49.73	73.74	49.59 Jun-55	88.56 Apr-73
SUWANNEE RIVER @ Ellaville	30.19	35.08	34.10	28.93	51.39	28.55 Aug-02	68.10 Apr-48
SUWANNEE RIVER @ Branford	9.43	13.47	15.96	6.78	26.78	6.74 Jul-02	38.88 Apr-48
SUWANNEE RIVER @ Wilcox	2.09	5.08	5.58	0.40	10.35	0.37 Feb-57	21.79 Apr-48
WITHLACOOCHEE RIVER near Pinetta	55.19	59.44	56.22	53.81	82.29	53.25 Aug-02	85.85 Apr-48
SANTA FE RIVER near Fort White	21.14	21.62	22.20	21.14	25.71	21.01 Nov-02	36.20 Sep-64
<u>COASTAL RIVERS</u>							
AUCILLA RIVER at Lamont	47.46	51.03	48.92	46.65	54.34	43.50 Jun-55	59.47 Apr-73
STEINHATCHEE RIVER near Cross City	11.23	12.29	11.87	10.29	20.42	10.11 Jul-81	26.74 Sep-64
ECONFINA RIVER near Perry	18.20	19.61	19.32	15.85	24.76	15.85 Jan-76	27.13 Sep-57
FENHOLLOWAY RIVER near Foley	54.64	55.87	57.27	54.30	58.74	54.17 Aug-77	68.80 Sep-64

Bold indicates new record set during the month.