

MEMORANDUM

TO: Governing Board

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

DATE: January 5, 2007

RE: December 2006 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 rainfall dataset), groundwater levels (101 wells), lake levels (17 lakes), and river levels (31 stations on 8 rivers).

RAINFALL

The District received, on average, 4.94 inches of rain during December, an increase of 56% over the average December rainfall of 3.17 inches. Most of this precipitation resulted from two strong frontal systems during the last week of the month. Western and coastal counties received significantly more rain than the eastern part of the District; county averages ranged from 6.26 inches in Jefferson County to 3.87 inches in Alachua County. Cumulative rainfall for the past 12 months is 41.08 inches, compared to the long-term average annual rainfall of 55.6 inches. As of December 31, the District had a rainfall deficit of 14.54 inches. The year ending December 31 is the fifth driest year since 1931. 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. Figure 3 shows annual rainfall extremes for the District. December rainfall data are provisional.

GROUNDWATER

Groundwater levels continued to drop in December, with an average District-wide decrease of 7 inches. Record low levels for December were observed at eleven wells, seven of which are in Hamilton County. All but two wells within the network were below the 50th percentile for December levels, while three-quarters were below the 25th percentile. See Figure 4 for a generalized representation of District groundwater levels.

SURFACEWATER

Lakes within the District's monitoring network increased by an average of 2.4 inches, as a result of the late-December storms. No record lows were set. Lake levels are shown compared to historic lake data in Table 2.

District rivers continued to decline during the first three weeks of December, then began to climb slightly. Stations on the Suwannee River rose by 5 to 6 inches by December 31st. While no historic all-time lows were reached, a new record monthly low was observed at the Suwannee River at Branford, the Aucilla River at Lamont, and the Steinhatchee River near Cross City. No record low river discharges were observed, with the exception of the Suwannee River at Dowling Park, a station with only 10 years of recorded discharge measurements. December river levels at selected monitoring stations are provided in Table 3. December minimum flows are compared to low flows of previous dry years in Table 4.

WATER CONSERVATION

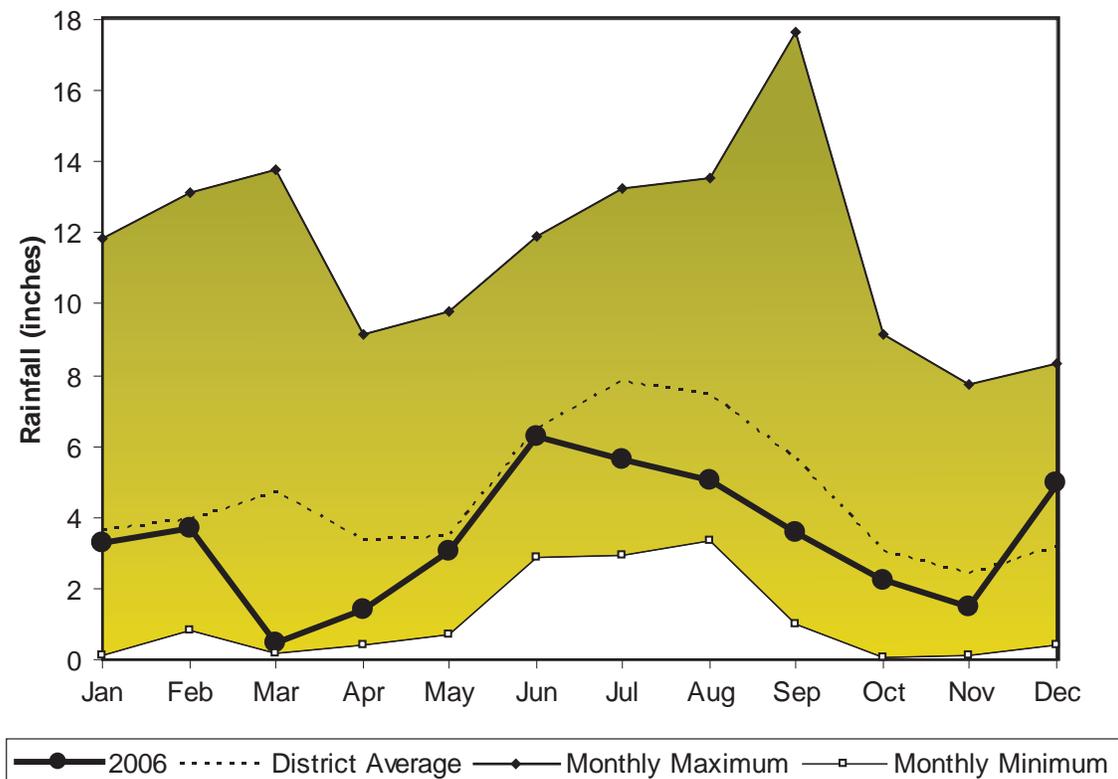
The Governing Board declared a Phase I Water Shortage Advisory on November 14, 2006, requesting voluntary reductions in water use by all District water users. This advisory remains in effect. The District has a variety of free water conservation information available to the public, including a Home Water 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.

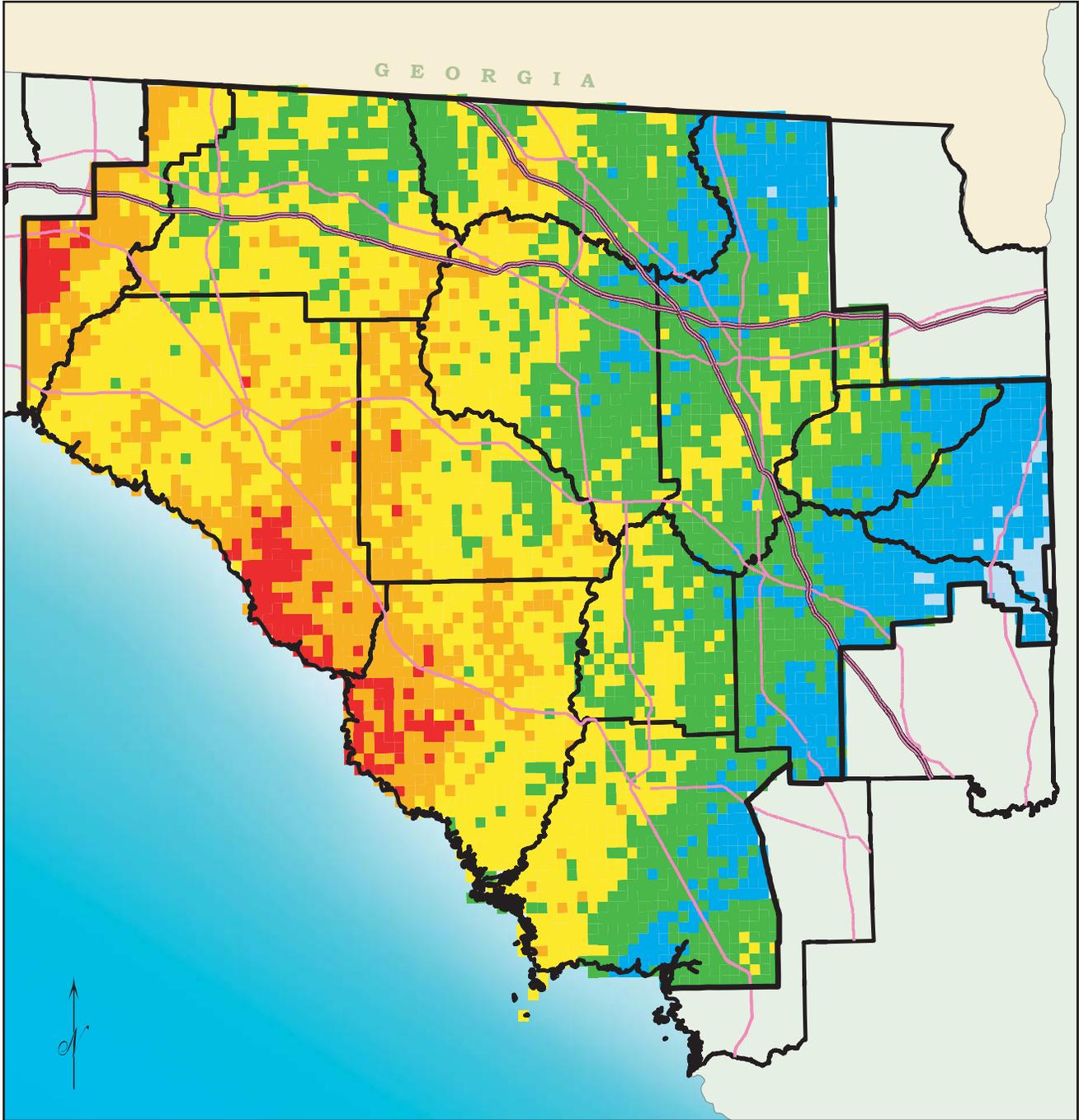
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Table 1. County and District-wide Rainfall Totals

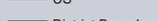
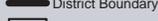
County	Dec-2006	Dec-2005	Average
		(inches)	
Alachua	3.87	7.14	2.77
Baker	4.79	7.27	2.77
Bradford	3.36	6.38	2.95
Columbia	4.36	6.81	3.08
Dixie	6.03	7.29	3.17
Gilchrist	4.90	7.05	3.07
Hamilton	4.74	5.59	2.98
Jefferson	6.26	4.99	4.25
Lafayette	5.71	7.16	3.33
Levy	4.74	6.19	3.18
Madison	5.18	4.70	3.79
Suwannee	4.96	6.69	2.79
Taylor	6.07	6.08	3.39
Union	4.17	7.28	2.86
District December 2006 Average			4.94
District Historical December Average			3.17
District Historical 12-month Average			55.62
Cumulative District 12-month Rainfall			41.08
Cumulative District 12-month Deficit:			-14.54

Figure 1: Comparison of District Monthly Rainfall





Major Roads

-  Interstate
-  US
-  District Boundary
-  County Boundaries

Rainfall

-  Less than 3 inches
-  3 - 4 inches
-  4 - 5 inches
-  5 - 6 inches
-  6 - 7 inches
-  More than 7 inches

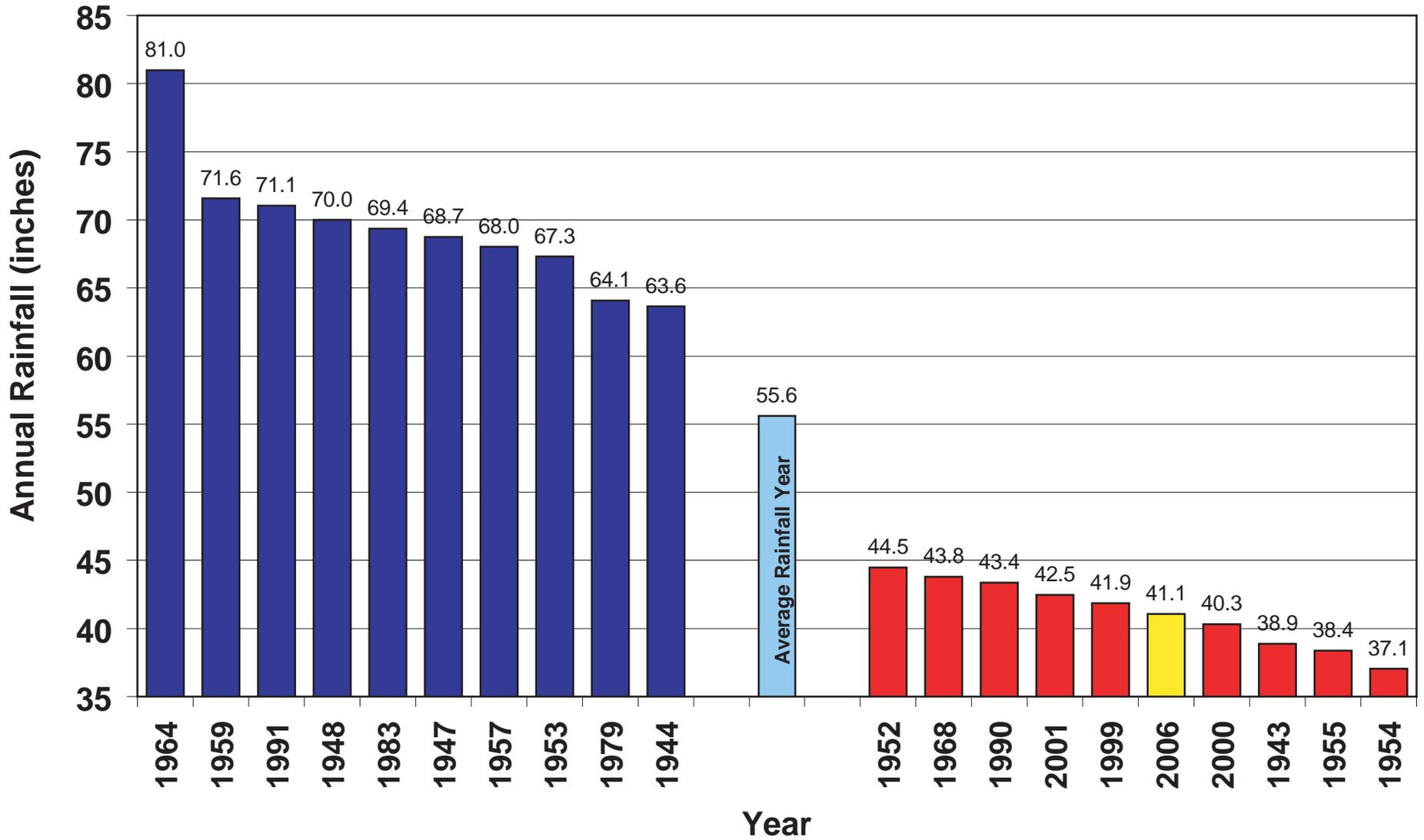
SRWMD December 2006 Rainfall

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.

Figure 3: Annual Rainfall Extremes in the SRWMD
The 10 Highest and Lowest Years
Year ending December 31, 1932- 2006



Groundwater Levels

December, 2006

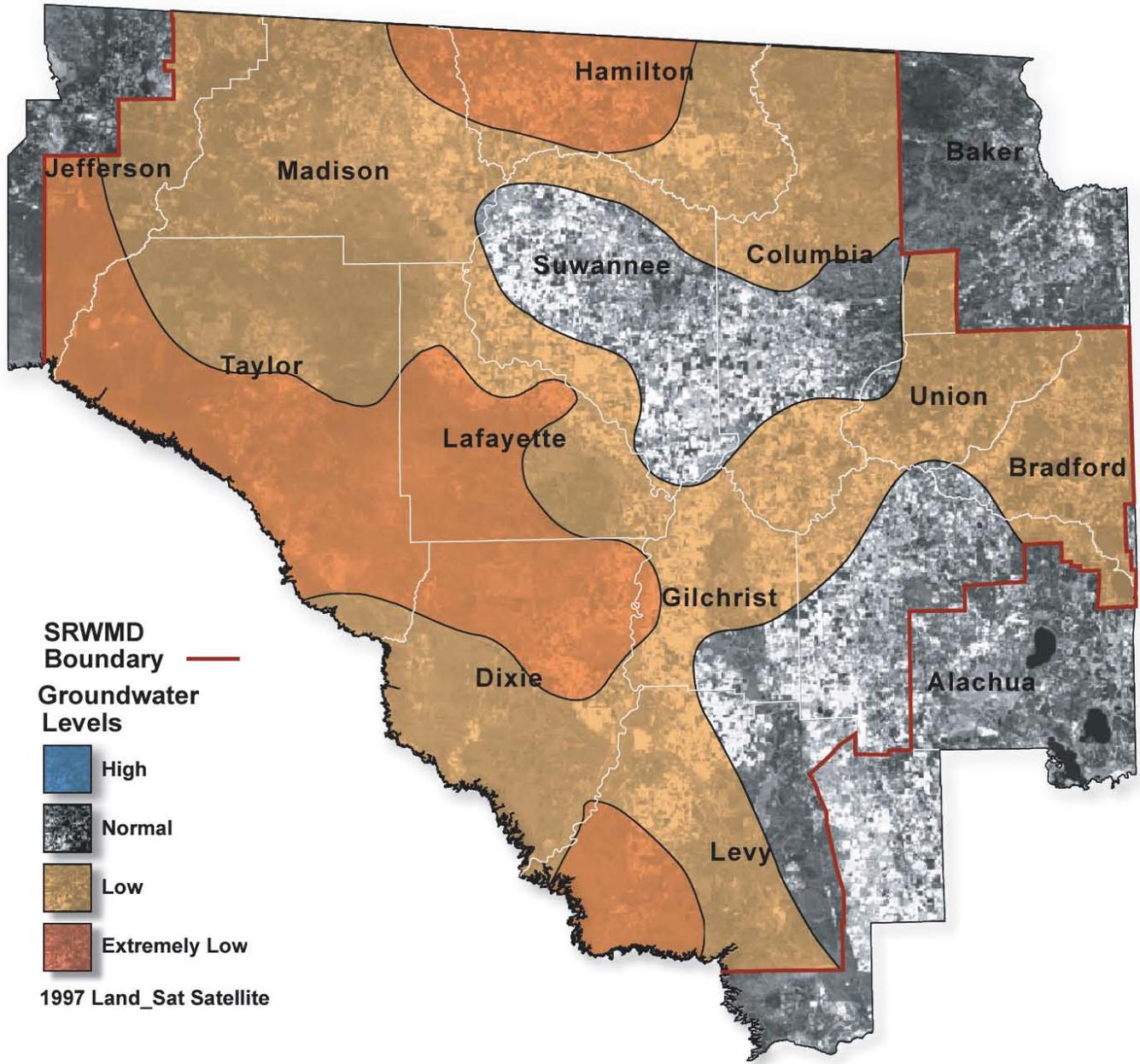


Figure 4

Table 2. Lake Levels within SRWMD.

Lake	Beginning Record	2006 December	2006 November	2006 October	2005 December	Monthly Change	Record Low	Record High
Lake Octahatchee	Nov-74	BG	BG	BG	107.56	N/A	95.6 (3/89)	107.9 (3/05)
Cherry Lake	Nov-74	151.47	151.21	151.22	152.39	0.3	150.8 (11/90)	154.0 (9/75)
Andrews Lake	Nov-74	76.52	76.23	76.16	77.87	0.3	73.3 (12/01)	78.4 (12/94)
Palestine Lake	Aug-75	141.76	141.38	141.62	144.00	0.4	139.3 (10/02)	145.2 (10/92)
Ocean Pond	Dec-74	152.62	152.62	152.74	155.24	0.0	150.9 (8/02)	156.6 (2/98)
Governor Hill Lake	Nov-74	47.77	47.34	48.48	53.04	0.4	46.8 (1/02)	54.3 (2/98)
Alligator Lake	Sep-65	93.76	93.46	93.53	97.93	0.3	90.2 (4/68)	100.8 (9/04)
Lake Francis	Jun-99	140.20	139.87	139.49	140.53	0.3	139.0 (12/01)	141.7 (9/04)
Lake Butler	Jul-57	N/A	128.38	128.48	130.69	N/A	126.8 (7/02)	134.0 (9/64)
Hampton Lake	Feb-89	128.14	128.08	128.35	129.93	0.1	124.5 (5/02)	133.4 (3/98)
Lake Sampson	Jul-57	129.99	129.87	129.99	131.49	0.1	129.5 (12/77)	136.2 (3/59)
Lake Crosby	Feb-89	129.13	128.98	129.21	132.26	0.2	128.3 (5/01)	135.4 (10/04)
Waters Lake	Jul-72	BG	BG	BG	73.07	N/A	55.1 (2/82)	79.7 (9/04)
Low Lake	Nov-74	147.87	147.38	147.25	148.20	0.5	146.8 (7/00)	150.3 (6/94)
Santa Fe Lake	Jul-58	138.61	138.47	138.74	140.65	0.1	135.7 (10/02)	142.8 (1/98)
Lake Altho	Mar-76	138.08	137.98	138.17	139.68	0.1	136.8 (7/01)	141.5 (2/98)
Snead's Smokehouse Lake	Dec-76	79.22	78.86	78.66	81.27	0.4	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.

	December 2006 Minimum	December 2006 Maximum	Average December	December 2005	December Lowest	December Highest	Historic Low	Historic High
<u>SUWANNEE RIVER AND TRIBUTARIES</u>								
SUWANNEE RIVER @ White Springs	49.8	50.3	57.1	56.6	49.6	77.0	49.59 Jun-55	88.56 Apr-73
SUWANNEE RIVER @ Ellaville	28.9	29.2	32.0	32.0	28.7	46.5	28.55 Aug-02	68.10 Apr-48
SUWANNEE RIVER @ Branford	7.5	8.0	10.9	13.7	8.3	23.7	6.74 Jul-02	38.88 Apr-48
SUWANNEE RIVER @ Wilcox	1.4	3.1	4.4	4.5	1.0	8.4	0.37 Feb-57	21.79 Apr-48
WITHLACOOCHEE RIVER near Pinetta	53.5	54.1	56.6	55.3	53.4	70.4	53.25 Aug-02	85.85 Apr-48
SANTA FE RIVER near Fort White	21.1	21.2	15.7	22.9	21.1	26.6	21.01 Nov-02	36.20 Sep-64
<u>COASTAL RIVERS</u>								
AUCILLA RIVER at Lamont	46.1	46.8	50.0	49.0	46.2	53.5	43.50 Jun-55	59.47 Apr-73
STEINHATCHEE RIVER near Cross City	10.3	10.6	12.0	11.9	10.4	23.7	10.11 Jul-81	26.74 Sep-64
ECONFINA RIVER near Perry	16.6	17.5	17.5	18.2	16.1	20.9	15.85 Jan-76	27.13 Sep-57
FENHOLLOWAY RIVER near Foley	54.6	54.9	56.0	57.2	54.2	59.5	54.17 Aug-77	68.80 Sep-64

Bold indicates new record set during the month.

Table 4. Low Flows within SRWMD.

	May 1932	June 1935	Nov 1943	Jun 1955	Dec 1968	Oct 1978	Nov 1981	Oct 1990	June 2000	Dec 2006*	Low Flow
Suwannee River											
Fargo, GA	0	-	0	0	16	3.2	7.8	1.0	8.4	1	0
White Springs	4.8	7.6	9.5	7.5	31	13	15	2.8	6.1	13	2.8
Ellaville	1050	1000	970	882	984	1200	1040	835	720	917	720
Dowling Park	-	-	-	-	-	-	-	-	987	980	980
Luraville	1490	1290	-	-	-	1577	1642	-	1050	1110	1050
Branford	1760	1820	1610	1610	1630	2262	1940	1530	1420	1740	1420
Rock Bluff	3320	3020	2720	2490	-	-	-	-	2565	2740	2490
Santa Fe River											
Worthington Springs	1.3	1.9	1.9	0.5	6.2	5.3	4.1	1.5	0	0	0
Ichetucknee River	260	243	264	241	297	311	277	264	228	340	228
Withlacoochee River											
Pinetta	134	94	86	70	91	140	95	99	88	80	70
Alapaha River											
Statenville, GA	22	29	28	17	20	23	24	20	33	23	17

All flows in cubic feet per second (cfs)

* December 2006 data are provisional and subject to change