# **Hydrologic Conditions**

for the month of

# February 2015

# Prepared by the Hydrologic Data Section Data Collection Bureau



March 31, 2015

http://www.watermatters.org

#### **ACKNOWLEDGMENTS**

The Hydrologic Conditions Report is a monthly effort of the Data Collection Bureau's Hydrologic Data Section. Acknowledgment is made to the following staff for their significant contributions, hard work and dedication to the timely production of this report:

Data Collection: Terry Burrell, Dave Dunnett, Don Everson, George

Prine, Steve Saxon, James Ferrell, Jeff Taylor, Greg

Johnston, Everett Eldridge and Robert Noland.

SCADA System: Mike Katherina.

QA/QC and Reporting: Margit Crowell, Pam Green, Steve DeSmith,

Patrick Casey, and Asmita Shukla.

Administrative Support/

Document Preparation: Karen Diez, Roxanne Frey, and Dianna Brass.

# **TABLE OF CONTENTS**

Introdu	uction	1
Execu	tive Summary – Provisional	2
Execu	tive Summary	3
Region	nal Overview	4
Rainfa	ıll	. 5 - 12
Surfac	ce Water	
	Lakes	13 - 20
	Streams	21 - 2
	Springs	26 - 29
Groun	d Water	
	Surficial Aquifer	30 - 32
	Intermediate and Floridan Aquifers	33 - 42
	Public Supply Wellfields	44 - 4
	Aquifer Resource	46 - 4
Water	Demand	
	Public Supply Surface Water Reservoirs	48 - 49
	Reservoirs	50 - 5
Appen	ndices	
	Rainfall Percentiles by Intervals & Region	56 - 5
	Rainfall Grid (NEXRAD)	58
	Lake Monitoring Stations	59 - 64
	Stream Monitoring Stations	65 - 66
	Description of Stream Monitoring Stations	67 - 70
	Springs Monitoring Stations	71 - 72
	Description of Springs Monitoring Stations	73 - 74
	Surficial Aquifer Monitoring Stations	75 - 76
	Groundwater & Aquifer Resource Monitoring Stations	77 - 78
	Wellfield Groundwater Monitoring Stations	79 - 8°
	Reservoir Locations	82

#### INTRODUCTION

The Hydrologic Conditions Report is generated monthly by the Hydrologic Data Section, Data Collection Bureau, of the Southwest Florida Water Management District. This report provides an end-of-month analytical summary of regional and temporal variations in the hydrologic conditions across the District's 16-county area for planning and regulatory purposes. In addition, it provides an excellent historical record for long-term local and regional hydrologic analysis.

The Hydrologic Data Section is responsible for the implementation and maintenance of a network of observation and monitoring stations used to track changes in various hydrologic parameters over time. Data collected are used by the regulatory, technical, and analytical sections of the District. Data recently collected and maintained by the section include: station and basin rainfall totals, stream and spring discharge measurements, and surface and ground water levels. Frequency of data collection ranges from hourly to monthly readings. All data collected are processed and analyzed, then uploaded into the Water Management Data Base for general access by the District. The Water Management Data Base is also periodically augmented from the United States Geological Survey's hydrologic data network.

The data presented in this report are monthly rainfall totals, streamflow, springflow, surface and ground water levels, reservoir levels and the Aquifer Resource Index. Associated maps of station locations are at the end of the report in the Appendices. Also reported herein are levels of public supply surface water reservoirs supplemented by various regional utilities. The data contained in this report was collected and analyzed in accordance with generally accepted procedures consistent with applicable scientific and technical standards of practice. The data presented are considered to be the best available at the time of publication and are subject to revision. Any questions about the significance, accuracy, or interpretation of these data should be referred to Granville Kinsman, Manager of the Hydrologic Data Section at (352) 796-7211 or (800) 423-1476, extension 4284.

The data evaluation, analyses and interpretation contained within this report have been prepared or approved by a certified Professional Geologist in accordance with Chapter 492, Florida Statutes.

Registration #PG-1704

#### Americans with Disabilities Act (ADA)

The Southwest Florida Water Management District (District) does not discriminate on the basis of disability. This nondiscrimination policy involves every aspect of the District's functions, including access to and participation in the District's programs and activities. Anyone requiring reasonable accommodation as provided for in the Americans with Disabilities Act should contact the District's Human Resources Bureau Chief, 2379 Broad Street, Brooksville, Florida 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only), ext. 4703; or email ADACoordinator@swfwmd.state.fl.us. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771(TDD) or 1(800)955-8770(Voice).

#### **EXECUTIVE SUMMARY**

#### **Provisional Hydrologic Conditions as of March 25, 2015**

Provisional rainfall totals are provided for the period of March 1, 2015 through March 24, 2015. The northern region has received an average of 1.10 inches, while the historic mean for the northern region for the month of March is 3.97 inches. The central region has received an average of 0.94 inch, while the historic mean for the central region for March is 3.55 inches. The southern region has received an average of 0.88 inch, while the historic mean for the southern region for March is 2.95 inches. District-wide, rainfall averaged 0.96 inch, while the historic mean for the District for March is 3.48 inches.

Provisional lake level data indicate that during the first 25 days of March, regional water levels have decreased in the Northern, Tampa Bay and Lake Wales Ridge regions of the District, while they have increased slightly in the Polk Uplands region. Average lake levels in the Northern region decreased an average of 0.17 foot and were 0.31 foot below the base of the normal range. Average lake levels in the Tampa Bay region decreased 0.10 foot and were 1.46 feet above the base of the normal range. Lake levels in the Polk Uplands region increased 0.02 foot and were 1.30 feet above the base of the normal range. The Lake Wales Ridge region posted an average decrease of 0.07 foot and was 0.50 foot below the base of the normal range.

As of March 23, 2015, provisional streamflow data based on regional index streams indicates average streamflow increased in the northern region of the District, while it decreased in the central and southern regions, compared to last month's data. Normal streamflow is flow that falls on or between the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The average streamflow for the Withlacoochee River near Holder in the northern region was at the upper-end of the normal range at the 71<sup>st</sup> percentile. The average streamflow for the Hillsborough River near Zephyrhills in the central region was above-normal at the 77<sup>th</sup> percentile, while flow in the Peace River at Arcadia in the southern region was at the upper-end of the normal range at the 72<sup>nd</sup> percentile.

Provisional groundwater data, as of March 23, 2015, indicate that levels in the intermediate and Floridan aquifers decreased in all three regions of the District, compared to last month's data. Aquifer levels were within the normal range in all three regions. The normal range is defined as levels that fall on or between the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The groundwater level in the northern region was at the 66<sup>th</sup> percentile, while levels in the central and southern regions were at the 71<sup>st</sup> and 52<sup>nd</sup> percentile, respectively.

#### **EXECUTIVE SUMMARY**

#### **Hydrologic Conditions for February 2015**

In February, average rainfall totals were normal in the northern region of the District, while rainfall was above-normal in the central and southern regions. The normal range for rainfall is defined by totals that fall on or between the 25<sup>th</sup> to 75<sup>th</sup> percentiles of the historical monthly accumulation for each region and where the 50<sup>th</sup> percentile represents the historical mean. The northern region received an average of 2.89 inches of rainfall, equivalent to the 51<sup>st</sup> percentile of the historical February record. The central region received an average of 5.42 inches of rainfall, equivalent to the 91<sup>st</sup> percentile, while the southern region received an average of 3.77 inches of rainfall, equivalent to the 78<sup>th</sup> percentile of the historical February record. The District-wide rainfall average of 4.15 inches was equivalent to the 78<sup>th</sup> percentile of the historical February record.

During the 12-month period from March 1, 2014 through February 28, 2015, the average rainfall totals in the northern and central regions were classified as "wetter than normal," while the totals in the southern region was classified as "normal." The northern region received an average of 59.70 inches of rainfall, equivalent to the 79<sup>th</sup> percentile of the historical annual record. The central region received an average of 58.66 inches of rainfall, equivalent to the 80<sup>th</sup> percentile, while the southern region received an average of 53.01 inches of rainfall, equivalent to the 54<sup>th</sup> percentile. The District-wide rainfall average of 56.99 inches was equivalent to the 73<sup>rd</sup> percentile of the historical annual record.

Average lake levels in February were below the annual normal range in the Northern and Lake Wales Ridge regions of the District, while they were within the annual normal range in the Tampa Bay and Polk Uplands regions. Normal lake levels are defined as levels that fall between the minimum low management level and the minimum flood level. Lake levels in the Northern region decreased by an average of 0.07 foot and were 0.14 foot below the base of the annual normal range. Lake levels in the Tampa Bay region increased an average of 0.09 foot and were 1.56 feet above the base of the annual normal range. Lake levels in the Polk Uplands region increased 0.12 foot and were 1.28 feet above the base of the annual normal range. Average lake levels in the Lake Wales Ridge region increased 0.04 foot and ended the month 0.43 feet below the base of the annual normal range.

Total streamflow in February, based on regional index streams, was above-normal in all three regions of the District. Normal streamflow is defined as the flow that falls on or between the 25<sup>th</sup> and 75<sup>th</sup> percentiles. Streamflow measured at the Withlacoochee River near Holder station in the northern region was in the 77<sup>th</sup> percentile. Streamflow in the Hillsborough River near Zephyrhills station in the central region was in the 93<sup>rd</sup> percentile, while total streamflow measured at the Peace River at Arcadia station in the southern region was in the 82<sup>nd</sup> percentile during February.

In February, groundwater data showed that levels in the intermediate and Floridan aquifers were at the top of the normal range in the northern region, were above-normal in the central region, while levels were within the normal range in the southern region. The normal range is defined as the level that falls on or between the 25<sup>th</sup> and 75<sup>th</sup> percentiles. The groundwater level in the northern region was in the 75<sup>th</sup> percentile, while levels in the central and southern regions were in the 80<sup>th</sup> and 58<sup>th</sup> percentiles, respectively.

#### REGIONAL OVERVIEW OF HYDROLOGIC CONDITIONS

#### **FEBRUARY 2015**

#### **Northern Region**

In February, the northern region received an average of 2.89 inches of rainfall, equivalent to the 51<sup>st</sup> percentile of the historical February readings, which is considered "normal." Average lake levels decreased in the northern region and ended the month an average of 0.14 foot below the base of the annual normal range. Total streamflow measured in the Withlacoochee River near Holder station decreased and was in the 77<sup>th</sup> percentile. Regional groundwater levels indicated average surficial aquifer water levels decreased and were in the 65<sup>th</sup> percentile, while levels in the intermediate and Floridan aquifer decreased and were in the 75<sup>th</sup> percentile.

# **Central Region**

In February, the central region received an average of 5.42 inches of rainfall, equivalent to the 91<sup>st</sup> percentile of historical February readings, which is considered "very wet." Average lake levels increased in the Tampa Bay and Polk Uplands regions, ending the month 1.56 and 1.28 feet, respectively, above the base of the annual normal range. Total streamflow measured at the Hillsborough River near Zephyrhills station increased and was in the 93<sup>rd</sup> percentile. Regional groundwater levels indicated average surficial aquifer water levels increased and were in the 74<sup>th</sup> percentile, while levels in the intermediate and Floridan aquifer decreased and were in the 80<sup>th</sup> percentile.

# Southern Region

In February, the southern region received an average of 3.77 inches of rainfall, equivalent to the 78<sup>th</sup> percentile of historical February readings, which is considered "wetter than normal." Average lake levels increased in the Lake Wales Ridge region and ended the month 0.43 foot below the base of the annual normal range. Total streamflow measured at the Peace River at Arcadia station increased and was in the 82<sup>nd</sup> percentile. Regional groundwater levels indicated average surficial aquifer water levels increased and were in the 68<sup>th</sup> percentile, while levels in the intermediate and Floridan aquifer decreased and were in the 58<sup>th</sup> percentile.

#### **RAINFALL**

The rainfall data used for all tabulations in this report are provided to the District under contract with an external vendor. These data are created by enhancing contractor-developed NEXRAD radar rainfall imagery with hourly rainfall data collected from the District's network of real-time gauges. This process results in highly accurate cell-based rainfall data representative of conditions over the entire District, including those portions where rainfall data collection would otherwise be limited due to gaps in the gauging network.

As defined by the United States Geological Survey (USGS), a percentile is a value on a scale of one hundred that indicates the percent of a distribution that is equal to or below it. For example, a rainfall total equivalent to the 90<sup>th</sup> percentile is equal to or greater than 90 percent of the rainfall totals recorded for this month during all years that totals have been recorded.

Percentiles for rainfall were calculated from the historical record by region, and by specific interval. The "wet season" total is the sum of the rainfall from June through September. The "dry season" total is the sum of the rainfall from October through May. The annual total characterization was calculated from a dataset of moving 12-month rainfall sum for the same period (1915 through the most recent completed year). The moving 12-month rainfall sum was used for annual statistics because it provided a much larger dataset, and therefore a better estimate of the true percentiles. The historical 12-month cumulative average is updated monthly.

Characterization ranges were established for each region, and for the whole District, with breaks at the 10<sup>th</sup> (P10), the 25<sup>th</sup> (P25), the 75<sup>th</sup> (P75) and the 90<sup>th</sup> (P90) percentiles. The rainfall in inches for each percentile break, by rainfall interval and by region and the characterization ranges are summarized in the Appendix.

In February, rainfall totals were within the normal range in the northern region of the District, while they were above-normal in the central and southern regions. The normal range for rainfall is defined by totals that fall on or between the 25<sup>th</sup> to 75<sup>th</sup> percentiles of the historical monthly average for each region and where the 50<sup>th</sup> percentile represents the historical mean. The northern region received an average of 2.89 inches of rainfall, equivalent to the 51<sup>st</sup> percentile of the historical February record. The central region received an average of 5.42 inches, equivalent to the 91<sup>st</sup> percentile, while the southern region received an average of 3.77 inches, equivalent to the 78<sup>th</sup> percentile. District-wide, rainfall averaged 4.15 inches, which is equivalent to the 78<sup>th</sup> percentile of the historical February record.

During the 12-month period from March 1, 2014 through February 28, 2015, the average rainfall totals in the northern and central regions of the District were classified as "wetter than normal," while the southern region was classified as "normal." The northern region received an average of 59.70 inches of rainfall, equivalent to the 79<sup>th</sup> percentile of the historical record. The central region received an average of 58.66 inches of rainfall, equivalent to the 80<sup>th</sup> percentile. The southern region received an average of 53.01 inches of rainfall, equivalent to the 54<sup>th</sup> percentile. The District-wide rainfall average was 56.99 inches, which is equivalent to the 73<sup>rd</sup> percentile of the historical annual record.

#### **Tampa Monthly Climate Summary for February 2015**

According to the National Weather Service, the monthly average temperature (°F) for Tampa was 59.7 degrees, which was 3.7 degrees below normal. The highest temperature recorded during the month was 78 degrees, while the lowest temperature recorded during the month was 34 degrees.

#### **Temperature and Precipitation Outlook**

The Climate Prediction Center's (CPC) three-month weather forecast, as of March 19, 2015, indicates a mixed rainfall forecast for the District. That is, above-normal chances for rainfall in the northern region of the District during the composite 3-month period from April through June 2015, while the forecast for the central and southern regions indicate equal chances for below-normal, normal or above-normal rainfall chances. The temperature forecast for this same time-period indicates equal chances for below-normal, normal or above-normal temperatures in all three regions of the District.

For more information log on to the CPC's website at:

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS index.html

# RELATIONSHIP OF FEBRUARY 2015 RAINFALL TO HISTORICAL RAINFALL AVERAGES

# Regional Summary:

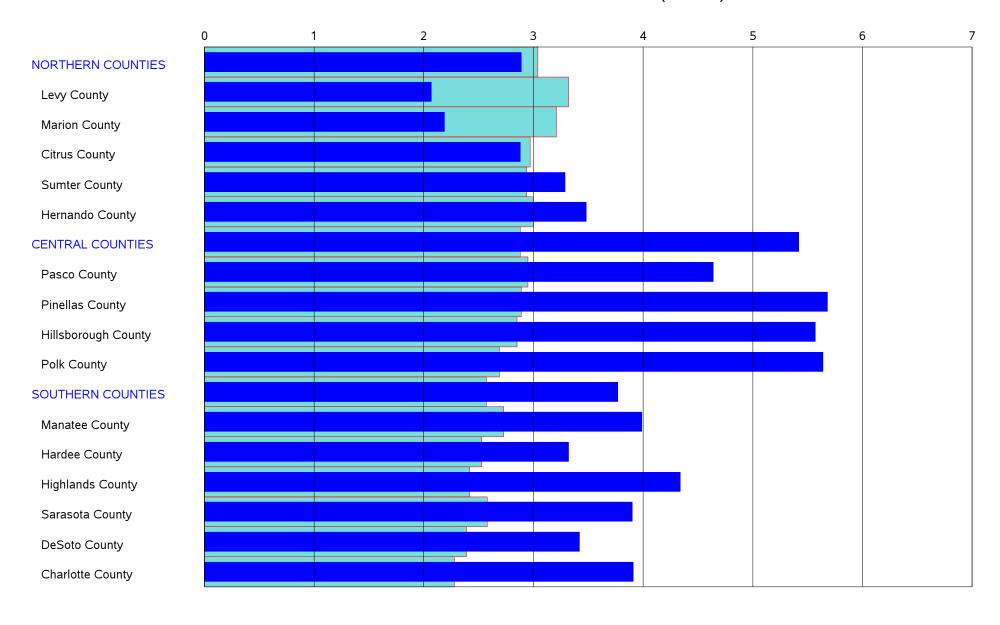
Region	FEB 2015 Average Rainfall	Historical Average for FEB	Departure from Historical Average	Calendar Year 2015 Cumulative Rainfall JAN-FEB	Calendar Year Historical Cumulative Rainfall JAN-FEB	Departure from Historical Cumulative FEB 2015	Cumulative 12-month Rainfall MAR 2014- FEB 2015	Historical 12-month Cumulative Rainfall	Departure from Historical 12-month Cumulative
Northern Counties	2.89	3.04	-0.15	6.52	5.78	0.74	59.70	53.53	6.17
Central Counties	5.42	2.88	2.54	7.42	5.34	2.08	58.66	52.26	6.40
Southern Counties	3.77	2.57	1.20	5.50	4.77	0.73	53.01	52.30	0.71
District All Counties	4.15	2.81	1.34	6.51	5.26	1.25	56.99	52.63	4.36
Regional Counti	es Summary:								
NORTHERN COUNTIES	FEB 2015 Average Rainfall	Historical Average for FEB	Departure from Historical Average	Calendar Year 2015 Cumulative Rainfall JAN-FEB	Calendar Year Historical Cumulative Rainfall JAN-FEB	Departure from Historical Cumulative FEB 2015	Cumulative 12-month Rainfall MAR 2014- FEB 2015	Historical 12-month Cumulative Rainfall	Departure from Historical 12-month Cumulative
Levy County Marion County Citrus County Sumter County Hernando County  CENTRAL COUNTIES	2.07	3.32	-1.25	6.95	6.48	0.47	58.59	53.84	4.75
	2.19	3.21	-1.02	6.81	6.11	0.70	59.17	54.30	4.87
	2.88	2.97	-0.09	6.71	5.73	0.98	61.06	54.00	7.06
	3.29	2.94	0.35	6.11	5.56	0.55	58.05	51.96	6.09
	3.48	3.00	0.48	6.15	5.67	0.48	61.37	54.97	6.40
Pasco County Pinellas County Hillsborough County Polk County	4.64	2.95	1.69	6.79	5.59	1.20	62.30	53.97	8.33
	5.68	2.89	2.79	7.54	5.40	2.14	55.28	51.57	3.71
	5.57	2.85	2.72	7.18	5.27	1.91	59.48	52.48	7.00
	5.64	2.69	2.95	7.86	5.03	2.83	57.01	51.90	5.11
Manatee County Hardee County Highlands County Sarasota County DeSoto County Charlotte County	3.99	2.73	1.26	5.56	5.11	0.45	54.10	53.43	0.67
	3.32	2.53	0.79	5.81	4.68	1.13	51.35	52.03	-0.68
	4.34	2.42	1.92	6.74	4.44	2.30	58.00	51.89	6.11
	3.90	2.58	1.32	5.89	4.83	1.06	53.94	52.58	1.36
	3.42	2.39	1.03	4.83	4.37	0.46	49.53	51.76	-2.23
	3.91	2.28	1.63	4.47	4.27	0.20	53.46	52.35	1.11

# **FEBRUARY 2015 RAINFALL CHARACTERIZATION**

# **Regional Characterization:**

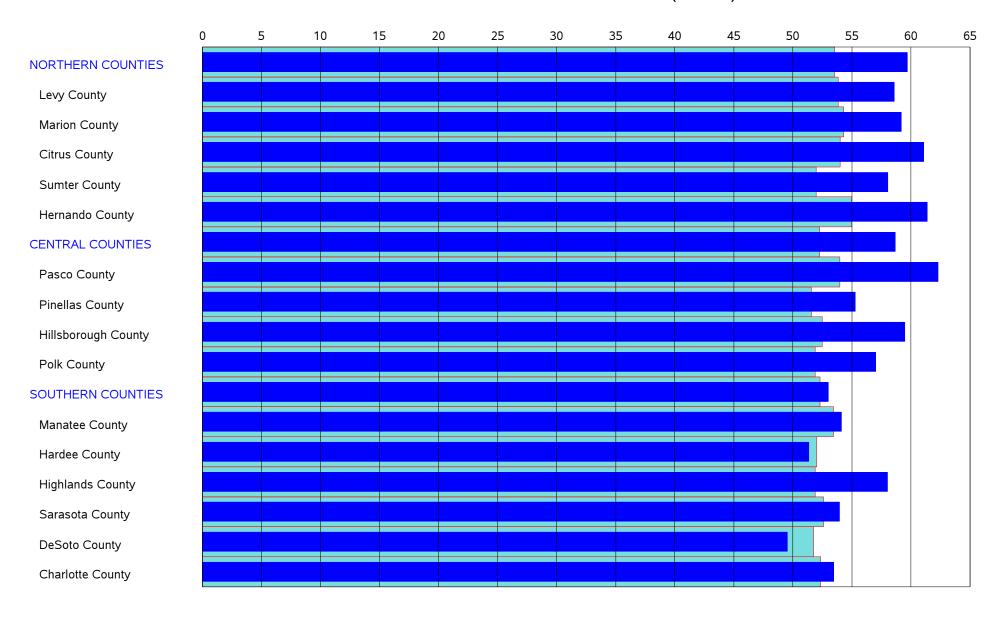
Region	FEB 2015 Average Rainfall	Historical FEB Percentile	FEB Rainfall Characterization	Cumuk 12-mo Raini MAR 2 FEB 2	nth Historical Fall 12-month 014- Cumulative	12-month Cumulative Rainfall Characterization	
Northern Counties Central Counties Southern Counties District Counties	2.89 5.42 3.77 4.15	51 91 78 78	Normal Very wet Wetter than normal Wetter than normal	59.7 58.6 53.0 56.9	6 80 1 54	Wetter than normal Wetter than normal Normal Normal	
Regional Countie	es Characteriz	ation:					
NORTHERN COUNTIES	FEB 2015 Average Rainfall	Historical FEB Percentile	FEB Rainfall Characterization	Cumula 12-ma Raini MAR 2 FEB 2	nth Historical Fall 12-month 014- Cumulative	12-month Cumulative Rainfall Characterization	
Levy County Marion County Citrus County Sumter County Hernando County  CENTRAL COUNTIES	2.07 2.19 2.88 3.29 3.48	34 40 54 63 68	Normal Normal Normal Normal Normal	58.5 59.1 61.0 58.0 61.3	7 72 6 80 5 77	Normal Normal Wetter than normal Wetter than normal Wetter than normal	
Pasco County Pinellas County Hillsborough County Polk County SOUTHERN COUNTIES	4.64 5.68 5.57 5.64	81 90 93 94	Wetter than normal Wetter than normal Very wet Very wet	62.3 55.2 59.4 57.0	8 66 8 82	Wetter than normal Normal Wetter than normal Normal	
Manatee County Hardee County Highlands County Sarasota County DeSoto County Charlotte County	3.99 3.32 4.34 3.90 3.42 3.91	74 71 91 79 75 85	Normal Normal Very wet Wetter than normal Normal Wetter than normal	54.1 51.3 58.0 53.9 49.5 53.4	5 48 0 77 4 61 3 44	Normal Normal Wetter than normal Normal Normal Normal	

# FEBRUARY 2015 RAINFALL HISTORIC AVERAGE VS HISTORICAL FEBRUARY AVERAGE (INCHES)

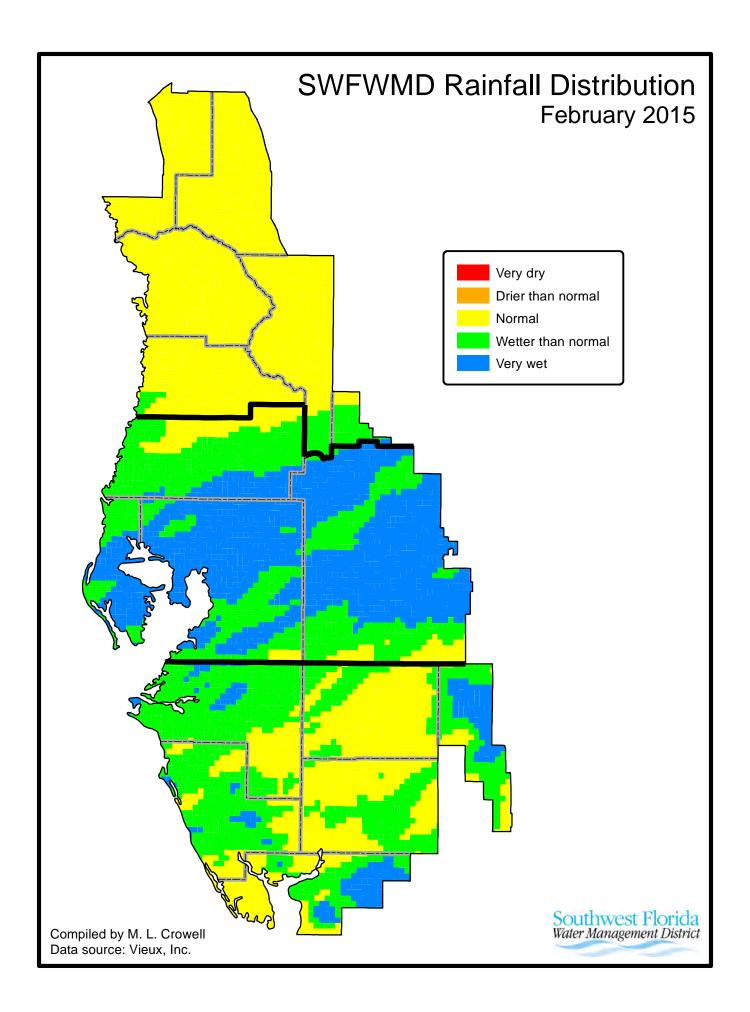


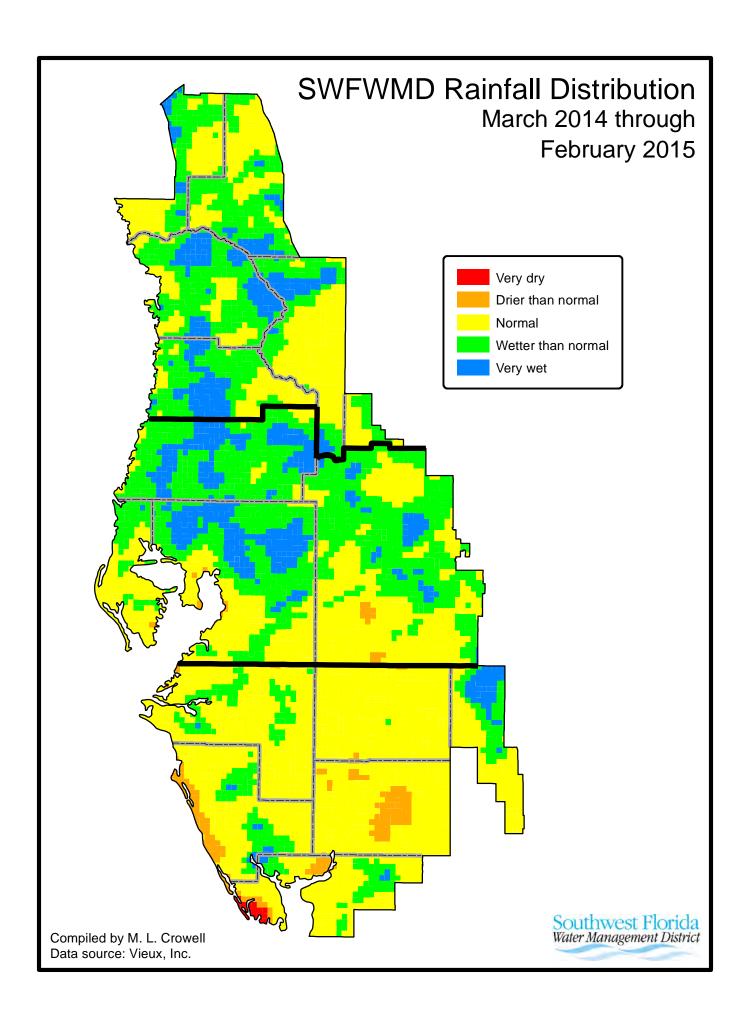


#### FEBRUARY 2015 12-MONTH CUMULATIVE RAINFALL VS AVERAGE ANNUAL CUMULATIVE (INCHES)









#### **SURFACE WATER**

#### Lakes

Across the District, 76 lakes have been selected as excellent indicators of current surface water conditions (see index map in Appendix). Water levels of these lakes are read monthly. In general, these lakes are concentrated in four regions, the northern region of Citrus, Hernando, and Sumter Counties, the Tampa Bay region of Hillsborough and Pasco Counties, the Polk Uplands region of northern Polk County, and the Lake Wales Ridge region of Polk and Highlands Counties. In this report, current monthly lake levels are tabulated and compared with previous records as well as District-established management levels. In addition, lake-level data representative of the four regions are presented in hydrographs showing a 15-year history of water levels, as a general indicator of surface-water conditions in that region.

The District's Governing Board (the Board) has established lake management levels for approximately 410 lakes within District boundaries, which are specified in Chapter 40D-8, Florida Administrative Code (F.A.C.). Management levels help protect the water resources of the District and the ecology of the lake or water-body for which it was established. In this report, the following three management levels are used to indicate normal and low lake levels: the Minimum Flood (MF) level, the Minimum Low Management (MLM) level, and the Minimum Extreme Low Management (MELM) level. In general, the MF level corresponds to the normal high level, the MLM to the normal low level, and the MELM to a drought-year low. These levels were derived from various sources, including technical publications, topographic maps, Water Resource Data Reports of the USGS, and other studies. Field investigations are also used to determine past surface levels from water marks, wetland vegetation, dry land vegetation, and to establish the elevation of septic tanks, docks, sea walls, roads and floor slabs.

During a normal year, each of the indicator lakes should reach both the designated normal high (MF) and the normal low (MLM) levels. In addition, it is generally beneficial for lakes to reach the adopted drought year low (MELM) level every four to six years for a short period of time for the biological health of the lake. In this report, hydrographs of representative lakes compare current and recent water levels against "normal ranges" defined by the adopted MF and MLM levels.

Of the 76 lakes presented in this report, 17 have water-control structures. These structures are used for water conservation and do not generally influence the water levels with regard to meteorologically wet or dry conditions. During periods of extreme high water, the structures may be operated to minimize flooding.

During February, 57 of the 76 lakes monitored for this report recorded water level increases, 14 recorded decreases, while five remained unchanged, compared to last month. Water levels decreased in the Northern region by 0.07 foot, while levels increased in the Tampa Bay, Polk Uplands and Lake Wales Ridge regions by 0.09, 0.12 and 0.04 foot, respectively. District-wide, average water levels increased by 0.06 foot, compared to last month.

In February, 70 of the 76 lakes monitored for this report recorded water level increases and six recorded decreases, compared to last year's levels. In the Northern, Tampa Bay, Polk Uplands and Lake Wales Ridge regions, average lake levels were higher by 1.14 feet, 0.53 foot, 1.95 feet and 1.21 feet, respectively. District-wide, average lake levels were higher by 1.09 feet, compared to last year's levels.

Water levels in 61 of the 76 lakes were above the base of the annual normal range, while 15 were below. Average lake levels in the Northern and Lake Wales Ridge regions were 0.14 and 0.43 foot, respectively, below the base of the annual normal range. The Tampa Bay and Polk Uplands regions were 1.56 and 1.28 feet, respectively, above the base of the normal range. District-wide, average lake levels were 0.92 foot above the base of the annual normal range. Water levels in 67 of the 76 lakes were above the drought-year levels.

# SUMMARY OF LAKE ELEVATIONS OF REGIONAL LAKES (feet)

NORTHERN LA	AKES					Change	Change	Diff	(MELM)	(MLM)	(MF)	Period		Period	
Lake Name	County	Beginning of Record	JAN 2015	FEB 2015	FEB 2014	from JAN 2015	from FEB 2014	from MELM	Drought Year Low	Normal Year Low	Normal Year High	of Record Low	Record Low Date	of Record High	Record High Date
Big Fish Lake	Pasco	1980	74.74	74.76	72.64	0.02	2.12	3.01	71.75	73.05	76.05	65.45	JUN 1997	77.40	SEP 2004
Crews Lake	Pasco	1981	52.54	52.66	49.38	0.12	3.28	2.66	50.00	52.00	55.00	42.63	APR 2001	55.40	SEP 1982
Hancock Lake	Pasco	1978	101.64	100.82	101.58	-0.82	-0.76	-1.18	102.00	104.00	106.50	90.00	MAR 2009	108.90	MAR 1998
Hunters Lake	Hernando	1965	17.85	17.67	16.64	-0.18	1.03	1.67	16.00	17.50	20.50	11.70	JUN 2001	20.50	MAR 1970
Lake Iola	Pasco	1965	139.09	139.19	136.91	0.10	2.28	-3.31	142.50	145.00	147.50	128.96	MAY 2012	148.70	JAN 1989
Lake Lindsey	Hernando	1982	63.38	63.32	62.36	-0.06	0.96	-1.18	64.50	66.00	69.00	59.27	MAY 2012	69.36	MAR 1998
Little Lake (Consu	Citrus	1985	41.30	41.06	39.06	-0.24	2.00	3.81	37.25	39.00	41.50	31.10	MAY 2001	42.84	SEP 2004
Lake Miona	Sumter	1978	52.11	52.17	50.07	0.06	2.10	1.17	51.00	53.00	55.00	47.88	AUG 1992	56.60	OCT 1982
Moon Lake	Pasco	1990	40.53	40.55	39.41	0.02	1.14	5.05	35.50	37.50	40.50	32.98	APR 2009	41.26	SEP 2004
Lake Panasoffkee	Sumter	1955	40.13	40.14	39.55	0.01	0.59	1.64	38.50	39.50	42.50	36.92	JUN 2007	44.28	APR 1960
Lake Pasadena	Pasco	1984	89.45	89.63	88.12	0.18	1.51	-0.37	90.00	91.50	94.50	81.56	MAY 2001	94.86	OCT 2004
Spring Lake	Hernando	1965	181.29	181.23	181.34	-0.06	-0.11	2.98	178.25	181.25	184.25	174.85	JUN 1965	183.57	OCT 1984
Floral City Pool	Citrus	1957	41.05	41.06	40.28	0.01	0.78	2.81	38.25	40.25	42.50	30.35	JUN 2001	44.22	MAR 1960
Inverness Pool	Citrus	1958	39.78	39.78	39.59	0.00	0.19	3.53	36.25	38.25	40.50	31.46	MAY 2001	42.94	APR 1960
Hernando Pool	Citrus	1958	38.70	38.47	38.50	-0.23	-0.03	3.72	34.75	36.75	39.00	31.09	JUL 2001	41.74	APR 1960

TAMPA BAY L	AKES					Change	Change	Diff	(MELM)	(MLM)	(MF)	Period		Period	
Lake Name	County	Beginning of Record	JAN 2015	FEB 2015	FEB 2014	from JAN 2015	from FEB 2014	from MELM	Drought Year Low	Normal Year Low	Normal Year High	of Record Low	Record Low Date	of Record High	Record High Date
Lake Alice	Hillsborough	1971	41.22	41.27	40.81	0.05	0.46	3.77	37.50	40.25	42.25	33.24	MAY 2002	42.42	SEP 2004
Lake Ann-Parker	Pasco	1969	47.61	47.80	47.34	0.19	0.46	2.80	45.00	45.75	48.75	43.28	JUN 2002	49.29	SEP 1979
Bay Lake	Hillsborough	1982	45.60	45.68	45.45	0.08	0.23	3.18	42.50	44.00	46.75	41.86	APR 1985	46.46	DEC 1997
Lake Brant	Hillsborough	1971	58.10	58.26	57.50	0.16	0.76	3.76	54.50	56.50	58.75	51.65	JUN 1994	60.04	AUG 1979
Brooker Lake	Hillsborough	1977	62.82	62.96	62.67	0.14	0.29	3.96	59.00	61.00	64.25	56.49	MAY 2002	64.08	DEC 1997
Calm Lake	Hillsborough	1965	50.08	50.08	49.81	0.00	0.27	5.08	45.00	47.50	50.50	41.88	JUN 2002	50.73	SEP 2004
Camp Lake	Pasco	1968	63.49	63.53	62.43	0.04	1.10	4.53	59.00	61.75	64.00	50.82	MAY 2002	64.00	SEP 1979
Carlton Lake	Hillsborough	1976	92.50	92.68	91.57	0.18	1.11	4.68	88.00	90.50	93.50	86.82	MAY 2001	94.60	FEB 1998
Lake Carroll	Hillsborough	1985	36.73	36.76	35.93	0.03	0.83	4.26	32.50	34.50	37.00	30.87	MAY 2002	38.06	DEC 1997
Church Lake	Hillsborough	1931	35.11	35.19	35.34	0.08	-0.15	3.69	31.50	34.00	36.25	27.94	MAY 2002	38.60	FEB 1936
Lake Cooper	Hillsborough	1946	60.47	60.56	60.02	0.09	0.54	3.56	57.00	59.75	61.75	55.60	JUN 2001	62.54	SEP 1947
Crescent Lake	Hillsborough	1981	41.96	41.87	41.88	-0.09	-0.01	3.37	38.50	40.00	42.50	35.34	JUN 2001	42.48	SEP 2009
Deer Lake	Hillsborough	1977	66.74	66.77	65.67	0.03	1.10	4.27	62.50	64.50	67.25	60.72	MAY 2002	67.42	DEC 1997
Egypt Lake	Hillsborough	1978	36.76	36.84	36.18	0.08	0.66	4.34	32.50	35.00	37.50	33.06	MAY 2000	38.15	SEP 1985
Gornto Lake	Hillsborough	1979	37.90	37.90	36.58	0.00	1.32	3.90	34.00	36.00	38.50	29.86	MAR 1979	39.48	FEB 1998
Lake Harvey	Hillsborough	1970	61.43	61.64	60.85	0.21	0.79	3.64	58.00	60.25	62.50	53.94	MAY 2002	63.90	DEC 1997
Lake Hiawatha	Hillsborough	1981	49.80	49.88	49.84	0.08	0.04	4.88	45.00	48.00	50.50	46.14	JUN 2000	51.12	APR 2010
Horse Lake	Hillsborough	1930	47.00	47.21	46.22	0.21	0.99	5.21	42.00	44.00	46.50	36.33	JUN 2002	50.00	AUG 1959
Lake Keene	Hillsborough	1948	62.14	62.35	62.46	0.21	-0.11	3.35	59.00	60.50	63.00	56.92	MAY 1994	63.30	SEP 1953
Keystone Lake	Hillsborough	1984	41.73	41.79	41.75	0.06	0.04	2.79	39.00	39.75	42.00	37.89	JUN 1994	43.26	SEP 1988
King Lake	Pasco	1983	102.79	102.92	102.31	0.13	0.61	2.92	100.00	102.50	105.25	94.20	APR 2009	104.80	MAR 1987
Lake Leclare	Hillsborough	1977	51.38	51.38	51.08	0.00	0.30	4.38	47.00	49.50	52.00	44.95	JUN 2001	52.59	JUL 2012
Lake Linda	Pasco	1969	65.93	65.95	65.23	0.02	0.72	3.95	62.00	64.00	66.75	60.07	MAY 2001	67.13	AUG 1979
Little Lake	Hillsborough	1931	45.35	45.43	45.28	0.08	0.15	3.43	42.00	43.50	46.50	38.06	JUN 1994	48.65	AUG 1960
Long Pond	Hillsborough	1978	46.16	46.10	45.27	-0.06	0.83	4.10	42.00	44.00	46.50	36.33	MAY 1979	48.27	SEP 1998
Mud (Walden) Lake	Hillsborough	1978	112.92	112.92	112.88	0.00	0.04	2.42	110.50	112.50	115.00	111.68	MAY 2012	114.42	MAR 1978
Lake Padgett	Pasco	1965	69.56	69.63	69.16	0.07	0.47	2.13	67.50	69.00	71.25	66.27	JUN 2001	71.90	SEP 1988
Platt Lake	Hillsborough	1946	49.25	49.47	49.02	0.22	0.45	3.47	46.00	47.75	50.50	42.53	JUN 2001	51.88	SEP 1979
Rainbow Lake	Hillsborough	1971	39.54	39.64	39.16	0.10	0.48	4.64	35.00	37.50	40.50	29.82	JUN 2002	40.74	AUG 2003
Lake Stemper	Hillsborough	1946	60.85	60.94	60.55	0.09	0.39	2.94	58.00	59.50	62.00	53.36	JUN 2001	62.30	MAR 1960
Lake Thomas	Hillsborough	1971	63.12	63.14	62.46	0.02	0.68	3.89	59.25	61.25	63.50	56.48	JUN 2002	64.48	SEP 1979
Turkey Ford Lake	Hillsborough	1970	51.35	51.68	50.84	0.33	0.84	1.68	50.00	51.50	54.00	48.07	JUN 1985	55.28	SEP 1988
Lake Wimauma	Hillsborough	1985	80.03	80.30	79.37	0.27	0.93	-0.70	81.00	83.00	86.75	70.12	MAY 2001	84.38	MAR 1998
	_														

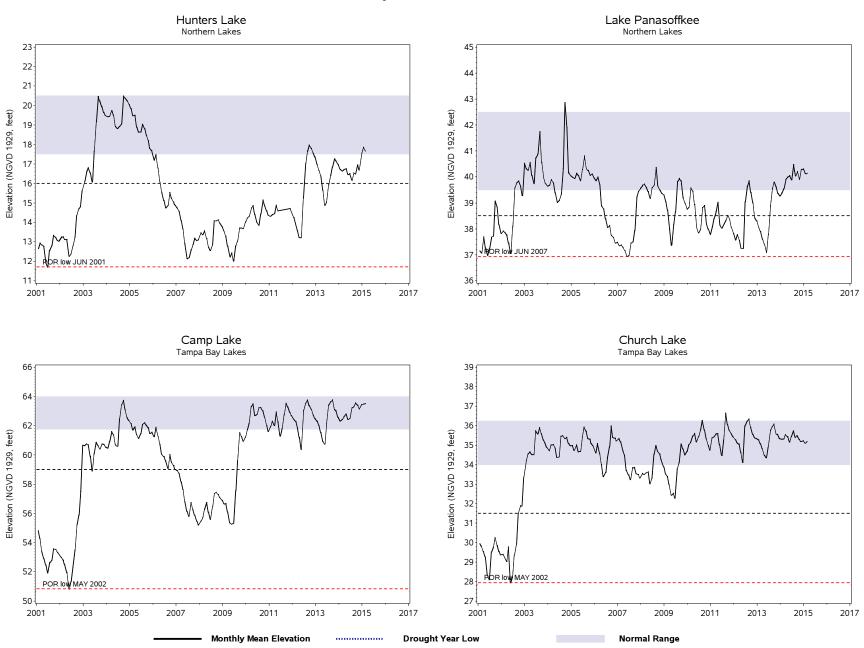
NOTE: M='no data' or 'not determined'

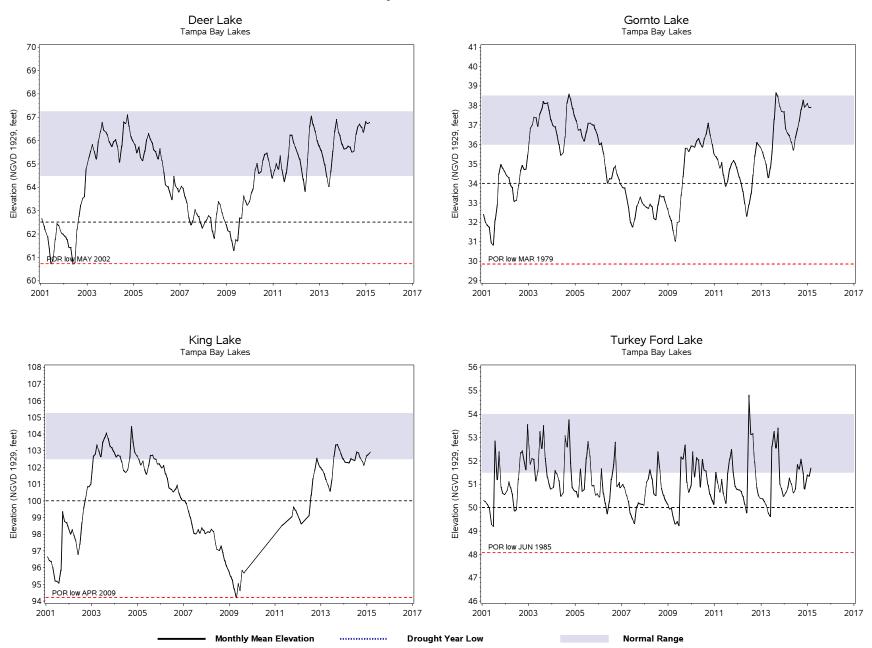
# SUMMARY OF LAKE ELEVATIONS OF REGIONAL LAKES (feet)

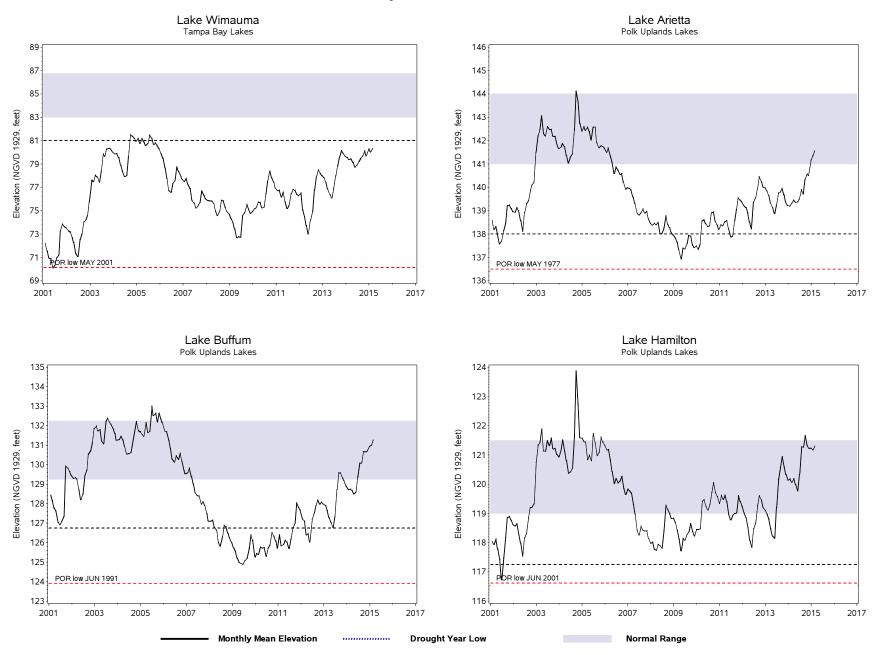
POLK UPLANI	OS LAKES					Change	Change	Diff	(MELM)	(MLM)	(MF)	Period		Period	
Lake Name	County	Beginning of Record	JAN 2015	FEB 2015	FEB 2014	from JAN 2015	from FEB 2014	from MELM	Drought Year Low	Normal Year Low	Normal Year High	of Record Low	Record Low Date	of Record High	Record High Date
Lake Alfred	Polk	1961	128.20	128.47	125.63	0.27	2.84	2.22	126.25	128.25	130.75	122.40	MAY 1977	132.76	MAR 1998
Lake Ariana	Polk	1945	136.62	136.68	135.29	0.06	1.39	4.18	132.50	134.50	137.00	131.28	MAY 1976	137.90	AUG 1946
Lake Arietta	Polk	1970	141.35	141.56	139.32	0.21	2.24	3.56	138.00	141.00	144.00	136.50	MAY 1977	144.12	SEP 2004
Blue Lake South	Polk	1986	113.28	113.35	110.65	0.07	2.70	0.85	112.50	114.00	117.00	103.38	FEB 1991	119.19	DEC 2005
Lake Bonny	Polk	1954	130.63	130.72	129.33	0.09	1.39	4.72	126.00	128.00	130.50	122.34	MAY 2009	133.08	SEP 2004
Lake Buffum	Polk	1972	131.00	131.26	128.75	0.26	2.51	4.51	126.75	129.25	132.25	123.90	JUN 1991	133.00	JUN 2005
Clearwater Lake	Polk	1979	144.08	144.04	142.04	-0.04	2.00	5.04	139.00	141.00	143.50	137.93	MAY 2001	146.06	AUG 1984
Lake Conine	Polk	1989	128.50	128.40	127.55	-0.10	0.85	3.90	124.50	126.50	128.75	123.83	NOV 2009	129.95	SEP 2004
Eagle Lake	Polk	1965	127.96	128.16	125.33	0.20	2.83	1.66	126.50	128.50	130.75	118.76	MAY 1976	131.50	SEP 1996
Lake Fannie	Polk	1967	125.51	125.63	122.74	0.12	2.89	5.63	120.00	123.50	125.75	118.67	MAY 1977	127.51	SEP 2004
Lake Garfield	Polk	1969	103.00	103.10	102.28	0.10	0.82	3.10	100.00	101.00	104.75	97.38	JUN 2001	105.91	SEP 1979
Lake Hamilton	Polk	1945	121.18	121.30	120.07	0.12	1.23	4.05	117.25	119.00	121.50	116.61	JUN 2001	124.34	OCT 1948
Lake Helene	Polk	1961	139.24	139.38	137.30	0.14	2.08	0.38	139.00	141.00	144.00	134.06	JUN 2008	146.48	MAR 1998
Lake Howard	Polk	1987	132.00	131.88	129.86	-0.12	2.02	4.88	127.00	129.50	132.00	127.69	MAY 2001	133.08	SEP 2004
Lake Juliana	Polk	1961	131.84	131.95	129.56	0.11	2.39	4.45	127.50	130.00	132.50	126.20	MAY 1976	134.10	MAR 1998
Lake Mcleod	Polk	1965	126.66	126.90	123.78	0.24	3.12	-1.10	128.00	129.50	132.00	115.11	MAY 1976	131.98	SEP 1998
Lake Otis	Polk	1954	127.20	127.45	124.72	0.25	2.73	4.45	123.00	125.00	128.00	119.58	MAY 1976	129.12	SEP 1960
Lake Ruby	Polk	1971	124.75	124.87	124.17	0.12	0.70	3.87	121.00	123.00	125.25	117.41	MAY 1976	125.98	SEP 2004
Lake Gibson	Polk	1969	143.07	143.21	142.92	0.14	0.29	1.71	141.50	141.50	143.50	140.21	MAY 2009	145.40	SEP 1988

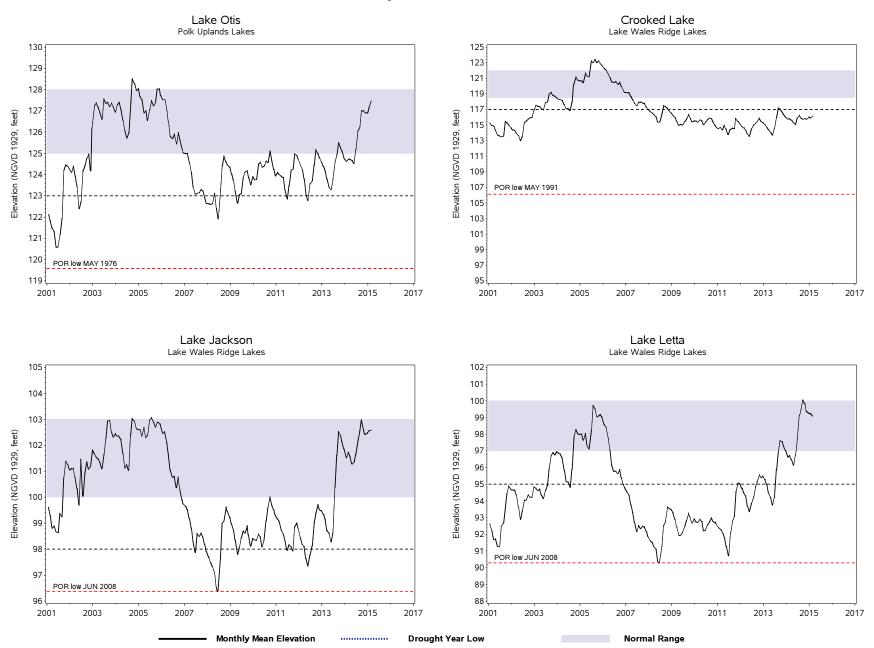
LK WALES R	IDGE LAKES					Change	Change	Diff	(MELM)	(MLM)	(MF)	Period		Period	
Lake Name	County	Beginning of Record	JAN 2015	FEB 2015	FEB 2014	from JAN 2015	from FEB 2014	from MELM	Drought Year Low	Normal Year Low	Normal Year High	of Record Low	Record Low Date	of Record High	Record High Date
Lake Annie	Polk	1970	112.43	112.69	111.12	0.26	1.57	-1.31	114.00	116.00	119.00	108.36	JUN 1990	117.56	OCT 2005
Lake Clay	Highlands	1983	77.83	77.84	77.81	0.01	0.03	2.84	75.00	76.00	78.75	74.34	MAY 2001	78.82	JUN 2013
Crooked Lake	Polk	1945	115.93	116.12	115.80	0.19	0.32	-0.88	117.00	118.50	122.00	106.10	MAY 1991	123.98	OCT 1948
Lake Jackson	Highlands	1945	102.57	102.58	101.73	0.01	0.85	4.58	98.00	100.00	103.00	96.37	JUN 2008	103.76	SEP 1947
Lake Letta	Highlands	1951	99.23	99.09	96.72	-0.14	2.37	4.09	95.00	97.00	100.00	90.27	JUN 2008	101.38	OCT 1953
Lake Lotela	Highlands	1950	107.76	107.90	104.43	0.14	3.47	3.90	104.00	105.00	108.50	96.63	JUN 2008	109.38	JUL 1954
Lake Placid	Highlands	1984	93.03	92.80	92.73	-0.23	0.07	2.80	90.00	91.50	94.50	88.08	JUN 2008	94.24	SEP 2003
Starr Lake	Polk	1983	102.45	102.61	101.88	0.16	0.73	-5.39	108.00	110.00	113.00	96.23	JUL 2001	109.80	DEC 2005
Trout Lake	Highlands	1981	96.59	96.54	95.03	-0.05	1.51	1.54	95.00	98.00	101.00	87.15	MAY 2001	98.90	MAR 1998

NOTE: M='no data' or 'not determined'









#### **Streams**

The District processes streamflow data collected by the U.S. Geological Survey (USGS) under a cooperatively funded program between the District and the USGS. Streamflow is recorded daily as water elevations at 12 gauging stations in three regions of the District (see index map in the Appendix). The USGS uses rating curves developed from water level elevations to calculate streamflow discharge in units of cubic feet per second (cfs). For this report, the reported streamflow values are the means of the daily discharge volumes for the current month. The period-of-record high and low values correspond to monthly means and not to peak events. Percentile values are calculated from the monthly means for the period of record, for each station. The percentile is the monthly mean statistically ranked on a scale of zero to 100 that indicates the percent of the period-of-record monthly means that are at or above the present monthly mean. The current year's data are provisional, and are subject to revision. Revised data are used for all calculations, as they become available.

Hydrographs are produced for each of the stream stations. Current monthly means for each station are compared to respective 25<sup>th</sup> and 75<sup>th</sup> percentiles of the period-of-record monthly means.

During February, eleven of the 12 stations monitored for this report had increased streamflow, compared to last month. Total streamflow decreased in the northern region of the District by 333.6 cfs (215.5 mgd), while flow increased in the central and southern regions by 617.0 cfs (398.6 mgd) and 757.6 cfs (489.4 mgd). District-wide, total streamflow increased an average of 1041.0 cfs (672.5 mgd).

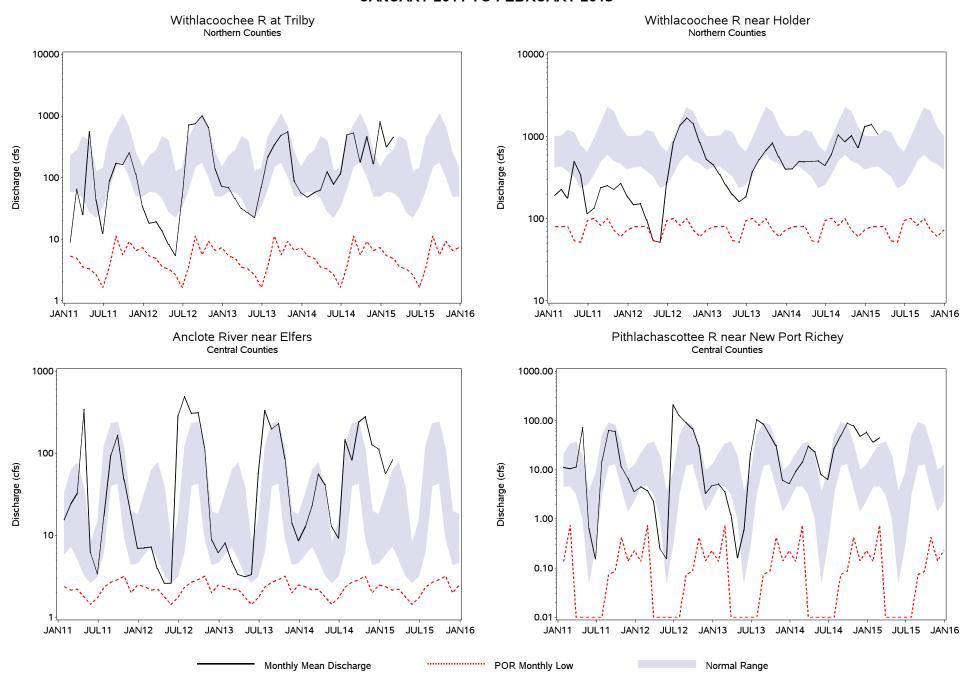
In February, all twelve stations recorded higher streamflow than in February 2014. Streamflow was higher in the northern, central and southern regions by 582.6 cfs (376.4 mgd), 921.6 cfs (595.4 mgd) and 928.1 cfs (599.6 mgd), respectively. District-wide, total streamflow was higher, on average, by 2432.3 cfs (1571.3 mgd), than the February 2014 average.

Compared to historical February discharge values, Withlacoochee River streamflow, measured at the Trilby station and the Holder station averaged in the 85<sup>th</sup> and 77<sup>th</sup> percentiles, respectively. Streamflow measured at the stations on the Anclote, Pithlachascotee and Hillsborough Rivers averaged in the 87<sup>th</sup>, 89<sup>th</sup> and 93<sup>rd</sup> percentiles of respective historical February readings. Streamflow measured at the Alafia River, Little Manatee River and Peace River at Bartow stations averaged in the 78<sup>th</sup>, 83<sup>rd</sup> and 91<sup>st</sup> percentiles of respective historical February readings. Additionally, streamflow measured at the Josephine Creek, Manatee River, Myakka River and Peace River at Arcadia stations averaged in the 77<sup>th</sup>, 88<sup>th</sup>, 90<sup>th</sup> and 82<sup>nd</sup> percentiles of respective historical February readings.

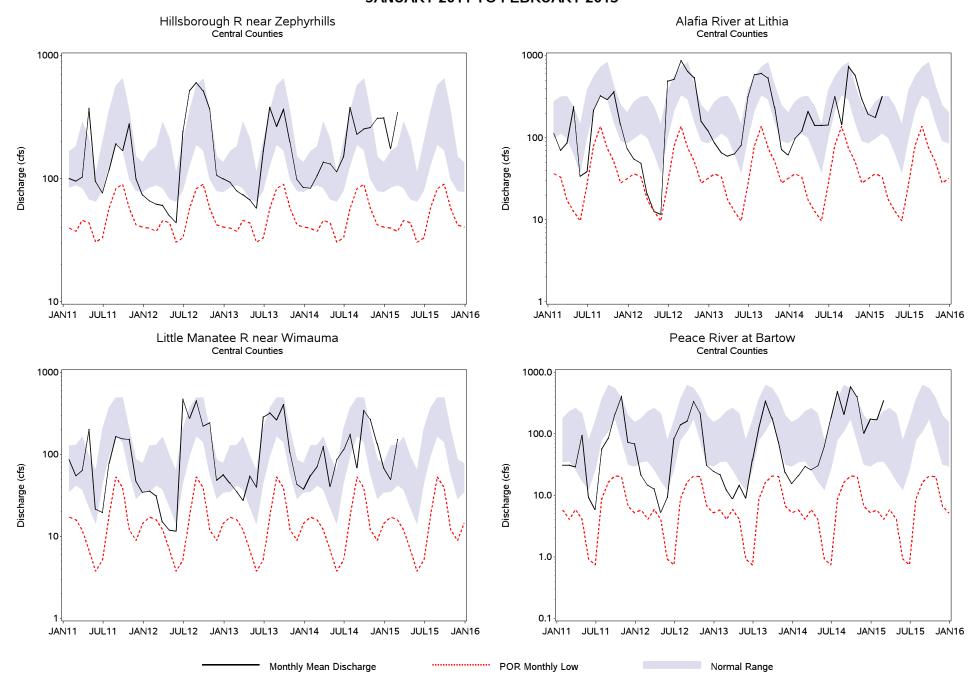
# SUMMARY OF STREAM DISCHARGE FROM MAJOR STREAMS (CFS), FEBRUARY 2015

NORTHERN COUNTIES	Beginning	Mean	Mean	Mean	Change	Change	FEB 2015	Period of	Record	Period of	Record
	Year of	Discharge	Discharge	Discharge	from	from	Percentile	Record	Low	Record	High
	Record	FEB 2015	JAN 2015	FEB 2014	JAN 2015	FEB 2014	Rank	Low	Date	High	Date
Withlacoochee R at Trilby Withlacoochee R near Holder	1930	453.7	319.3	57.5	134.4	396.2	88%	0.1	JUN2000	8840	JUN1934
	1931	1082.7	1416.3	500.1	-333.6	582.6	77%	33.0	MAR2001	8660	APR1960
CENTRAL COUNTIES											
Anclote River near Elfers Pithlachascottee R near New Port Ric Hillsborough R near Zephyrhills Alafia River at Lithia Little Manatee R near Wimauma Peace River at Bartow	1946	83.4	56.9	23.3	26.5	60.1	87%	0.8	MAY1962	3710	JUL1960
	hey 1963	44.5	36.5	14.2	8.0	30.3	89%	0.0	MAY2013	2180	JUN2012
	1939	343.8	176.5	106.3	167.3	237.5	93%	27.0	MAY2001	9700	MAR1960
	1932	319.4	177.9	120.6	141.5	198.8	78%	4.1	JUN2000	9820	SEP2004
	1939	151.5	49.8	71.1	101.7	80.4	83%	0.9	DEC1976	9720	SEP1988
	1939	344.1	172.1	29.6	172.0	314.5	91%	0.0	MAY2009	4100	SEP1947
SOUTHERN COUNTIES											
Josephine Cr near DeSoto City	1946	61.1	45.8	37.4	15.3	23.7	77%	0.5	MAY1956	1680	SEP1948
Manatee River near Myakka Head	1966	71.3	21.1	22.7	50.2	48.6	88%	0.1	MAY1975	6440	JUN2003
Myakka River near Sarasota	1936	239.9	85.6	52.8	154.3	187.1	90%	0.0	JUN2012	9540	JUN2003
Peace River at Arcadia	1931	1048.0	510.2	379.3	537.8	668.7	82%	0.0	JUL1974	9990	OCT1953

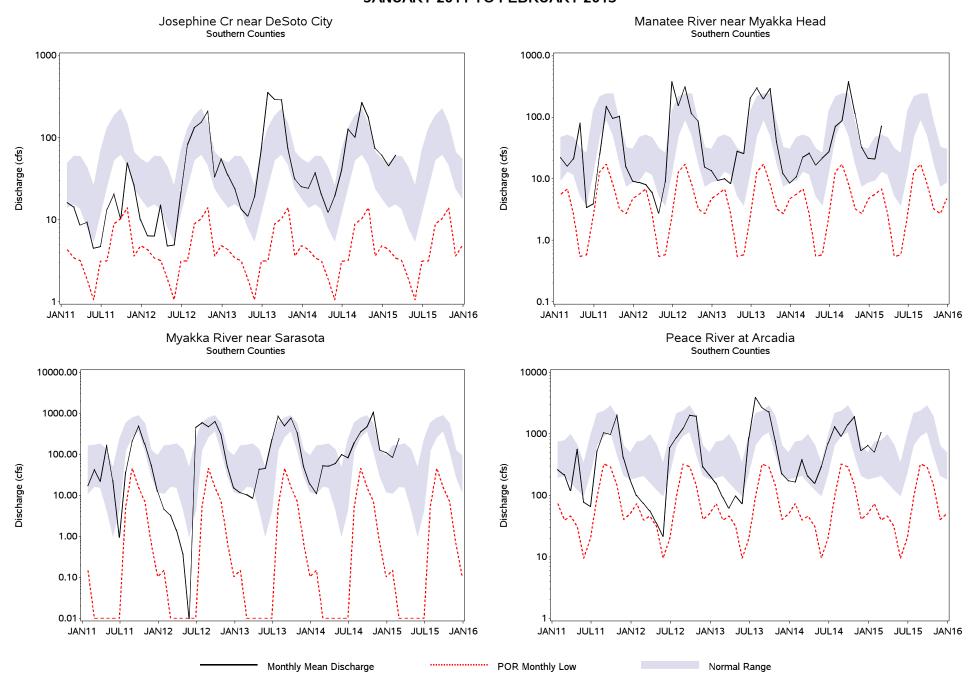
# HYDROGRAPHS OF MAJOR STREAMS JANUARY 2011 TO FEBRUARY 2015



# HYDROGRAPHS OF MAJOR STREAMS JANUARY 2011 TO FEBRUARY 2015



# HYDROGRAPHS OF MAJOR STREAMS JANUARY 2011 TO FEBRUARY 2015



# **Springs**

The District processes springflow data collected by Tampa Bay Water through a mutual agreement and by the U.S. Geological Survey (USGS) under a cooperatively funded program between the District and the USGS. Springflow is monitored at seven gauging stations in two regions of the District (see index map in the Appendix). Springflow data for Rainbow, Silver and Sulphur Springs are recorded as daily water levels. The USGS uses rating curves developed for these springs from historical water level elevations to calculate springflow discharge in units of cubic feet per second (cfs). Crystal and Weeki Wachee Springs discharge (cfs) is provided as an instantaneous reading calculated by the USGS. Buckhorn and Lithia Springs discharge is obtained from Tampa Bay Water biweekly and weekly, respectively. Period-of-record high and low values correspond to monthly theoretical means and not to peak events. Values are reported as percentiles calculated from an analysis of historical monthly means recorded during a given month. The percentile is the monthly mean ranked on a scale of zero to 100 that indicates the percent of period-of-record values that are above, equal to or below the median (50<sup>th</sup> percentile) for the current month. The values reported are provisional, and are subject to revision at the end of the water year. Revised USGS springflow data are loaded into the District's WMIS when they become available.

Hydrographs are produced for the seven-springflow stations, and current values are compared to respective 25<sup>th</sup> and 75<sup>th</sup> percentiles that are calculated from historical data. The 25<sup>th</sup> and 75<sup>th</sup> percentiles are calculated using the SAS<sup>TM</sup> software system for data analysis using period-of-record monthly theoretical means for each springflow station analyzed.

During February, five of the seven stations reported decreased springflow, compared to the previous month. Total springflow increased in the northern region by 39.0 cfs (25.2 mgd), while it decreased in the central region by 23.3 cfs (14.8 mgd). District-wide, springflow increased by 15.7 cfs (10.4 mgd).

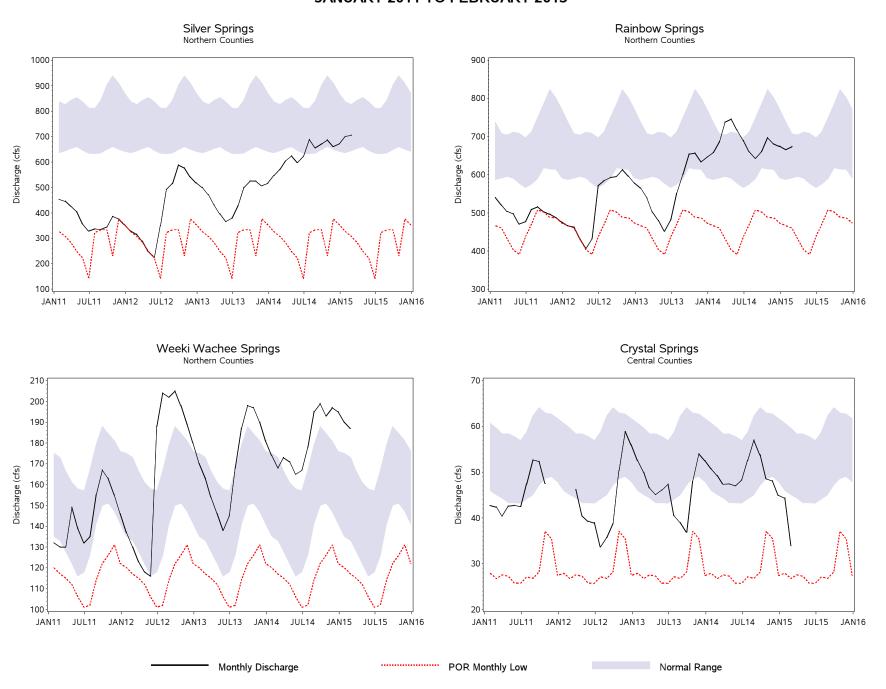
In February, total springflow recorded at five of the seven stations was above last year's levels. Total springflow for the northern region was higher by 182.8 cfs (118.1 mgd), while springflow was lower in the central region by 7.7 cfs (4.9 mgd). District-wide, springflow was higher by 175.1 cfs (113.2 mgd), compared to February 2014 rates.

Compared to historical period-of-record values for February, total springflow measured in Rainbow, Silver and Weeki Wachee Springs, in the northern region, was in the 56<sup>th</sup>, 42<sup>nd</sup> and 85<sup>th</sup> percentiles of respective historical readings. Springflow measured in Crystal, Sulphur, Buckhorn and Lithia Springs in the central region was in the 7<sup>th</sup>, 23<sup>rd</sup>, 57<sup>th</sup> and 75<sup>th</sup> percentiles, respectively, of historical February readings.

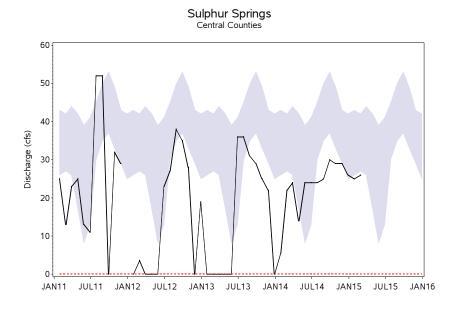
# SUMMARY OF SPRINGS DISCHARGE FROM MAJOR SPRINGS (CFS), FEBRUARY 2015

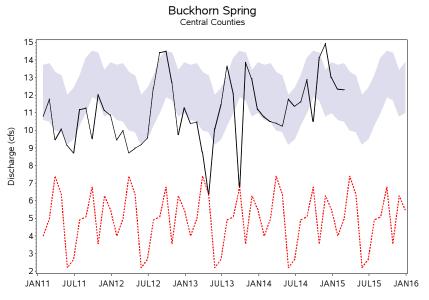
NORTHERN COUNTIES	FEB 2015 Discharge	JAN 2015 Discharge	FEB 2014 Discharge	Change From JAN 2015	Change From FEB 2014	FEB 2015 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Rainbow Springs	673.7	667.3	667.8	6.4	5.9	56%	391.0	MAY2012	1060.0	SEP1988
Silver Springs	714.2	678.2	555.3	36.0	158.9	42%	141.0	JUN2012	1290.0	OCT1960
Weeki Wachee Springs	188.7	192.1	170.7	-3.4	18.0	85%	101.0	JUN1994	257.0	OCT2004
CENTRAL COUNTIES										
Crystal Springs	38.4	45.6	50.0	-7.2	-11.6	7%	25.7	JUN2001	113.6	AUG1941
Sulphur Springs	25.3	25.4	21.0	-0.1	4.3	23%	0.0	FEB1976	145.0	MAR1960
Buckhorn Springs	12.2	12.7	11.2	-0.5	1.0	57%	2.2	MAY2006	32.7	AUG2004
Lithia Springs	41.8	57.3	43.2	-15.5	-1.4	75%	9.1	MAY2000	91.5	NOV2004

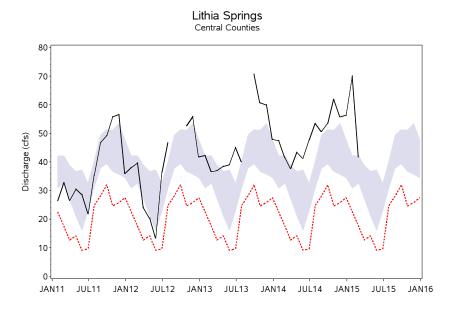
# HYDROGRAPHS OF REGIONAL SPRINGS JANUARY 2011 TO FEBRUARY 2015



# HYDROGRAPHS OF REGIONAL SPRINGS JANUARY 2011 TO FEBRUARY 2015







Monthly Discharge

POR Monthly Low

#### **GROUND WATER**

The ground-water section of this report provides ground-water level information within the District based on geographically delineated areas (regions) within the District. For this report, the District has been divided into three geographical regions that are defined by county boundaries (see index maps in the Appendix). Each regional area includes all or part of each county that is located within that region and that is also within the District's jurisdictional boundaries. The northern region includes the counties of Citrus, Hernando, Lake, Levy, Marion and Sumter, where the Floridan aquifer is generally unconfined and at or near land surface, allowing rainfall to easily recharge (replenish) the aquifer system. The central region includes the counties of Hillsborough, Pasco, Pinellas and Polk, where the Floridan aquifer can be unconfined, semi-confined or confined (overlain by thick clays). Where the Floridan aquifer is confined, recharge to the aquifer from rainfall is low. The southern region includes the counties of Charlotte, DeSoto, Hardee, Highlands, Manatee and Sarasota, where the Floridan aquifer is confined.

Twelve surficial aquifer (shallow, non-artesian) and 77 intermediate and Floridan aquifer (deep) monitor wells are measured for this report to determine the relative health of ground-water levels District-wide. Only monitor wells with an adequate and reliable period-of-record water level measurements were selected for the network. For each well, the 25<sup>th</sup> and 75<sup>th</sup> percentiles ("low normal" and "high normal," respectively) were calculated for each week of the year using the period-of-record data. The 25<sup>th</sup> and 75<sup>th</sup> percentiles are used to represent the lower and upper limits of the normal range, as they are considered a reliable and robust measure of the normal range, and are less affected by extremes in the data record. The end-of month water-level readings measured for this report are compared to their corresponding normal ranges. Trend data from 16 intermediate and Floridan aquifer wells are shown in hydrographs to compare current water levels to the low normal and high normal levels.

Data from these wells are further compiled into regional statistics for the three regions of the District. Wells in the northern counties are unconfined and non-artesian, while those in the southern counties are confined and artesian. Wells included in the central counties vary between confined and unconfined conditions due to the transitional nature of geology in this area. The potentiometric levels of representative Floridan aquifer wells are used to produce the potentiometric surface maps presented in this report.

#### **Surficial Aquifer**

During February, seven of the 12 surficial aquifer wells recorded water level increases, compared to last month. Regionally, average surficial aquifer water levels decreased in the northern region of the District by 0.05 foot, while levels increased in the central and southern regions by 0.03 and 0.16 foot, respectively. District-wide, average surficial aquifer water levels increased by 0.05 foot.

In February, average water levels in nine of the 12 surficial aquifer wells were higher than February 2014 levels. Average surficial aquifer water levels were higher in the northern and central regions by 0.85 and 0.57 foot, respectively, while levels in the southern region was lower 0.09 foot. District-wide, average water levels in surficial wells were 0.45 foot higher than February 2014 levels.

For February, water levels were above the low normal level in all 12 surficial wells. Average surficial aquifer water levels in the northern, central and southern regions were 1.96, 1.65 and 1.59 feet, respectively, above the low normal level. District-wide, the average water level in surficial wells was 1.69 feet above the low normal level.

# SUMMARY OF SURFICIAL AQUIFER LEVELS IN REPRESENTATIVE WELLS, FEBRUARY 2015

NORTHERN COUNTIES	FEB 2015 Elev	JAN 2015 Elev	FEB 2014 Elev	Change From JAN 2015	Change From FEB 2014	FEB Historical Low Normal	FEB Historical High Normal	Departure From Low Normal	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Green Swamp	91.77	91.75	90.79	0.02	0.98	89.45	91.69	2.32	82.95	MAY2000	93.07	SEP1985
Lecanto 2	8.45	8.57	7.72	-0.12	0.73	6.84	8.55	1.61	5.76	MAY2001	13.92	SEP1974
CENTRAL COUNTIES												
Loughman Lutz-Lake Fern ROMP 50 Shallow SR 33 & Combee Road SR 577 Shallow Tarpon Road Shallow USGS P-48	92.18	92.26	90.61	-0.09	1.56	90.61	92.21	1.57	88.40	JUN2001	95.79	SEP2004
	57.66	57.38	57.14	0.27	0.52	56.48	57.70	1.17	52.64	NOV2009	60.81	OCT1983
	42.32	41.97	41.86	0.35	0.47	41.34	41.86	0.98	38.01	OCT2010	44.05	SEP2001
	134.13	133.92	132.33	0.21	1.80	132.33	134.67	1.80	129.16	FEB2001	136.97	OCT1995
	121.55	121.53	123.22	0.02	-1.67	119.50	123.90	2.05	109.99	JAN2000	129.16	SEP2013
	12.13	12.46	11.34	-0.33	0.79	11.07	12.26	1.06	9.31	JUN1978	16.93	SEP1971
	101.03	101.24	100.50	-0.21	0.53	98.11	99.96	2.92	96.07	JUN2001	104.79	SEP2004
SOUTHERN COUNTIES												
Edgeville 4 Shallow	67.98	68.05	67.88	-0.07	0.10	66.56	68.35	1.42	63.85	MAY1975	69.93	SEP1971
ROMP 26 Shallow	69.58	69.36	69.82	0.22	-0.24	67.93	70.19	1.65	64.32	JUN1999	75.11	JUN1982
SR 74	16.02	15.70	16.14	0.32	-0.12	14.31	15.85	1.71	12.66	MAY2000	18.78	AUG2013

#### **Intermediate and Floridan Aquifers**

In February, monthly analysis indicates that 43 of the 77 intermediate and Floridan aquifer wells monitored for this report recorded water level decreases, compared to last month. Regionally, average water levels decreased in the northern, central and southern regions by 0.15, 0.16 and 0.39 foot, respectively. District-wide, the average water level in the intermediate and Floridan aquifer decreased by 0.23 foot.

During February, annual analysis indicates that 65 of the 77 intermediate and Floridan aquifer wells monitored for this report recorded water level increases, compared to levels measured in February 2014. Regionally, the mean water level in the northern, central and southern regions was 1.30, 2.17 and 1.02 feet, respectively, higher than February 2014 levels. District-wide, average water levels in intermediate and Floridan aquifer wells were 1.57 feet higher than last year's levels.

For February, 72 of the 77 intermediate and Floridan aquifer wells had levels above the low normal level, compared to historical monthly levels. The average water levels in the northern, central and southern regions were 2.78, 6.92 and 4.78 feet, respectively, above the low normal level. District-wide, the average water level in intermediate and Floridan aquifer wells was 5.18 feet above the low normal level.

### SUMMARY OF INTERMEDIATE AND FLORIDAN AQUIFER LEVELS IN REPRESENTATIVE WELLS, FEBRUARY 2015

### **Regional Summary:**

Region	FEB 2015 Mean Elevation	FEB 2015 Relation to POR Median	FEB 2015 Relation to 25th Percentile	FEB 2015 Mean Percentile Rank	JAN 2015 Mean Percentile Rank	FEB 2014 Mean Percentile Rank
Northern Counties	38.24	1.33	2.78	75%	76%	53%
Central Counties	61.07	3.56	6.92	80%	79%	61%
Southern Counties	32.16	1.10	4.78	58%	60%	58%

### **Regional Wells Summary:**

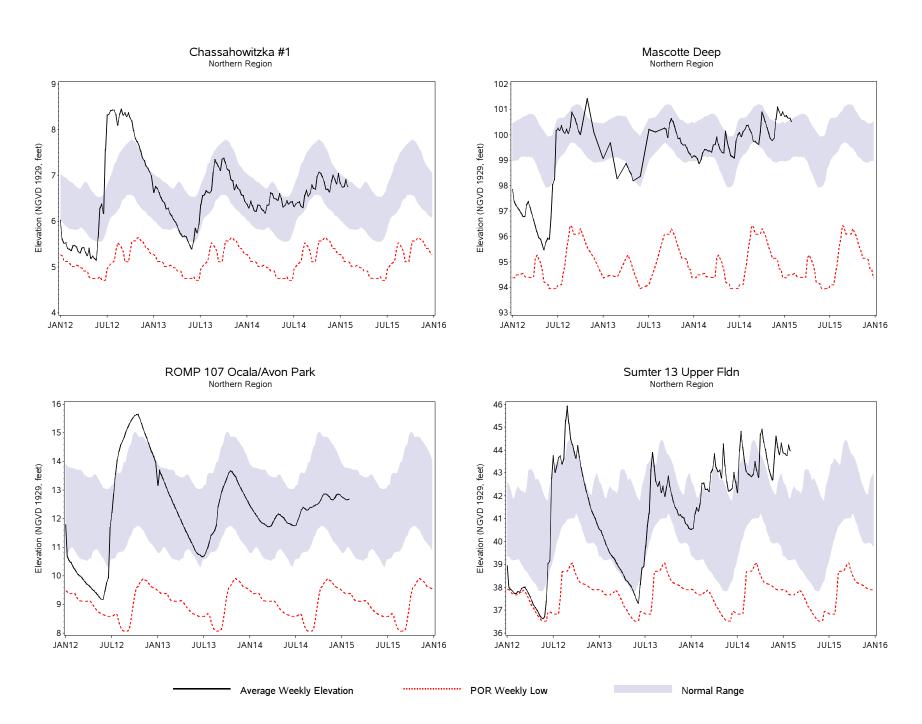
NORTHERN COUNTIES	FEB 2015 Elev	JAN 2015 Elev	FEB 2014 Elev	Change From JAN 2015	Change From FEB 2014	FEB Historical Low Normal	FEB Historical High Normal	Departure From Low Normal	e FEB 2015 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
CE 14 Dunnellon Deep	41.00	40.50	39.35	0.50	1.65	37.64	42.46	3.36	63%	31.92	MAY2012	60.24	MAR1966
Chassahowitzka 1 Deep Inverness Dot Fldn	6.71 29.59	7.11 29.66	6.34 28.46	-0.40 -0.07	0.37 1.13	5.87 27.51	6.82 31.17	0.84 2.08	70% 49%	4.71 21.67	JUN2001 JUN2001	9.67 37.80	OCT1982 OCT1982
Mascotte Deep	100.82	100.83	99.41	-0.07	1.13	99.19	100.73	1.63	83%	93.94	JUN2001	102.66	SEP1988
North Locanto Deep	4.60	4.93	4.29	-0.33	0.31	3.96	4.94	0.64	56%	2.94	MAY2001	8.10	OCT1982
ROMP 103 Suwannee/Ocala	41.84	42.09	40.69	-0.25	1.15	37.83	42.20	4.01	68%	33.74	MAY2009	50.98	OCT2004
ROMP 107 Ocala/Avon Park	12.62	12.70	11.85	-0.08	0.77	10.75	13.77	1.87	50%	8.06	AUG2007	19.78	NOV1982
ROMP 111 Ocala/Avon Park	50.17	50.27	49.14	-0.10	1.03	48.57	50.45	1.60	66%	44.23	JUL1992	53.29	SEP2004
ROMP 116 Avon Park	34.63	35.91	33.42	-1.28	1.21	31.73	33.76	2.90	87%	29.24	MAY2012	39.27	OCT2004
ROMP 119 Avon Park	46.02	45.56	44.17	0.46	1.85	42.59	45.23	3.43	91%	39.85	MAY2012	52.20	MAR1998
ROMP 120 Avon Park	45.64	45.15	44.35	0.49	1.29	41.71	44.97	3.93	81%	38.70	MAY2012	52.20	MAR1998
ROMP 134 Ocala/Avon Park	48.60	48.32	46.40	0.28	2.20	42.47	47.25	6.13	82%	37.78	JUN2012	57.33	APR1998
ROMP 89 Ocala	93.82	93.50	91.58	0.32	2.24	89.74	92.48	4.08	97%	82.44	JUN2000	94.86	DEC1997
ROMP 97 Avon Park	19.60	19.54	17.33	0.06	2.27	15.11	19.80	4.49	75%	11.82	MAY2009	26.21	SEP2004
ROMP TR 124 Avon Park	3.84	4.71	3.92	-0.87	-0.08	2.51	3.43	1.33	93%	0.77	SEP2004	7.95	JUN1995
ROMP TR 21-2 Ocala/Avpk	2.10	3.04	2.08	-0.94	0.02	1.23	1.81	0.87	92%	-0.06	DEC1990	4.56	NOV1987
Sumter 13 JC 59 Up Fldn	43.70	44.34	42.32	-0.64	1.38	40.74	43.19	2.96	81%	36.52	MAY2012	46.92	SEP2004
Webster City Fldn	83.65	83.47	80.79	0.18	2.86	79.65	84.15	4.00	71%	74.15	MAY2012	88.70	SEP2005
Weeki Wachee Deep Repl	17.11	17.36	15.46	-0.25	1.65	14.43	17.96	2.68	63%	10.37	MAY2009	23.61	AUG1984

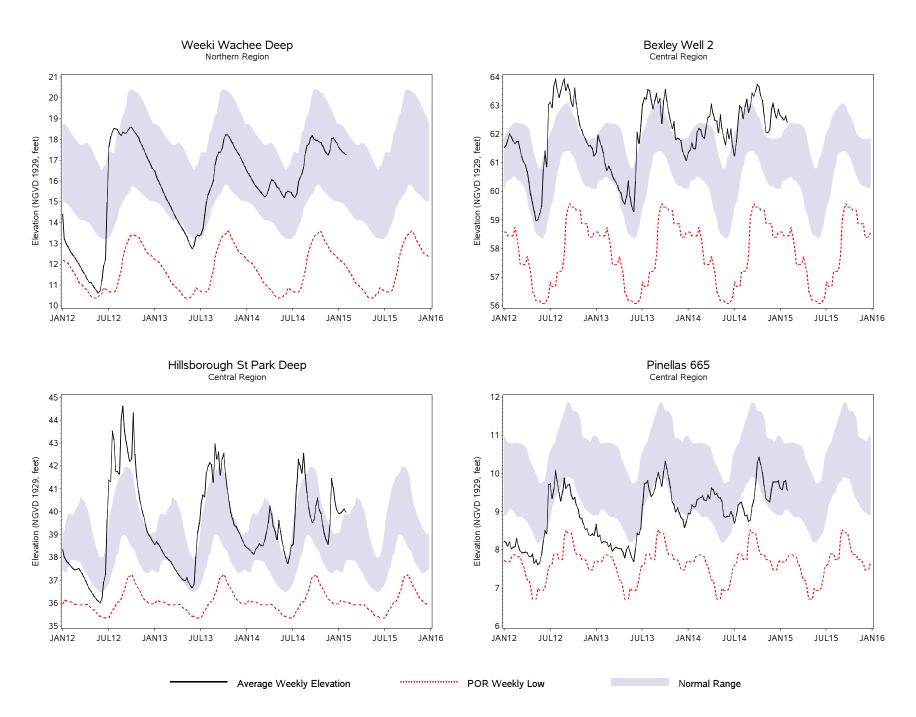
### Regional Wells Summary (continued):

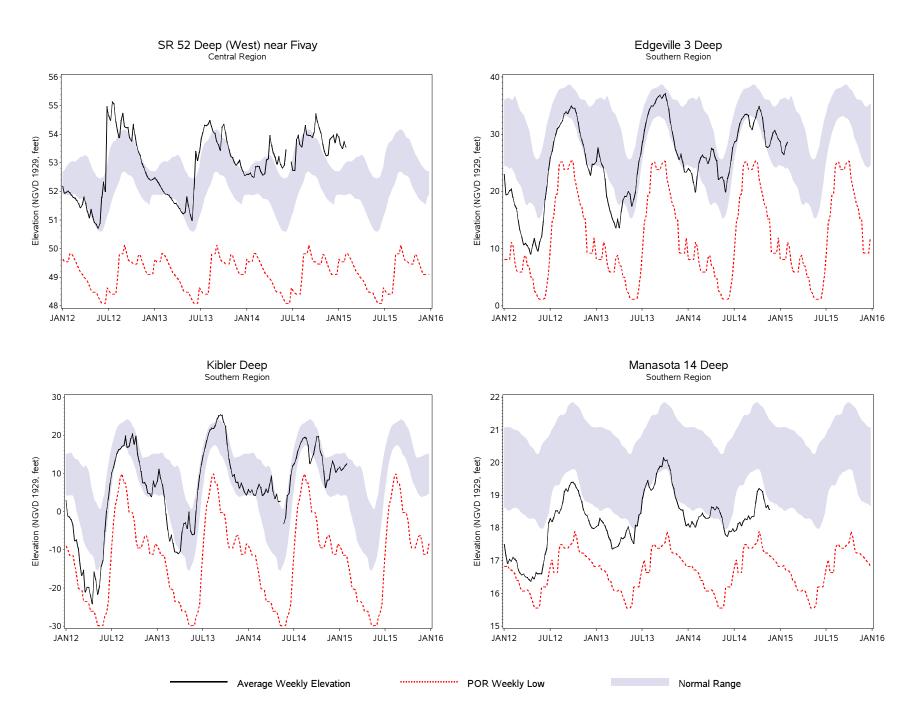
•	•	•		Change	Change	FEB	FEB	Departure	e FEB				
	FEB	JAN	FEB	From	From	Historical		From	2015	Period of	Record	Period of	Record
	2015	2015	2014	JAN	FEB	Low	High	Low	Percentile	Record	Low	Record	High
CENTRAL COUNTIES	Elev	Elev	Elev	2015	2014	Normal	Normal	Normal	Rank	Low	Date	High	Date
Bexley 2 Fldn	62.80	62.41	61.92	0.39	0.88	60.43	62.45	2.37	90%	56.08	JUN2000	64.07	SEP1988
Coley Deep	87.38	86.01	84.10	1.37	3.28	80.21	87.48	7.17	75%	59.36	JAN2010	94.17	SEP1949
Debuel Road Deep	57.46	57.07	55.82	0.39	1.64	53.23	55.91	4.23	93%	46.48	JUN2002	60.13	SEP1979
Hills State Pk Parking Deep	42.28	40.06	38.55	2.22	3.73	37.85	39.84	4.43	92%	35.35	JUN2000	47.40	DEC1997
Lk Alftred Deep nr Lake Alfr	127.64	128.96	127.17	-1.32	0.47	126.48	128.34	1.16	60%	119.85	MAY1974	131.62	OCT1960
Loughman Deep	90.46	90.56	89.09	-0.10	1.37	89.40	91.41	1.06	48%	85.90	MAY2001	93.23	OCT1979
Lykes Pasco Fldn	68.01	67.92	65.81	0.09	2.20	62.93	67.66	5.08	81%	56.94	JUN2000	75.78	OCT2004
Masaryktown Deep	37.45	38.20	34.84	-0.75	2.61	29.84	38.74	7.61	71%	21.89	AUG1994	50.32	SEP1984
Moon Lake Deep	31.99	32.01	30.92	-0.02	1.07	29.67	31.11	2.32	94%	25.27	AUG1990	34.38	MAR1998
Pasco 13 nr Drexel Fldn	72.80	72.57	71.69	0.23	1.11	71.47	74.05	1.33	49%	68.00	JUN2001	77.14	JUL1960
Pinellas 665 Fldn	10.16	9.99	9.42	0.17	0.74	8.82	10.78	1.34	64%	6.70	MAY2006	14.79	SEP1959
ROMP 123 Hawthorn/Ocala	14.19	12.65	9.33	1.54	4.86	-0.13	14.14	14.32	76%	-29.47	MAY2000	33.53	FEB1998
ROMP 40 Swnn/AvPk	44.09	43.27	40.29	0.82	3.80	25.81	42.80	18.28	85%	-4.21	JUN2000	57.29	FEB1998
ROMP 45 Avon Park	75.05	76.92	71.25	-1.87	3.80	57.10	70.36	17.95	97%	31.75	MAY1981	84.41	OCT2004
ROMP 48 Tampa/Suwannee	39.30	38.19	35.15	1.11	4.15	20.90	37.63	18.40	82%	-9.39	JUN2000	52.64	AUG1982
ROMP 50 Avon Park	7.53	6.86	5.14	0.67	2.39	0.34	6.52	7.19	83%	-32.77	FEB2004	14.95	AUG1982
ROMP 58 Ocala	97.76	98.87	96.20	-1.11	1.56	93.83	99.53	3.93	65%	84.03	JUN2000	106.94	DEC2005
ROMP 59 Swnn/AvPk	76.46	77.90	72.03	-1.44	4.43	56.77	71.24	19.69	97%	33.33	MAY1981	85.92	OCT2004
ROMP 60 Ocala/Avon Park	75.94	77.39	71.69	-1.45	4.25	54.97	70.20	20.97	90%	51.22	MAY2012	79.72	SEP2013
ROMP 66 Tampa	19.28	18.92	17.35	0.36	1.93	15.71	18.00	3.57	90%	12.04	JUN1977	24.51	DEC1997
ROMP 76 U Fldn	129.54	130.32	126.44	-0.78	3.10	126.89	129.40	2.65	79%	119.37	MAY1981	132.88	SEP2004
ROMP 87 Avon Park	104.48	104.08	102.23	0.40	2.25	100.62	103.85	3.86	93%	94.88	JUN2000	105.82	DEC1997
ROMP 88 Avon Park	106.25	105.89	103.52	0.36	2.73	102.66	105.18	3.59	96%	97.41	JUN2000	107.03	DEC1997
ROMP 93 Swnn/AvPk	74.90	75.10	72.72	-0.20	2.18	66.34	72.86	8.56	92%	59.02	JUN2001	76.60	SEP1982
ROMP DV-1 Suwannee	55.75	60.72	56.10	-4.97	-0.35	50.83	56.48	4.92	72%	5.52	JAN2010	65.59	FEB1998
ROMP TR 10-2 Tampa	10.55	10.49	9.79	0.06	0.76	7.95	9.77	2.60	95%	0.22	MAY1981	14.90	SEP2004
ROMP TR 13-3 Avon Park	15.16	15.39	16.92	-0.23	-1.76	14.86	16.41	0.30	34%	10.95	JUL1987	18.59	MAY1973
SR 52 And CR581 Deep	76.08	76.33	73.72	-0.25	2.36	66.74	75.05	9.34	85%	56.96	JUN2001	79.44	AUG1965
SR 52 Deep W nr Fivay Jct	53.76	53.85	52.70	-0.09	1.06	51.90	53.05	1.86	96%	48.08	JUN2000	59.53	AUG2010
SR 577 Deep Sanlon Ranch Fldn	92.31 99.16	92.67 99.15	89.72	-0.36 0.01	2.59 3.87	84.84 86.00	92.06 95.17	7.47 13.16	82% 97%	72.76 66.38	JUN2000 MAY1975	98.51	MAR1998
			95.29									105.27	OCT2004
Tarpon Rd Deep	10.40	10.66	9.92	-0.26	0.48	9.66	10.73	0.74	63%	7.41	MAY2007	13.06	SEP1971

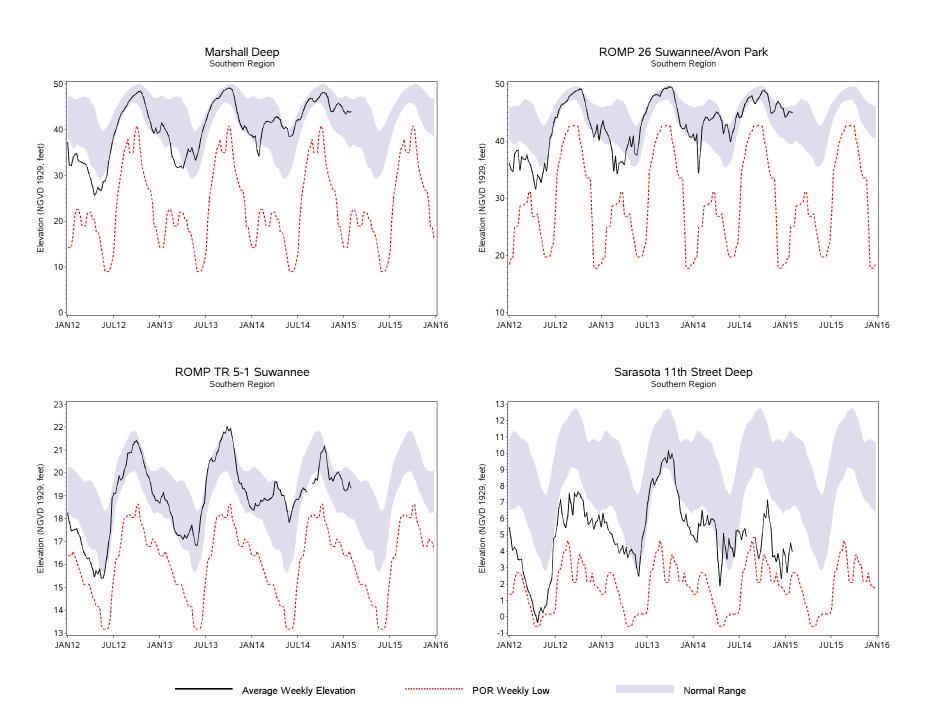
### **Regional Wells Summary (continued):**

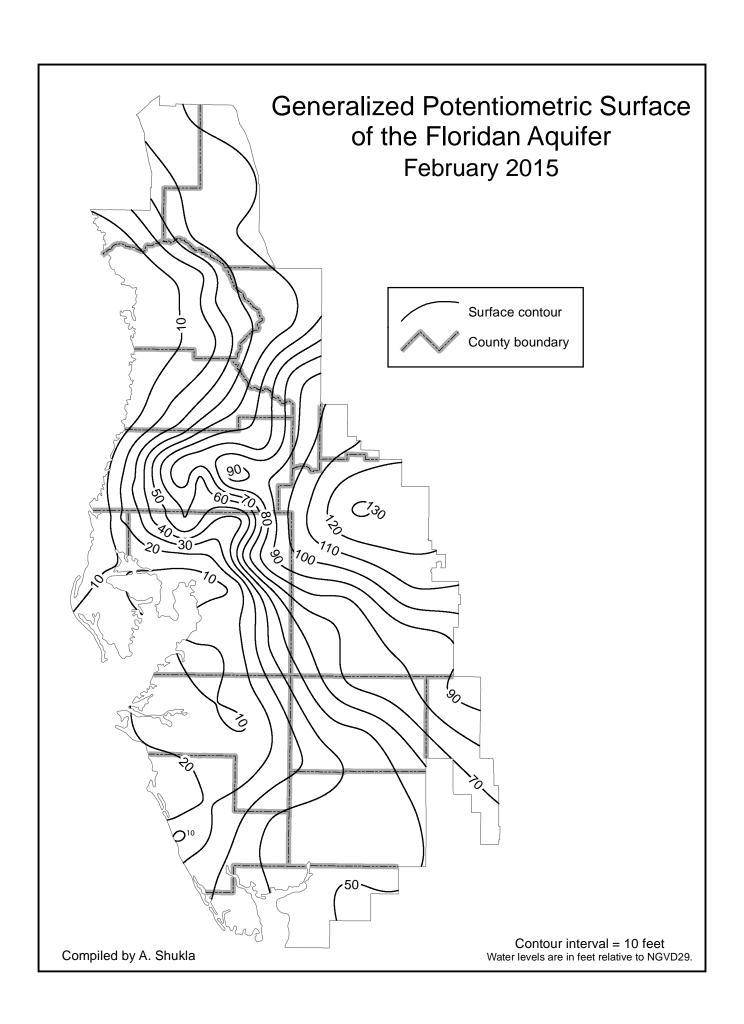
•	•	•		Change	Change	FEB	FEB	Departure	e FEB				
	FEB	JAN	FEB	From	From	Historical	Historical	From	2015	Period of	Record	Period of	Record
	2015	2015	2014	JAN	FEB	Low	High	Low	Percentile	Record	Low	Record	High
SOUTHERN COUNTIES	Elev	Elev	Elev	2015	2014	Normal	Normal	Normal	Rank	Low	Date	High	Date
Big Slough Deep	33.97	33.23	32.74	0.74	1.23	31.66	33.92	2.31	78%	26.84	MAY2006	36.12	OCT1995
Cargill FA-1 Fldn	71.39	73.19	67.28	-1.80	4.11	56.20	69.42	15.19	97%	28.48	MAY1981	80.81	OCT2004
Edgeville 3 Deep	28.72	25.99	26.33	2.73	2.39	21.88	36.60	6.84	49%	1.13	MAY2000	46.40	OCT1965
Englewood 14 Deep	2.53	3.05	6.10	-0.52	-3.57	2.69	5.29	-0.16	22%	-0.97	FEB2001	11.37	SEP1974
Florida Cities Test 1	7.10	3.68	3.34	3.42	3.76	5.12	18.09	1.98	31%	-18.63	MAY1976	25.89	SEP1977
Florida Pwr @ Piney Point	17.47	16.18	15.95	1.29	1.52	11.66	15.93	5.81	92%	-4.84	MAY1989	21.26	SEP2003
Kibler Deep	11.16	9.32	4.24	1.84	6.92	-2.38	14.08	13.54	68%	-29.95	MAY2000	29.30	AUG1978
Manasota 14 Deep	18.03		18.45		-0.42	18.63	21.04	-0.60	18%	15.55	MAY2009	22.70	NOV1971
Marshell Deep	41.90	43.92	41.83	-2.02	0.07	36.23	46.97	5.67	55%	8.96	JUN2000	55.24	MAR1964
ROMP 16 Ocala	44.28	47.59	46.97	-3.31	-2.69	45.02	48.66	-0.74	21%	28.94	JAN2001	51.00	OCT1995
ROMP 17 Up Fldn	43.25	46.42	45.61	-3.17	-2.36	42.15	45.58	1.10	38%	31.79	JUN2000	50.81	OCT1994
ROMP 19 West UFA Swnn	27.73	25.10	26.13	2.63	1.60	21.94	28.00	5.79	72%	10.99	JUN2000	33.04	JAN1984
ROMP 26 Suwannee/Tampa	39.88	44.70	44.26	-4.82	-4.38	39.92	46.91	-0.04	25%	17.78	DEC2010	52.21	OCT1979
ROMP 28X Swnn/AvPk	69.11	70.39	69.56	-1.28	-0.45	66.76	70.09	2.35	65%	56.36	JAN2010	74.60	OCT1995
ROMP 30 Swnn/AvPk	46.40	50.12	45.38	-3.72	1.02	34.45	47.59	11.95	69%	-0.20	JUN2000	60.52	MAR1998
ROMP 31 Swnn/AvPk	43.37	44.58	40.29	-1.21	3.08	29.80	46.33	13.57	70%	-8.20	JUN2000	57.79	MAR1998
ROMP 32 Low Ocala/Avpk	26.33	27.86	24.04	-1.53	2.29	15.21	29.46	11.12	66%	-17.76	JUN2000	44.70	FEB1998
ROMP 43XX Avon Park	87.70	90.88	88.23	-3.18	-0.53	84.36	89.25	3.34	61%	67.27	JAN2010	94.60	MAR1998
ROMP TR 1-2 Up Fldn	45.01	45.59	45.09	-0.58	-0.08	44.10	45.00	0.91	79%	40.68	JAN2001	47.09	APR1998
ROMP TR 3-1 Up Fldn	34.07	34.35	34.04	-0.28	0.03	32.64	33.66	1.43	86%	28.97	JUN2000	35.64	SEP2003
ROMP TR 5-1 Suwannee	20.38	19.63	18.89	0.75	1.49	17.78	19.92	2.60	81%	13.16	JUN2000	23.00	SEP1983
ROMP TR 7-1 Tampa	19.92	18.90	18.55	1.02	1.37	17.24	19.98	2.68	75%	9.81	JUN2000	23.40	SEP2003
ROMP TR 7-4 Swnn/Ocala	17.63	15.77	14.04	1.86	3.59	9.68	16.30	7.95	89%	-3.55	MAY2000	23.78	SEP2003
Sarasota 11TH St Deep	2.50	4.00	6.61	-1.50	-4.11	6.59	10.97	-4.09	1%	-0.60	APR2012	19.31	SEP1979
Sarasota Office Up Floridan	18.57	16.59	14.64	1.98	3.93	13.76	26.02	4.81	42%	-3.24	JUN2000	35.21	MAR1931
Verna T 0-1	17.70	16.73	11.12	0.97	6.58	8.65	20.39	9.05	67%	-16.79	MAY2000	33.32	JAN1984

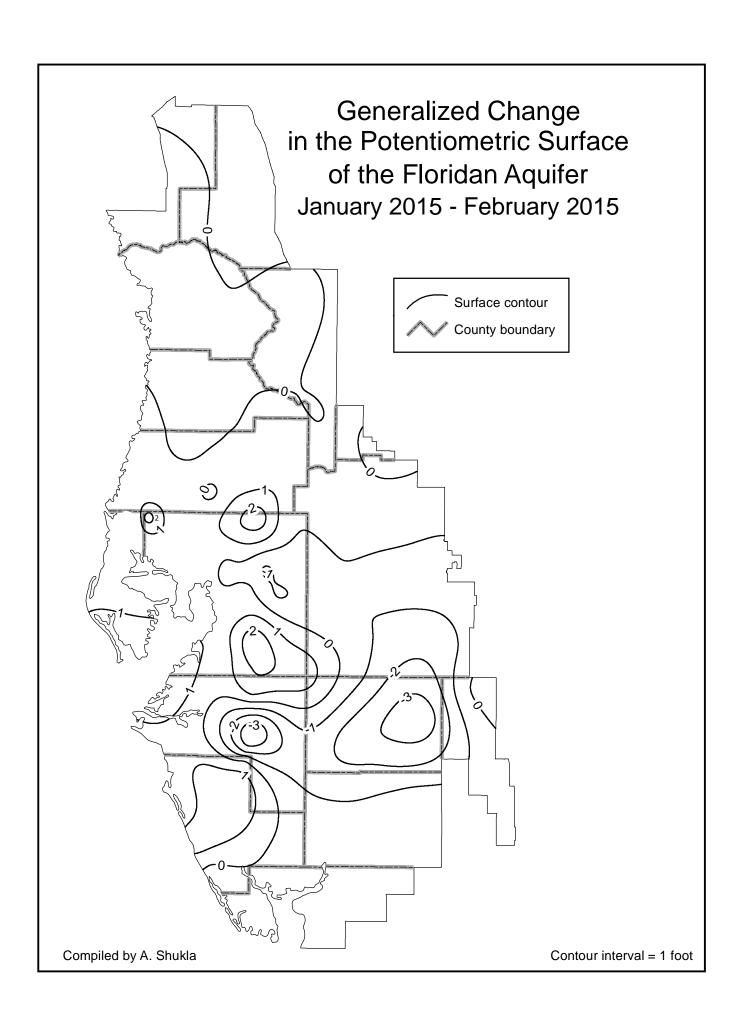


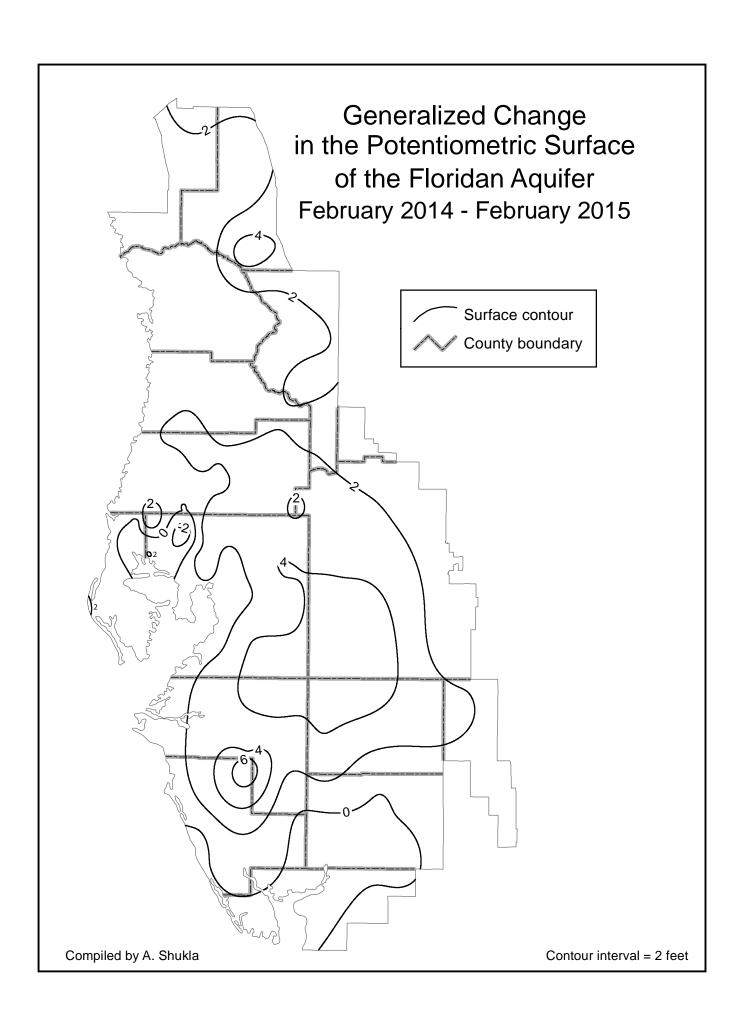












### **Public Supply Wellfields**

Water levels are measured in 21 monitor wells (9 surficial, 12 intermediate and Floridan aquifer wells) located at nine public supply wellfields in the District. Thirteen of the 21 monitor wells have water levels measured monthly, two biweekly, and six weekly. Monthly data are tabulated to compare recent water levels to historical means.

During February, average water levels increased in eight of the twelve intermediate and Floridan wells and all nine surficial wells. Average water levels measured in the intermediate and Floridan wells increased 0.16 foot, while levels measured in surficial wells increased 0.27 foot.

In February, average water levels in seven of the 12 intermediate and Floridan wells and all nine surficial wells were above last year's levels. Water levels measured in the intermediate and Floridan wells averaged 1.19 feet above last year's levels, while surficial water levels averaged 1.53 feet above February 2014 levels.

For February, average water levels in all 12 intermediate and Floridan wells and nine surficial wells were above the low normal level, compared to historical monthly levels. Water levels measured in the intermediate and Floridan wells averaged 8.91 feet above the low normal level, while levels in the surficial wells averaged 7.28 feet above the low normal level.

### SUMMARY OF GROUNDWATER LEVELS IN REPRESENTATIVE WELLFIELD WELLS, FEBRUARY 2015

INT/FLORIDAN WELLS	FEB 2015 Elev	JAN 2015 Elev	FEB 2014 Elev	Change From JAN 2015	Change From FEB 2014	FEB Historical Low Normal	FEB Historical High Normal	Departure From Low Normal	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Cosme-Odessa Cosme No. 3 Cross Bar WRW Cypress Crk TMR-1 Deep Cypress Crk TMR-3 Deep Eldridge-Wilde 11 Deep Eldridge-Wilde 2S Morris Bridge 3A Deep Section 21 Hills 13 Deep South Pasco 42 South Pasco SR 54 Deep Starkey Regional Verna 08	26.64 52.01 64.28 60.31 21.19 21.43 33.12 43.01 50.15 52.61 36.12 12.84	27.33 52.19 64.35 60.28 19.27 21.43 32.59 42.44 50.08 52.10 36.10 13.64	27.79 47.73 63.63 60.66 18.29 20.58 30.05 44.81 51.55 52.79 34.85 6.72	-0.69 -0.17 -0.07 0.03 1.92 0.00 0.53 0.57 0.07 0.50 0.02 -0.80	-1.15 4.28 0.64 -0.34 2.90 0.85 3.07 -1.79 -1.40 -0.18 1.26 6.12	22.90 40.62 51.12 49.78 9.47 10.41 27.49 35.70 41.65 45.73 31.00 0.87	27.60 52.25 61.76 58.15 18.79 19.15 31.97 45.64 49.10 53.91 34.39 13.51	3.74 11.39 13.16 10.53 11.72 11.02 5.62 7.31 8.50 6.88 5.12 11.97	10.86 33.93 36.91 34.19 0.31 -1.36 17.91 21.43 27.38 33.19 24.98 -24.32	JUN2000 DEC1993 FEB2001 FEB2001 SEP1990 JUN2000 MAY2009 JUN2002 MAY2002 JUN2000 MAY1989	33.75 61.65 70.87 68.74 64.70 25.43 42.53 52.08 58.35 59.20 37.69 26.68	AUG2012 AUG1984 JUN1976 JUL1976 NOV2009 SEP2013 AUG2013 JUL1944 AUG2012 AUG2012 JUL2012 FEB1998
SURFICIAL WELLS												
Cosme-Odessa IC-6 Cross Bar SERW Cypress Crk TMR-1 Shallow Cypress Crk TMR-3 Shallow Eldridge-Wilde 11 Shallow Morris Bridge 3A Shallow Section 21 Hills 13 Shallow South Pasco SR 54 Shallow Starkey 707	37.79 69.72 65.22 61.79 27.46 35.47 52.47 59.23 31.53	37.48 69.29 65.05 61.62 27.27 34.59 52.42 59.20 31.36	37.15 66.22 64.30 59.05 27.13 32.43 51.37 58.68 30.57	0.32 0.43 0.17 0.18 0.19 0.88 0.05 0.03 0.17	0.64 3.50 0.93 2.74 0.33 3.05 1.10 0.55 0.96	35.67 58.84 55.62 53.89 16.81 30.63 40.50 57.03 26.21	37.50 67.85 64.16 60.47 23.90 34.30 50.31 58.70 29.66	2.12 10.88 9.60 7.90 10.65 4.84 11.97 2.20 5.32	31.91 53.08 39.89 53.55 10.28 24.02 33.81 54.43 22.70	JUL1973 JUL1994 DEC2000 MAY1997 MAY1991 MAY2009 MAY2001 OCT1980 JUN2000	42.72 72.53 69.06 64.66 29.34 39.20 53.82 60.49 33.85	SEP1988 JUL1984 AUG2003 AUG1978 SEP2004 DEC1997 AUG2012 SEP1998 MAR1998

### **Aquifer Resource Index**

The Aquifer Resource Index (ARI) was created to provide information to the media, residents, local governments and other interested parties about current ground-water conditions and how they compare to historical records. The underlying purpose of this index is to provide the public with a gauge of ground-water levels in their area, so they can develop an understanding of the severity and cycles of drought and recovery.

The ARI is derived by comparing current ground-water levels with historical levels for 77 intermediate and Floridan aquifer (deep) monitor wells located throughout the three geographic areas of the District. Monitor wells with an adequate and reliable period-of-record to calculate weekly percentiles were selected for the network.

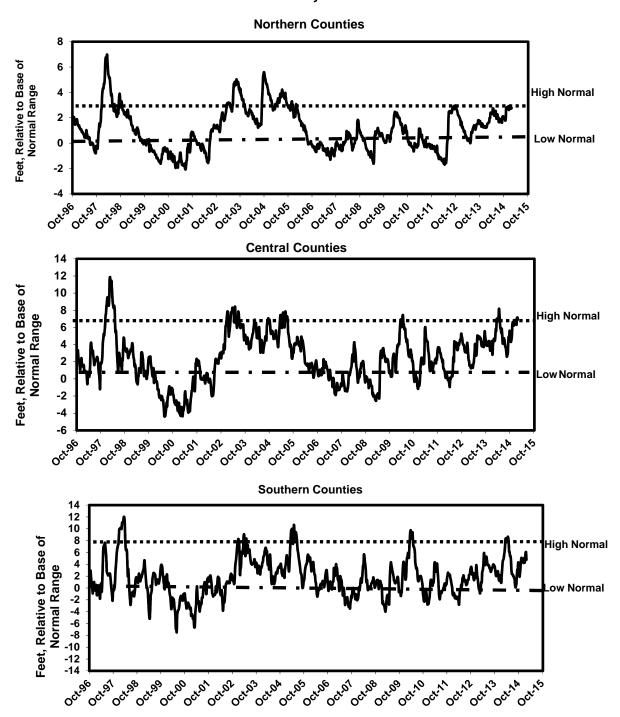
To determine the ARI value for a geographic area, each well is compared to its respective low-normal value weekly, and the difference is calculated. The weekly differences are used to determine the regional ARI value and the resulting ARI value represents how far water levels in the aquifer have to rise or fall to reach their respective low-normal value. The normal range for the northern region is approximately zero to three feet, zero to five-and-one-half feet for the central region and zero to eight feet for the southern region.

## Weekly Aquifer Resource Index Level, In Feet (Relative to Bottom of the Normal Range or 25<sup>th</sup> Percentile)

Report Date	Northern Counties	Central Counties	Southern Counties
02/02/2015	2.72	6.31	4.80
02/10/2015	2.79	7.04	5.79
02/17/2015	2.73	7.16	6.05
02/23/2015	2.78	6.92	4.78

Note: A negative value indicates the regional average is below the "Low-Normal" level

### AQUIFER RESOURCE INDEX\* February 2015



<sup>\*</sup>Average Groundwater Level Relative to Low Normal, NGVD 29 Compiled By Pam Green

### PUBLIC SUPPLY SURFACE WATER RESERVOIRS

CITY OF TAMPA RESERVOIR (Hillsborough River Basin): Constructed in 1924, it is located on the Hillsborough River in Hillsborough County. It is the fourth largest public supply surface water facility in the District. It is the main water supply for the City of Tampa and has a total storage capacity of 1.7 billion gallons (bg). The total usable volume is 1.4 bg, when the reservoir elevation is 22.5 feet NGVD. It is an in-stream reservoir with a depth that ranges between nine and 22 feet. Given this amount of water, it is estimated that a 15-day supply of water is available from this facility over an extended dry period. During periods of low water due to drought conditions, the facility is permitted to pump water from two alternate sources. The first of these two sources is the Tampa Bypass Canal. Water is pumped over the water control structure at S-161 into the Hillsborough River above the dam. The second source is Sulphur Springs, just downstream from the dam, where water is captured at the spring and pumped back behind the dam. Withdrawals from both sources are in strict accordance with pumpage schedules as outlined in the facility's water use permit. When water levels fall below 12 feet NGVD, water cannot be withdrawn because the reservoir level is below the intake pipes. The permitted average daily withdrawal for this facility is 82 mgd, with a permitted maximum daily withdrawal of 104 mgd. Currently, ground water wells are not used to augment this facility. The minimum producible level is 9.00 feet.

### PEACE RIVER RESERVOIRS - PEACE RIVER/MANASOTA REGIONAL WATER

**SUPPLY AUTHORITY (Peace River Basin):** The Peace River reservoirs are located in southwestern DeSoto County. They are an off-stream reservoir system consisting of two reservoirs that store surface water captured from the Peace River during wet periods. The first reservoir, Reservoir 1, was built in 1980 and encompasses approximately 85 acres, has a water depth of approximately 31 feet, and has a total storage capacity of approximately 625 million gallons. The second reservoir, Reservoir 2, was built in 2009, covers about 616 acres, has a water depth of approximately 35 feet, and has a total storage capacity of about 6.0 billion gallons. The PRMRWSA facility ranks as the third largest in the District for total volume storage and supplies water to Charlotte, DeSoto, Manatee and Sarasota counties and to the City of North Port. The facility also uses an aquifer storage recovery (ASR) system for storing treated water pumped from the river. The minimum producible level at Reservoir 1 is Elevation 8.0 feet, while Reservoir 2 is Elevation 27.0 feet.

MANATEE RESERVOIR (Manasota Basin): Completed in 1967 by the damming of the Manatee River, the Manatee Reservoir is the second largest of the six surface-water public supply facilities within the District. Located in Manatee County, this in-stream facility has a storage capacity of 7.5 bg. The service area of the Manatee reservoir is the unincorporated portions of Manatee County, the City of Palmetto and Anna Maria Island, and also the Sarasota SUD#1. This reservoir provides essentially all public supply for Manatee County, with the exception of the City of Bradenton. The total size of this reservoir is 1800 acres with an average depth of 15 feet. With the reservoir full, the facility has approximately 220 days of available water supply. When the surface-water elevation drops below 21.0 feet, water cannot be withdrawn because levels are below the facility's intakes. The permitted average daily withdrawal for this facility is 34.9 mgd, with a permitted peak monthly quantity of 41.9 mgd. The minimum producible level is 21.00 feet.

**EVERS RESERVOIR (Manasota Basin):** Constructed in 1935 and expanded in 1985, it is located on the Braden River in Manatee County. This is the fifth largest public supply reservoir in the District. Its main service area is the City of Bradenton and approximately 500 customers outside the city. It has a total storage capacity of 1.5 bg. The total size of the facility is 300 acres with an average depth of 12 feet. Water ceases to flow over the dam when the level falls below 3.84 feet NGVD. During the 1985 drought, while expansion of the facility was taking place, the water level dropped to one foot below sea level and demand was still met. Given a completely full reservoir, with no water going over the spillway, it is estimated the facility could supply water for approximately 260 days, with no input from rainfall. The permitted average daily withdrawal for this facility is 6.95 mgd, with a permitted peak monthly quantity of 8.13 mgd. Currently, ground-water wells are not used to augment this facility.

SHELL CREEK RESERVOIR (Peace River Basin): Shell Creek Reservoir, located in Charlotte County, is the sixth largest surface water system within the District. This system was built in 1964 and services the City of Punta Gorda as well as unincorporated areas surrounding the city limits. The Shell Creek Reservoir is fed by two primary tributaries, Shell Creek from the east and Prairie Creek from the northwest. The total drainage area at Hendrickson Dam is 373 square miles. It has a surface area of 800 acres and depths of 10 to 12 feet. Total storage capacity is 765 mg. Even with this low volume of water, personnel at this facility estimate they have approximately 125 days of available supply with no input from rainfall. Water ceases to flow across the weir when surface elevations drop below 5.0 feet NGVD, and at 3.7 feet NGVD water quality becomes a major concern. When surface elevations drop below 1.75 feet NGVD, the water is below the intakes and withdrawal of water is not possible. The permitted average daily withdrawal by this facility is 5.358 mgd, with a permitted peak monthly quantity of 6.901 mgd. The minimum producible level is 1.70 feet.

C.W. BILL YOUNG REGIONAL RESERVOIR - TAMPA BAY WATER (Alafia River Basin): Constructed in early 2005, it is the largest public supply surface water facility in the District. Located in southern Hillsborough County, it is an off-stream reservoir that stores surface water skimmed from the Tampa Bypass Canal and Alafia and Hillsborough Rivers. It services the Tampa Bay region through the Tampa Bay Water regional public supply water distribution system. The reservoir has an estimated storage capacity of 15.0 bg when the water level elevation is 136.5 feet NGVD. The reservoir is approximately 45 feet deep, two miles long and one mile wide, and encompasses a land area of approximately 1,100 acres. It reportedly has the capacity to provide 25 percent of the Tampa Bay region's public supply needs for six months and can supply the Tampa Bay regional surface water treatment plant at full capacity for 227 days.

### **Reservoirs**

Water-level data for the seven reservoirs are obtained weekly from the USGS, Manatee County Utilities Department, Peace River/Manasota Regional Water Supply Authority, or Tampa Bay Water. The last weekly water-level value of the month is indicated in this report. The values reported are provisional and subject to revision.

In February, five of the seven reservoirs monitored for this report recorded water-level increases, compared to last month. The Hillsborough River, Lake Manatee, Bill Young, Peace River No. 1 and Shell Creek reservoirs posted water level increases of 0.01 foot, 0.63 foot, 5.58 feet, 0.50 foot and 0.02 foot, respectively. The Evers and Peace River No. 2 reservoirs posted water level decreases of 0.01 foot and 1.60 feet, respectively, , compared to the previous month.

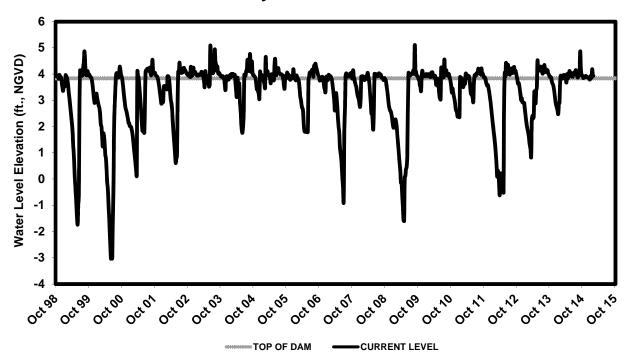
### SUMMARY OF WATER LEVELS IN WATER SUPPLY RESERVOIRS (ELEVATION IN FEET, NGVD 29)

				Change	Change
	2015	2015	2014	from Prior	from Prior
RESERVOIR	Jan	Feb	Feb	Month	Year
Evers					
City of Bradenton	3.94	3.93	3.94	-0.01	-0.01
Hillsborough					
City of Tampa	22.64	22.65	22.65	0.01	0.00
Lake Manatee					
Manatee County	39.35	39.98	38.22	0.63	1.76
C.W. Bill Young Regional					
Tampa Bay Water	129.61	135.19	63.01	5.58	72.18
Peace River					
PRMRWSA Reservoir #1	24.2	24.7	25.2	0.50	-0.50
PRMRWSA Reservoir #2	63.3	61.7	62.0	-1.60	-0.30
Shell Creek					
City of Punta Gorda	5.11	5.13	5.16	0.02	-0.03

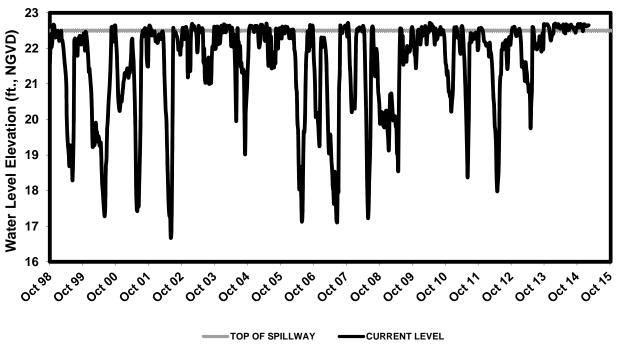
NGVD - National Geodetic Vertical Datum Reported data are provisional and subject to revision.

Compiled by Pam Green

# **EVERS RESERVOIR City of Bradenton**

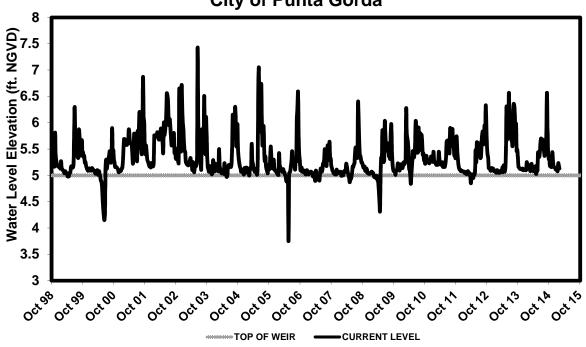


# HILLSBOROUGH RESERVOIR City of Tampa

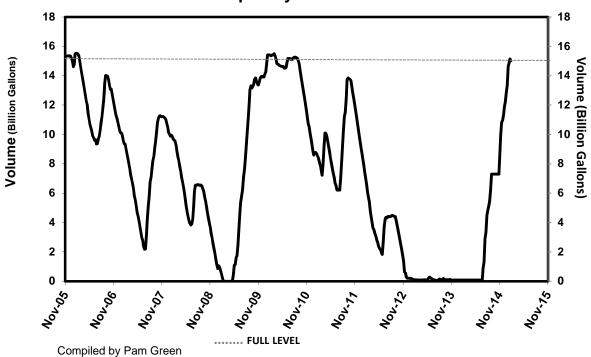


Compiled by Pam Green

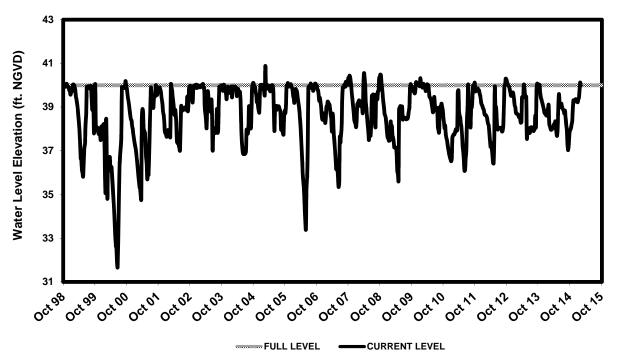
# SHELL CREEK RESERVOIR City of Punta Gorda



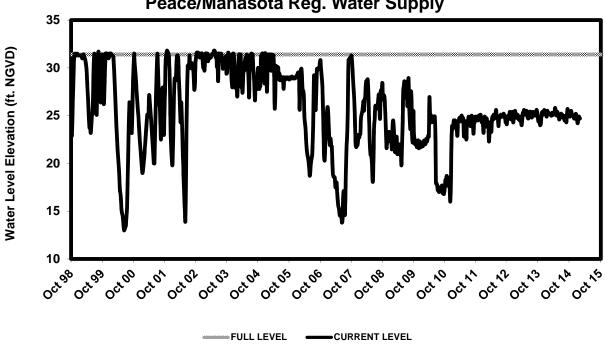
## C.W. BILL YOUNG REGIONAL RESERVOIR Tampa Bay Water



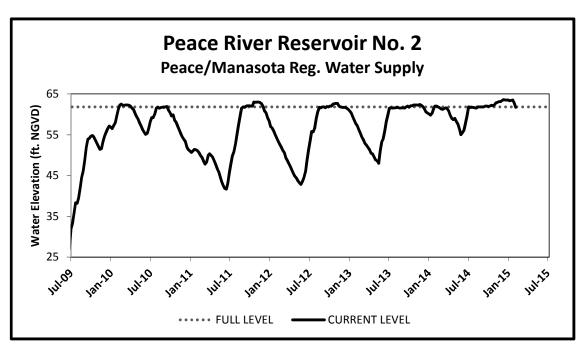
## LAKE MANATEE RESERVOIR Manatee County



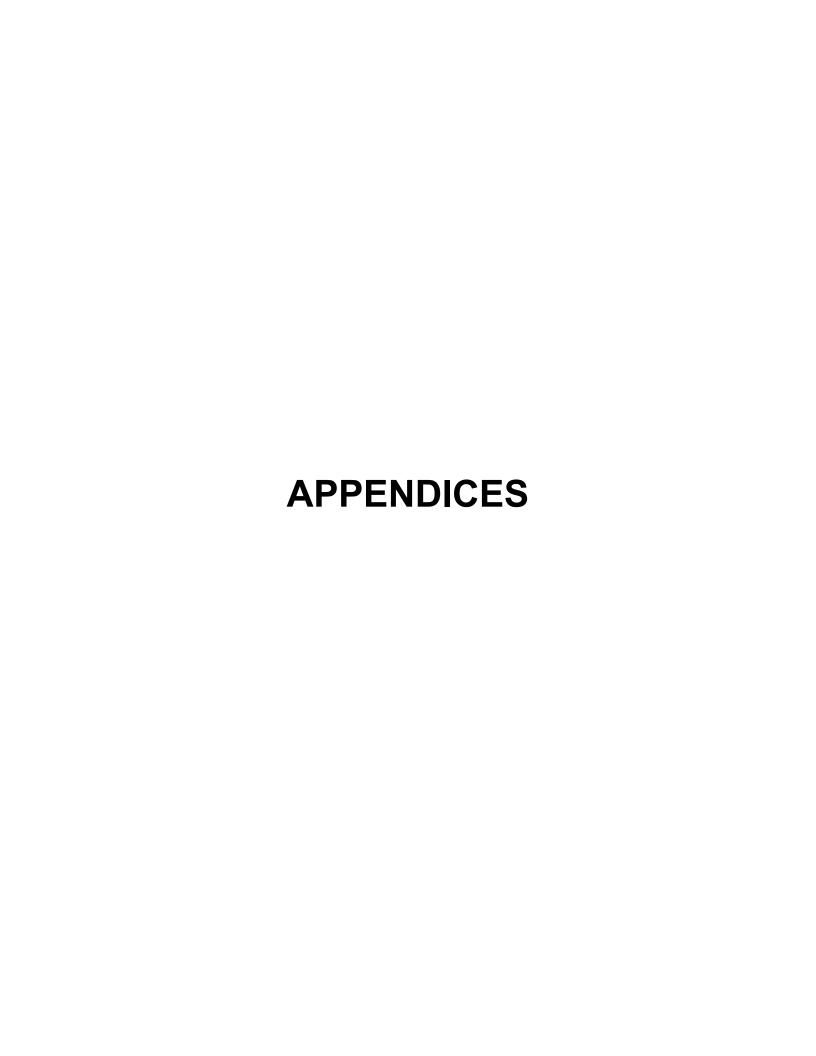




Compiled by Pam Green



Compiled by Pam Green



Rainfall percentiles by interval and region, inches.

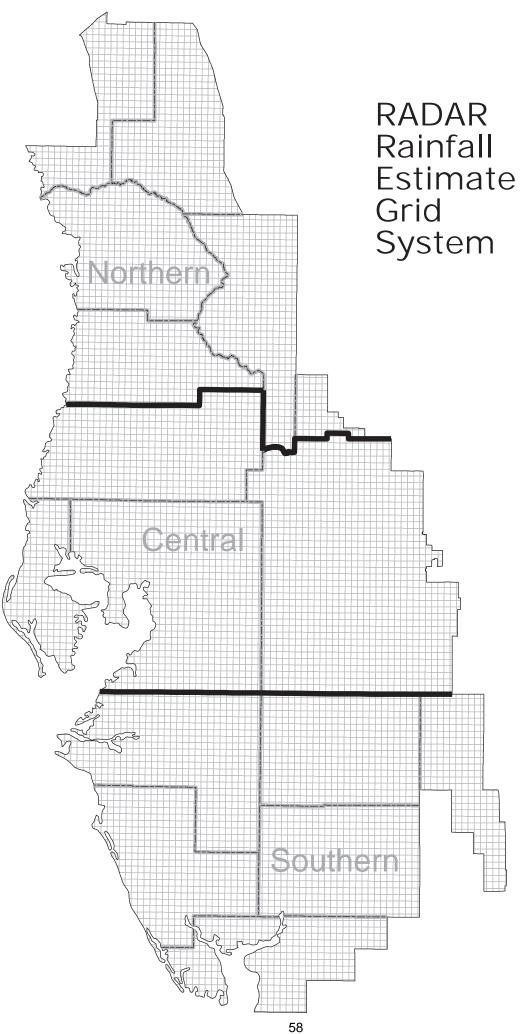
Rainfall percentiles by interval and region, inches.									
Rainfall Interval	Region	10 <sup>TH</sup> Percentile (P10)	25 <sup>th</sup> Percentile (P25)	50 <sup>th</sup> Percentile (P50)	75 <sup>th</sup> Percentile (P75)	90 <sup>th</sup> Percentile (P90)			
Annual total	Northern	43.19	48.35	54.01	58.86	63.46			
Annual total	Central	41.45	46.10	52.16	57.28	63.82			
Annual total	Southern	42.05	46.25	52.19	57.82	63.43			
Annual total	District	43.12	47.22	52.99	57.46	62.83			
Dry season total	Northern	15.27	18.42	23.79	28.72	32.10			
Dry season total	Central	13.32	16.48	21.59	26.86	30.83			
Dry season total	Southern	12.35	15.68	21.24	26.23	30.01			
Dry season total	District	13.71	16.79	22.02	27.22	29.70			
Wet season total	Northern	22.79	25.44	29.45	33.43	38.16			
Wet season total	Central	23.22	25.79	29.71	34.86	39.22			
Wet season total	Southern	24.37	27.37	30.58	35.88	41.68			
Wet season total	District	23.92	27.16	29.97	34.71	38.93			
January total	Northern	0.73	1.50	2.45	4.00	5.30			
January total	Central	0.72	1.21	2.23	3.72	4.60			
January total	Southern	0.39	0.93	1.88	3.31	4.93			
January total	District	0.65	1.17	2.10	3.55	4.90			
February total	Northern	0.82	1.42	2.82	4.08	5.76			
February total	Central	0.60	1.12	2.38	4.17	5.50			
February total	Southern	0.36	1.26	2.21	3.63	4.93			
February total	District	0.73	1.32	2.38	3.94	5.12			
March total	Northern	1.00	2.06	3.15	5.43	7.21			
March total	Central	0.97	1.66	2.96	4.95	6.44			
March total	Southern	0.81	1.28	2.56	4.29	6.68			
March total	District	1.09	1.64	3.04	4.86	6.92			
April total	Northern	0.65	1.33	2.38	3.95	5.52			
April total	Central	0.51	0.96	1.87	3.44	5.59			
April total	Southern	0.48	1.19	2.04	3.75	4.66			
April total	District	0.65	1.20	2.24	3.72	5.12			
May total	Northern	1.18	1.95	3.21	4.67	6.92			
May total	Central	0.87	1.64	2.73	4.58	5.75			
May total	Southern	1.17	1.91	3.36	5.22	6.75			
May total	District	1.23	2.04	3.24	4.87	6.29			
June total	Northern	4.60	5.47	7.27	8.63	10.16			
June total	Central	3.65	4.79	6.46	8.27	9.48			
June total	Southern	4.22	5.63	7.44	9.06	12.06			
June total	District	4.55	5.46	7.24	8.60	10.99			
July total	Northern	5.36	6.75	8.29	9.16	11.52			
July total	Central	4.89	5.98	8.35	10.05	11.44			
July total	Southern	5.68	6.94	8.11	9.50	10.99			
July total	District	5.60	6.83	8.19	9.57	10.58			
August total	Northern	5.44	6.30	7.31	9.72	11.33			
August total	Central	5.52	6.55	7.90	9.72	12.03			
August total	Southern	5.55	6.22	7.90 7.70	8.97	10.49			
August total	District	5.65	6.52	7.70	9.37	10.43			
September total	Northern	2.79	4.18	5.84	8.04	11.35			
September total	Central	3.19	5.11	6.46	8.50	11.69			
September total	Southern	4.30	5.46	6.94	9.33	11.85			
September total	District	3.85	5.21	6.53	8.62	11.65			
October total	Northern	0.63	1.27	2.46	4.40	6.15			
October total	Central	0.69	1.39	2.40	4.40	6.13			
October total	Southern	0.09	1.78	2.73	4.03	6.04			
October total	District	1.06	1.76	2.73	4.27	5.79			

Rainfall percentiles by interval and region, inches (continued).

Rainfall Interval	Region	10 <sup>™</sup> Percentile (P10)	25 <sup>th</sup> Percentile (P25)	50 <sup>th</sup> Percentile (P50)	75 <sup>th</sup> Percentile (P75)	90 <sup>th</sup> Percentile (P90)
November total	Northern	0.38	0.71	1.63	2.88	4.56
November total	Central	0.25	0.47	1.42	2.82	4.33
November total	Southern	0.40	0.64	1.46	2.56	3.82
November total	District	0.37	0.63	1.53	2.73	4.39
December total	Northern	0.54	1.06	2.06	3.71	5.19
December total	Central	0.48	0.84	1.89	3.03	4.87
December total	Southern	0.45	0.77	1.56	2.63	4.18
December total	District	0.54	0.89	1.86	2.92	4.34

### Rainfall characterization ranges

Characterization	Range	Corresponding Rainfall Percent of Normal (approximate)
Very dry	Less than the P10 rainfall	Less than 80 percent of normal
Drier than normal	P10 to P24 rainfal	80 to 90 percent of normal
Normal	P25 to P75 rainfall	90 to 110 percent of normal
Wetter than normal	P76 to P90 rainfal	110 to 120 percent of normal
Very Wet	Greater than the P90 rainfall	Greater than 120 percent of normal

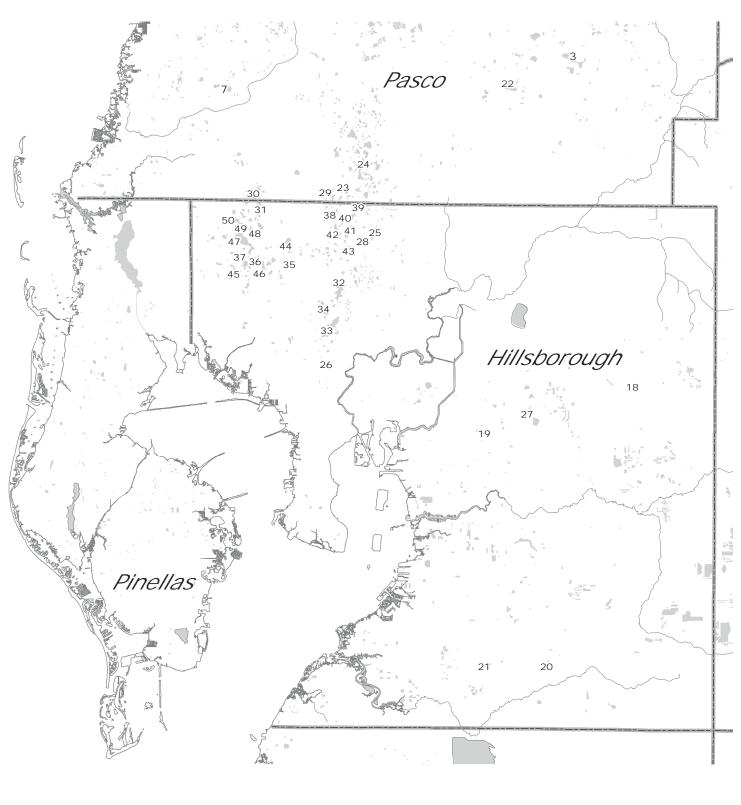




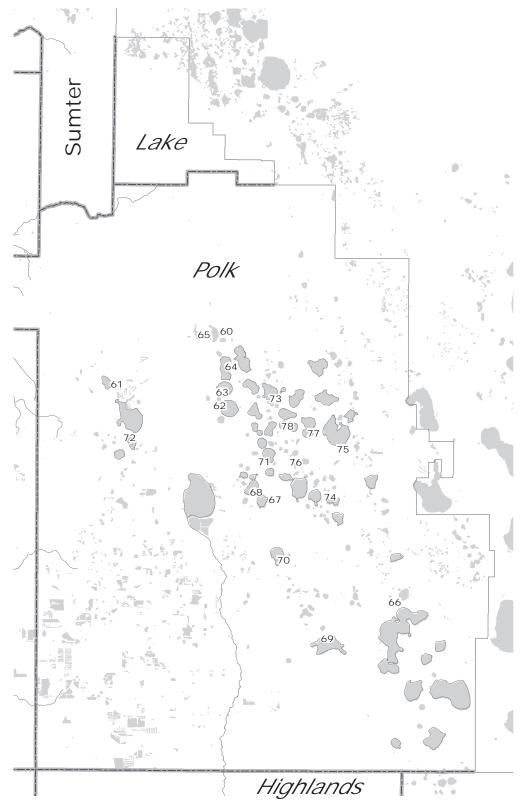
## Selected Lake Monitoring Stations Northern Region



## Selected Lake Monitoring Stations Tampa Bay Region

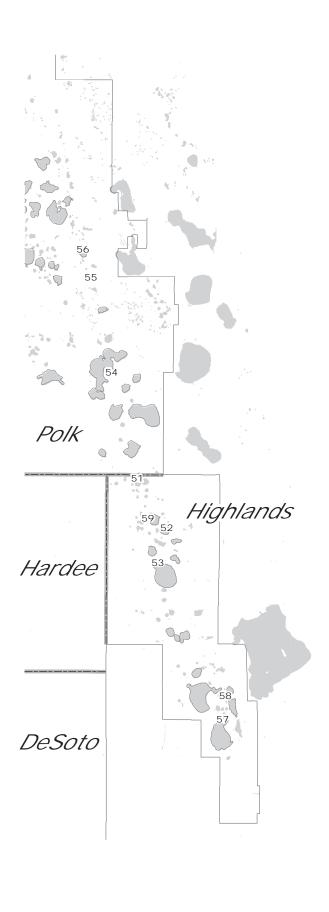


## Selected Lake Monitoring Stations Polk Uplands Region





## Selected Lake Monitoring Stations Lake Wales Ridge Region





## Selected Lake Monitoring Stations

### **Northern Region**

Site Name
Lake Iola
Hancock Lake
Lake Pasadena
Big Fish Lake
Crews Lake
Lake Lindsey
Moon Lake
Hunters Lake
Tsala Apopka at Floral City
Lake Miona
Pana Vista Outlet River
Outlet River at Panacoochee
Tsala Apopka at Inverness
Spring Lake
Tsala Apopka at Hernando
Little Lake (Consuella)
Lake Panasoffkee

### Tampa Bay Region

Map ID	<u>Site Name</u>	<u>Map ID</u>	Site Name
18	Mud (Walden) Lake	40	Lake Brooker
19	Gornto Lake	41	Cooper Lake
20	Carlton Lake	42	Lake Thomas
21	Lake Wimauma	43	Brant Lake
22	King Lake near San Antonio	44	Turkey Ford Lake
23	Lake Linda	45	Church Lake
24	Lake Padgett	46	Horse Lake
25	Keene Lake	47	Lake Alice
26	Egypt Lake	48	Lake Calm
27	Long Pond	49	Keystone Lake
28	Lake Stemper	50	Crescent Lake
29	Camp Lake		
30	Lake Ann (Parker)		
31	Lake Hiawatha		
32	Platt Lake		
33	Lake Carroll		
34	Bay Lake		
35	Lake LeClare		
36	Little Lake		
37	Rainbow Lake		
38	Lake Harvey		
39	Deer Lake		

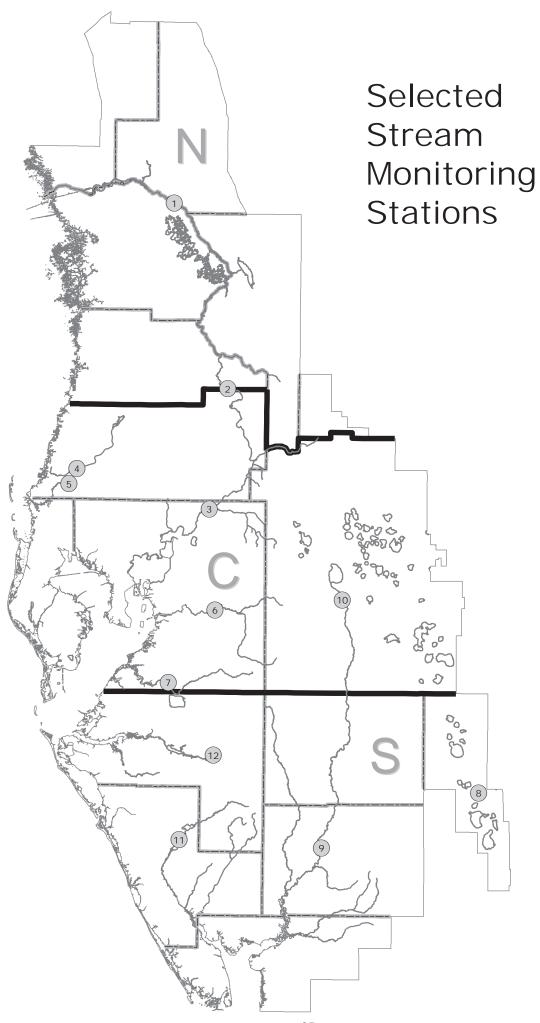
## Selected Lake Monitoring Stations

### **Lake Wales Ridge Region**

<u>Map ID</u>	<u>Site Name</u>
51	Trout Lake
52	Lake Letta
53	Lake Jackson at Sebring
54	Crooked Lake near Babson Park
55	Lake Starr
56	Lake Annie
57	Lake Placid
58	Lake Clay
59	Lake Lotela

## **Polk Uplands Region**

<u>Map ID</u>	Site Name
60	Lake Helene
61	Lake Gibson
62	Lake Ariana
63	Lake Arietta
64	Lake Juliana
65	Clearwater Lake
66	Blue Lake South
67	Lake McLeod
68	Eagle Lake
69	Lake Buffum
70	Lake Garfield
71	Lake Howard
72	Lake Bonny
73	Lake Alfred
74	Lake Ruby
75	Lake Hamilton
76	Lake Otis
77	Lake Fannie
78	Lake Conine





## Selected Stream Monitoring Stations

Map ID	<u>Site Name</u>
1	Withlacoochee River near Holder
2	Withlacoochee River at Trilby
3	Hillsborough River near Zephyrhills
4	Pithlachascotee River near New Port Richey
5	Anclote River near Elfers
6	Alafia River at Lithia
7	Little Manatee River near Wimauma
8	Josephine Creek near DeSoto City
9	Peace River at Arcadia
10	Peace River at Bartow
11	Myakka River near Sarasota
12	Manatee River near Myakka Head

### STREAM MONITORING STATIONS

### WITHLACOOCHEE RIVER (Northern Region)

Total length: 157 miles

Headwaters: NW Polk and southern Sumter Counties

Elevation: 135 feet

Tributaries: Little Withlacoochee, Big Gant Canal, Jumper Creek, Shady

Brook, Outlet River of Lake Panasoffkee, Leslie Heifner Canal, Orange State Canal, Tsala Apopka Outfall Canal and Rainbow

Springs.

Mouth: Gulf of Mexico, Citrus County

Average fall: 0.9 feet/mile Drainage area: 2000 square miles

### **Holder Station**

County: Marion Period-of-record: 1928

Location: 38 miles upstream from mouth

Avg daily discharge: 1036.3 cfs Runoff per year: 10.36 inches

Max of monthly avg discharge: 7096.3 cfs in 04/1960 Min of monthly avg discharge: 111.8 cfs in 07/1992 Drainage area: 1825 square miles

#### Trilby Station

County: Hernando Period-of-record: 1928

Location: 93 miles upstream from mouth

Avg daily discharge: 336.3 cfs Runoff per year: 6.73 inches

Max of monthly avg discharge: 4254.7 cfs in 09/1933
Min of monthly avg discharge: 6.1 cfs in 07/1992
Drainage area: 570 square miles

#### **ANCLOTE RIVER (Central Region)**

Total length: 27.5 miles

Headwaters: South-central Pasco County, west of Land O Lakes

Elevation: 65 feet

Tributaries: South Branch and Hollin Creek Mouth: South Branch and Hollin Creek Gulf of Mexico, Pasco County

Average fall: 2.4 feet/mile Drainage area: 113 square miles

### **Elfers Station**

County: Pasco Period-of-record: 1946

Location: 16 miles upstream from mouth

Avg daily discharge: 65.1 cfs
Runoff per year: 12.20 inches

Max of monthly avg discharge: 633.8 cfs in 09/1988
Min of monthly avg discharge: 1.4 cfs in 05/1981
Drainage area: 72.5 square miles

#### **HILLSBOROUGH RIVER (Central Region)**

Total length: 55 miles

Headwaters: Southeast Pasco County

Elevation: 77 feet

Tributaries: Crystal Springs, Blackwater Creek, Flint Creek, Trout Creek,

Cypress Creek, Curiosity Creek and Sulphur Springs

Mouth: Hillsborough Bay Average fall: 1.4 feet/mile Drainage area: 690 square miles

#### Zephyrhills Station

County: Hillsborough

Period-of-record: 1939

Location: 40 miles upstream from mouth

Avg daily discharge: 244.2 cfs Runoff per year: 15.05 inches

Max of monthly avg discharge: 2284.5 cfs in 12/1997 Min of monthly avg discharge: 47.1 cfs in 05/1994 Drainage area: 200 square miles

### PITHLACHASCOTEE RIVER (Central Region)

Total length: 41 miles

Headwaters: Crews Lake and Masaryktown area in central Pasco and

southern Hernando Counties

Elevation: 120 feet

Mouth: Gulf of Mexico

Average fall: 2.9 feet/mile

Drainage area: 191 square miles

#### **New Port Richey Station:**

County: Pasco Period-of-record: 1963

Location: 10.5 miles upstream from mouth

Avg daily discharge: 27.9 cfs
Runoff per year: 27.11 inches

Max of monthly avg discharge: 329.4 cfs in 09/1988

Min of monthly avg discharge: 0.0 cfs

Drainage area: 180 square miles

#### ALAFIA RIVER (Central Region)

Total length: 24 miles

Headwaters: Western Polk and eastern Hillsborough Counties

Tributaries: North and South Prongs, Lithia Springs, and Buckhorn Creek.

Elevation: 30 feet

Mouth: Tampa Bay

Average fall: 1.5 feet/mile

Drainage area: 420 square miles

#### Lithia Station:

County: Hillsborough

Period-of-record: 1932

Location: 16 miles upstream from mouth

Avg daily discharge: 339.7 cfs Runoff per year: 13.59 inches

Max of monthly avg discharge: 4185.4 cfs in 09/1933 Min of monthly avg discharge: 13.0 cfs in 05/1945 Drainage area: 335 square miles

#### LITTLE MANATEE RIVER (Central Region)

Total length: 39 miles

Headwaters: Southeast Hillsborough County

Tributaries: Carlton Branch, the South Fork, Dug Creek and Cypress Creek.

Elevation: 130 feet

Mouth: Tampa Bay

Average fall: 3.4 feet/mile

Drainage area: 225 square miles

#### Wimauma Station:

County: Hillsborough

Period-of-record: 1939

Location: 15 miles upstream from mouth

Avg daily discharge: 171.4 cfs Runoff per year: 15.68 inches

Max of monthly avg discharge: 1443.7 cfs in 07/1945 Min of monthly avg discharge: 3.8 cfs in 05/45 Drainage area: 149 square miles

## JOSEPHINE CREEK (Southern Region)

Total length: 12 miles

Headwaters: Lake Josephine in central Highlands County

Elevation: 80 feet

Mouth: Lake Istokpoga in Highlands County

Average fall: 3.5 feet/mile
Drainage area: 143 square miles

### **DeSoto City Station:**

County: Highlands Period-of-record: 1946

Location: 4.9 miles upstream of mouth

Avg daily discharge: 74.2 cfs Runoff per year: 8.90 inches

Max of monthly avg discharge: 769.9 cfs in 09/1960 Min of monthly avg discharge: 1.1 cfs in 05/56 Drainage area: 109 square miles

#### MANATEE RIVER (Southern Region)

Total length: 45 miles

Headwaters: Four corners area Hillsborough, Polk, Hardee and manatee Counties.

Elevation: 130 feet
Mouth: Tampa Bay
Average fall: 2.9 feet/mile
Drainage area: 330 square miles

## Myakka Head Station:

County: Manatee Period-of-record: 1966

Location: 36 miles upstream from mouth

Avg daily discharge: 69.6 cfs Runoff per year: 14.62 inches

Max of monthly avg discharge: 529.7 cfs in 09/1994 Min of monthly avg discharge: 0.5 cfs in 04/75 Drainage area: 65.3 square miles

#### MYAKKA RIVER (Southern Region)

Total length: 54.1 miles

Headwaters: Western Hardee and Eastern Manatee Counties
Tributaries: Howard Creek, Deer Prairie, and Big Slough Canal

Elevation: 105 feet

Mouth: Charlotte Harbor Average fall: 1.9 feet/mile Drainage area: 540 square miles

#### Sarasota Station:

County: Sarasota Period-of-record: 1936

Location: 36 miles upstream from mouth

Avg daily discharge: 250.5 cfs Runoff per year: 15.03 inches

Max of monthly avg discharge: 2467.2 cfs in 09/1947 Min of monthly avg discharge: 0.0 cfs numerous times

Drainage area: 229 square miles

#### PEACE RIVER (Central and Southern Region)

Total length: 120 miles

Headwaters: Green Swamp in northern Polk County through Lake Hancock, Winter Haven

chain of lakes, and Lake Hamilton.

Tributaries: Peace Creek Canal, Saddle Creek, Charlie Creek, Prairie Creek, Horse Creek,

Joshua Creek and Shell Creek. Elevation: 110 feet

Mouth: Charlotte Harbor Average fall: 1 feet/mile

Drainage area: 2300 square miles

## **Arcadia Station (Southern Region):**

County: Desoto Period-of-record: 1931

Location: 36 miles upstream from mouth

Avg daily discharge: 1078.9 cfs Runoff per year: 10.79 inches

Max of monthly avg discharge: 9876.0 cfs in 09/1933

Min of monthly avg discharge: 51.6 cfs 05/85
Drainage area: 1367 square miles

## **Bartow Station (Central Region):**

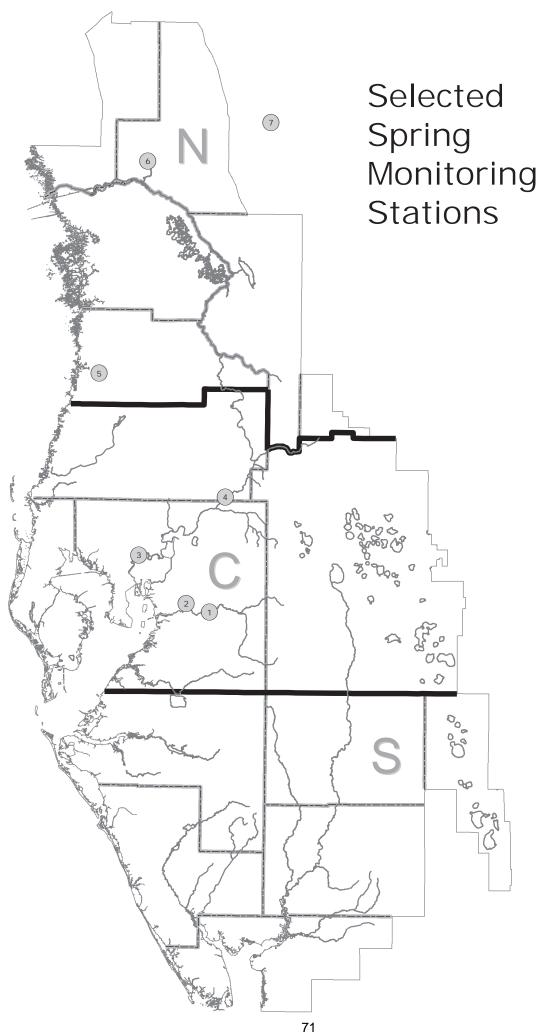
County: Polk Period-of-record: 1939

Location: 105 miles upstream from mouth

Avg daily discharge: 224.1 cfs Runoff per year: 6.72 inches

Max of monthly avg discharge: 2261.5 cfs in 09/1960

Min of monthly avg discharge: 6.4 cfs 05/90 Drainage area: 390 square miles





# Selected Spring Monitoring Stations

Map ID	<u>Site Name</u>
1	Lithia Main Spring
2	Buckhorn Main Spring
3	Sulphur Springs at Sulphur Springs
4	Crystal Springs near Zephyrhills
5	Weeki Wachee River near Brooksville
6	Rainbow Springs near Dunnellon
7	Silver Springs near Ocala

## **SPRINGS MONITORING STATIONS**

RAINBOW SPRINGS (Northern Region)

County: Marion

Basin: Withlacoochee River

1<sup>st</sup> Magnitude:

Discharge measurement location: 5 mi downstream from head of springs Discharge contributes to: Rainbow River, Withlacoochee River

Public Access: Yes Period-of-record: 1965

Non-recording gage Gage: Maximum daily mean: 1061 cfs in 09/1988 Minimum daily mean: 489 cfs in 06/2000

SILVER SPRINGS (Northern Region)

County: Marion

Basin: Ocklawaha River

Magnitude:

4 to 5 mi downstream from head of springs Discharge measurement location: Discharge contributes to:

Silver Springs River, Ocklawaha River,

St. Johns River

Public Access: Yes 1932 Period-of-record:

Gage: Water-stage recorder Maximum daily mean: 1290 cfs in 10/1960 Minimum daily mean: 432 cfs in 07/2000

**WEEKI WACHEE SPRINGS (Northern Region)** 

County: Hernando Basin: Coastal Rivers

1<sup>st</sup> Magnitude:

Discharge measurement location: 1 mi downstream from head of springs

Discharge contributes to: Weeki Wachee River

Public Access: Yes Period-of-record: 1993

Gage: Water-stage

229 cfs in 03/1998 Maximum daily mean: Minimum daily mean: 101 cfs in 06/1994

**CRYSTAL SPRINGS (Central Region)** 

County: Pasco

Basin: Hillsborough River

Magnitude:

Difference between discharge measurements Discharge measurement location:

> of Hillsborough River made upstream from and downstream from Crystal Springs

Hillsborough River Discharge contributes to:

Public Access: No 1923 Period-of-record:

Gage: Non-recording gage Maximum daily mean: 147 cfs in 07/1941 Minimum daily mean: 22 cfs in 08/1986

### **SULPHUR SPRINGS (Central Region)**

County: Hillsborough
Basin: Hillsborough River

Magnitude: 2<sup>nd</sup>

Discharge measurement location: 300 ft downstream from gage

Discharge contributes to: Hillsborough River

Public Access: Yes Period-of-record: 1956

Gage: Water-stage recorder Maximum daily mean: 145 cfs in 03/1960

Minimum daily mean: 0 cfs for various days throughout the

period-of-record

## **BUCKHORN SPRINGS (Central Region)**

County: Hillsborough Basin: Alafia River

Magnitude: 2<sup>nd</sup>

Discharge measurement location: Difference between discharge measurements

of Buckhorn Creek made 25 ft upstream from and 100 ft downstream from Buckhorn Springs

Discharge contributes to: Buckhorn Creek, Alafia River

Public Access: No Period-of-record: 1987

Gage: Water-stage recorder
Maximum daily mean: 21.9 cfs in 02/1989
Minimum daily mean: 2.7 cfs in 06/1987

## LITHIA SPRINGS: (Central Region)

County: Hillsborough Basin: Alafia River

Magnitude: 2<sup>nd</sup>

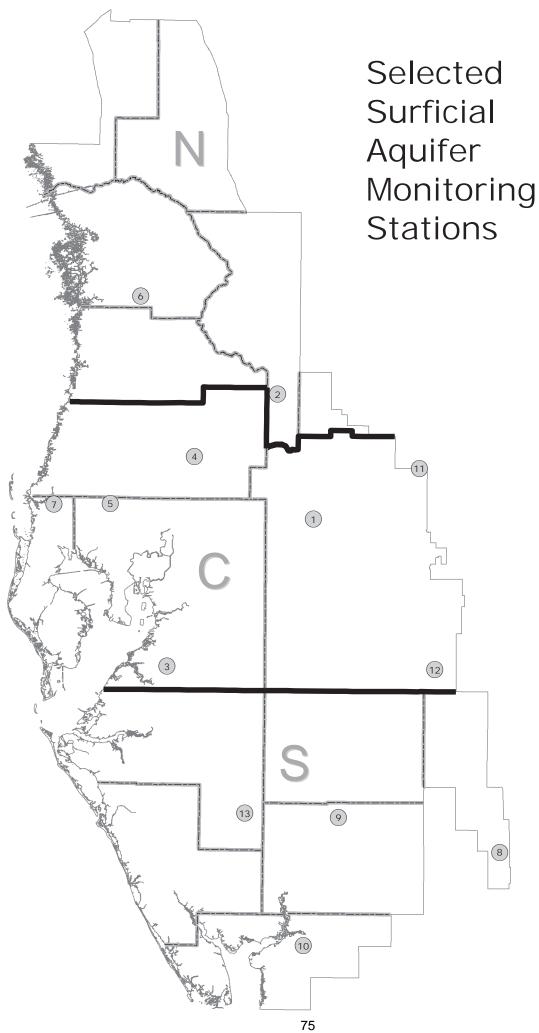
Discharge measurement location: 50 feet downstream from main pool

Discharge contributes to:

Alafia River

Public Access: Yes Period-of-record: 1934

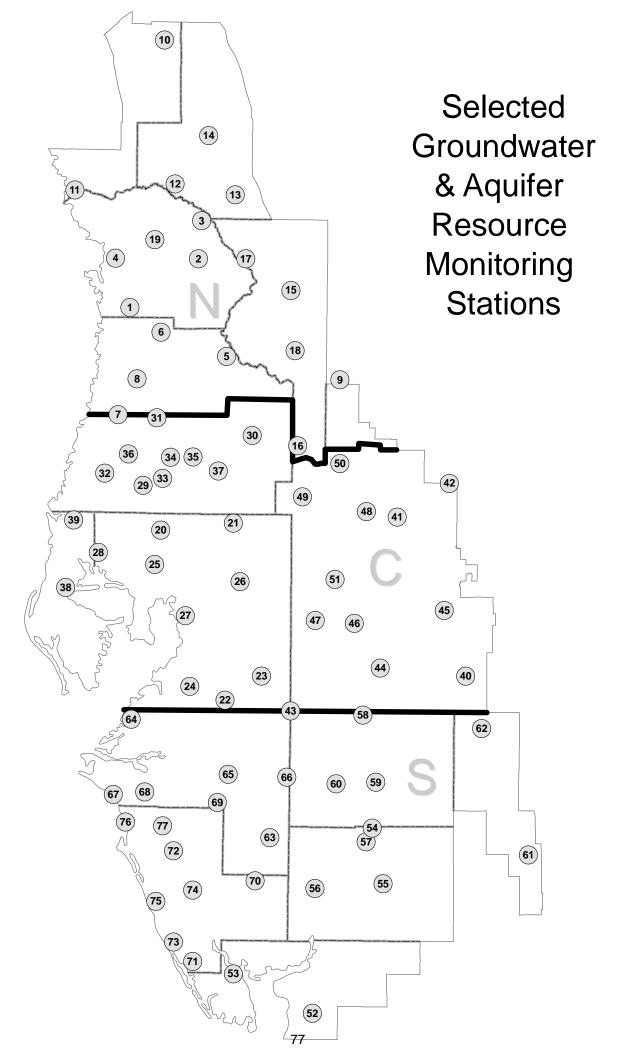
Gage: Water-stage recorder
Maximum daily mean: 83.4 cfs in 10/1967
Minimum daily mean: 6.3 cfs in 02/1989





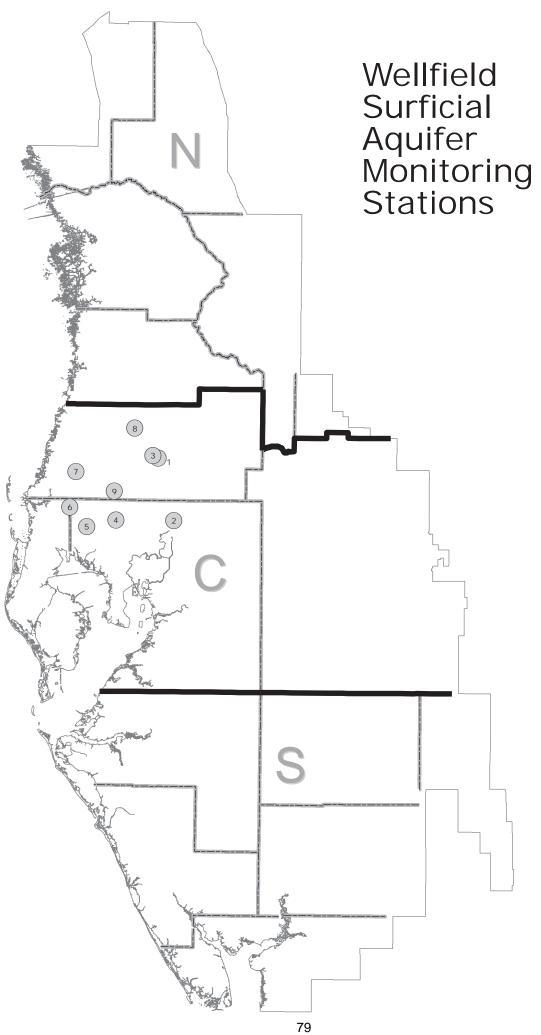
# Selected Surficial Aquifer Monitoring Stations

<u>Map ID</u>	<u>Site Name</u>
1	State Road 33/Combee Road Shallow
2	Green Swamp L12B Shallow
3	ROMP 50 Surficial
4	State Road 577 Shallow
5	Lutz-Lake Fern Shallow
6	Lecanto 2 Shallow
7	Tarpon Road Shallow
8	Bairs Den Surficial
9	ROMP 26 Surficial
10	State Road 74 (77-Foot) Shallow
11	Loughman Shallow
12	USGS P-48 Shallow
13	Edgeville 4 Shallow

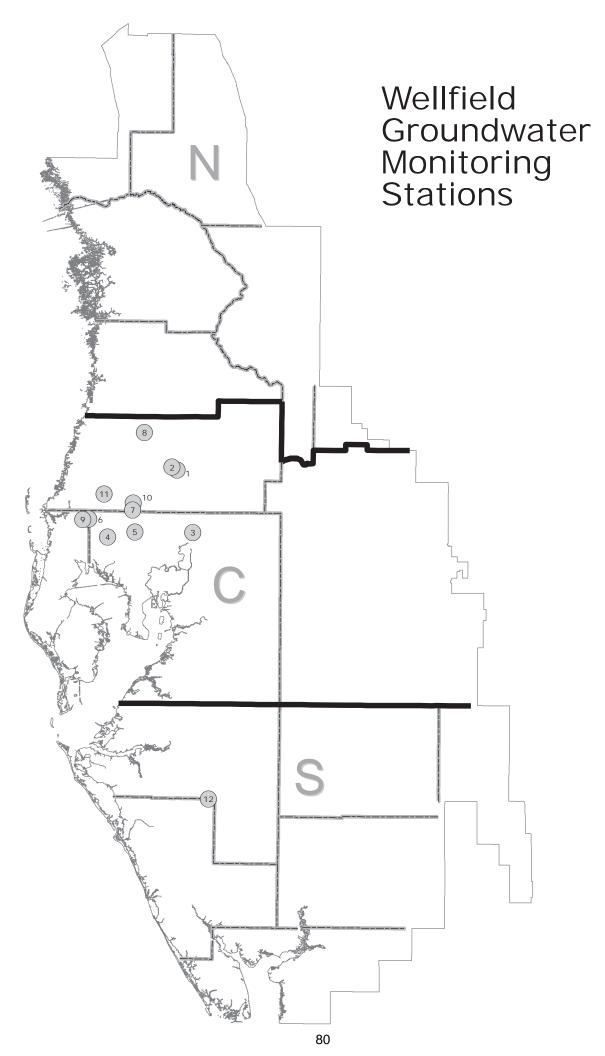


## Select Groundwater & Aquifer Resource Monitoring Stations

	O:: N		07. 11
Map ID	Site Name	Map ID	Site Name
1	Chassahowitzka 1 Deep	42	Loughman Deep
2	Inverness Dot Fldn	43	ROMP 40 Suwannee/Avon Park
3	ROMP 116 Avon Park	44	ROMP 45 Avon Park
4	ROMP TR 21-2 Ocala/Avpk	45	ROMP 58 Ocala
5	ROMP 103 Suwannee/Ocala	46	ROMP 59 Suwannee/Avon Park
6	ROMP 107 Ocala/Avon Park	47	ROMP 60 Ocala/Avon Park
7	ROMP 97 Avon Park	48	ROMP 76 U Fldn
8	Weeki Wachee Deep Repl	49	ROMP 87 Avon Park
9	Mascotte Deep	50	ROMP 88 Avon Park
10	ROMP 134 Ocala/Avon Park	51	Sanlon Ranch Fldn
11	ROMP TR 124 Avon Park	52	ROMP TR 1-2 Up Fldn
12	CE 14 Dunnellon Deep	53	ROMP TR 3-1 Up Fldn
13	ROMP 119 Avon Park	54	Marshell Deep
14	ROMP 120 Avon Park	55	ROMP 16 Ocala
15	ROMP 111 Ocala/Avon Park	56	ROMP 17 Up Fldn
16	ROMP 89 Ocala	57	ROMP 26 Suwannee/Tampa
17	Sumter 13 JC 59 Up Fldn	58	Cargill FA-1 Fldn
18	Webster City Fldn	59	ROMP 30 Suwannee/Avon Park
19	North Locanto Deep	60	ROMP 31 Suwannee/Avon Park
20	Debuel Road Deep	61	ROMP 28X Suwannee/Avon Park
21	Hills State Pk Parking Deep	62	ROMP 43XX Avon Park
22	ROMP 123 Hawthorn/Ocala	63	Edgeville 3 Deep
23	ROMP 48 Tampa/Suwannee	64	Florida Pwr @ Piney Point
24	ROMP 50 Avon Park	65	Kibler Deep
25	ROMP 66 Tampa	66	ROMP 32 Low Ocala/Avpk
26	ROMP DV-1 Suwannee	67	ROMP TR 7-1 Tampa
27	ROMP TR 10-2 Tampa	68	ROMP TR 7-4 Swnn/Ocala
28	ROMP TR 13-3 Avon Park	69	Verna T 0-1
29	Bexley 2 Fldn	70	Big Slough Deep
30	Lykes Pasco Fldn	71	Englewood 14 Deep
31	Masaryktown Deep	72	Florida Cities Test 1
32	Moon Lake Deep	73	Manasota 14 Deep
33	Pasco 13 nr Drexel Fldn	74	ROMP 19 West UFA Swnn
34	ROMP 93 Suwannee/Avon Park	75	ROMP TR 5-1 Suwannee
35	SR 52 And CR581 Deep	76	Sarasota 11TH St Deep
36	SR 52 Deep W nr Fivay Jct	77	Sarasota Office Up Floridan
37	SR 577 Deep		·
38	Pinellas 665 Fldn		
39	Tarpon Rd Deep		
40	Coley Deep		
41	Lk Alftred Deep nr Lake Alfred		









## Wellfield Groundwater Monitoring Stations

<u>Map ID</u>	<u>Site Name</u>
1	Cypress Creek TMR-1 Deep
2	Cypress Creek TMR-3 Deep
3	Morris Bridge 3A Floridan
4	Cosme 3 Floridan
5	St. Pete Hillsboro 13 Deep
6	Eldridge-Wilde 11 Floridan
7	St. Pete 42 Deep
8	Cross Bar WRW Floridan
9	Eldridge-Wilde 2S Deep
10	State Road 54 Deep
11	Starkey Regional Floridan
12	Verna 08 Deep

## Wellfield Surficial Aquifer Monitoring Stations

Map ID	Site Name
1	Cypress Creek TMR-1 Shallow
2	Morris Bridge 3A Surficial
3	Cypress Creek TMR-3 Shallow
4	St. Pete Hillsboro 13 Shallow
5	St. Pete IC-6 Shallow
6	Eldridge-Wilde 11 Surficial
7	Starkey 707 Shallow
8	Cross Bar SERW Shallow
9	State Road 54 Shallow

