

Hydrologic Conditions

for the month of

November 2024

Prepared by the
Hydrologic Data Section
Data Collection Bureau



December 17, 2024

<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, Don Everson, George Prine, James Ferrell, Greg Johnston, Everett Eldridge, Robert Noland, James Thomas, Ernesto Mangual, Patrick Hunt and Joshua Payne.
QA/QC and Reporting:	Steve DeSmith, Joey Fogel, Erin Walters, Casie Cutman and Karla Rodriguez.
Administrative Support/ Document Preparation:	Karen Diez, Shelley Browning and Laurel Marsh.

INTRODUCTION

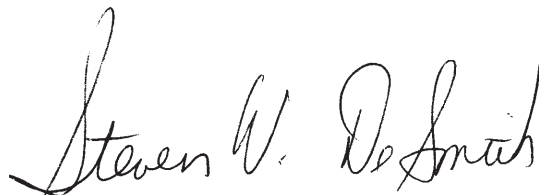
The Hydrologic Conditions Report is generated monthly by the Hydrologic Data Section, Data Collection Bureau, of the Southwest Florida Water Management District. This report provides an end-of-month analytical summary of regional and temporal variations in the hydrologic conditions across the District's 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. All data collected are processed and analyzed, uploaded into a centralized data base maintained by the District and then made available to the public through the District's Environmental Data Portal. The District's data collection program is augmented with data collected by the United States Geological Survey (USGS) through a cooperative joint funding agreement. Data derived from both District and USGS sources are used in this report.

The data contained in this report were 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.

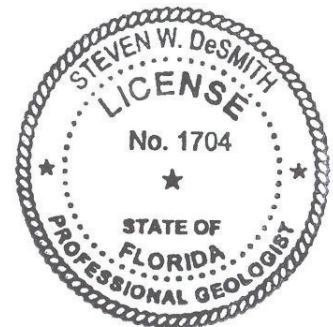
Any questions about the significance, accuracy, or interpretation of these data should be referred to Tamera McBride, Manager of the Hydrologic Data Section at (352) 796-7211 or (800) 423-1476.

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.



12/12/2024

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, services and activities. Anyone requiring reasonable accommodation, or who would like information as to the existence and location of accessible services, activities, and facilities, as provided for in the Americans with Disabilities Act, should contact the Human Resources Office Chief, at 2379 Broad St., Brooksville, FL 34604-6899; telephone (352) 796-7211 or 1-800-423-1476 (FL only), or email ADACoordinator@WaterMatters.org. 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). If requested, appropriate auxiliary aids and services will be provided at any public meeting, forum, or event of the District. In the event of a complaint, please follow the grievance procedure located at WaterMatters.org/ADA.

EXECUTIVE SUMMARY

Hydrologic Conditions for November 2024

In November, average rainfall totals were significantly below normal in all three regions of the District. The normal range for rainfall is defined by totals that fall on or between the 25th to 75th percentiles of the historical monthly accumulation for each region and where the 50th percentile represents the historical mean. The northern counties received an average of 0.47 inch of rainfall, equivalent to the 15th percentile of the historical November record. The central counties received an average of 0.52 inch of rainfall, equivalent to the 17th percentile, while the southern counties received an average of 0.52 inch of rainfall, equivalent to the 17th percentile of the historical November record. The Districtwide rainfall average of 0.51 inch was equivalent to the 17th percentile of the historical November record.

During the 12-month period from December 1, 2023, through November 30, 2024, the average rainfall totals in the northern, central and southern counties were classified as “wetter than normal.” The northern counties received an average of 61.92 inches of rainfall, equivalent to the 89th percentile of the historical annual record. The central counties received an average of 62.62 inches of rainfall, equivalent to the 88th percentile, while the southern counties received an average of 57.94 inches of rainfall, equivalent to the 78th percentile. The Districtwide rainfall average of 60.79 inches was equivalent to the 86th percentile of the historical annual record.

Average lake levels in November were within the normal range in all four lake regions of the District. 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 0.31 foot and were 0.95 foot above the base level of the annual normal range. Lake levels in the Tampa Bay region decreased by an average of 0.43 foot and were 1.44 feet above the base of the annual normal range. Lake levels in the Polk Uplands region decreased by an average of 0.35 foot and were 2.01 feet above the base of the annual normal range. Lake levels in the Lake Wales Ridge region decreased by an average of 0.13 foot and ended the month 0.07 foot above the base level of the annual normal range.

Total streamflow in November, based on three regional index rivers, was significantly above normal in all three regions of the District. Normal streamflow is defined as the flow that falls on or between the 25th and 75th percentiles. Streamflow measured at the Withlacoochee River near Holder station in the northern counties increased and ended the month at the 99th percentile. Streamflow at the Hillsborough River near Zephyrhills station in the central counties decreased and ended the month at the 92nd percentile, while total streamflow measured at the Peace River at Arcadia station in the southern counties decreased and ended the month at the 87th percentile.

In November, regional groundwater level percentiles indicated Upper Floridan aquifer water levels decreased in all three regions of the District, compared to last month. The average regional groundwater level in the northern, central and southern counties ended the month at the 84th, 78th and 58th percentiles, respectively.

REGIONAL OVERVIEW OF HYDROLOGIC CONDITIONS

NOVEMBER 2024

For this report, the District has been divided into three geographical regions that are defined by county boundaries, unless otherwise indicated. 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; the central region includes the counties of Hillsborough, Pasco, Pinellas and Polk; while the southern region includes the counties of Charlotte, DeSoto, Hardee, Highlands, Manatee and Sarasota.

Northern Region

In November, the northern region received an average of 0.47 inch of rainfall, equivalent to the 15th percentile of the historical November readings, which is considered "drier than normal." Average lake levels decreased in the northern region, ending the month 0.95 foot above the base of the annual normal range. Total streamflow measured in the Withlacoochee River near Holder station increased and was in the 99th percentile. Regional groundwater level percentiles indicated Upper Floridan aquifer water levels decreased and ended the month in the 84th percentile.

Central Region

In November, the central region received an average of 0.52 inch of rainfall, equivalent to the 17th percentile of historical November readings, which is considered "drier than normal." Average lake levels decreased in the Tampa Bay and Polk Uplands regions, ending the month 1.44 and 2.01 feet above, respectively, the base of the annual normal range. Total streamflow measured at the Hillsborough River near Zephyrhills station decreased and was in the 92nd percentile. Regional groundwater level percentiles indicated Upper Floridan aquifer water levels decreased and ended the month in the 78th percentile.

Southern Region

In November, the southern region received an average of 0.52 inch of rainfall, equivalent to the 17th percentile of historical November readings, which is considered "drier than normal." Average lake levels decreased in the Lake Wales Ridge region and ended the month 0.07 foot above the base of the annual normal range. Total streamflow measured at the Peace River at Arcadia station decreased and was in the 87th percentile. Regional groundwater level percentiles indicated Upper Floridan aquifer water levels decreased and ended the month in the 58th 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 15-minute rainfall data collected from the District's network of real-time gauges. This process results in rainfall estimates for every 1.5 square-miles over the entire District, filling in those portions where rainfall data collection would otherwise be limited due to gaps in the gauging network.

Rainfall data are evaluated by using the current values to calculate percentiles in order to determine how normal or abnormal they are. 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 that is calculated to be equivalent to the 90th percentile indicates that it is higher than 90 percent of the rainfall totals ever recorded for this month during all years that rainfall has been measured.

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 10th (P10), the 25th (P25), the 75th (P75) and the 90th (P90) percentiles. The normal range for rainfall is defined by totals that fall on or between the 25th to 75th percentiles of the historical monthly average for each region and where the 50th percentile represents the historical median. The zero percentile indicates a new period-of-record low and the 100th percentile is a new record high. The rainfall in inches for each percentile break, by rainfall interval and by region and the characterization ranges are summarized in the Appendix.

In November, rainfall totals were significantly below normal in all three regions of the District. The normal range for rainfall is defined by totals that fall on or between the 25th to 75th percentiles of the historical monthly average for each region and where the 50th percentile represents the historical median. The northern counties received an average of 0.47 inch of rainfall, equivalent to the 15th percentile of the historical November record. The central counties received an average of 0.52 inch, equivalent to the 17th percentile of the historical November record, while the southern counties received an average of 0.52 inch, equivalent to the 17th percentile. Districtwide, rainfall averaged 0.51 inch, which is equivalent to the 17th percentile.

During the 12-month period from December 1, 2023, through November 30, 2024, the average rainfall totals in the northern, central and southern counties were classified as "wetter than normal." The northern counties received an average of 61.92 inches of rainfall, equivalent to the 89th percentile of the historical record. The central counties received an average of 62.62 inches of rainfall, equivalent to the 88th percentile. The southern counties received an average of 57.94 inches of rainfall, equivalent to the

78th percentile. The Districtwide rainfall average was 60.79 inches, which is equivalent to the 86th percentile of the historical annual record.

Tampa Monthly Climate Summary for November 2024

According to the National Weather Service (NWS), the monthly average temperature (°F) for Tampa was 73.0 degrees, which was 3.2 degrees above normal. The highest temperature recorded during the month was 91.0 degrees, while the lowest temperature recorded during the month was 49.0 degrees. The November 2024 monthly average temperature of 73.0 degrees rank as the 6th warmest November since records began in 1890. The warmest November had an average temperature of 76.3 degrees, which occurred in 1986.

Temperature and Precipitation Outlook

The Climate Prediction Center's (CPC) three-month weather forecast, as of November 21, 2024, indicates below-normal chances for rainfall in all three regions of the District, during the composite 3-month period from December 2024 through February 2025. The temperature forecast for this same time-period indicates above-normal temperatures are likely to occur throughout the District.

[Note: Due to the early publication date of December 10, 2024, for this report, the CPC's December 19, 2024, forecast was unavailable.]

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

http://www.cpc.ncep.noaa.gov/products/OUTLOOKS_index.html

RELATIONSHIP OF NOVEMBER 2024 TO HISTORICAL RAINFALL AVERAGES

All units in inches.

Regional Summary

Region	NOV 2024 Average Rainfall	Historic Average for NOV	Departure from Historical Average	Calendar Year 2024 Cumulative Rainfall JAN-NOV	Calendar Year Historical 2024 Cumulative Rainfall JAN-NOV	Departure from Historical Cumulative NOV 2024	Cumulative 12-Month Rainfall DEC 2023-NOV 2024	Historical 12-month Cumulative Rainfall	Departure from Historical 12-month Cumulative
Northern Counties	0.47	1.99	-1.52	56.95	51.00	5.95	61.92	53.60	8.31
Central Counties	0.52	1.88	-1.36	59.37	50.04	9.33	62.62	52.43	10.19
Southern Counties	0.52	1.80	-1.28	54.82	50.45	4.37	57.94	52.37	5.57
District All Counties	0.51	1.88	-1.37	57.12	50.57	6.55	60.79	52.80	8.00

Counties by Region

	NOV 2024 Average Rainfall	Historic Average for NOV	Departure from Historical Average	Calendar Year 2024 Cumulative Rainfall JAN-NOV	Calendar Year Historical 2024 Cumulative Rainfall JAN-NOV	Departure from Historical Cumulative NOV 2024	Cumulative 12-Month Rainfall DEC 2023-NOV 2024	Historical 12-month Cumulative Rainfall	Departure from Historical 12-month Cumulative
NORTHERN COUNTIES									
Levy	0.38	2.09	-1.71	50.04	51.00	-0.96	55.52	54.00	1.51
Marion	0.24	2.07	-1.83	53.70	51.52	2.18	59.55	54.33	5.22
Citrus	0.55	1.95	-1.40	57.61	51.46	6.15	62.35	54.09	8.26
Sumter	0.56	1.97	-1.41	58.24	49.52	8.72	63.12	51.99	11.13
Hernando	0.48	1.99	-1.51	62.15	52.39	9.76	66.30	54.93	11.37
Lake	1.01	1.91	-0.90	62.55	49.62	12.93	66.93	52.00	14.93
CENTRAL COUNTIES									
Pasco	0.46	1.98	-1.52	61.69	51.56	10.12	65.47	54.03	11.44
Pinellas	0.43	1.88	-1.45	65.54	49.18	16.36	69.41	51.60	17.81
Hillsborough	0.42	1.84	-1.42	63.61	50.40	13.21	66.85	52.71	14.14
Polk	0.64	1.82	-1.18	54.28	49.97	4.31	57.17	52.03	5.14
SOUTHERN COUNTIES									
Manatee	0.31	1.86	-1.55	57.94	51.29	6.65	60.72	53.34	7.38
Hardee	0.36	1.72	-1.36	48.76	50.27	-1.50	51.50	52.08	-0.58
Highlands	1.08	1.75	-0.67	47.87	50.38	-2.51	50.84	51.99	-1.15
Sarasota	0.45	1.85	-1.40	62.36	50.66	11.70	65.13	52.66	12.47
DeSoto	0.42	1.75	-1.33	51.96	50.08	1.87	55.23	51.86	3.37
Charlotte	0.90	1.75	-0.85	57.73	50.75	6.97	62.28	52.59	9.70

NOVEMBER 2024 RAINFALL CHARACTERIZATION

All units in inches.

Regional Summary

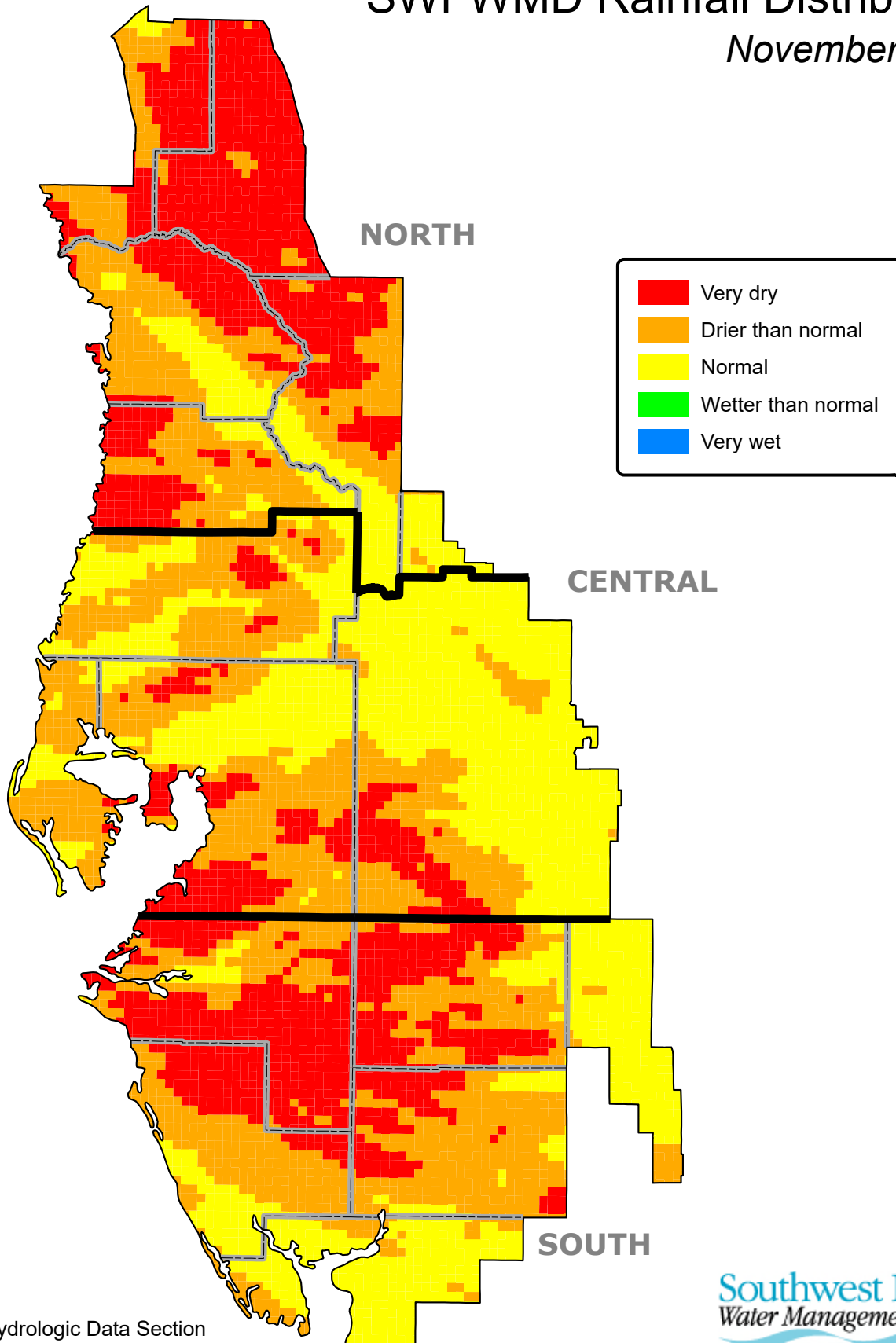
Region	NOV 2024 Average Rainfall	Historical NOV Percentile	NOV Rainfall Characterization	Cumulative 12-Month Rainfall DEC 2023-NOV 2024	Historical 12-month Cumulative Percentile	12-month Cumulative Rainfall Characterization
Northern Counties	0.47	15	Drier than normal	61.92	89	Wetter than normal
Central Counties	0.52	17	Drier than normal	62.62	88	Wetter than normal
Southern Counties	0.52	17	Drier than normal	57.94	78	Wetter than normal
District All Counties	0.51	17	Drier than normal	60.79	86	Wetter than normal

Counties by Region

NORTHERN COUNTIES	NOV 2024 Average Rainfall	Historical NOV Percentile	NOV Rainfall Characterization	Cumulative 12-Month Rainfall DEC 2023-NOV 2024	Historical 12-month Cumulative Percentile	12-month Cumulative Rainfall Characterization
Levy	0.38	11	Drier than normal	55.52	55	Normal
Marion	0.24	6	Very dry	59.55	73	Normal
Citrus	0.55	24	Drier than normal	62.35	80	Wetter than normal
Sumter	0.56	26	Normal	63.12	97	Very wet
Hernando	0.48	20	Drier than normal	66.30	90	Wetter than normal
Lake	1.01	41	Normal	66.93	93	Wetter than normal
CENTRAL COUNTIES						
Pasco	0.46	18	Drier than normal	65.47	89	Wetter than normal
Pinellas	0.43	23	Drier than normal	69.41	96	Very wet
Hillsborough	0.42	19	Drier than normal	66.85	92	Wetter than normal
Polk	0.64	25	Normal	57.17	75	Normal
SOUTHERN COUNTIES						
Manatee	0.31	9	Very dry	60.72	83	Wetter than normal
Hardee	0.36	16	Drier than normal	51.50	45	Normal
Highlands	1.08	43	Normal	50.84	44	Normal
Sarasota	0.45	15	Drier than normal	65.13	92	Wetter than normal
DeSoto	0.42	18	Drier than normal	55.23	65	Normal
Charlotte	0.90	40	Normal	62.28	87	Wetter than normal

SWFWMD Rainfall Distribution

November 2024

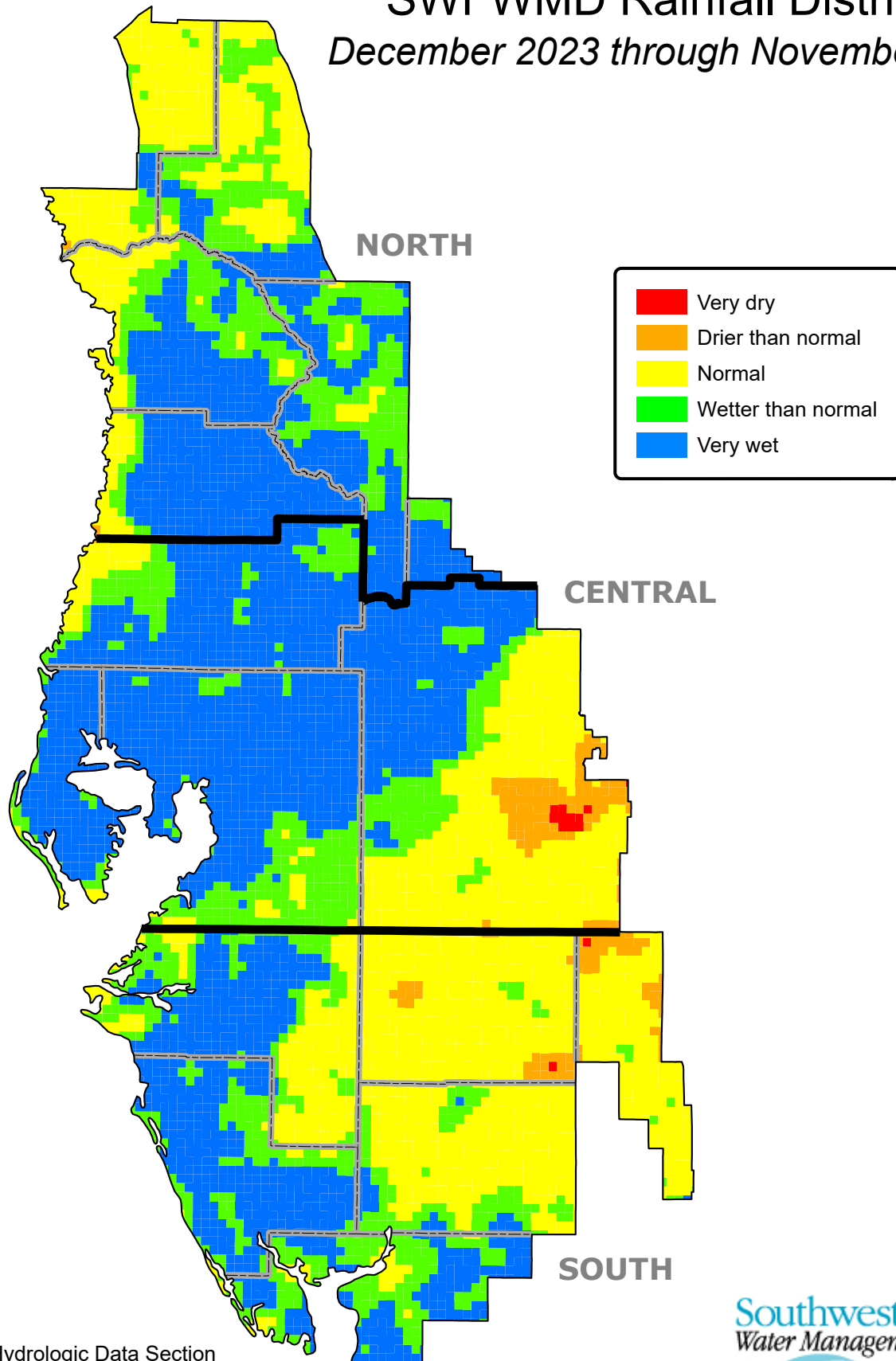


Hydrologic Data Section
Data source: Vieux, Inc.

Southwest Florida
Water Management District

SWFWMD Rainfall Distribution

December 2023 through November 2024



Hydrologic Data Section
Data source: Vieux, Inc.

Southwest Florida
Water Management District

SURFACE WATER

Lakes

Across the District, 75 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 75 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.

Compared to October data, 66 of the 75 lakes monitored for this report recorded water level decreases and 8 recorded increases. Monthly water level data was missing regarding Camp Lake, for analysis purposes. Average water levels decreased in the Northern, Tampa Bay, Polk Uplands and Lake Wales Ridge regions by 0.31, 0.43, 0.35 and 0.13 foot, respectively. Districtwide, average water levels decreased by 0.35 foot, compared to last month.

Compared to November 2023 data, 61 of the 75 lakes monitored for this report recorded water level increases, while 11 recorded decreases. Monthly and/or last-year water level data was missing regarding Camp, Deer and Egypt Lakes, for analysis purposes. In the Northern, Tampa Bay and Polk Uplands regions, average lake levels were higher by 2.95 feet, 1.82 feet and 0.46 foot, respectively. In the Lake Wales Ridge region, average lake levels were lower by 0.47 foot. Districtwide, average lake levels were higher by 1.39 feet, compared to last year's levels.

In November 2024, water levels in 64 of the 75 lakes were within the annual normal range, while 10 were below. Monthly water level data was missing regarding Camp Lake, for analysis purposes. Lake levels in the Northern, Tampa Bay, Polk Uplands and Lake Wales Ridge regions averaged 0.95 foot, 1.44 feet, 2.01 feet and 0.07 foot, respectively, above the base of the annual normal range. Districtwide, average lake levels were 1.32 feet above the base of the annual normal range. Water levels in 73 of the 75 lakes were above the drought-year levels.

Period-of-Record “High” Surface Water Level

The following data was mistakenly omitted from last month's report. That is, in October 2024, a period-of-record “high” surface water level was set at the below listed lakes:

- Northern Lake Region: Lake Miona; Lake Panasoffkee.
- Tampa Bay Lake Region: Lake Ann-Parker; Bay Lake; Lake Carroll; Crescent Lake; Lake Keene; Keystone Lake.
- Polk Uplands Lake Region: Lake Bonny; Lake Juliana.

SUMMARY OF LAKE ELEVATIONS OF REGIONAL LAKES (feet)

All elevations are referenced to the NGVD29 datum. "M" indicates missing or undetermined value.

NORTHERN LAKES

Lake Name	County	Beginning of Record	OCT 2024	NOV 2024	NOV 2023	Change from OCT 2024	Change from NOV 2023	Diff from MELM	(MELM) Drought Year Low	(MLM) Normal Year Low	(MF) Normal Year High	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Crews Lake	Pasco	1986	52.74	52.30	47.66	-0.44	4.64	2.30	50.00	52.00	55.00	42.63	APR 2001	54.92	MAR 1998
Floral City Pool	Citrus	1981	41.51	41.53	39.56	0.02	1.97	3.28	38.25	40.25	42.50	30.35	JUN 2001	42.66	SEP 2004
Hancock Lake	Pasco	1978	105.68	105.22	98.26	-0.46	6.96	3.22	102.00	104.00	106.50	90.00	MAR 2009	108.90	MAR 1998
Hernando Pool	Citrus	1985	39.01	38.80	37.30	-0.21	1.50	4.05	34.75	36.75	39.00	31.08	JUL 2001	40.17	FEB 1998
Hunters Lake	Hernando	1967	16.69	16.79	12.71	0.10	4.08	0.79	16.00	17.50	20.50	11.70	JUN 2001	20.50	MAR 1970
Inverness Pool	Citrus	1985	40.25	40.05	37.94	-0.20	2.11	3.80	36.25	38.25	40.50	31.45	MAY 2001	40.89	OCT 2004
Lake Iola	Pasco	1984	143.97	143.89	141.77	-0.08	2.12	1.39	142.50	145.00	147.50	128.96	MAY 2012	148.70	JAN 1989
Lake Lindsey	Hernando	1982	68.01	67.79	65.46	-0.22	2.33	3.29	64.50	66.00	69.00	59.38	MAY 2012	69.47	MAR 1998
Little Lake (Consuella)	Citrus	1985	40.28	40.17	36.58	-0.11	3.59	2.92	37.25	39.00	41.50	31.10	MAY 2001	42.84	SEP 2004
Lake Miona	Sumter	1985	55.62	55.53	52.59	-0.09	2.94	4.53	51.00	53.00	55.00	47.88	MAY 2002	55.62	OCT 2024
Moon Lake	Pasco	1990	39.72	39.54	37.16	-0.18	2.38	4.04	35.50	37.50	40.50	32.98	APR 2009	41.26	SEP 2004
Lake Panasoffkee	Sumter	1962	43.08	40.77	39.99	-2.31	0.78	2.27	38.50	39.50	42.50	36.87	JUN 2007	43.08	OCT 2024
Lake Pasadena	Pasco	1984	91.52	91.37	88.77	-0.15	2.60	1.37	90.00	91.50	94.50	81.56	MAY 2001	94.86	OCT 2004
Spring Lake	Hernando	1965	181.03	180.99	177.75	-0.04	3.24	2.74	178.25	181.25	184.25	174.85	JUN 1965	183.57	OCT 1984

TAMPA BAY LAKES

Lake Name	County	Beginning of Record	OCT 2024	NOV 2024	NOV 2023	Change from OCT 2024	Change from NOV 2023	Diff from MELM	(MELM) Drought Year Low	(MLM) Normal Year Low	(MF) Normal Year High	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Lake Alice	Hillsborough	1981	41.59	41.19	38.49	-0.40	2.70	3.69	37.50	40.25	42.25	33.24	MAY 2002	42.42	SEP 2004
Lake Ann-Parker	Pasco	1983	47.95	47.44	45.77	-0.51	1.67	2.44	45.00	45.75	48.75	43.28	JUN 2001	49.46	OCT 2024
Bay Lake	Hillsborough	1982	46.01	45.75	45.33	-0.26	0.42	3.25	42.50	44.00	46.75	41.86	APR 1985	47.31	OCT 2024
Lake Brant	Hillsborough	1981	58.18	57.94	55.31	-0.24	2.63	3.44	54.50	56.50	58.75	51.65	JUN 1994	59.57	AUG 2015
Brooker Lake	Hillsborough	1977	63.22	62.90	61.52	-0.32	1.38	3.90	59.00	61.00	64.25	56.49	MAY 2002	64.08	DEC 1997
Calm Lake	Hillsborough	1982	48.88	48.68	47.20	-0.20	1.48	3.68	45.00	47.50	50.50	41.88	JUN 2002	51.04	JUL 2015
Camp Lake	Pasco	1983	62.65	M	60.22	M	M	M	59.00	61.75	64.00	50.82	MAY 2002	64.05	JUL 2015
Carlton Lake	Hillsborough	1976	93.08	92.78	89.36	-0.30	3.42	4.78	88.00	90.50	93.50	86.82	MAY 2001	94.60	FEB 1998
Lake Carroll	Hillsborough	1985	36.55	36.07	34.56	-0.48	1.51	3.57	32.50	34.50	37.00	30.87	MAY 2002	38.76	OCT 2024
Church Lake	Hillsborough	1983	35.97	35.61	33.49	-0.36	2.12	4.11	31.50	34.00	36.25	27.94	MAY 2002	36.90	JUL 1987
Lake Cooper	Hillsborough	1980	61.44	60.54	58.72	-0.90	1.82	3.54	57.00	59.75	61.75	55.60	JUN 2001	62.44	AUG 2015
Crescent Lake	Hillsborough	1981	41.86	41.98	40.60	0.12	1.38	3.48	38.50	40.00	42.50	35.34	JUN 2001	43.95	OCT 2024
Deer Lake	Hillsborough	1977	67.29	66.67	M	-0.62	M	4.17	62.50	64.50	67.25	60.72	MAY 2002	67.42	DEC 1997
Egypt Lake	Hillsborough	1978	37.36	36.84	M	-0.52	M	4.34	32.50	35.00	37.50	33.06	MAY 2000	38.15	SEP 1985
Gornto Lake	Hillsborough	1979	38.91	38.79	36.03	-0.12	2.76	4.79	34.00	36.00	38.50	29.86	MAR 1979	39.48	FEB 1998
Lake Harvey	Hillsborough	1970	61.65	61.02	59.69	-0.63	1.33	3.02	58.00	60.25	62.50	53.94	MAY 2002	63.90	DEC 1997
Lake Hiawatha	Hillsborough	1981	50.53	50.05	49.19	-0.48	0.86	5.05	45.00	48.00	50.50	46.14	JUN 2000	51.16	JUL 2019
Horse Lake	Hillsborough	1930	45.42	45.50	42.06	0.08	3.44	3.50	42.00	44.00	46.50	36.33	JUN 2002	50.00	AUG 1959
Lake Keene	Hillsborough	1981	62.49	61.88	60.76	-0.61	1.12	2.88	59.00	60.50	63.00	56.12	JUN 2002	64.17	OCT 2024
Keystone Lake	Hillsborough	1984	41.72	41.55	40.74	-0.17	0.81	2.55	39.00	39.75	42.00	37.84	JUN 2000	44.07	OCT 2024
King Lake	Pasco	1983	103.54	102.92	102.26	-0.62	0.66	2.92	100.00	102.50	105.25	94.20	APR 2009	104.80	MAR 1987
Lake Leclare	Hillsborough	1977	51.81	51.11	49.87	-0.70	1.24	4.11	47.00	49.50	52.00	44.95	JUN 2001	52.99	JUL 2015
Lake Linda	Pasco	1983	66.29	65.61	63.88	-0.68	1.73	3.61	62.00	64.00	66.75	60.07	MAY 2001	67.17	SEP 2017
Little Lake	Hillsborough	1979	45.83	45.55	43.91	-0.28	1.64	3.55	42.00	43.50	46.50	38.06	JUN 1994	48.55	JUN 2017
Long Pond	Hillsborough	1978	46.74	46.57	43.34	-0.17	3.23	4.57	42.00	44.00	46.50	36.33	MAY 1979	48.27	SEP 1998
Mud (Walden) Lake	Hillsborough	1978	112.93	112.83	112.75	-0.10	0.08	2.33	110.50	112.50	115.00	111.45	MAY 2017	114.42	MAR 1978
Lake Padgett	Pasco	1965	70.74	70.64	68.78	-0.10	1.86	3.14	67.50	69.00	71.25	66.27	JUN 2001	71.90	SEP 1988
Platt Lake	Hillsborough	1981	50.84	49.52	48.12	-1.32	1.40	3.52	46.00	47.75	50.50	42.53	JUN 2001	51.61	AUG 2015
Rainbow Lake	Hillsborough	1981	40.26	39.82	35.98	-0.44	3.84	4.82	35.00	37.50	40.50	29.82	JUN 2002	40.95	JUL 2015
Lake Stemper	Hillsborough	1983	60.96	60.53	58.31	-0.43	2.22	2.53	58.00	59.50	62.00	53.36	JUN 2001	61.68	SEP 2004
Lake Thomas	Hillsborough	1981	63.10	62.94	60.78	-0.16	2.16	3.69	59.25	61.25	63.50	56.48	JUN 2002	64.13	AUG 2015
Turkey Ford Lake	Hillsborough	1970	52.63	50.86	49.97	-1.77	0.89	0.86	50.00	51.50	54.00	48.07	JUN 1985	55.28	SEP 1988
Lake Wimauma	Hillsborough	1985	81.26	81.10	78.36	-0.16	2.74	0.10	81.00	83.00	86.75	70.12	MAY 2001	84.38	MAR 1998

SUMMARY OF LAKE ELEVATIONS OF REGIONAL LAKES (feet), continued

All elevations are referenced to the NGVD29 datum. "M" indicates missing or undetermined value.

POLK UPLANDS LAKES

Lake Name	County	Beginning of Record	OCT 2024	NOV 2024	NOV 2023	Change from OCT 2024	Change from NOV 2023	Diff from MELM	(MELM) Drought Year Low	(MLM) Normal Year Low	(MF) Normal Year High	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Lake Alfred	Polk	1990	131.30	131.18	131.47	-0.12	-0.29	4.93	126.25	128.25	130.75	124.17	MAY 2013	132.77	DEC 2020
Lake Ariana	Polk	1984	137.06	136.68	136.39	-0.38	0.29	4.18	132.50	134.50	137.00	131.68	MAY 2009	137.66	JAN 2016
Lake Arietta	Polk	1970	142.68	142.31	142.16	-0.37	0.15	4.31	138.00	141.00	144.00	136.50	MAY 1977	144.33	OCT 2004
Blue Lake South	Polk	1986	113.83	113.77	114.59	-0.06	-0.82	1.27	112.50	114.00	117.00	103.38	FEB 1991	119.19	DEC 2005
Lake Bonny	Polk	1954	133.39	131.84	130.17	-1.55	1.67	5.84	126.00	128.00	130.50	122.34	MAY 2009	134.43	OCT 2024
Lake Buffum	Polk	1982	131.08	130.91	130.46	-0.17	0.45	4.16	126.75	129.25	132.25	123.90	JUN 1991	133.00	JUN 2005
Clearwater Lake	Polk	1979	144.81	143.94	142.88	-0.87	1.06	4.94	139.00	141.00	143.50	137.93	MAY 2001	146.06	AUG 1984
Lake Conine	Polk	1989	128.91	128.45	128.50	-0.46	-0.05	3.95	124.50	126.50	128.75	123.83	NOV 2009	129.95	SEP 2004
Eagle Lake	Polk	1965	129.36	129.35	128.64	-0.01	0.71	2.85	126.50	128.50	130.75	120.87	MAY 1967	131.50	SEP 1996
Lake Fannie	Polk	1967	126.10	125.38	125.60	-0.72	-0.22	5.38	120.00	123.50	125.75	118.67	MAY 1977	127.51	SEP 2004
Lake Garfield	Polk	1982	103.29	102.59	102.16	-0.70	0.43	2.59	100.00	101.00	104.75	97.38	JUN 2001	105.70	FEB 1998
Lake Gibson	Polk	1984	143.02	142.79	142.61	-0.23	0.18	1.29	141.50	141.50	143.50	140.21	MAY 2009	145.71	OCT 2024
Lake Hamilton	Polk	1962	121.47	120.98	121.23	-0.49	-0.25	3.73	117.25	119.00	121.50	116.61	JUN 2001	123.96	OCT 2004
Lake Helene	Polk	1961	146.17	146.21	142.71	0.04	3.50	7.21	139.00	141.00	144.00	134.06	JUN 2008	146.71	OCT 2017
Lake Howard	Polk	1987	131.95	131.68	131.51	-0.27	0.17	4.68	127.00	129.50	132.00	127.69	MAY 2001	133.08	SEP 2004
Lake Juliana	Polk	1984	134.25	134.03	132.98	-0.22	1.05	6.53	127.50	130.00	132.50	127.40	NOV 2009	134.62	OCT 2024
Lake Mcleod	Polk	1983	128.23	128.15	128.65	-0.08	-0.50	0.15	128.00	129.50	132.00	120.76	JUL 1985	131.98	SEP 1998
Lake Otis	Polk	1954	127.00	127.09	126.52	0.09	0.57	4.09	123.00	125.00	128.00	119.58	MAY 1976	129.12	SEP 1960
Lake Ruby	Polk	1974	125.04	124.95	124.35	-0.09	0.60	3.95	121.00	123.00	125.25	120.68	JUN 1974	125.98	SEP 2004

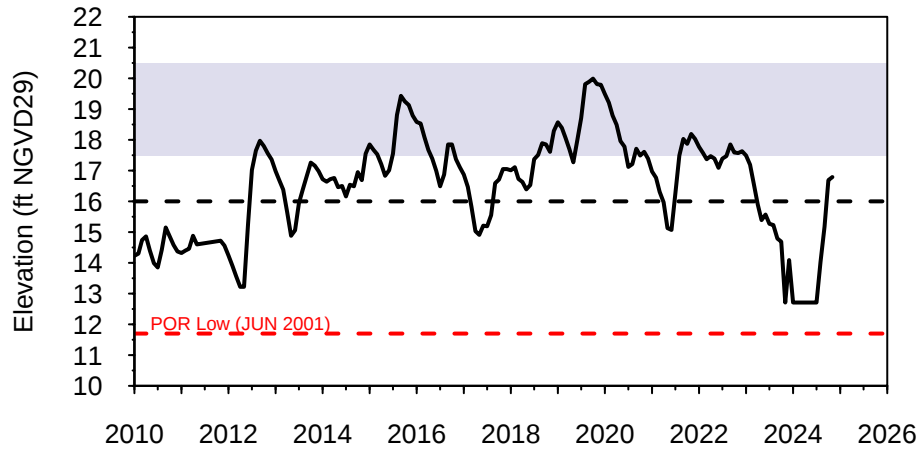
LAKE WALES RIDGE LAKES

Lake Name	County	Beginning of Record	OCT 2024	NOV 2024	NOV 2023	Change from OCT 2024	Change from NOV 2023	Diff from MELM	(MELM) Drought Year Low	(MLM) Normal Year Low	(MF) Normal Year High	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Lake Annie	Polk	1983	116.20	116.07	116.53	-0.13	-0.46	2.07	114.00	116.00	119.00	108.36	JUN 1990	118.15	NOV 2020
Lake Clay	Highlands	1983	78.29	78.07	77.89	-0.22	0.18	3.07	75.00	76.00	78.75	74.34	MAY 2001	78.82	JUN 2013
Crooked Lake	Polk	1982	118.87	118.69	118.65	-0.18	0.04	1.69	117.00	118.50	122.00	106.28	APR 1991	123.44	AUG 2005
Lake Jackson	Highlands	1984	102.71	102.53	102.45	-0.18	0.08	4.53	98.00	100.00	103.00	96.47	JUN 2008	103.75	SEP 2017
Lake Letta	Highlands	1981	98.79	98.93	99.13	0.14	-0.20	3.93	95.00	97.00	100.00	90.27	JUN 2008	100.85	NOV 2022
Lake Lotela	Highlands	1989	106.62	106.68	106.84	0.06	-0.16	2.68	104.00	105.00	108.50	96.63	JUN 2008	109.13	SEP 2017
Lake Placid	Highlands	1984	93.92	93.70	93.28	-0.22	0.42	3.70	90.00	91.50	94.50	88.08	JUN 2008	94.24	SEP 2003
Starr Lake	Polk	1983	102.91	102.74	105.71	-0.17	-2.97	-5.26	108.00	110.00	113.00	96.23	JUL 2001	109.80	DEC 2005
Trout Lake	Highlands	1981	95.43	95.19	96.32	-0.24	-1.13	0.19	95.00	98.00	101.00	87.15	MAY 2001	99.89	SEP 2016

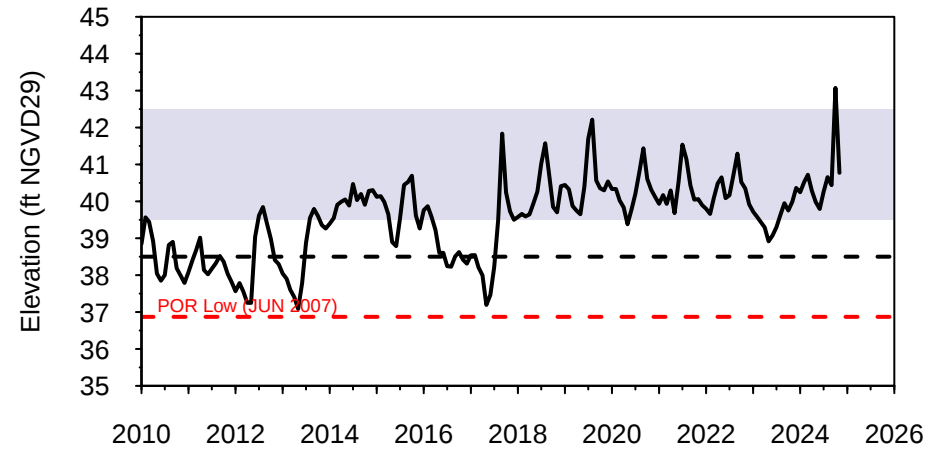
HYDROGRAPHS OF REGIONAL LAKES

15-Year Period of Record

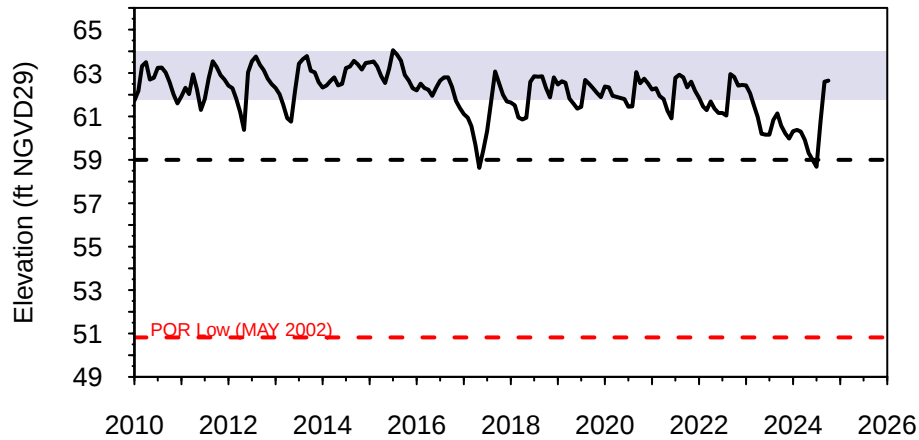
Hunters Lake
Northern Lakes



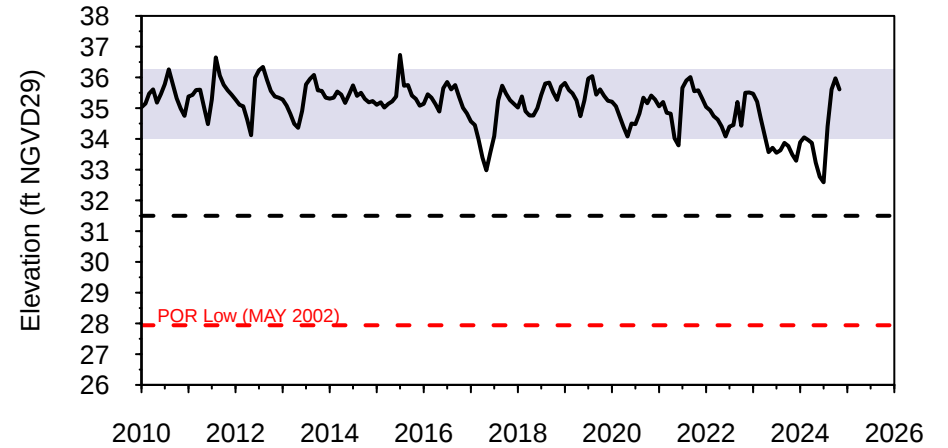
Lake Panasoffkee
Northern Lakes



Camp Lake
Tampa Bay Lakes



Church Lake
Tampa Bay Lakes

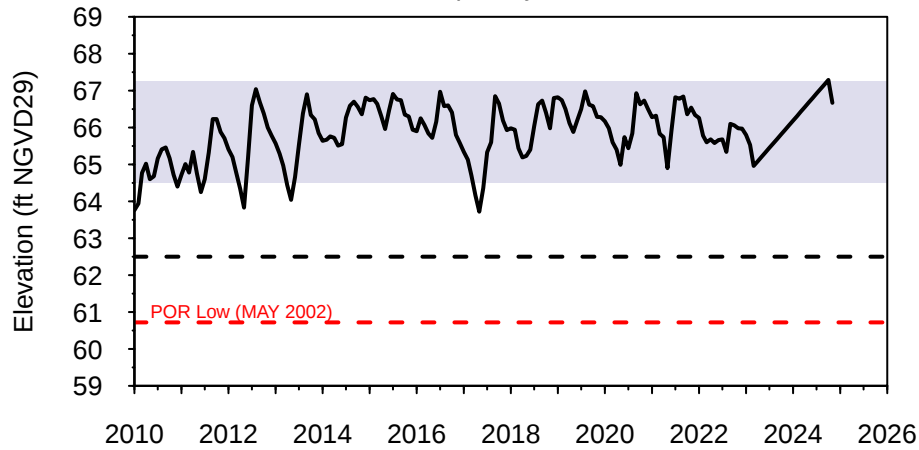


— Water Level - - Drought-Year Low Normal Range

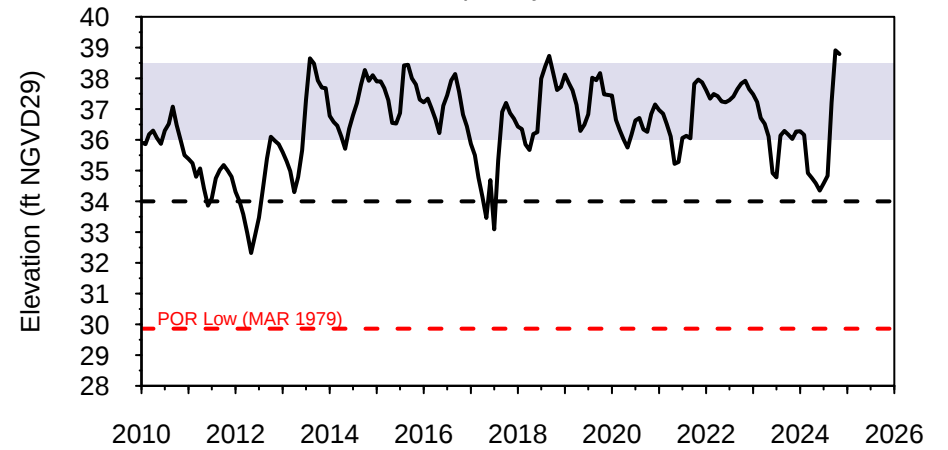
HYDROGRAPHS OF REGIONAL LAKES

15-Year Period of Record

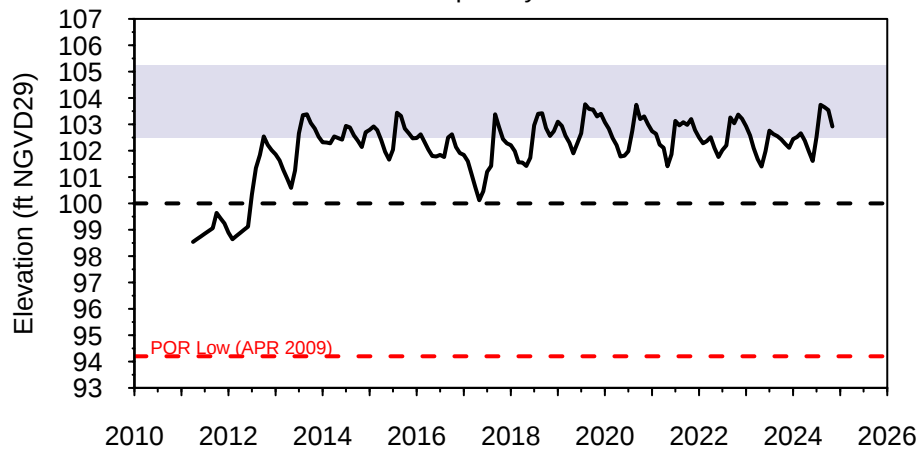
Deer Lake
Tampa Bay Lakes



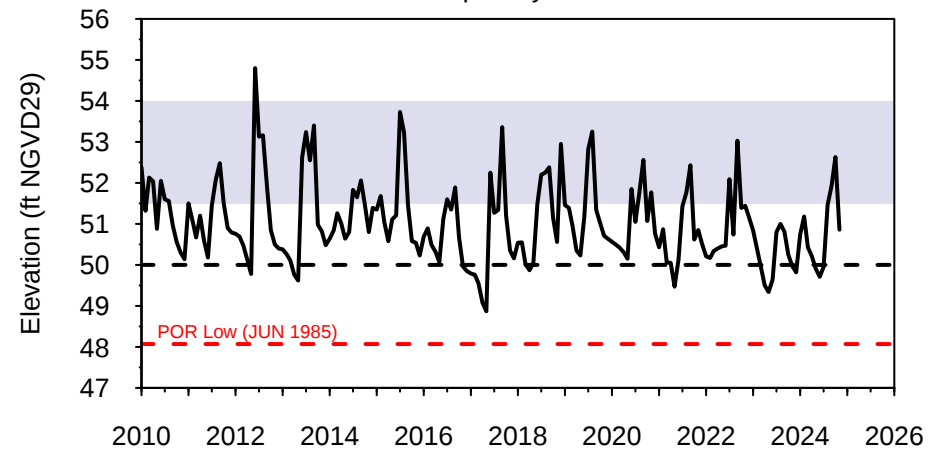
Gornto Lake
Tampa Bay Lakes



King Lake
Tampa Bay Lakes



Turkey Ford Lake
Tampa Bay Lakes



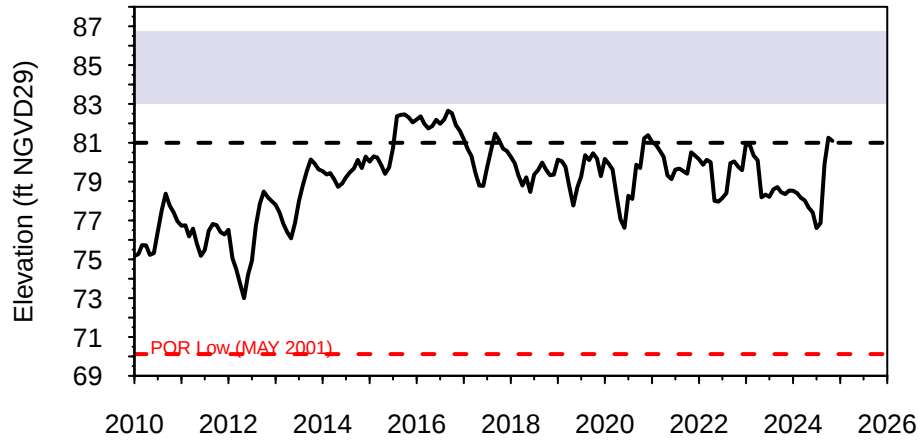
— Water Level - - Drought-Year Low Normal Range

HYDROGRAPHS OF REGIONAL LAKES

15-Year Period of Record

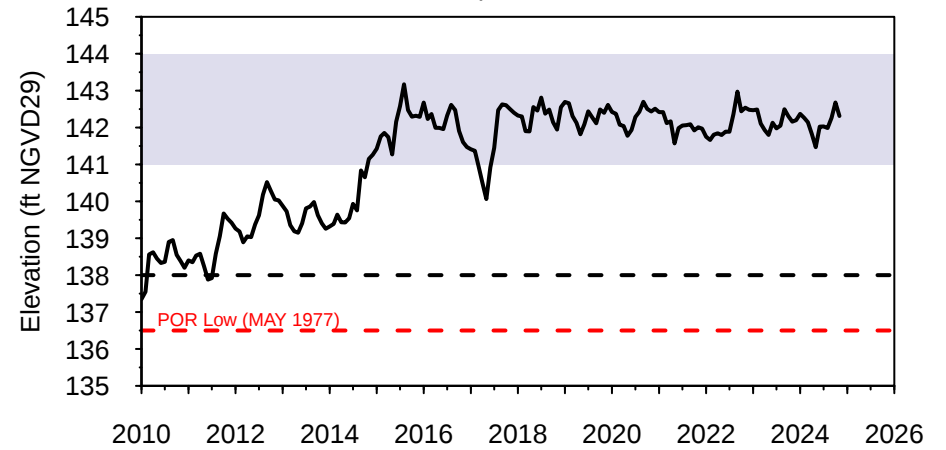
Lake Wimauma

Tampa Bay Lakes



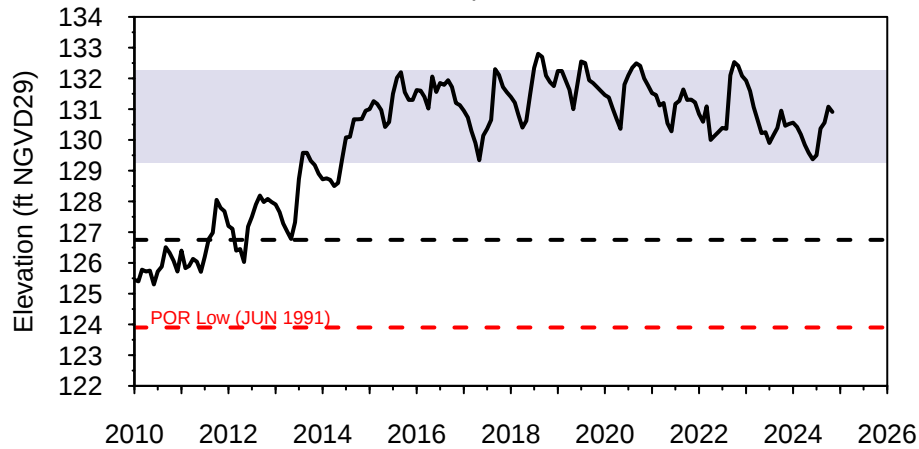
Lake Arietta

Polk Uplands Lakes



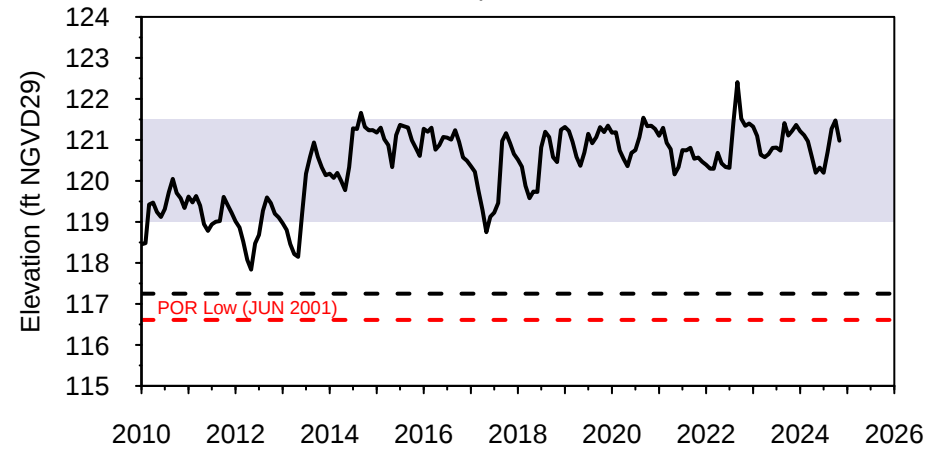
Lake Buffum

Polk Uplands Lakes



Lake Hamilton

Polk Uplands Lakes



— Water Level

- - Drought-Year Low

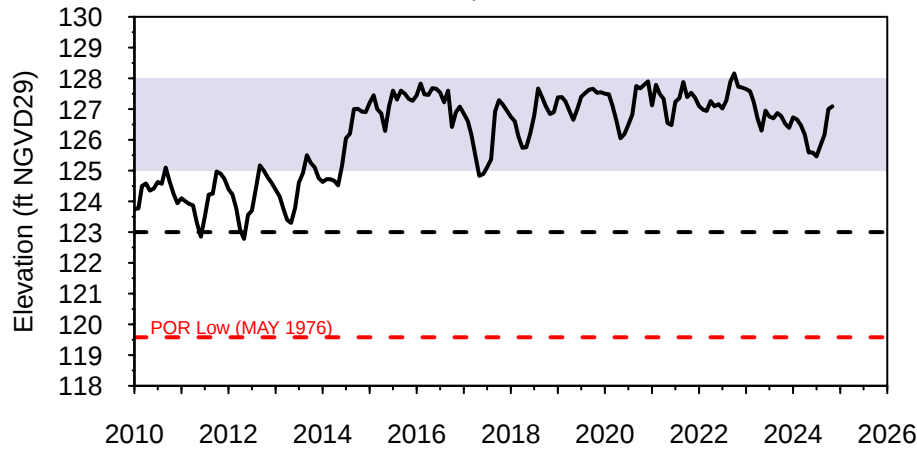
■ Normal Range

HYDROGRAPHS OF REGIONAL LAKES

15-Year Period of Record

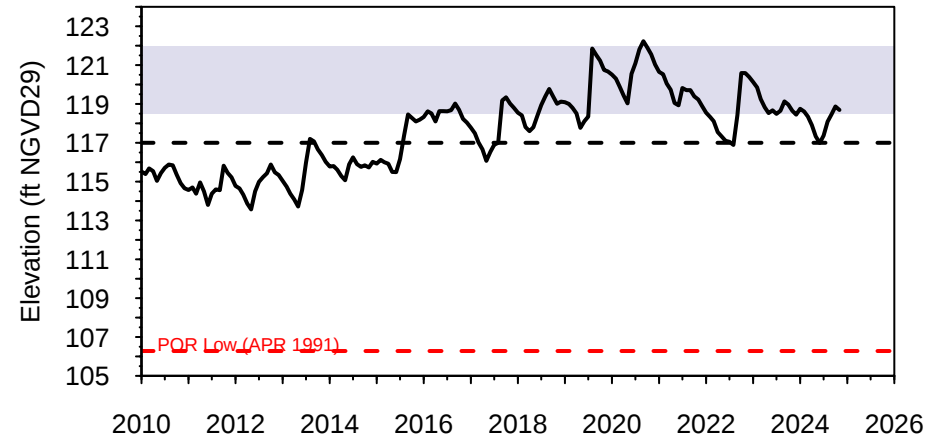
Lake Otis

Polk Uplands Lakes



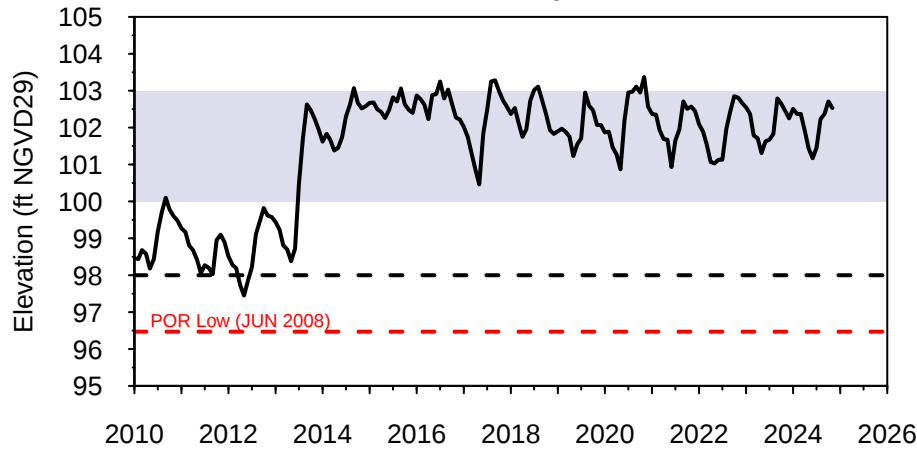
Crooked Lake

Lake Wales Ridge Lakes



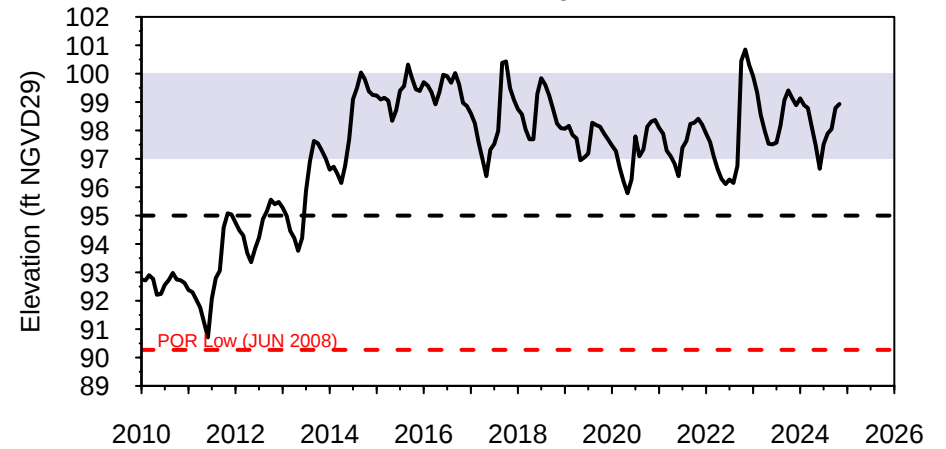
Lake Jackson

Lake Wales Ridge Lakes



Lake Letta

Lake Wales Ridge Lakes



— Water Level - - Drought-Year Low Normal Range

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 median. The zero percentile indicates a new period-of-record low and the 100th percentile is a new record high level. 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 25th and 75th percentiles of the period-of-record monthly means, reflecting the normal range of readings for the month.

Compared to October data, 11 of the 12 stations monitored for this report recorded decreased streamflow, while one reported increased streamflow.

Compared to November 2023 data, 11 of the 12 stations recorded streamflow increases, while one reported decreased streamflow.

Compared to historical November discharge values, Withlacoochee River streamflow, measured at the Trilby station and the Holder station, averaged in the 100th and 99th percentiles, respectively. Streamflow measured at the stations on the Alafia, Anclote, and Hillsborough Rivers averaged in the 88th, 81st and 92nd percentiles of respective historical November readings. Streamflow measured at the Little Manatee River, Peace River at Bartow, and Pithlachascotee River stations averaged in the 58th, 98th and 85th percentiles of respective historical November readings. Additionally, streamflow measured at the Josephine Creek, Manatee River, Myakka River, and Peace River at Arcadia stations averaged in the 83rd, 27th, 71st and 87th percentiles of respective historical November readings.

Historic High “Monthly” Streamflow

In November 2024, a record high “monthly” streamflow for the historic November readings, was reported at the Withlacoochee River at Trilby station. Additionally, the following data was mistakenly omitted from last month's report. That is, in October 2024, a record high “monthly” streamflow regarding the historic October readings was reported at the below listed stations:

- Northern counties: Withlacoochee River at Trilby.
- Central counties: Anclote River near Elfers; Pithlachascotee River near New Port Richey.

SUMMARY OF STREAM DISCHARGE FROM MAJOR STREAMS, NOVEMBER 2024

All units in cubic feet per second (cfs). "M" indicates missing or undetermined value.

Northern Counties

Stream Name	Beginning Year of Record	NOV 2024 Discharge	OCT 2024 Discharge	NOV 2023 Discharge	Change from OCT 2024	Change from NOV 2023	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Withlacoochee R at Trilby	1928	1306.4	2997.7	27.3	-1691.3	1279.1	100	0.1	JUN 2000	8840.0	JUN 1934
Withlacoochee R nr Holder	1928	3797.3	3364.8	354.0	432.5	3443.3	99	33.0	MAR 2001	8660.0	APR 1960

Central Counties

Stream Name	Beginning Year of Record	NOV 2024 Discharge	OCT 2024 Discharge	NOV 2023 Discharge	Change from OCT 2024	Change from NOV 2023	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Alafia R at Lithia	1932	348.0	1669.2	110.6	-1321.2	237.4	88	4.1	MAY 2000	40800.0	SEP 1933
Anclothe R nr Elfers	1946	42.6	582.0	2.9	-539.4	39.7	81	0.8	MAY 1962	3710.0	JUL 1960
Hillsborough R nr Zephyrhills	1939	311.6	2613.7	93.3	-2302.1	218.3	92	27.0	JUN 2000	12300.0	MAR 1960
Little Manatee R nr Wim.	1939	61.6	558.6	33.9	-497.0	27.7	58	0.9	DEC 1976	11100.0	SEP 1960
Peace R at Bartow	1939	544.6	1463.0	46.9	-918.4	497.7	98	0.0	MAY 2000	4100.0	SEP 1947
Pithlachascotee R nr NPR	1963	24.4	346.3	1.4	-321.9	23.0	85	0.0	MAY 1981	2180.0	JUN 2012

Southern Counties

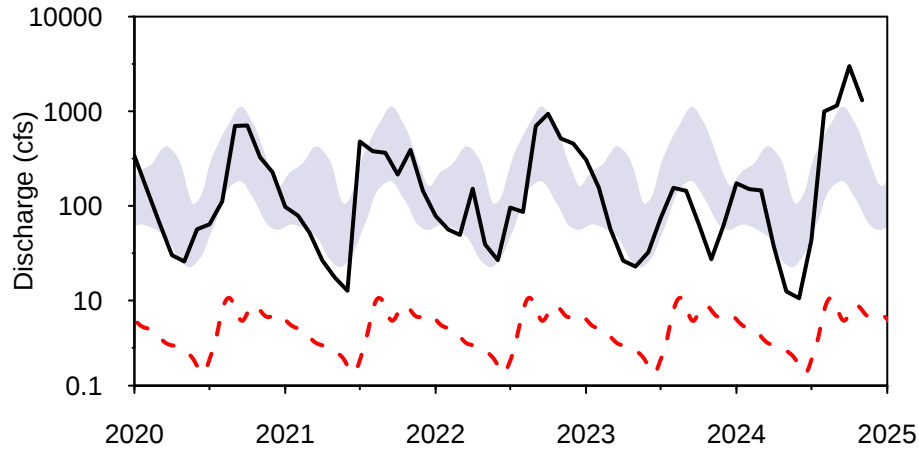
Stream Name	Beginning Year of Record	NOV 2024 Discharge	OCT 2024 Discharge	NOV 2023 Discharge	Change from OCT 2024	Change from NOV 2023	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Josephine Cr nr DeSoto C.	1946	96.8	274.5	51.9	-177.7	44.9	83	0.5	MAY 1956	1680.0	SEP 1948
Manatee R nr Myakka Hd.	1966	10.3	325.5	13.6	-315.2	-3.3	27	0.1	MAY 1975	6440.0	JUN 2003
Myakka R nr Sarasota	1936	117.5	1003.3	40.9	-885.8	76.6	71	0.0	MAR 1938	12600.0	OCT 2022
Peace R at Arcadia	1931	1132.3	4370.3	309.6	-3238.0	822.7	87	5.6	MAY 2000	49900.0	OCT 2022

HYDROGRAPHS OF MAJOR STREAMS

JANUARY 2020 to NOVEMBER 2024

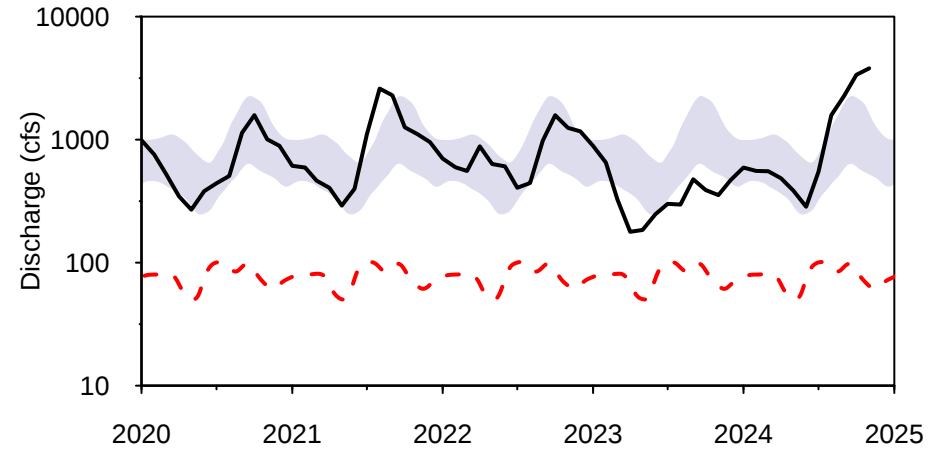
Withlacoochee R at Trilby

Northern Region



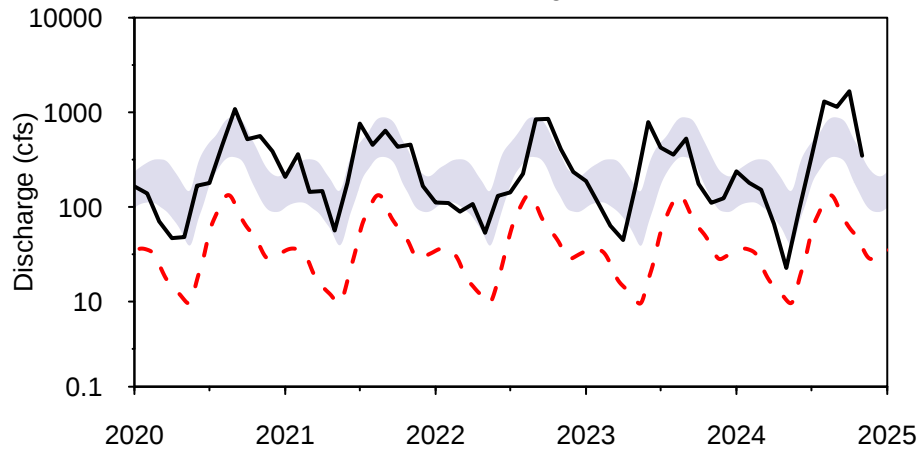
Withlacoochee R nr Holder

Northern Region



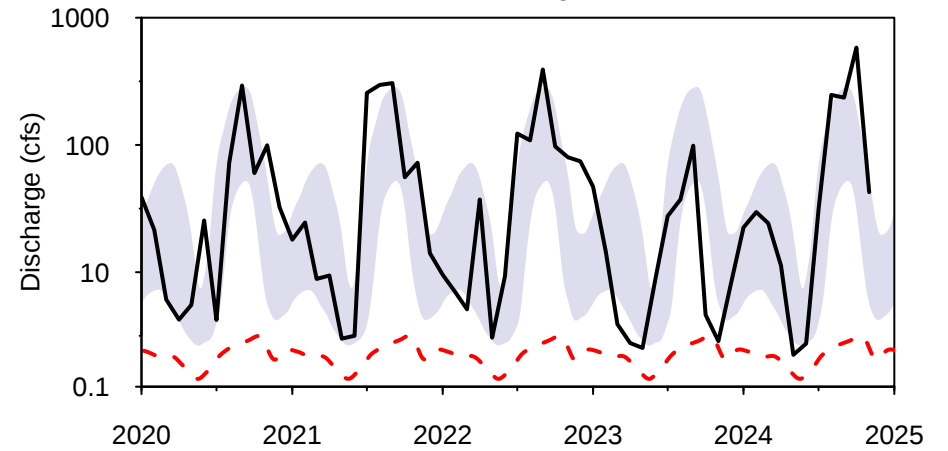
Alafia R at Lithia

Central Region



Anclore R nr Elfers

Central Region



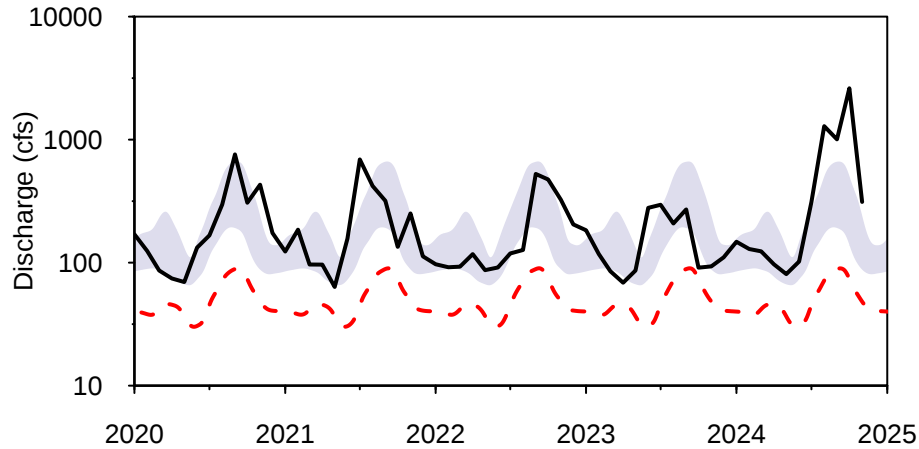
— Monthly Discharge - - - POR Monthly Low ■ Normal Range

HYDROGRAPHS OF MAJOR STREAMS

JANUARY 2020 to NOVEMBER 2024

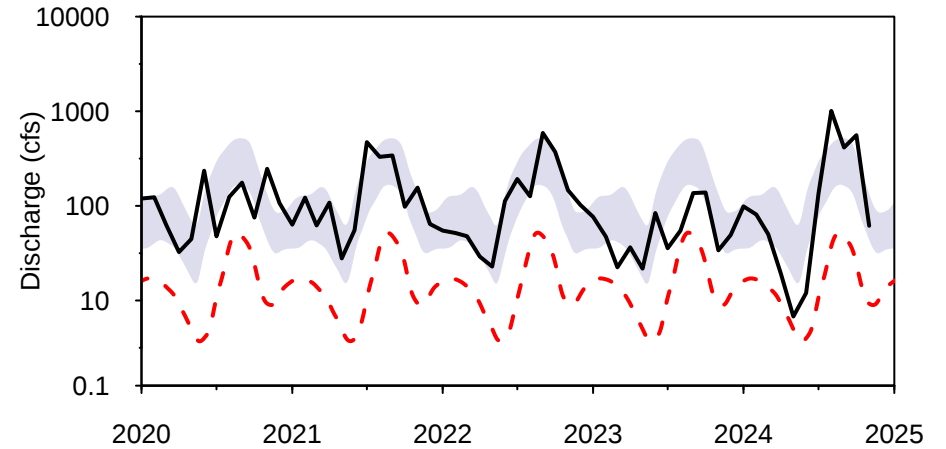
Hillsborough R nr Zephyrhills

Central Region



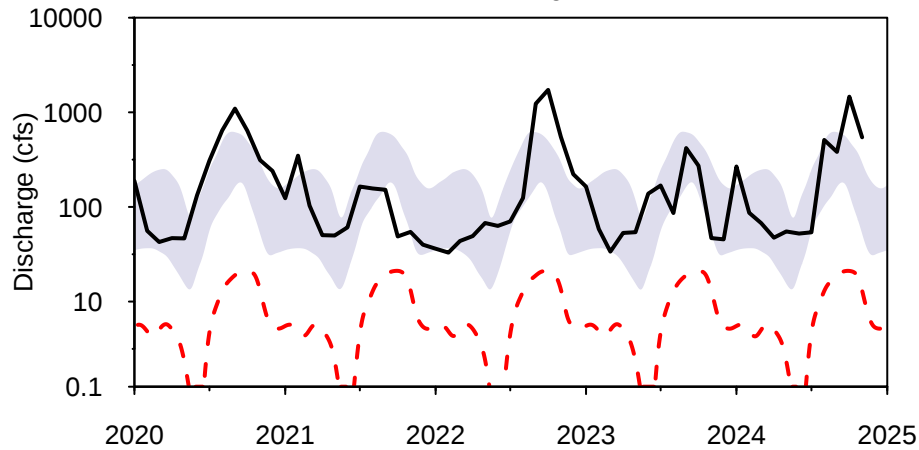
Little Manatee R nr Wim.

Central Region



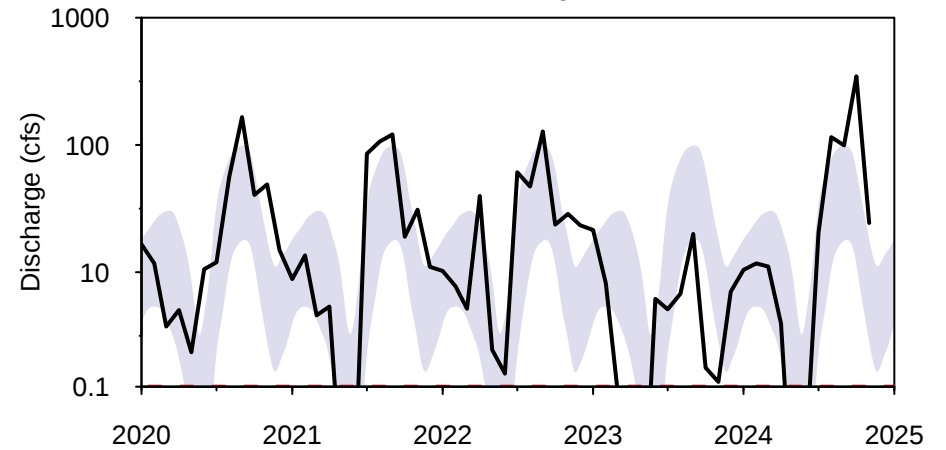
Peace R at Bartow

Central Region



Pithlachascotee R nr NPR

Central Region

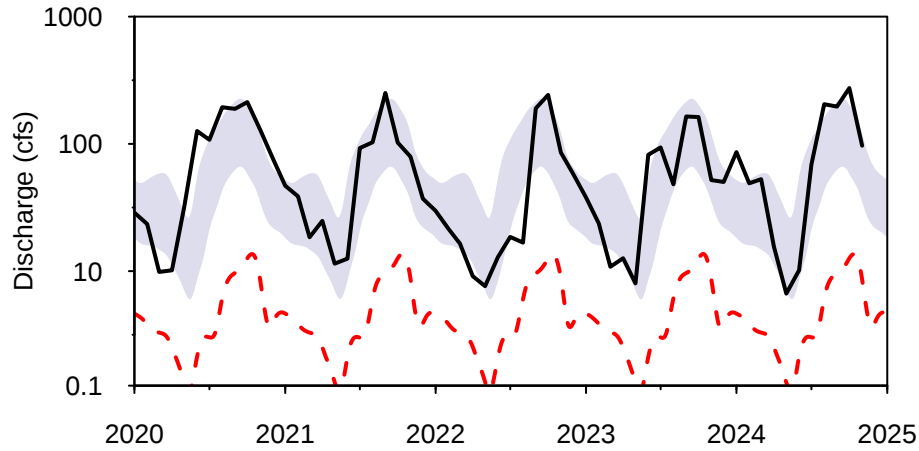


— Monthly Discharge - - - POR Monthly Low ■ Normal Range

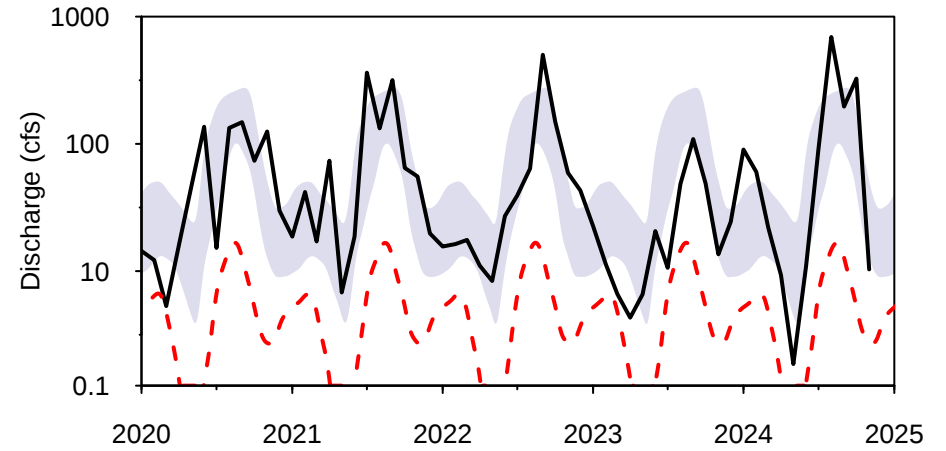
HYDROGRAPHS OF MAJOR STREAMS

JANUARY 2020 to NOVEMBER 2024

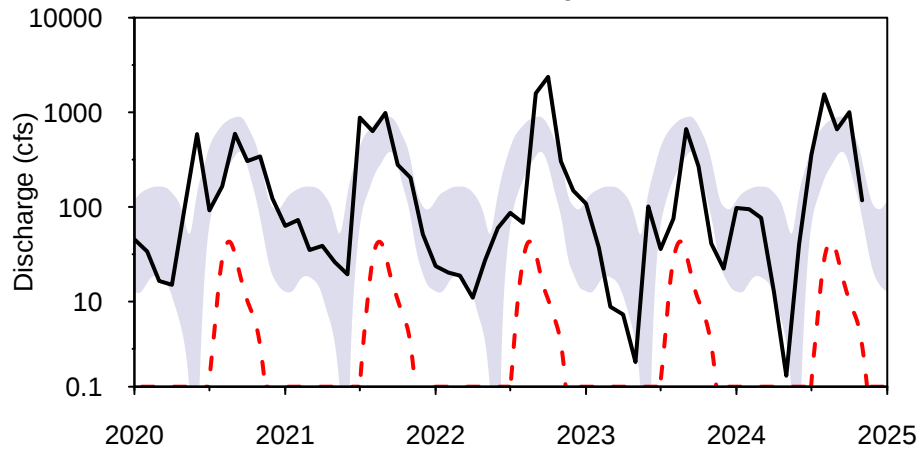
Josephine Cr nr DeSoto C.
Southern Region



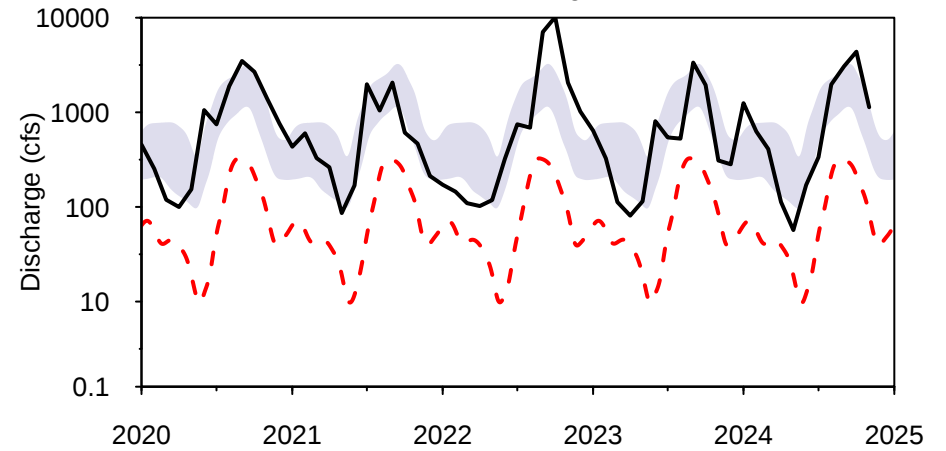
Manatee R nr Myakka Hd.
Southern Region



Myakka R nr Sarasota
Southern Region



Peace R at Arcadia
Southern Region



— Monthly Discharge - - - POR Monthly Low ■ Normal Range

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 six 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). 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, where the normal range is defined by flows between the 25th to 75th percentiles. The zero percentile indicates a new period-of-record low and the 100th percentile is a new record high. The values reported are provisional and are subject to revision at the end of the water year.

Compared to October data, three of six stations monitored for this report recorded decreased springflow, while two recorded increased springflow. Last month springflow data was missing regarding Lithia Springs, for analysis purposes.

Compared to November 2023 data, all six stations recorded increased springflow.

Compared to historical period-of-record values for November, total springflow measured in Rainbow, Silver and Weeki Wachee Springs, in the northern region, was in the 40th, 67th and 88th percentiles, respectively, of historical November readings. Springflow measured at the Buckhorn, Lithia and Sulphur Springs stations, in the central region, was in the 80th, 96th and 65th percentile of historical November readings.

SUMMARY OF SPRING DISCHARGE FROM MAJOR SPRINGS, NOVEMBER 2024

All units in cubic feet per second (cfs). "M" indicates missing or undetermined value.

Northern Counties

Spring Name	NOV 2024 Discharge	OCT 2024 Discharge	NOV 2023 Discharge	Change from OCT 2024	Change from NOV 2023	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Rainbow Springs	667.9	682.4	663.8	-14.5	4.1	40	391.0	MAY 2012	1060.0	SEP 1988
Silver Springs	827.6	783.7	656.9	43.9	170.7	67	141.0	JUN 2012	1290.0	OCT 1960
Weeki Wachee Springs	208.2	201.2	140.2	7.0	68.0	88	101.0	JUN 1994	257.0	OCT 2004

Central Counties

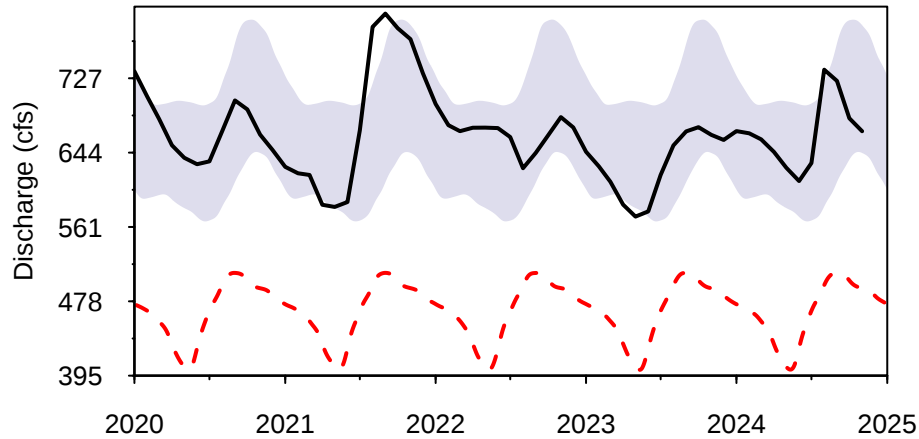
Spring Name	NOV 2024 Discharge	OCT 2024 Discharge	NOV 2023 Discharge	Change from OCT 2024	Change from NOV 2023	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
Buckhorn Springs	13.8	15.8	9.5	-2.0	4.3	80	2.2	MAY 2006	50.5	FEB 2015
Lithia Springs	78.1	M	46.2	M	31.9	96	9.1	MAY 2000	91.5	NOV 2004
Sulphur Springs	39.4	47.3	0.0	-7.9	39.4	65	0.0	JUN 1994	145.0	MAR 1960

HYDROGRAPHS OF REGIONAL SPRINGS

JANUARY 2020 to NOVEMBER 2024

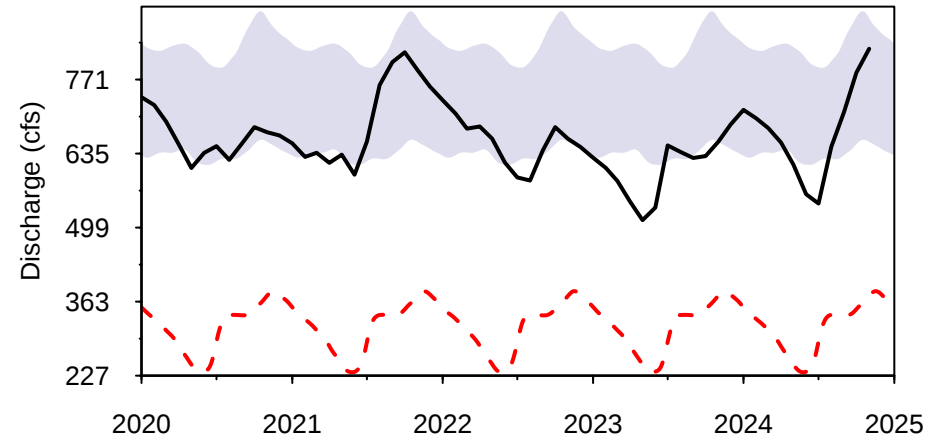
Rainbow Springs

Northern Region



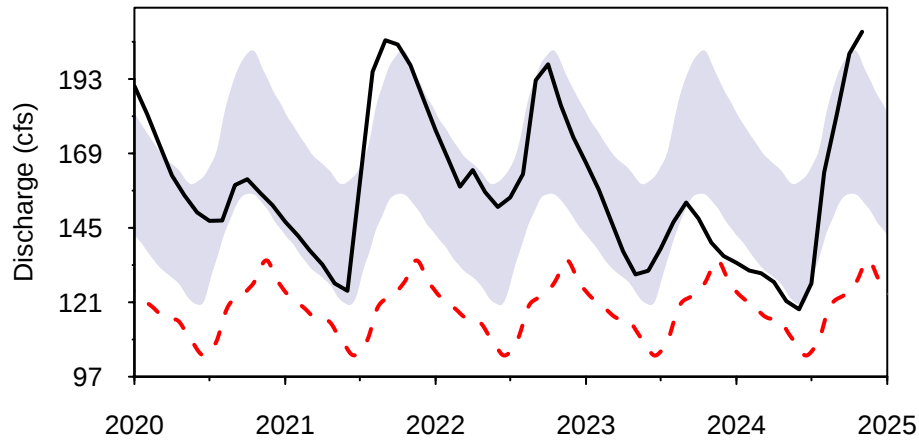
Silver Springs

Northern Region



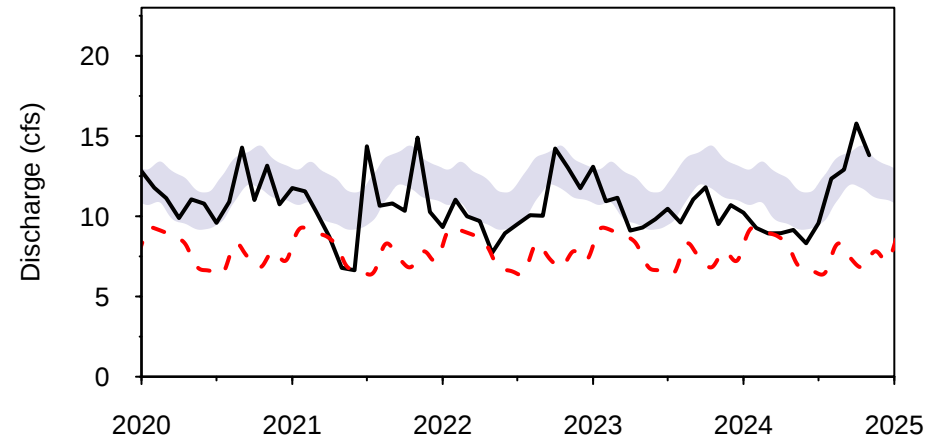
Weeki Wachee Springs

Northern Region



Buckhorn Springs

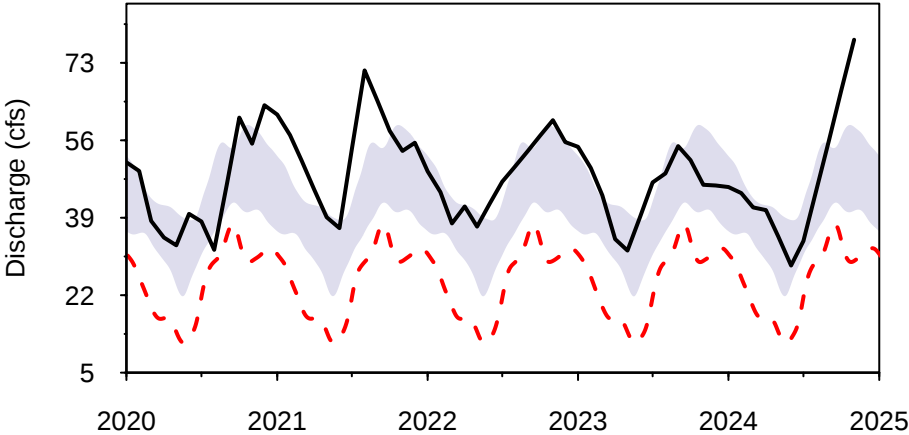
Central Region



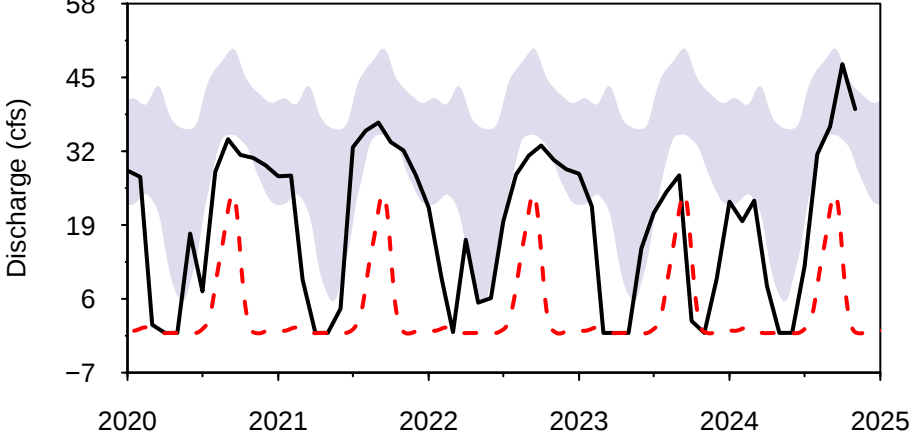
— Monthly Discharge - - - POR Monthly Low ■ Normal Range

HYDROGRAPHS OF REGIONAL SPRINGS
JANUARY 2020 to NOVEMBER 2024

Lithia Springs
Central Region



Sulphur Springs
Central Region



— Monthly Discharge - - - POR Monthly Low ■ Normal Range

GROUNDWATER

The groundwater section of this report provides groundwater level information for the Upper Floridan Aquifer (UFA) located within the District. As earlier indicated, the District is divided into three geographical regions defined by county boundaries (see index maps in the Appendix). In the northern counties, the UFA is generally at or near land surface, allowing rainfall to easily recharge (replenish) the aquifer system. In the central counties, the UFA can be unconfined or confined (overlain by thick clays). Where the UFA is confined, recharge to the aquifer from rainfall is low. In the southern counties, the UFA is confined.

Eighty UFA monitor wells are measured for this report to determine the relative health of groundwater levels Districtwide. Only monitor wells with an adequate and reliable period-of-record of water level measurements were selected for the network. For each well, the 25th and 75th percentiles ("low normal" and "high normal," respectively) were calculated for each week of the year using the period-of-record data. The 25th and 75th 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 wells are shown in hydrographs to compare current water levels to the low normal and high normal levels. Data from all 80 wells is further compiled into regional statistics for the three regions of the District. There are 20 wells located in the northern counties, 31 wells located in the central counties and 29 wells located in the southern counties, that are currently used for determining the regional percentiles. The potentiometric levels of representative Floridan aquifer wells are used to produce the potentiometric surface maps presented in this report.

Upper Floridan Aquifer

Since October, 75 of the 80 wells monitored for this report recorded water level decreases, while five recorded increases. Regionally, average water levels decreased in the northern, central and southern counties by 0.84 foot, 0.72 foot and 1.89 feet respectively. Districtwide, the average water level in the UFA decreased by 1.17 foot.

Compared to November 2023 data, 77 of the 80 wells monitored for this report recorded water level increases, while three recorded decreases. Regionally, the mean water level in the northern, central and southern counties was higher by 3.07, 2.84 and 2.59 feet, respectively. Districtwide, average water levels in UFA wells were 2.81 feet higher than November 2023 levels.

In November, the regional aquifer level percentile in the UFA ended the month above normal in the northern and central counties, and within the normal range in the southern counties. The regional aquifer level percentile in the northern, central and southern counties ended the month at the 84th, 78th and 58th percentiles, respectively.

Record High Water Levels

In November 2024, a record high "monthly" water level for the historic November readings, was set in the following wells:

- Northern counties: ROMP 103; ROMP 111; ROMP 116;

- Central counties: Lykes Pasco; ROMP 66; ROMP TR 10-2; SR 577 Deep.

{THE REMAINDER OF THIS PAGE HAS BEEN INTENTIONALLY LEFT BLANK}

SUMMARY OF UPPER FLORIDAN AQUIFER LEVELS IN REPRESENTATIVE WELLS, NOVEMBER 2024

All elevations are referenced to the NGVD29 datum (feet). "M" indicates missing or undetermined value.

Regional Summary

Region	NOV 2024 Elevation	NOV 2024 vs. Historic NOV Median	NOV 2024 vs. Historic NOV 25th Percentile	NOV 2024 Percentile Rank	OCT 2024 Percentile Rank	NOV 2023 Percentile Rank
Northern	40.50	2.13	3.48	84	86	38
Central	63.48	2.71	5.32	78	85	44
Southern	34.29	0.81	3.14	58	65	31

Regional Wells Summary

	NOV 2024 Elev	OCT 2024 Elev	NOV 2023 Elev	Change from OCT 2024	Change from NOV 2023	NOV Historical Low Normal	NOV Historical High Normal	Departure from Low Normal	NOV 2024 Percentile Rank	Period of Record Low	Record Low Date	Period of Record High	Record High Date
NORTHERN COUNTIES													
CE 14 Dunnellon Deep	43.85	45.10	37.83	-1.25	6.02	37.64	42.45	6.21	88%	31.94	MAY 2012	50.74	MAR 1998
Chassahowitzka 1 Deep	7.93	8.49	5.84	-0.56	2.09	6.08	7.31	1.85	95%	4.72	JUN 2001	9.75	SEP 2021
Inverness DOT	30.97	31.07	26.82	-0.10	4.15	28.35	32.13	2.62	63%	21.70	JUN 2001	37.80	OCT 1982
Mascotte Deep (L-0062)	100.83	101.50	100.15	-0.67	0.68	99.02	100.49	1.81	93%	93.94	JUN 2000	102.66	SEP 1988
North Lecanto Deep	5.77	6.08	4.20	-0.31	1.57	4.45	5.51	1.32	81%	2.94	MAY 2001	8.10	OCT 1982
ROMP 103	47.64	49.15	37.85	-1.51	9.79	42.46	43.57	5.18	100%	37.12	JUN 2024	49.17	OCT 2024
ROMP 107	16.23	16.30	10.36	-0.07	5.87	11.60	14.60	4.63	88%	8.08	AUG 2007	19.78	NOV 1982
ROMP 111	51.83	53.07	50.33	-1.24	1.50	48.27	50.00	3.56	100%	44.22	JUL 1992	54.39	OCT 2024
ROMP 116	36.55	38.67	31.91	-2.12	4.64	31.79	33.86	4.76	100%	29.24	MAY 2012	39.28	OCT 2004
ROMP 119 Sulfate	47.37	48.29	44.87	-0.92	2.50	43.47	46.29	3.90	96%	39.86	MAY 2012	50.98	OCT 2004
ROMP 120	47.10	47.65	44.52	-0.55	2.58	42.40	45.50	4.70	89%	38.71	MAY 2012	52.24	MAR 1998
ROMP 134 (Ocal-Avpk-Oldm)	50.01	50.41	48.33	-0.40	1.68	43.84	49.22	6.17	80%	37.80	JUN 2012	57.35	APR 1998
ROMP 89	91.75	92.88	91.74	-1.13	0.01	90.40	91.40	1.35	79%	82.46	JUN 2000	94.93	DEC 1997
ROMP 97	20.58	21.45	14.99	-0.87	5.59	15.94	19.97	4.64	84%	11.84	MAY 2009	26.24	SEP 2004
ROMP TR 124 (Avpk) 2	2.82	3.09	2.68	-0.27	0.14	2.43	3.52	0.39	49%	0.77	SEP 2004	5.66	DEC 2018
ROMP TR 21-2 Chloride	3.31	3.65	3.04	-0.34	0.27	2.67	3.38	0.64	64%	1.25	MAR 1991	6.71	SEP 2024
Sumter 13 JC 59 U Repl	43.98	45.53	40.90	-1.55	3.08	40.19	42.62	3.79	95%	36.52	MAY 2012	47.36	AUG 2021
Tidewater 1	56.18	56.93	53.95	-0.75	2.23	53.33	56.60	2.85	69%	48.05	JUN 2012	61.81	SEP 1982
Webster City	86.16	87.47	84.25	-1.31	1.91	80.62	83.81	5.54	94%	74.16	MAY 2012	89.07	OCT 2024
Weeki Wachee Repl	19.15	20.02	14.06	-0.87	5.09	15.39	19.15	3.76	75%	10.37	MAY 2009	23.61	AUG 1984

Regional Wells Summary (continued)

<i>CENTRAL COUNTIES</i>	<i>NOV 2024 Elev</i>	<i>OCT 2024 Elev</i>	<i>NOV 2023 Elev</i>	<i>Change from OCT 2024</i>	<i>Change from NOV 2023</i>	<i>NOV Historical Low Normal</i>	<i>NOV Historical High Normal</i>	<i>Departure from Low Normal</i>	<i>NOV 2024 Percentile Rank</i>	<i>Period of Record Low</i>	<i>Record Low Date</i>	<i>Period of Record High</i>	<i>Record High Date</i>
Bexley 2	61.52	62.48	60.57	-0.96	0.95	60.35	61.88	1.17	51%	56.08	JUN 2000	64.50	SEP 2017
Coley Deep	85.00	85.81	84.50	-0.81	0.50	79.80	84.79	5.20	81%	60.77	JAN 2010	90.99	OCT 2004
Cross Bar 2SW CSX (CB-2SW)	67.46	68.33	66.06	-0.87	1.40	65.51	67.03	1.95	82%	61.00	JAN 2008	70.30	JAN 1998
Debuel Road Deep	54.76	55.77	50.85	-1.01	3.91	53.34	55.80	1.42	60%	46.48	APR 2002	60.13	SEP 1979
DV-1 (Swnn)	55.34	42.78	53.00	12.56	2.34	50.99	56.39	4.35	58%	12.06	JAN 2010	65.72	FEB 1998
Hillsborough RSPPL Deep	40.47	43.18	38.08	-2.71	2.39	37.73	39.57	2.74	90%	35.35	JUN 2000	48.26	OCT 2024
Lake Alfred Deep nr Lake Alfred	129.21	130.08	129.11	-0.87	0.10	126.16	128.68	3.05	93%	119.85	MAY 1974	131.18	MAR 1998
Loughman Deep	90.40	90.78	90.63	-0.38	-0.23	89.56	91.12	0.84	44%	85.90	MAY 2001	93.60	OCT 2022
Lykes Pasco	73.47	75.68	65.53	-2.21	7.94	64.18	68.63	9.29	100%	56.94	JUN 2000	76.18	OCT 2024
Masaryktown Deep	40.78	41.15	30.18	-0.37	10.60	28.88	38.36	11.90	85%	21.89	AUG 1994	50.09	OCT 1982
Pasco 13 nr Drexel	72.65	73.85	71.03	-1.20	1.62	71.85	73.24	0.80	55%	68.00	JUN 2001	77.92	SEP 2024
Pinellas 665	9.82	10.90	8.59	-1.08	1.23	9.08	10.72	0.74	62%	6.70	MAY 2006	14.79	SEP 1959
ROMP 123 Htrn AS/U Aq	14.28	13.69	10.10	0.59	4.18	3.87	13.12	10.41	78%	-29.47	MAY 2000	33.56	FEB 1998
ROMP 40	42.43	42.82	38.62	-0.39	3.81	34.88	43.67	7.55	64%	-4.15	JUN 2000	57.37	FEB 1998
ROMP 45 (Avpk)	77.38	79.63	74.25	-2.25	3.13	66.13	76.68	11.25	91%	33.90	JUN 2000	84.44	OCT 2004
ROMP 48 (Tmpe-Swnn)	37.04	38.16	34.14	-1.12	2.90	29.26	37.74	7.77	68%	-7.87	MAY 2000	52.64	FEB 1998
ROMP 50 (Avpk) Chloride	10.52	11.39	6.29	-0.87	4.23	3.46	7.48	7.06	98%	-17.42	FEB 2018	14.95	AUG 1982
ROMP 58	103.59	102.67	103.58	0.92	0.01	99.43	104.83	4.16	61%	89.38	JAN 2010	111.01	DEC 2005
ROMP 59 Interface	78.49	80.75	75.06	-2.26	3.43	62.45	75.23	16.04	93%	33.33	MAY 1981	85.92	OCT 2004
ROMP 60 (Avpk) Repl	78.27	79.97	74.69	-1.70	3.58	73.18	77.51	5.08	87%	51.29	MAY 2012	83.25	SEP 2018
ROMP 66	21.76	24.07	16.70	-2.31	5.06	17.93	19.52	3.83	100%	13.02	JUN 2000	26.47	OCT 2024
ROMP 76	130.75	131.93	129.80	-1.18	0.95	127.29	130.02	3.46	91%	121.88	JAN 2010	132.92	SEP 2004
ROMP 87 (Avpk)	102.86	103.86	101.73	-1.00	1.13	101.25	102.91	1.61	74%	94.90	JUN 2000	109.95	JUN 2023
ROMP 88 (Avpk)	104.81	105.75	103.80	-0.94	1.01	102.88	104.29	1.93	79%	92.37	APR 2023	107.62	OCT 2024
ROMP 93	74.92	75.80	70.87	-0.88	4.05	66.17	73.39	8.75	96%	59.03	JUN 2001	76.89	OCT 2024
ROMP TR 10-2	13.34	14.79	11.61	-1.45	1.73	9.00	10.65	4.34	100%	6.25	MAY 2000	15.43	OCT 2024
ROMP TR 13-3	15.07	15.98	14.45	-0.91	0.62	15.06	16.46	0.01	25%	10.95	JUL 1987	18.79	AUG 2015
Sanlon Ranch	100.91	102.79	97.24	-1.88	3.67	88.66	97.08	12.25	98%	66.38	MAY 1975	105.27	OCT 2004
SR 52 and CR 581 Deep	75.44	76.89	71.60	-1.45	3.84	68.28	74.80	7.16	86%	56.96	JUN 2001	81.22	JUN 2023
SR 577 Deep	94.87	96.92	88.94	-2.05	5.93	86.65	92.56	8.22	100%	72.76	JUN 2000	98.51	MAR 1998
Tarpon Road Deep	10.24	11.45	8.31	-1.21	1.93	9.75	10.71	0.49	57%	7.50	JUN 2006	13.48	AUG 2015

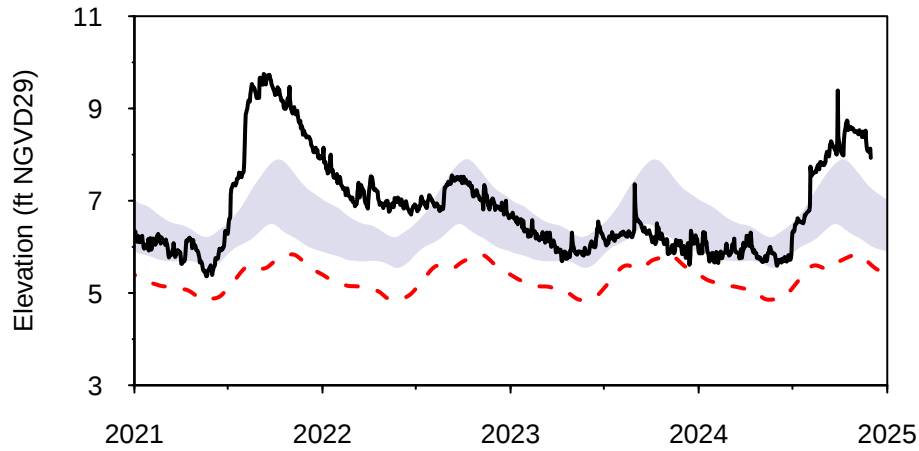
Regional Wells Summary (continued)

<i>SOUTHERN COUNTIES</i>	<i>NOV 2024 Elev</i>	<i>OCT 2024 Elev</i>	<i>NOV 2023 Elev</i>	<i>Change from OCT 2024</i>	<i>Change from NOV 2023</i>	<i>NOV Historical Low Normal</i>	<i>NOV Historical High Normal</i>	<i>Departure from Low Normal</i>	<i>NOV 2024 Percentile Rank</i>	<i>Period of Record Low</i>	<i>Record Low Date</i>	<i>Period of Record High</i>	<i>Record High Date</i>
Big Slough Deep	33.38	34.78	32.72	-1.40	0.66	32.35	33.80	1.03	64%	26.85	MAY 2006	37.41	SEP 2022
Cargill FA-1	75.90	78.09	72.43	-2.19	3.47	62.51	74.53	13.39	93%	30.50	MAY 1981	82.95	OCT 2004
Edgeville 3 Deep Dstr	28.14	30.61	25.35	-2.47	2.79	24.22	33.12	3.93	55%	1.13	MAY 2000	41.26	OCT 1979
Englewood 14 Deep	6.18	6.79	1.40	-0.61	4.78	4.50	5.97	1.68	81%	-0.97	FEB 2001	11.64	SEP 2022
Manasota 14 Deep	17.43	18.18	17.29	-0.75	0.14	18.36	20.88	-0.93	4%	15.36	JUN 2024	22.70	NOV 1971
Marshall Deep (USGS)	44.76	47.81	43.01	-3.05	1.75	39.91	47.08	4.85	57%	8.96	JUN 2000	55.24	MAR 1964
ROMP 16	46.96	47.91	46.34	-0.95	0.62	45.33	47.86	1.63	51%	28.94	JAN 2001	51.21	SEP 1995
ROMP 17 (Swann)	45.57	46.70	45.11	-1.13	0.46	43.76	46.97	1.81	53%	31.89	JUN 2000	51.64	OCT 1994
ROMP 19 (Swann)	23.89	26.25	21.04	-2.36	2.85	23.80	29.29	0.09	26%	10.99	JUN 2000	33.80	SEP 2017
ROMP 19X (Swann)	34.31	35.91	31.02	-1.60	3.29	31.10	35.06	3.21	63%	19.28	JUN 2000	39.92	OCT 1994
ROMP 20 (Swann)	20.80	22.63	17.55	-1.83	3.25	20.09	22.41	0.71	41%	11.99	MAY 2007	26.66	SEP 2017
ROMP 22 (Swann)	20.27	23.43	14.93	-3.16	5.34	15.46	21.15	4.81	71%	-3.71	MAY 2000	30.18	FEB 1998
ROMP 26	45.29	47.48	44.31	-2.19	0.98	42.28	46.77	3.01	60%	19.48	JAN 2010	51.28	OCT 1979
ROMP 28X	71.60	72.73	71.24	-1.13	0.36	68.04	70.62	3.56	91%	57.24	JAN 2010	75.07	OCT 2024
ROMP 30	50.55	54.98	47.34	-4.43	3.21	41.70	50.94	8.85	70%	-0.20	JUN 2000	60.52	MAR 1998
ROMP 31	46.15	50.13	42.12	-3.98	4.03	37.58	46.15	8.57	75%	-6.22	JUN 2000	57.92	MAR 1998
ROMP 32 (Avpk)	30.50	33.39	26.28	-2.89	4.22	21.18	29.57	9.32	78%	-17.74	JUN 2000	44.73	FEB 1998
ROMP 43XX	89.06	88.25	88.18	0.81	0.88	84.82	89.37	4.24	70%	70.93	JAN 2010	94.60	MAR 1998
ROMP 9 (Swann)	42.16	42.81	41.64	-0.65	0.52	41.50	42.97	0.66	45%	37.00	JAN 2001	46.35	SEP 2006
ROMP TR 1-2	45.04	45.46	45.22	-0.42	-0.18	44.89	45.63	0.15	43%	40.72	JUN 2000	47.55	SEP 2022
ROMP TR 3-1	34.08	33.92	34.23	0.16	-0.15	33.52	34.31	0.55	63%	29.04	JUN 2000	36.52	SEP 2022
ROMP TR 5-1 Sulfate	18.68	19.78	16.96	-1.10	1.72	18.49	19.96	0.19	28%	13.26	JUN 2000	22.56	SEP 2017
ROMP TR 5-2 (Swann)	24.60	26.08	21.60	-1.48	3.00	24.04	26.84	0.57	46%	13.75	MAY 2006	31.10	OCT 1994
ROMP TR 7-1 (L Arca Aq Int)	20.01	21.93	16.79	-1.92	3.22	17.30	19.19	2.71	86%	10.01	JUN 2000	24.75	OCT 2024
ROMP TR 7-4 (Swann)	16.01	19.78	11.07	-3.77	4.94	11.14	16.08	4.87	75%	-3.55	MAY 2000	24.35	AUG 2019
ROMP TR 8-1 (Swann)	19.44	21.72	17.02	-2.28	2.42	16.28	18.38	3.16	89%	6.60	MAY 2000	23.82	OCT 2024
ROMP TR SA-1 (Swann)	9.74	11.76	6.09	-2.02	3.65	10.45	11.55	-0.71	20%	2.54	JUN 2024	22.04	SEP 1999
Sarasota Service Office	16.56	21.07	9.98	-4.51	6.58	16.21	28.06	0.35	28%	-3.24	JUN 2000	35.21	MAR 1931
Verna Test 0-1	17.41	18.78	11.03	-1.37	6.38	12.49	20.14	4.92	54%	-15.73	MAY 2000	33.32	JAN 1984

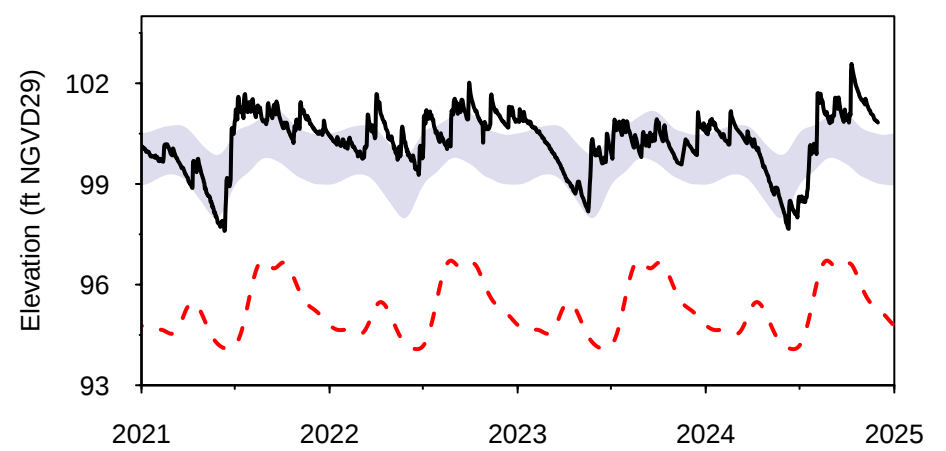
HYDROGRAPHS OF REPRESENTATIVE UPPER FLORIDAN AQUIFER WELLS

JANUARY 2021 TO NOVEMBER 2024

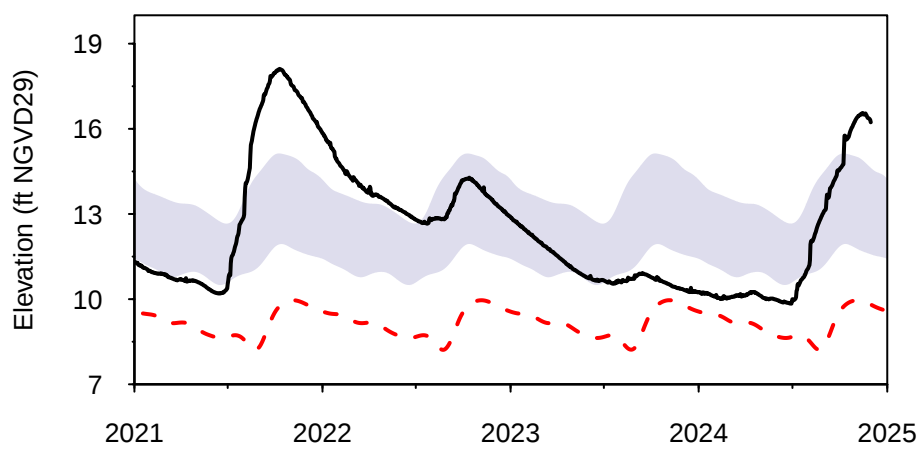
Chassahowitzka 1 Deep
Northern Region



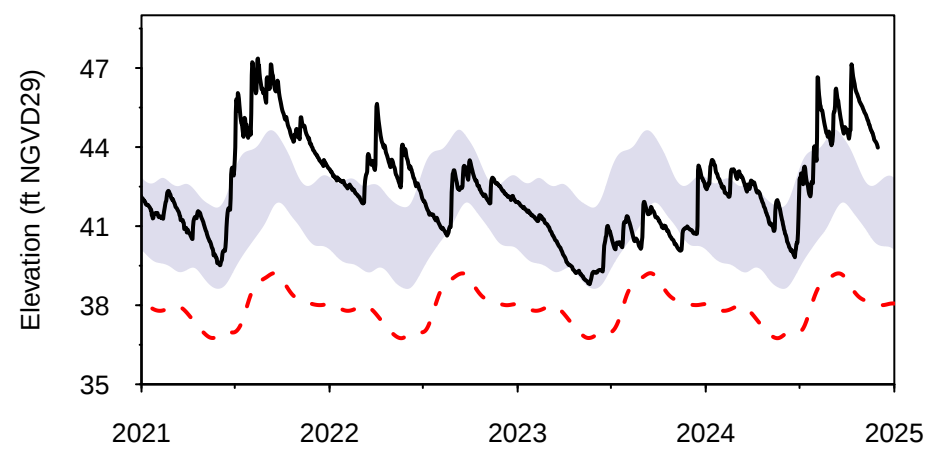
Mascotte Deep (L-0062)
Northern Region



ROMP 107
Northern Region



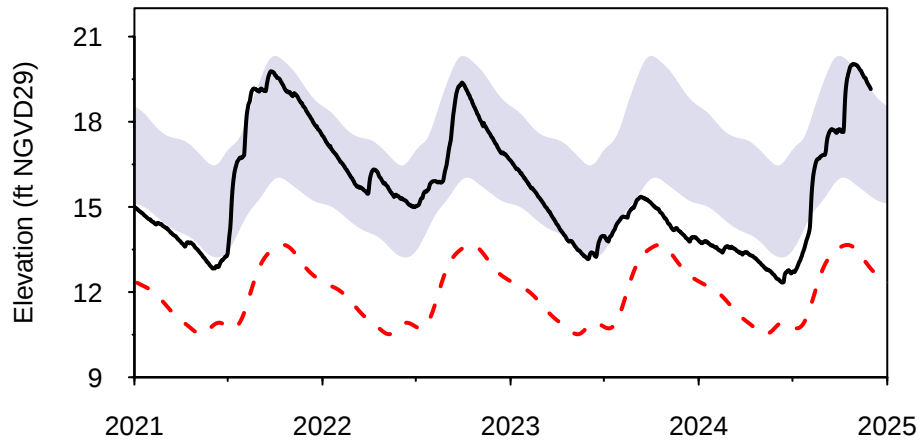
Sumter 13 JC 59 U Repl
Northern Region



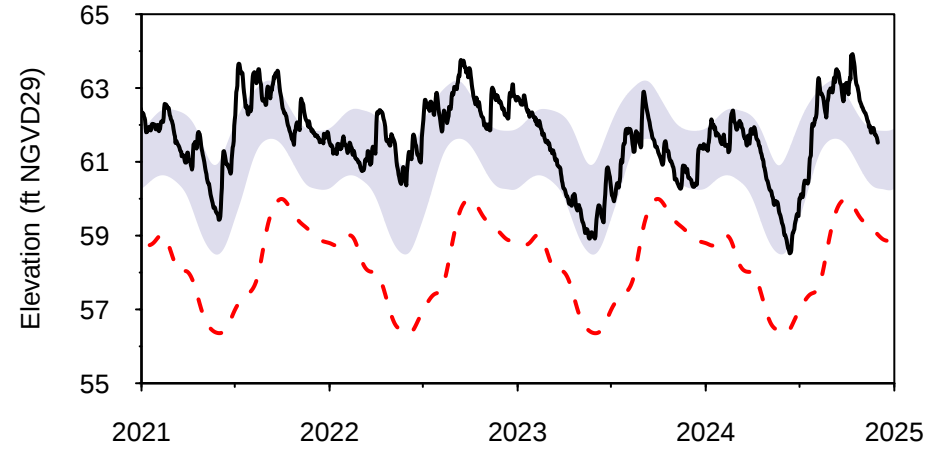
— Water Level - - - POR Daily Low ■ Normal Range

HYDROGRAPHS OF REPRESENTATIVE UPPER FLORIDAN AQUIFER WELLS
JANUARY 2021 TO NOVEMBER 2024

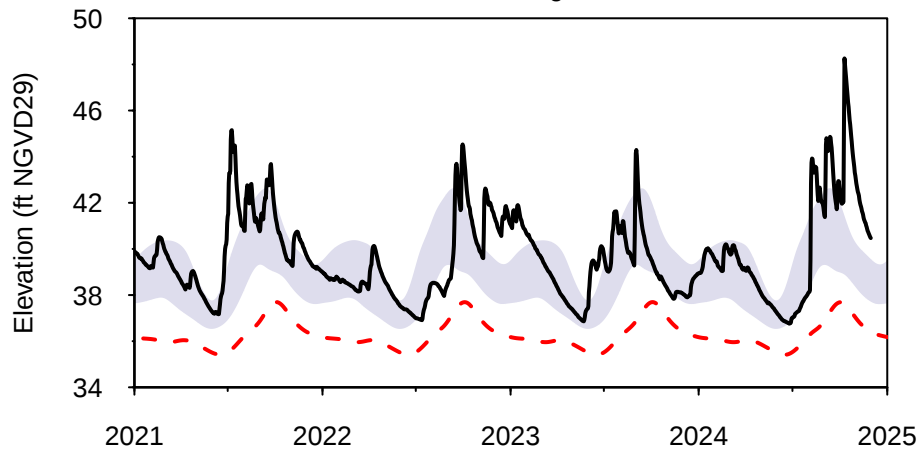
Weeki Wachee Repl
Northern Region



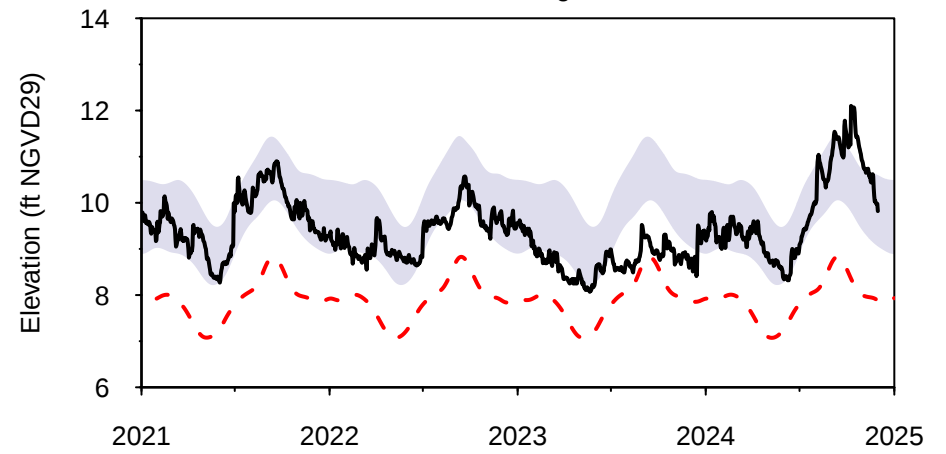
Bexley 2
Central Region



Hillsborough RSPPL Deep
Central Region



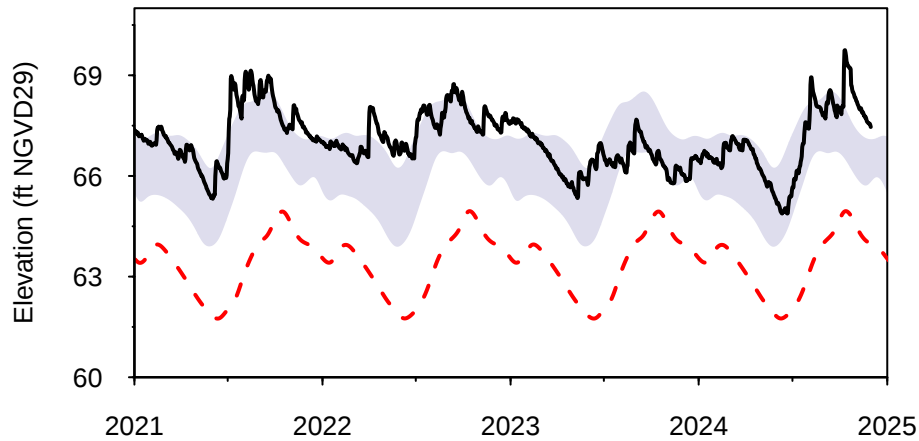
Pinellas 665
Central Region



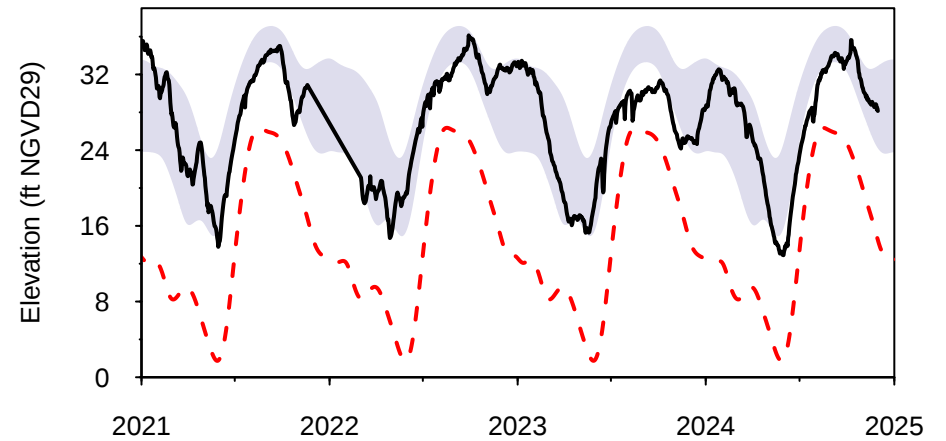
— Water Level - - - POR Daily Low ■ Normal Range

HYDROGRAPHS OF REPRESENTATIVE UPPER FLORIDAN AQUIFER WELLS
JANUARY 2021 TO NOVEMBER 2024

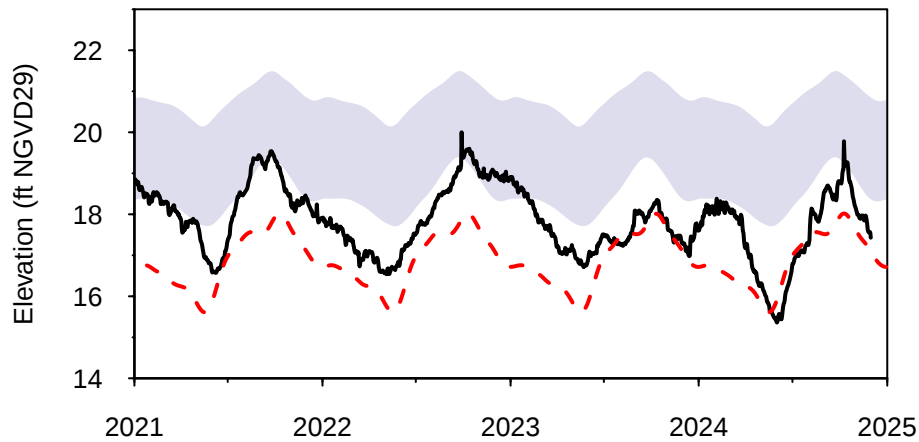
Cross Bar 2SW CSX (CB-2SW)
Central Region



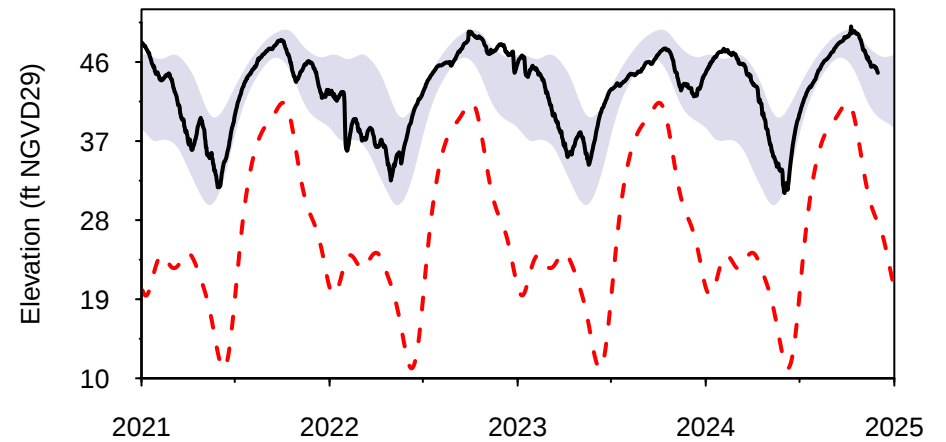
Edgeville 3 Deep Dstr
Southern Region



Manasota 14 Deep
Southern Region



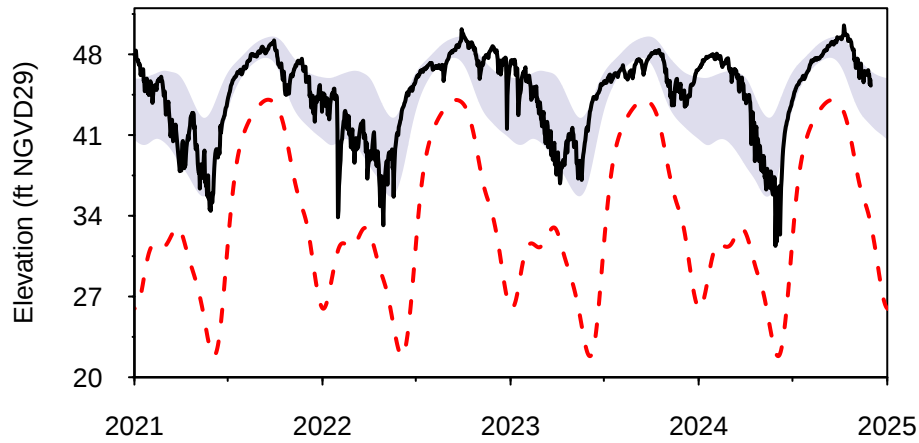
Marshall Deep (USGS)
Southern Region



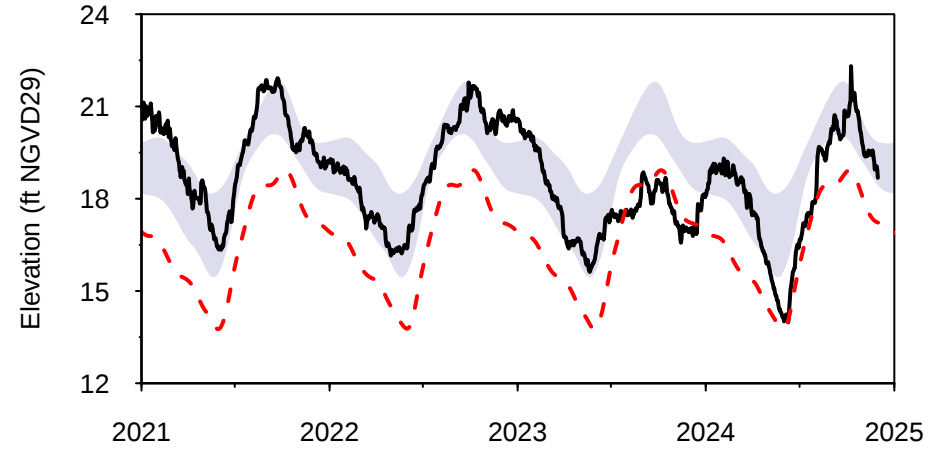
— Water Level - - - POR Daily Low Normal Range

HYDROGRAPHS OF REPRESENTATIVE UPPER FLORIDAN AQUIFER WELLS
JANUARY 2021 TO NOVEMBER 2024

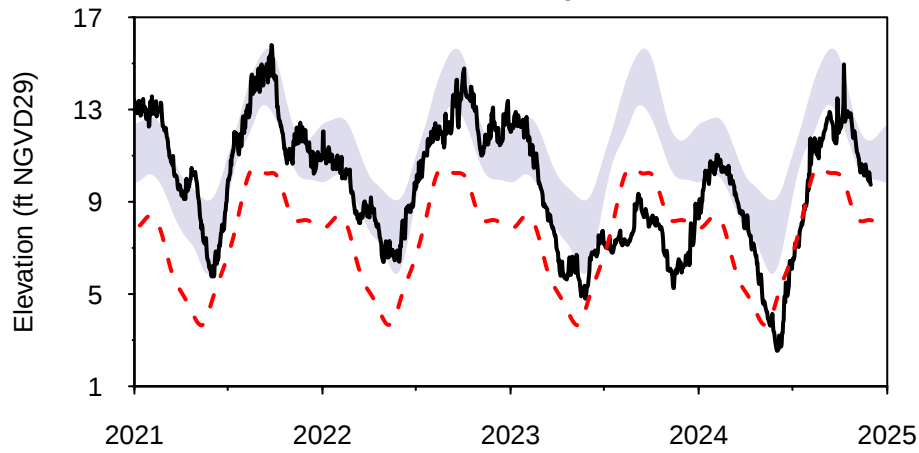
ROMP 26
Southern Region



ROMP TR 5-1 Sulfate
Southern Region

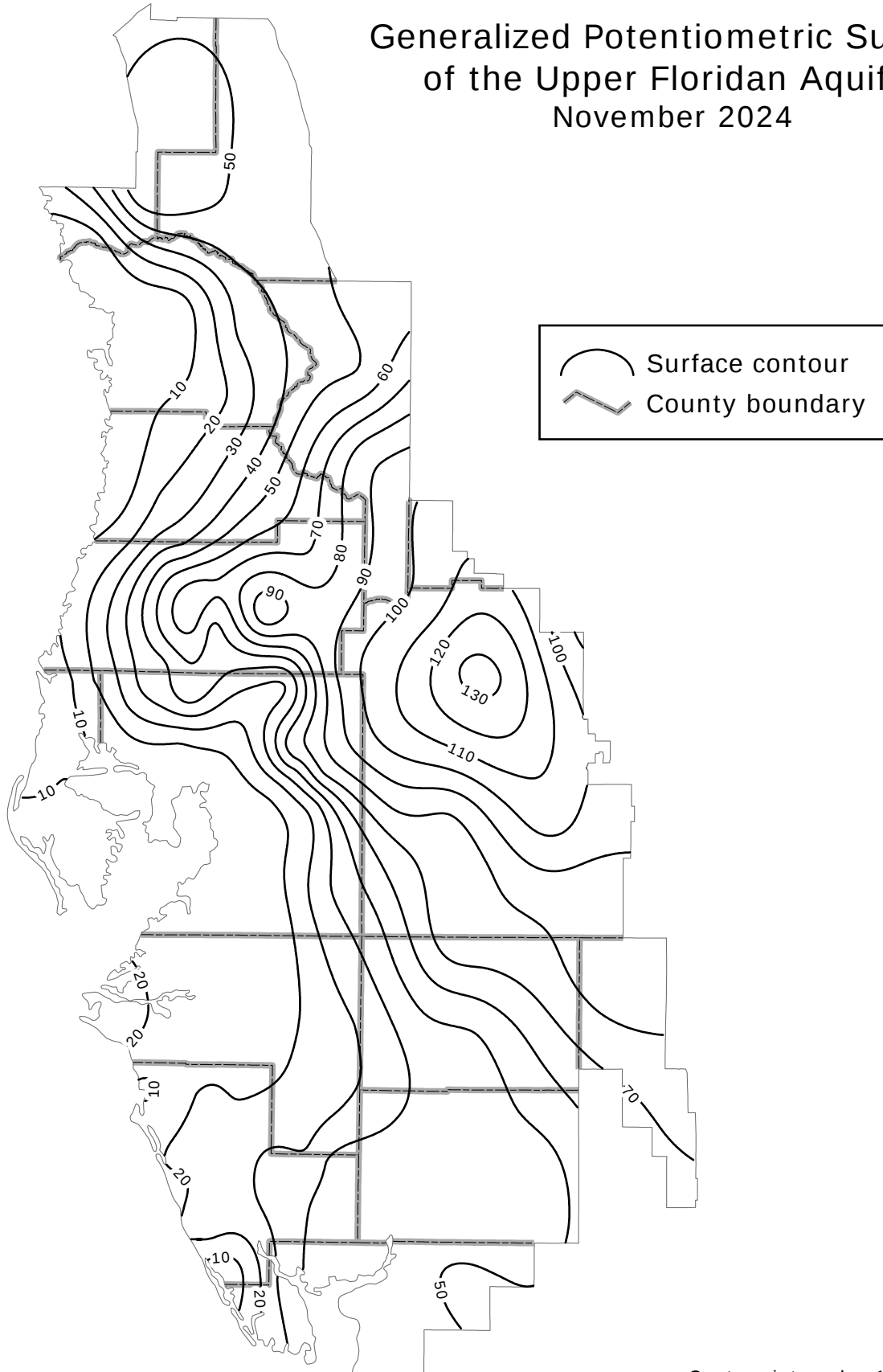


ROMP TR SA-1 (Swnn)
Southern Region



— Water Level - - - POR Daily Low ■ Normal Range

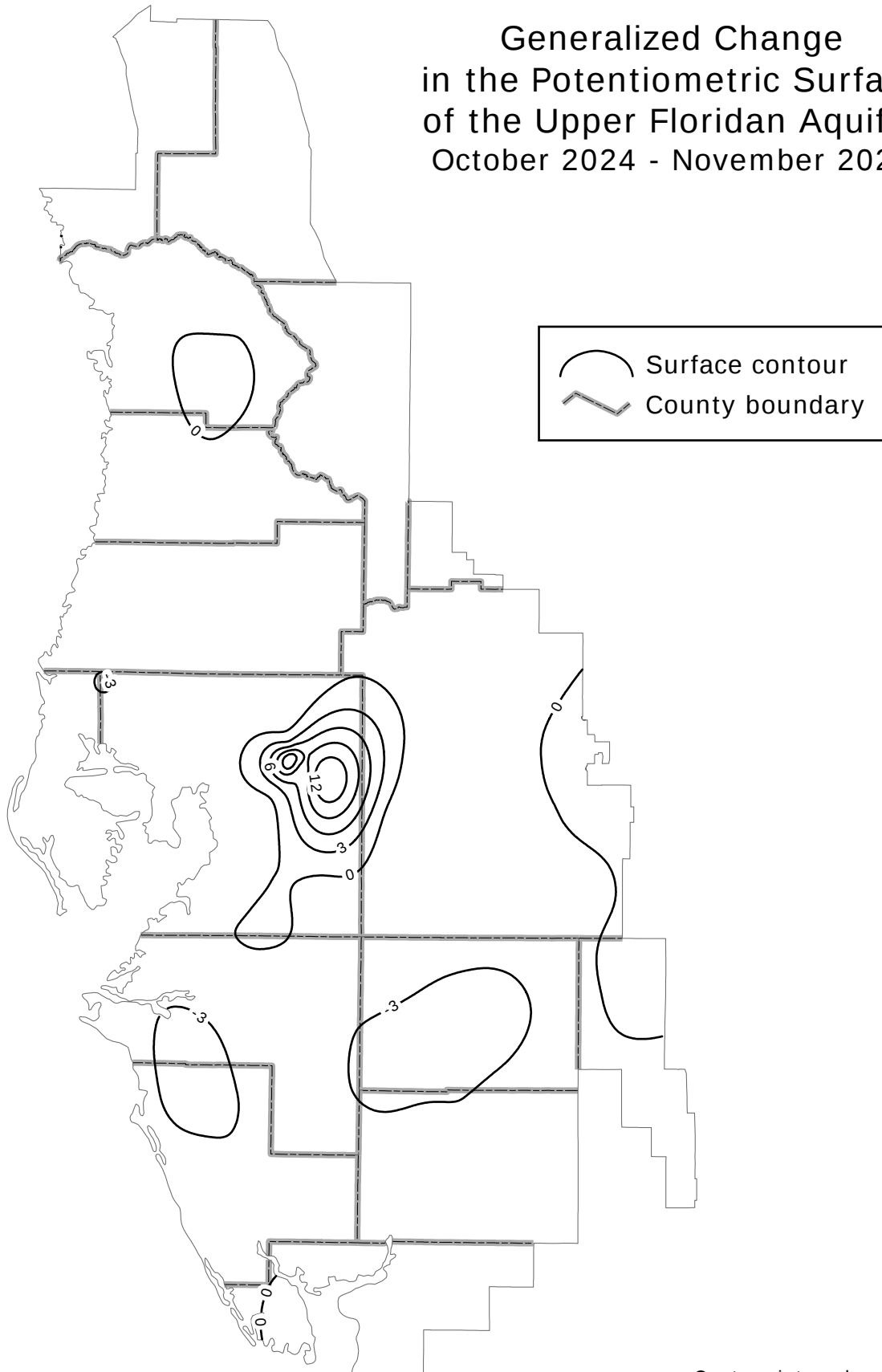
Generalized Potentiometric Surface of the Upper Floridan Aquifer November 2024



Compiled by Hydrologic Data Section

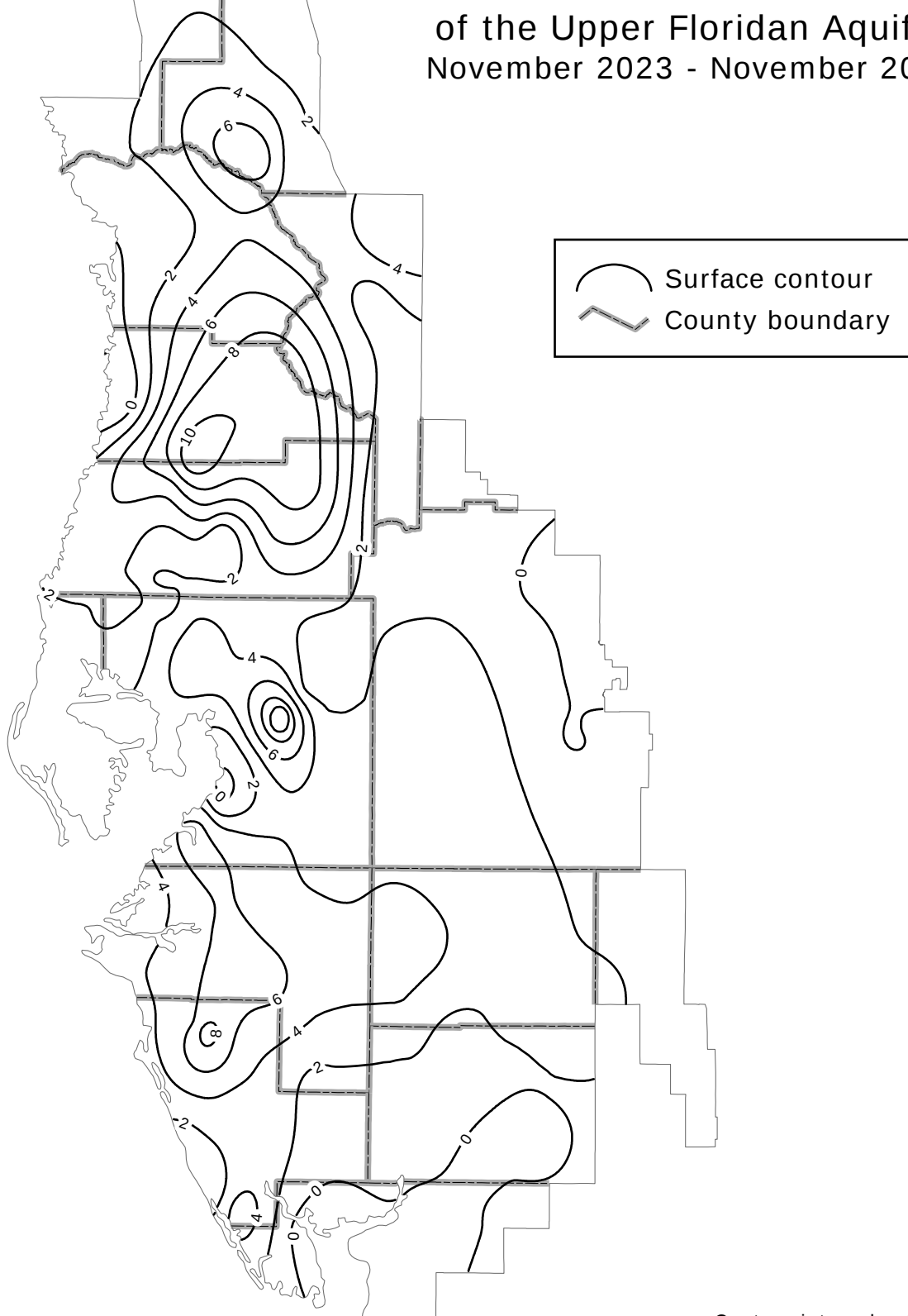
Contour interval = 10 feet
Water levels are in feet relative to NGVD29

Generalized Change in the Potentiometric Surface of the Upper Floridan Aquifer October 2024 - November 2024



Compiled by Hydrologic Data Section

Generalized Change
in the Potentiometric Surface
of the Upper Floridan Aquifer
November 2023 - November 2024



Compiled by Hydrologic Data Section

Contour interval = 2 feet
Water levels are in feet relative to NGVD29

Regional Aquifer Resource Index

Aquifers are underground layers of rock and sand that hold water. In southwest Florida, more than 80 percent of the water supply comes from aquifers. The Regional Aquifer Resource Index (ARI) was created to provide information to the media, residents, local governments and other interested parties about current groundwater conditions and how they compare to historical records. The underlying purpose of this index is to provide the public with a gauge of groundwater conditions in their area, so they can develop an understanding of the severity and cycles of drought and recovery.

This ARI report reflects percentile values to compare current aquifer levels to historical levels during the same time of year on a scale of 0-100. For example, if the regional groundwater level is at the 50th percentile, it means that half of the historical groundwater levels for this time of year were higher and half were lower than the current level.

To determine the ARI percentile value for each geographic region (indicated below), the percentile values of the monitor wells located within that region are averaged. Monitor wells with an adequate and reliable period-of-record to calculate weekly percentiles were selected for the network. A total of 80 wells Districtwide are used for the ARI Network (see index map in Appendix).

Weekly Aquifer Resource Index Level (Percentile)

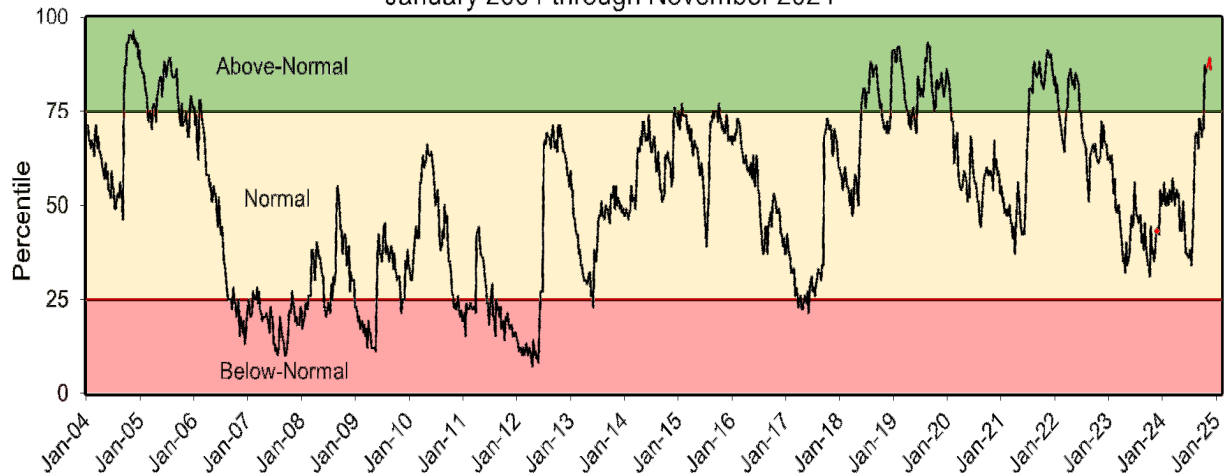
Report Date	Northern Counties	Central Counties	Southern Counties
11/03/2024	87	86	64
11/10/2024	88	87	64
11/17/2024	89	82	65
11/24/2024	86	80	64
11/27/2024	87	81	62

Note: Any regional percentile value that falls on or between the 25th and 75th percentile is considered “normal.” Less than the 25th would be considered “below-normal,” while above the 75th would be considered “above-normal.”

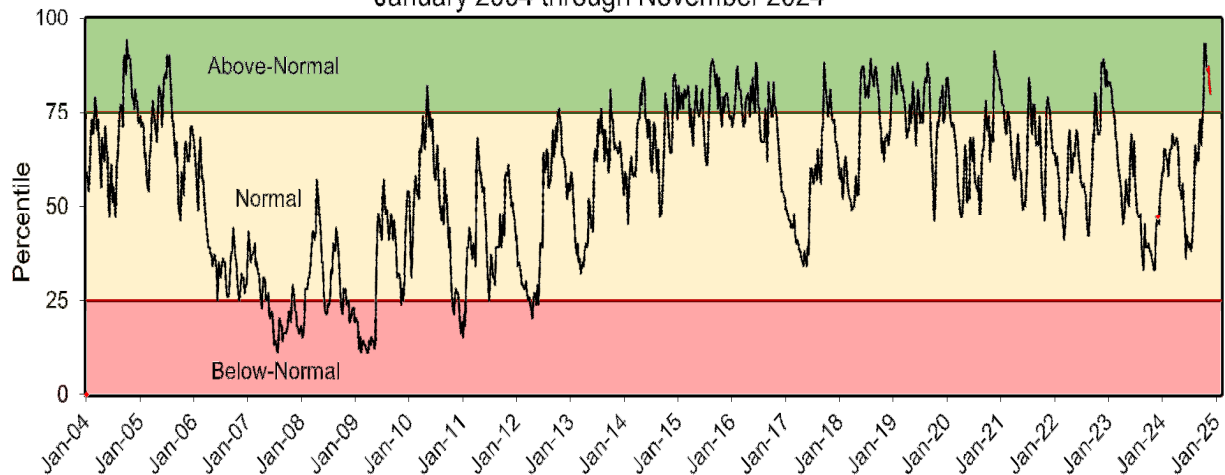
REGIONAL AQUIFER RESOURCE INDEX

November 2024

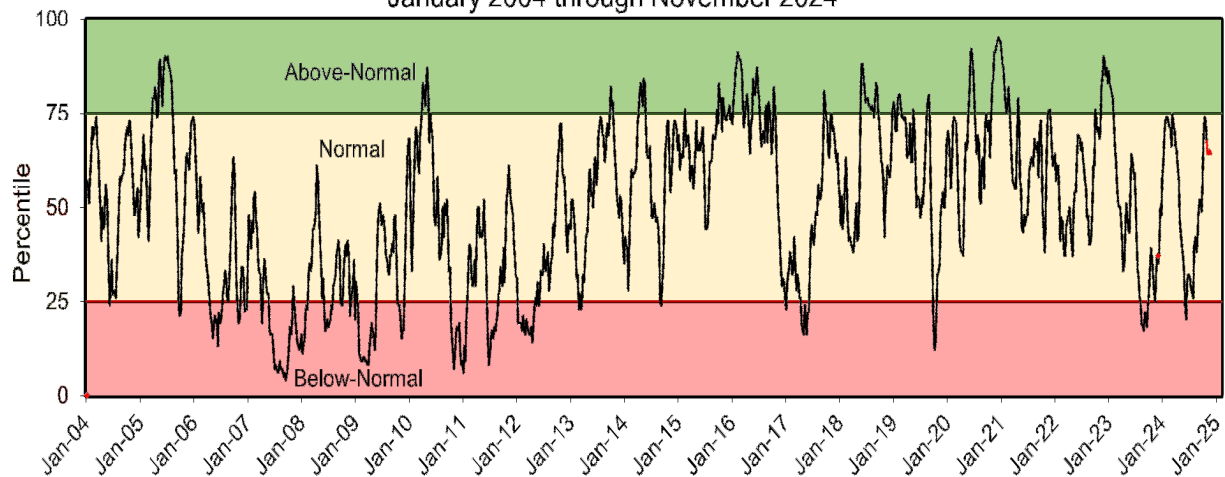
Groundwater Levels: Northern Counties
January 2004 through November 2024



Groundwater Levels: Central Counties
January 2004 through November 2024



Groundwater Levels: Southern Counties
January 2004 through November 2024



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 November, four of the seven reservoirs monitored for this report recorded water-level increases, while three recorded decreases, compared to last month. The Hillsborough River, C.W. Bill Young, and Peace River Nos. 1 and 2, reservoirs posted water level increases of 1.84 feet, 1.07 feet and 0.10 foot and 2.00 feet respectively, compared to last month. The Evers, Lake Manatee and Shell Creek reservoirs posted water level decreases of 0.11, 0.94 and 0.19 foot, respectively, compared to last month.

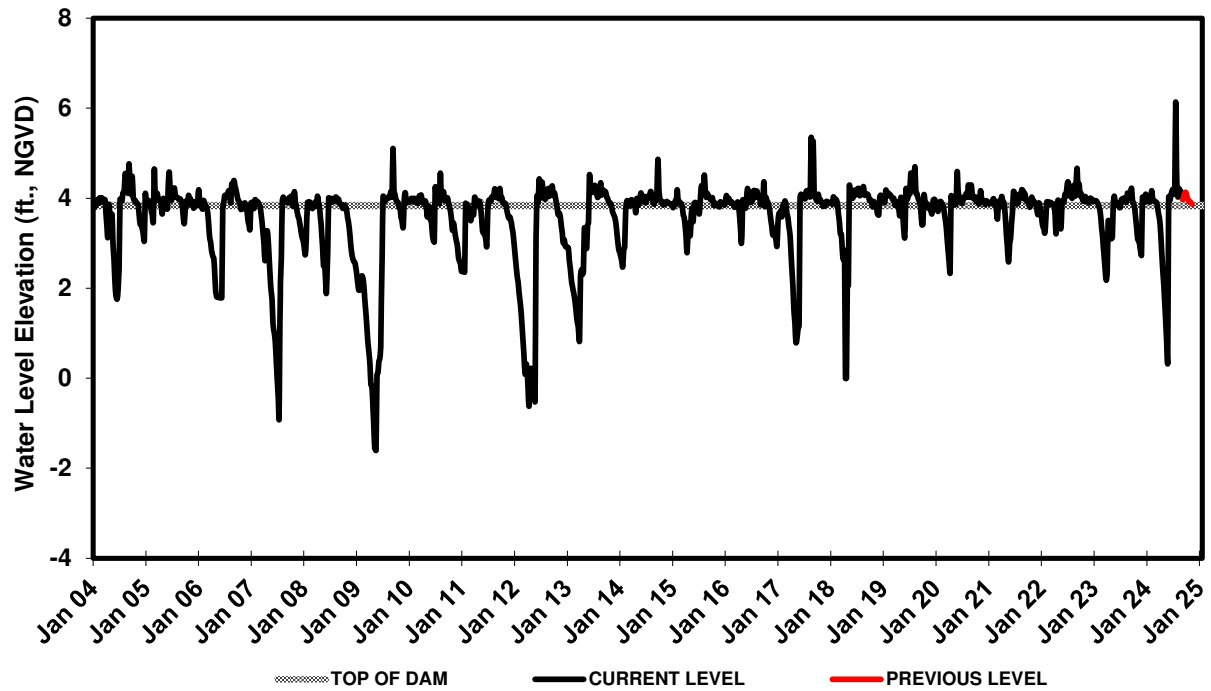
SUMMARY OF WATER LEVELS IN WATER SUPPLY RESERVOIRS (GAGE LEVEL, IN FEET)

RESERVOIR	2024 October	2024 November	2023 November	Change from Prior Month	Change from Prior Year
Evers					
City of Bradenton	3.98	3.87	2.98	-0.11	0.89
Hillsborough					
City of Tampa	20.95	22.79	22.29	1.84	0.50
Lake Manatee					
Manatee County	40.04	39.10	37.86	-0.94	1.24
C.W. Bill Young Regional					
Tampa Bay Water	135.14	136.21	117.92	1.07	18.29
Peace River					
PRMRWSA Reservoir #1	24.90	25.00	25.00	0.10	0.00
PRMRWSA Reservoir #2	60.60	62.60	62.70	2.00	-0.10
Shell Creek					
City of Punta Gorda	5.34	5.15	5.12	-0.19	0.03

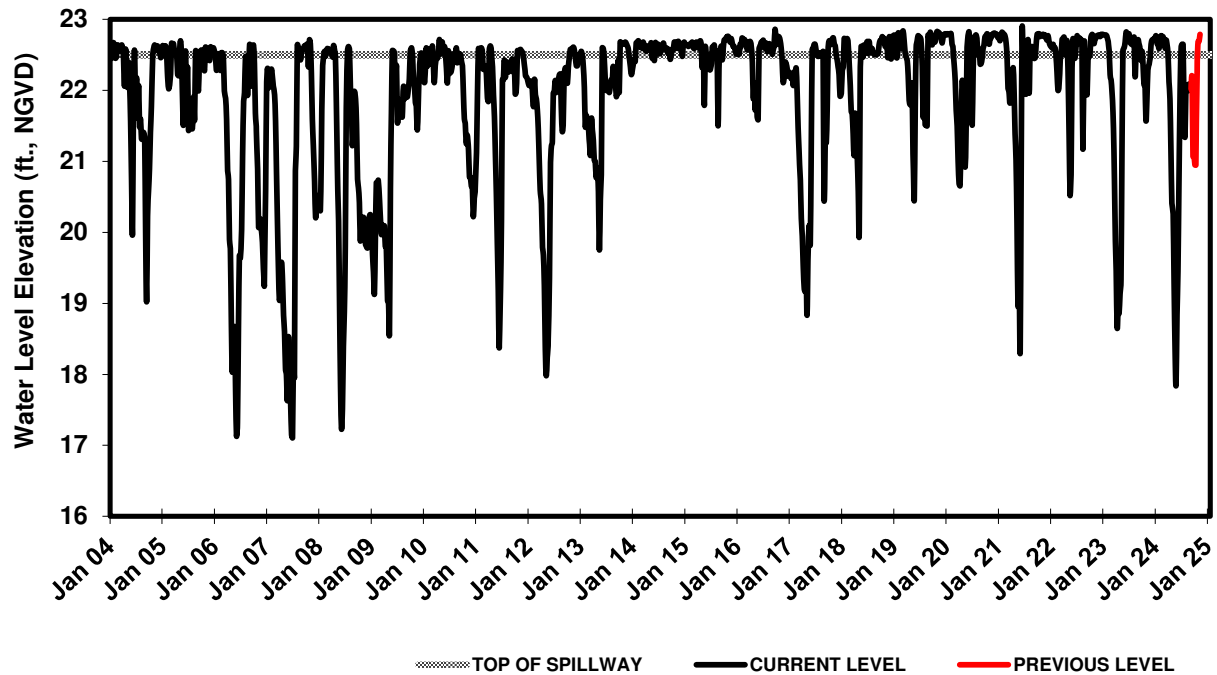
Reported data are provisional and subject to revision.

e = Estimated

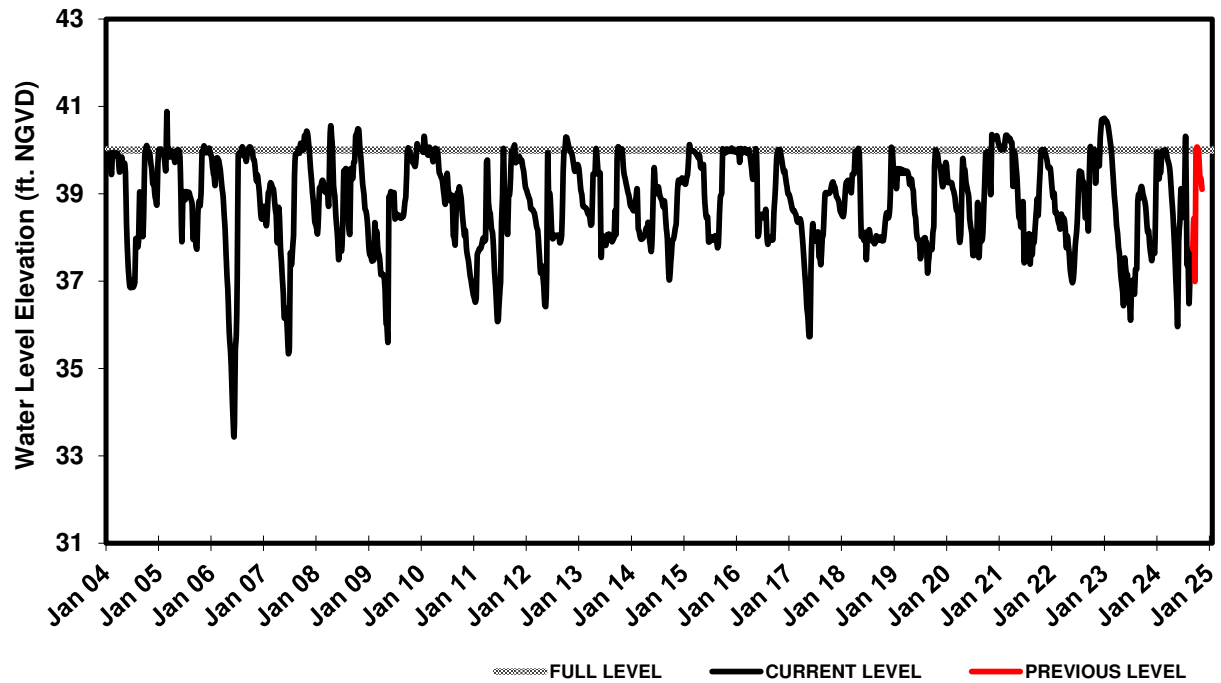
EVERS RESERVOIR City of Bradenton



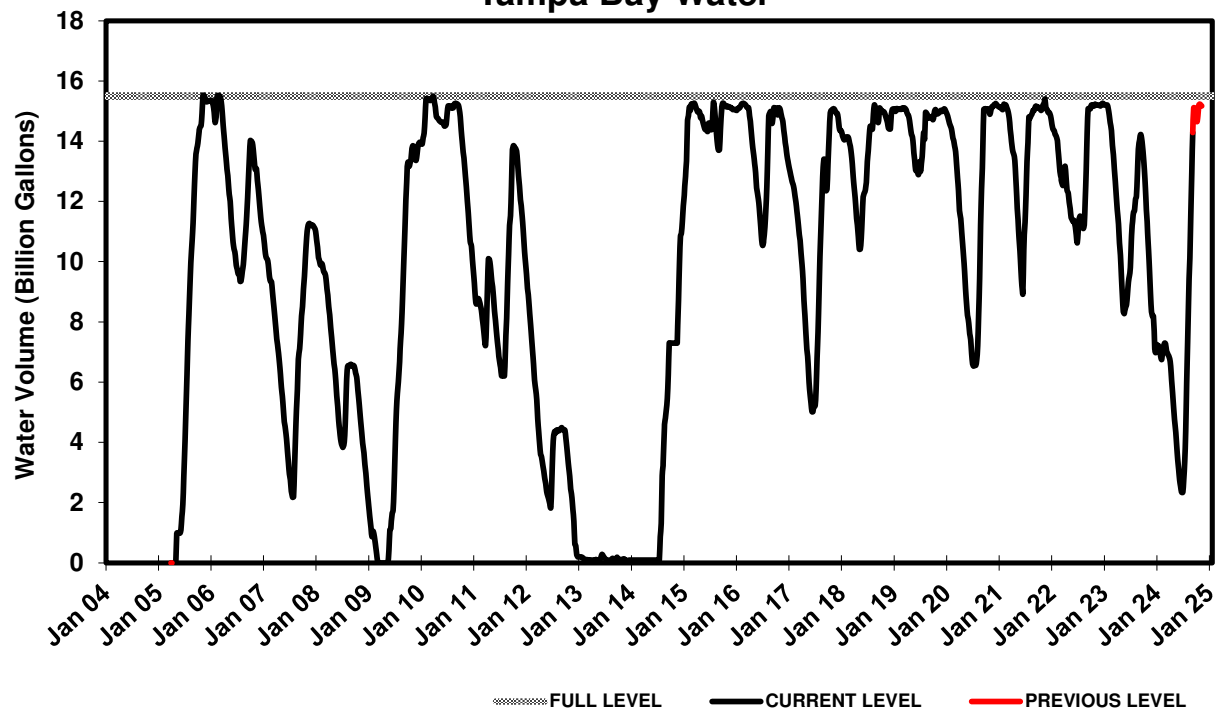
HILLSBOROUGH RESERVOIR City of Tampa



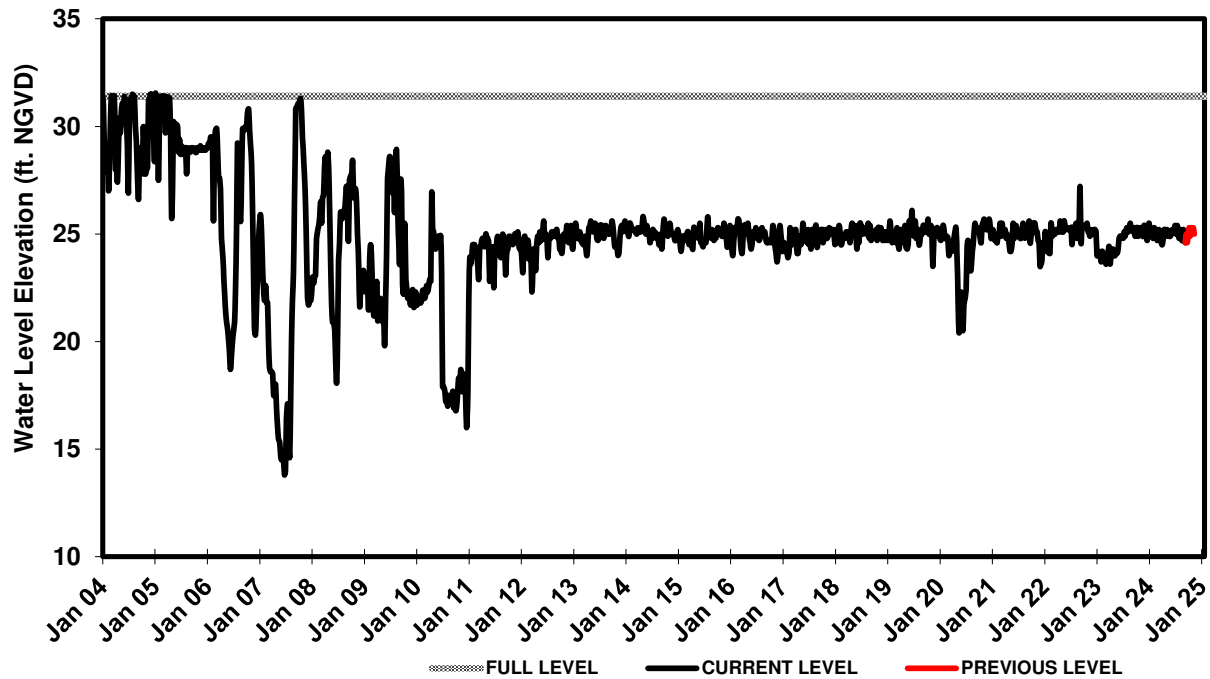
LAKE MANATEE RESERVOIR Manatee County



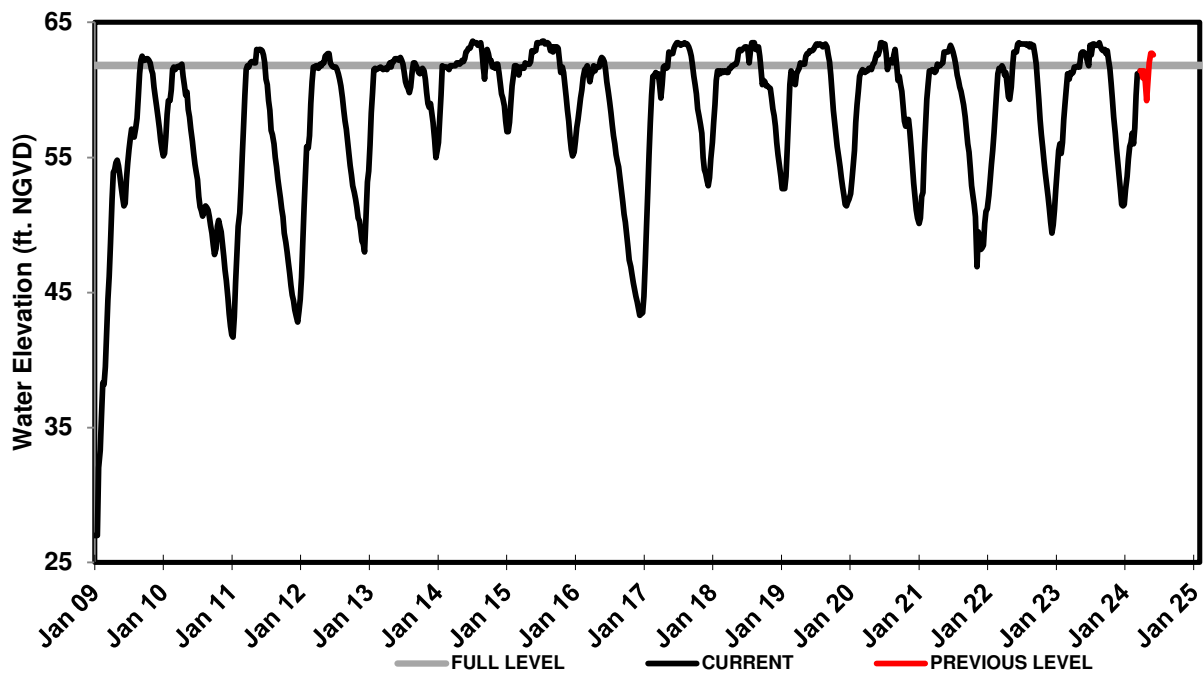
C.W. BILL YOUNG REGIONAL RESERVOIR Tampa Bay Water



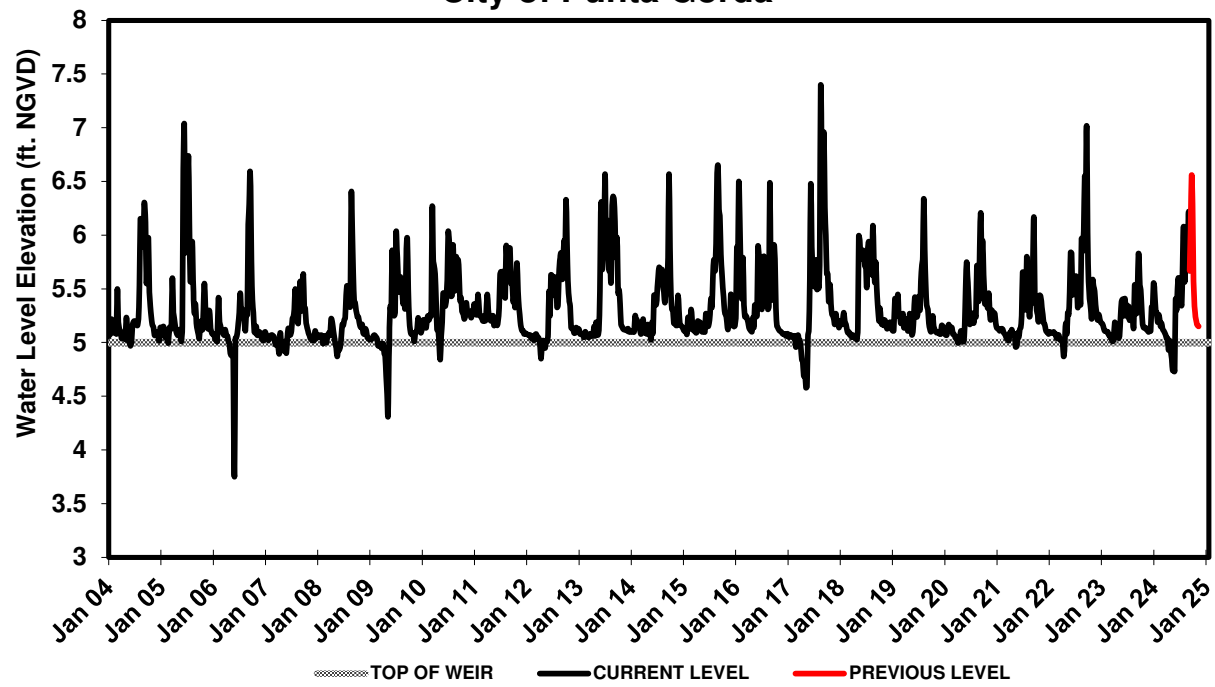
PEACE RIVER RESERVOIR No. 1
Peace/Manasota Reg. Water Supply



PEACE RIVER RESERVOIR No. 2
Peace/Manasota Reg. Water Supply



SHELL CREEK RESERVOIR City of Punta Gorda



APPENDICES

Rainfall percentiles by interval and region, inches.

Rainfall Interval	Region	10TH Percentile (P10)	25th Percentile (P25)	50th Percentile (P50)	75th Percentile (P75)	90th Percentile (P90)
Annual total	<i>Northern</i>	43.19	48.35	54.01	58.86	63.46
Annual total	<i>Central</i>	41.45	46.10	52.16	57.28	63.82
Annual total	<i>Southern</i>	42.05	46.25	52.19	57.82	63.43
Annual total	<i>District</i>	43.12	47.22	52.99	57.46	62.83
Dry season total	<i>Northern</i>	15.27	18.42	23.79	28.72	32.10
Dry season total	<i>Central</i>	13.32	16.48	21.59	26.86	30.83
Dry season total	<i>Southern</i>	12.35	15.68	21.24	26.23	30.01
Dry season total	<i>District</i>	13.71	16.79	22.02	27.22	29.70
Wet season total	<i>Northern</i>	22.79	25.44	29.45	33.43	38.16
Wet season total	<i>Central</i>	23.22	25.79	29.71	34.86	39.22
Wet season total	<i>Southern</i>	24.37	27.37	30.58	35.88	41.68
Wet season total	<i>District</i>	23.92	27.16	29.97	34.71	38.93
January total	<i>Northern</i>	0.73	1.50	2.45	4.00	5.30
January total	<i>Central</i>	0.72	1.21	2.23	3.72	4.60
January total	<i>Southern</i>	0.39	0.93	1.88	3.31	4.93
January total	<i>District</i>	0.65	1.17	2.10	3.55	4.90
February total	<i>Northern</i>	0.82	1.42	2.82	4.08	5.76
February total	<i>Central</i>	0.60	1.12	2.38	4.17	5.50
February total	<i>Southern</i>	0.36	1.26	2.21	3.63	4.93
February total	<i>District</i>	0.73	1.32	2.38	3.94	5.12
March total	<i>Northern</i>	1.00	2.06	3.15	5.43	7.21
March total	<i>Central</i>	0.97	1.66	2.96	4.95	6.44
March total	<i>Southern</i>	0.81	1.28	2.56	4.29	6.68
March total	<i>District</i>	1.09	1.64	3.04	4.86	6.92
April total	<i>Northern</i>	0.65	1.33	2.38	3.95	5.52
April total	<i>Central</i>	0.51	0.96	1.87	3.44	5.59
April total	<i>Southern</i>	0.48	1.19	2.04	3.75	4.66
April total	<i>District</i>	0.65	1.20	2.24	3.72	5.12
May total	<i>Northern</i>	1.18	1.95	3.21	4.67	6.92
May total	<i>Central</i>	0.87	1.64	2.73	4.58	5.75
May total	<i>Southern</i>	1.17	1.91	3.36	5.22	6.75
May total	<i>District</i>	1.23	2.04	3.24	4.87	6.29
June total	<i>Northern</i>	4.60	5.47	7.27	8.63	10.16
June total	<i>Central</i>	3.65	4.79	6.46	8.27	9.48
June total	<i>Southern</i>	4.22	5.63	7.44	9.06	12.06
June total	<i>District</i>	4.55	5.46	7.24	8.60	10.99
July total	<i>Northern</i>	5.36	6.75	8.29	9.16	11.52
July total	<i>Central</i>	4.89	5.98	8.35	10.05	11.44
July total	<i>Southern</i>	5.68	6.94	8.11	9.50	10.99
July total	<i>District</i>	5.60	6.83	8.19	9.57	10.58
August total	<i>Northern</i>	5.44	6.30	7.31	9.72	11.33
August total	<i>Central</i>	5.52	6.55	7.90	9.62	12.03
August total	<i>Southern</i>	5.55	6.22	7.70	8.97	10.49
August total	<i>District</i>	5.65	6.52	7.70	9.37	10.67
September total	<i>Northern</i>	2.79	4.18	5.84	8.04	11.35
September total	<i>Central</i>	3.19	5.11	6.46	8.50	11.69
September total	<i>Southern</i>	4.30	5.46	6.94	9.33	11.85
September total	<i>District</i>	3.85	5.21	6.53	8.62	11.65
October total	<i>Northern</i>	0.63	1.27	2.46	4.40	6.15
October total	<i>Central</i>	0.69	1.39	2.61	4.03	6.13
October total	<i>Southern</i>	0.92	1.78	2.73	4.27	6.04
October total	<i>District</i>	1.06	1.57	2.80	4.15	5.79

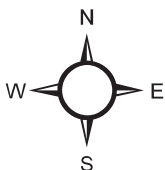
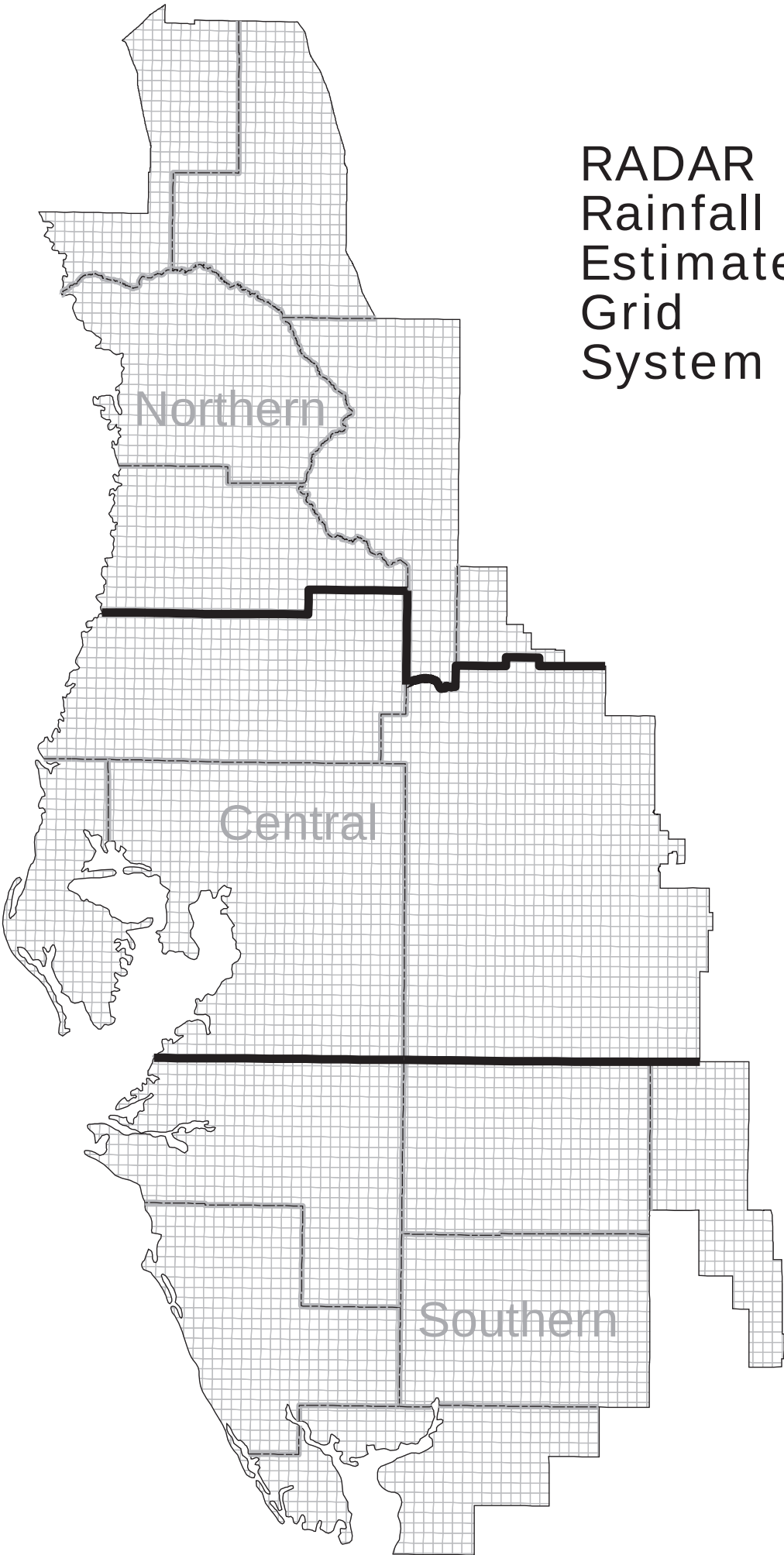
Rainfall percentiles by interval and region, inches (continued).

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

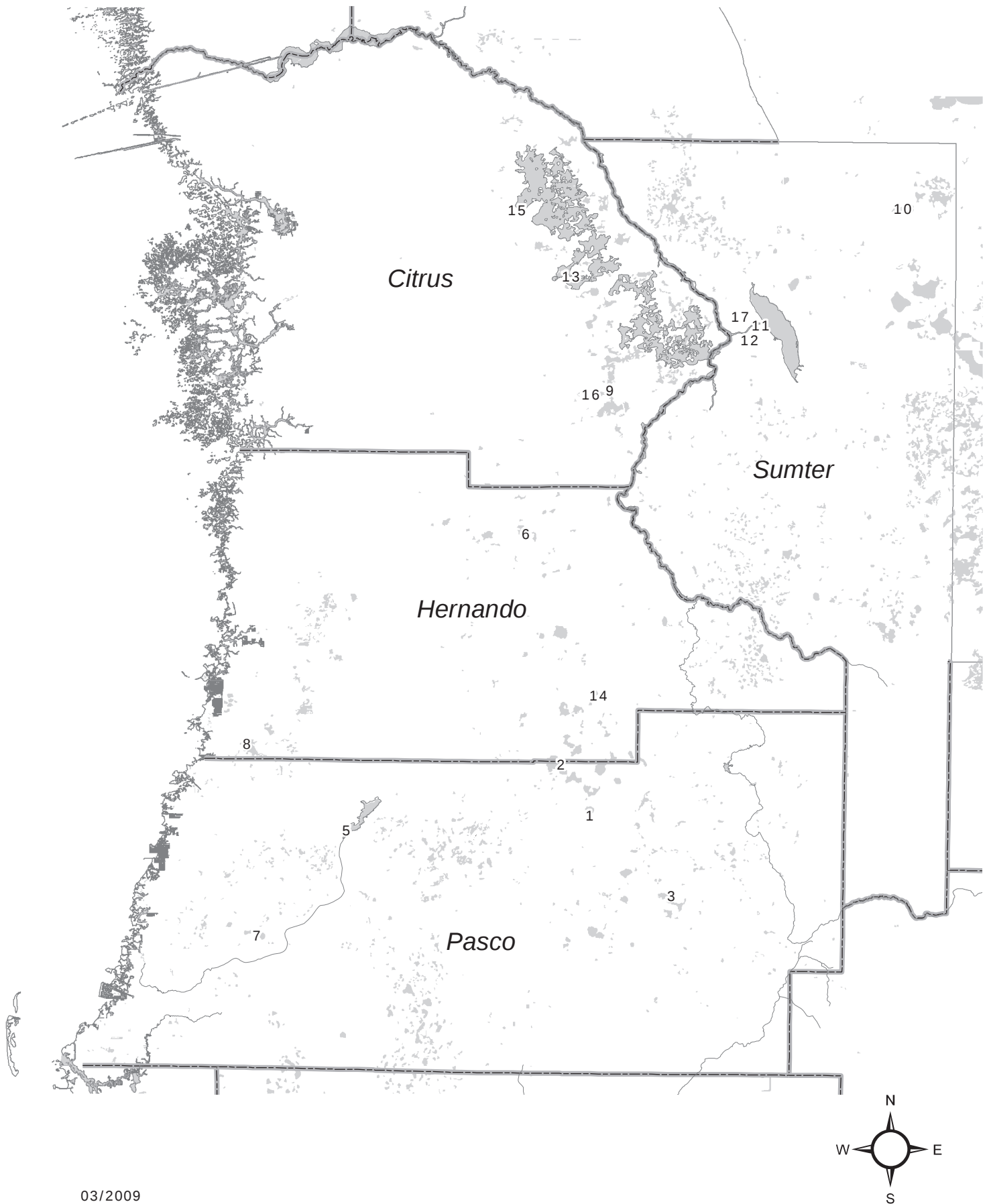
Rainfall characterization ranges

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 rainfall	80 to 90 percent of normal
Normal	P25 to P75 rainfall	90 to 110 percent of normal
Wetter than normal	P76 to P90 rainfall	110 to 120 percent of normal
Very Wet	Greater than the P90 rainfall	Greater than 120 percent of normal

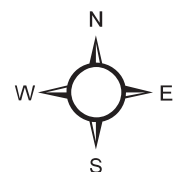
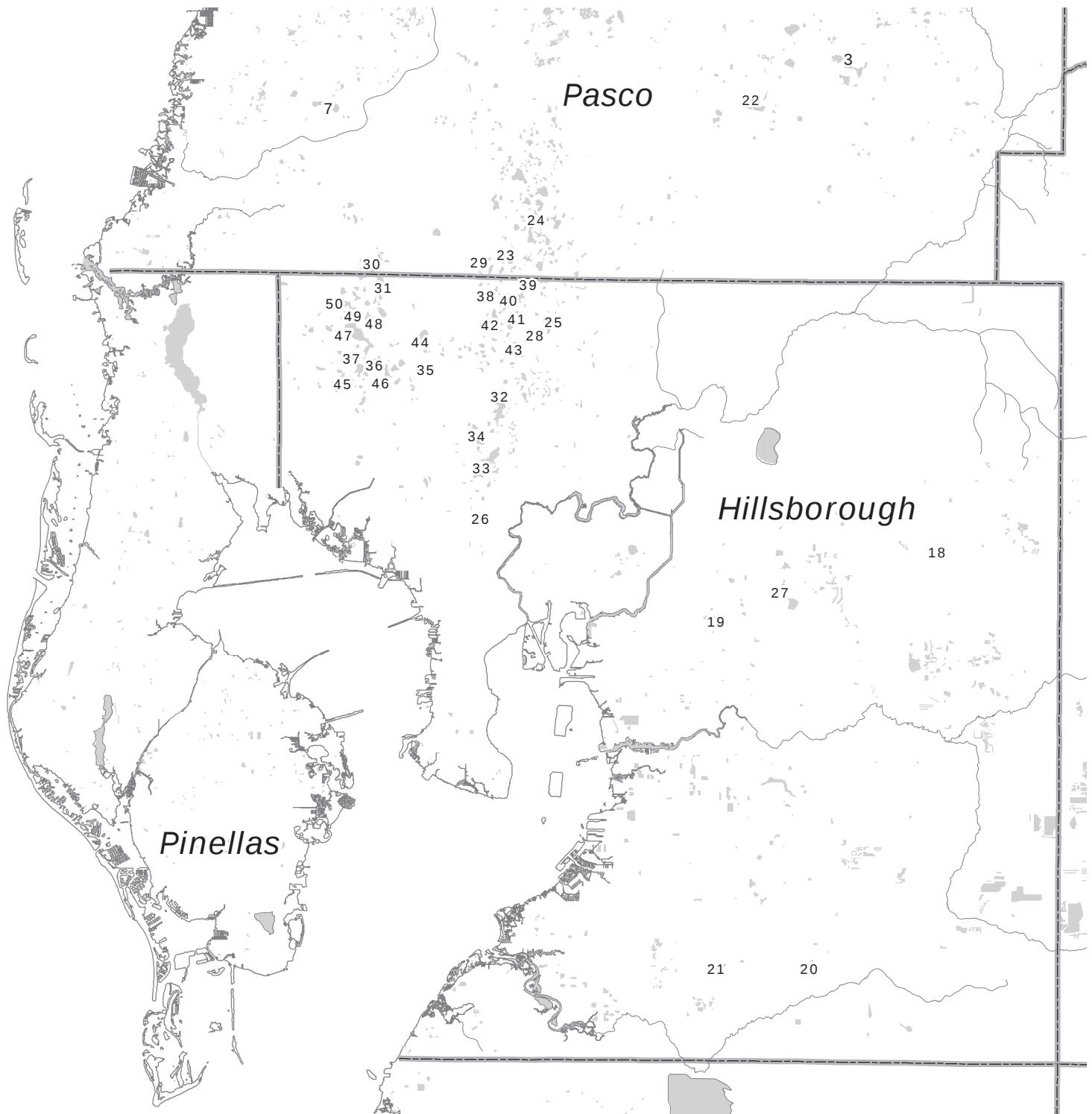
RADAR
Rainfall
Estimate
Grid
System



Selected Lake Monitoring Stations Northern Region

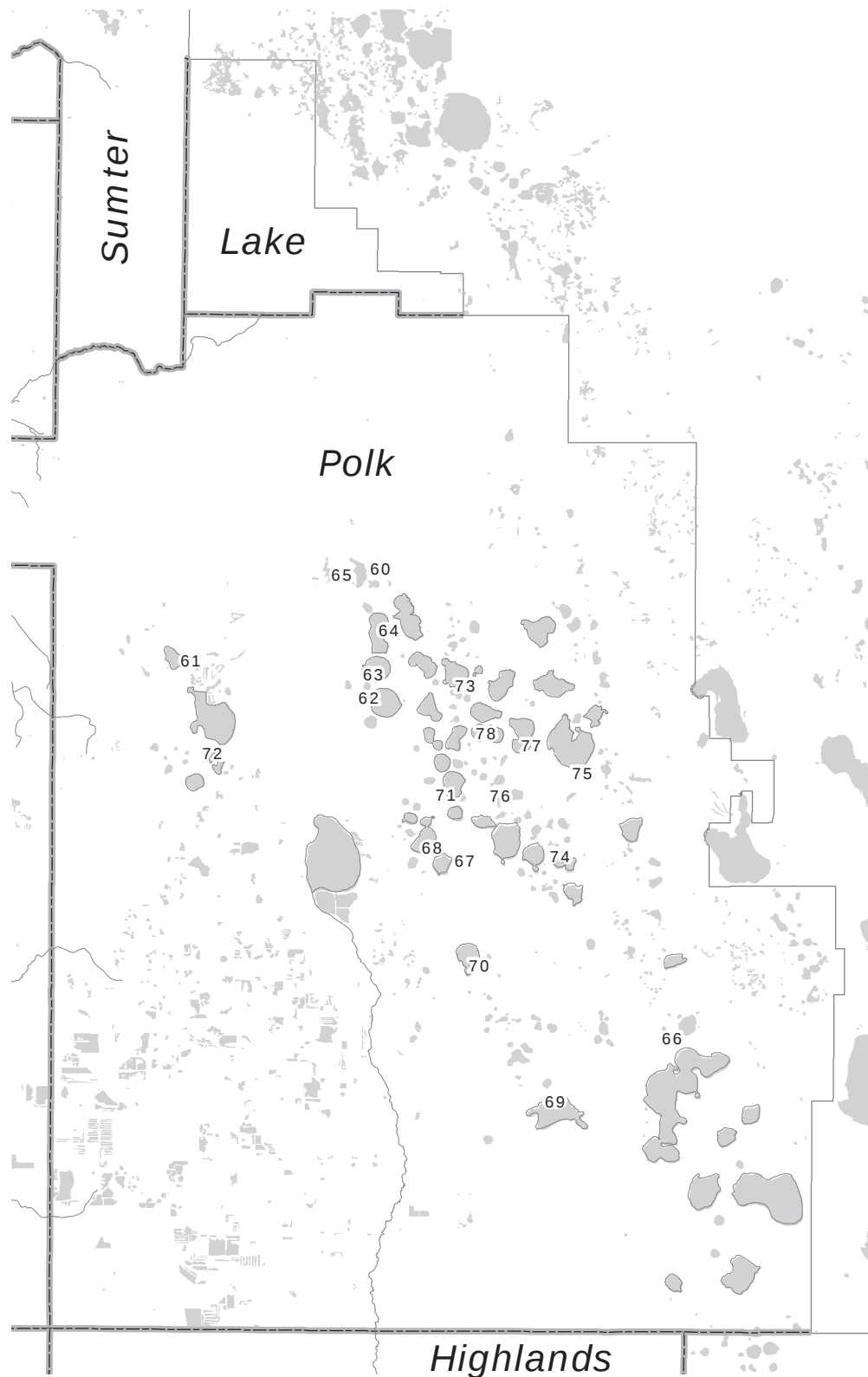


Selected Lake Monitoring Stations Tampa Bay Region



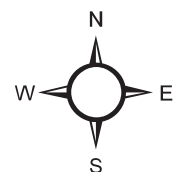
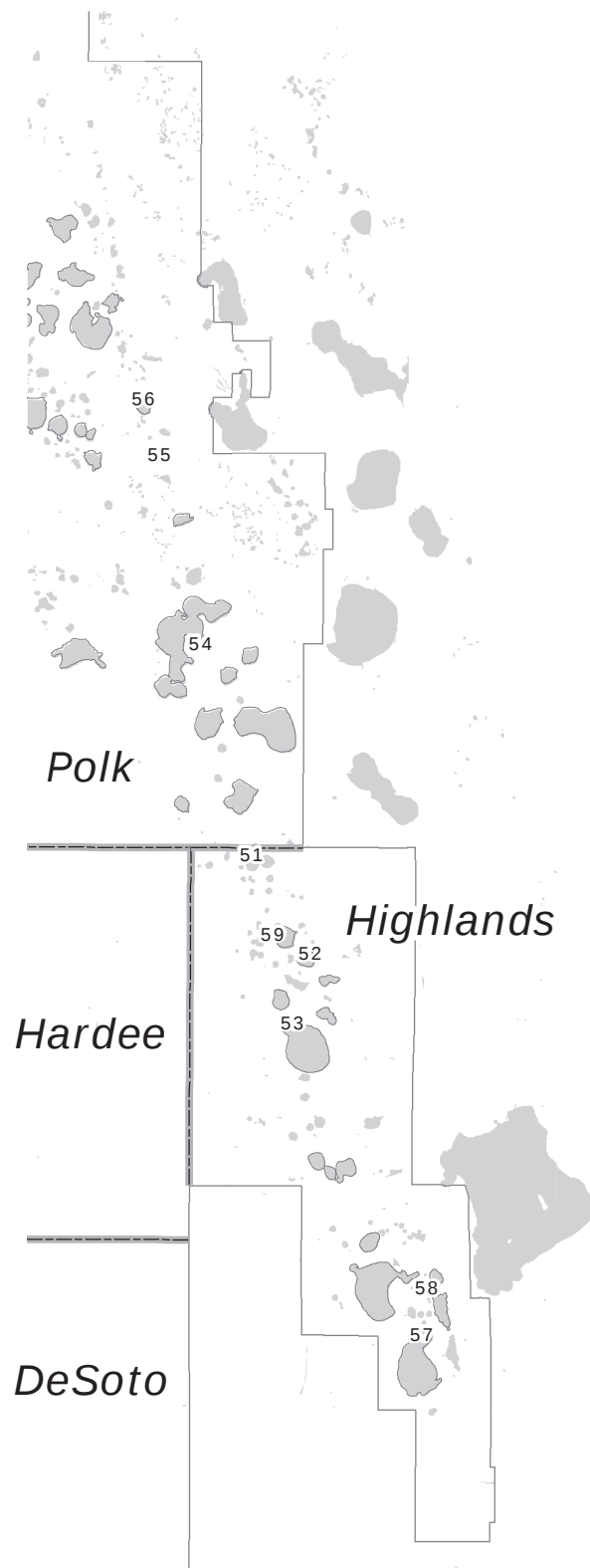
Selected Lake Monitoring Stations

Polk Uplands Region



Selected Lake Monitoring Stations

Lake Wales Ridge Region



Selected Lake Monitoring Stations

Northern Region

<u>Map ID</u>	<u>Site Name</u>
1	Lake Iola
2	Hancock Lake
3	Lake Pasadena
5	Crews Lake
6	Lake Lindsey
7	Moon Lake
8	Hunters Lake
9	Tsala Apopka at Floral City
10	Lake Miona
11	Pana Vista Outlet River
12	Outlet River at Panacoochee
13	Tsala Apopka at Inverness
14	Spring Lake
15	Tsala Apopka at Hernando
16	Little Lake (Consuella)
17	Lake Panasoffkee

Tampa Bay Region

<u>Map ID</u>	<u>Site Name</u>	<u>Map ID</u>	<u>Site Name</u>
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

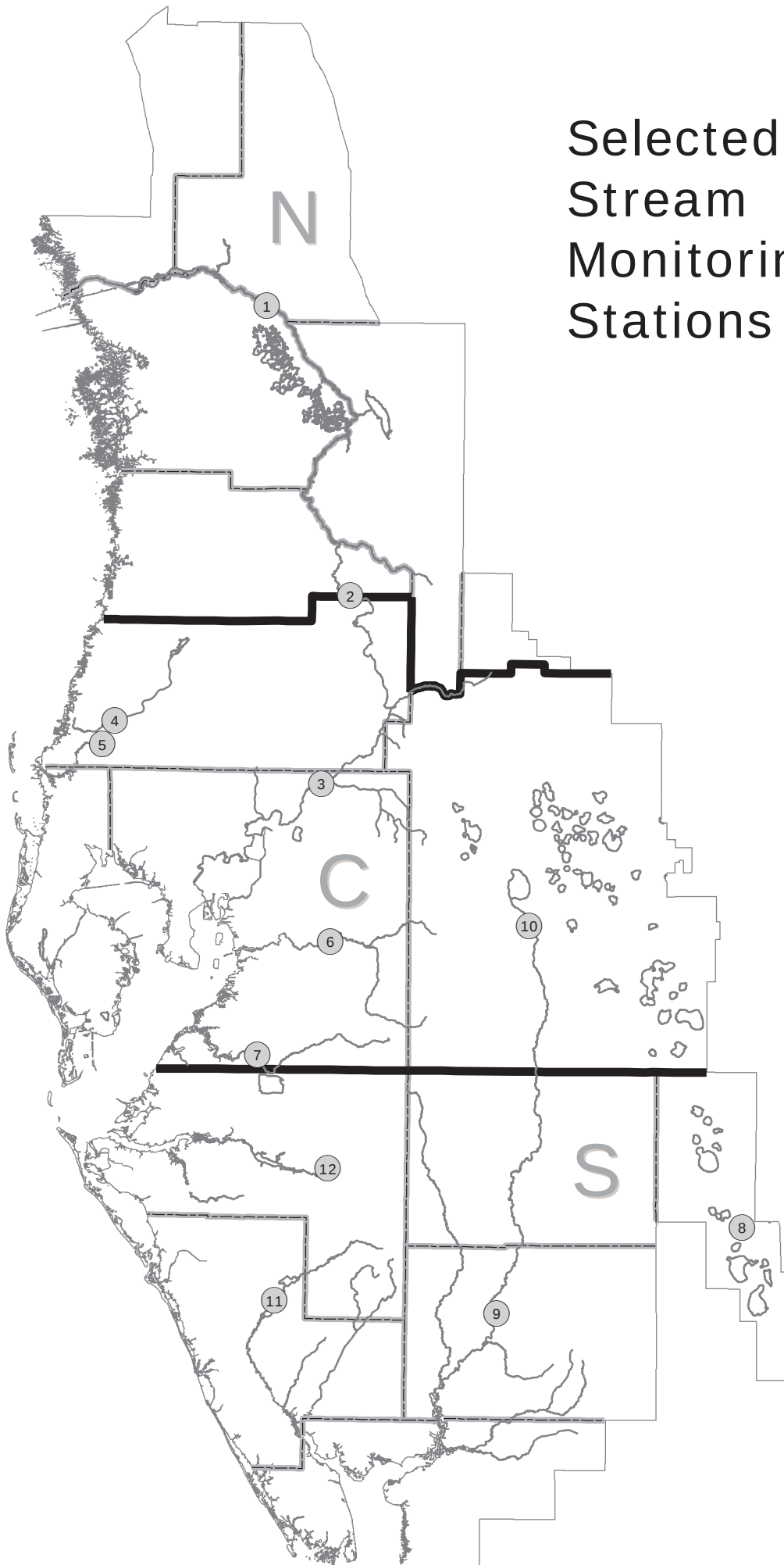
Lake Wales Ridge Region

<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>	<u>Site Name</u>
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



Selected Stream Monitoring Stations

<u>Map ID</u>	<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
Drainage area: 2000 square miles

Holder Station

County: Marion
Period-of-record: 1928
Location: 38 miles upstream from mouth
Drainage area: 1825 square miles

Trilby Station

County: Hernando
Period-of-record: 1928
Location: 93 miles upstream from mouth
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: Gulf of Mexico, Pasco County
Drainage area: 113 square miles

Elfers Station

County: Pasco
Period-of-record: 1946
Location: 16 miles upstream from mouth
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
Drainage area: 690 square miles

Zephyrhills Station

County: Hillsborough
Period-of-record: 1939
Location: 40 miles upstream from mouth
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
Drainage area: 191 square miles

New Port Richey Station:

County: Pasco
Period-of-record: 1963
Location: 10.5 miles upstream from mouth
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
Drainage area: 420 square miles

Lithia Station:

County: Hillsborough
Period-of-record: 1932
Location: 16 miles upstream from mouth
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
Drainage area: 225 square miles

Wimauma Station:

County: Hillsborough
Period-of-record: 1939
Location: 15 miles upstream from mouth
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
Drainage area: 143 square miles

DeSoto City Station:

County: Highlands
Period-of-record: 1946
Location: 4.9 miles upstream of mouth
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
Drainage area: 330 square miles

Myakka Head Station:

County: Manatee
Period-of-record: 1966
Location: 36 miles upstream from mouth
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
Drainage area: 540 square miles

Sarasota Station:

County: Sarasota
Period-of-record: 1936
Location: 36 miles upstream from mouth
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
Drainage area: 2300 square miles

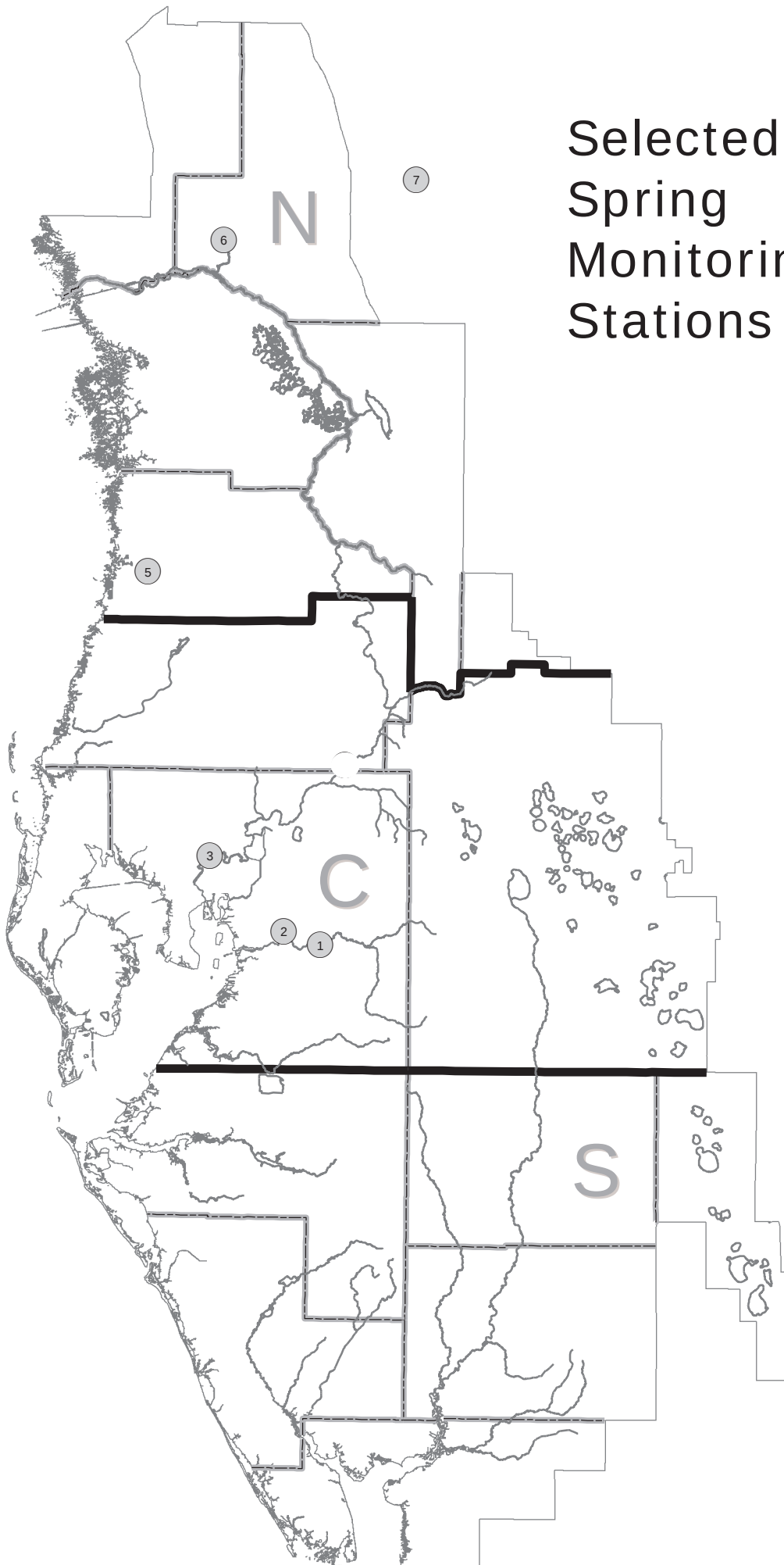
Arcadia Station (Southern Region):

County: Desoto
Period-of-record: 1931
Location: 36 miles upstream from mouth
Drainage area: 1367 square miles

Bartow Station (Central Region):

County: Polk
Period-of-record: 1939
Location: 105 miles upstream from mouth
Drainage area: 390 square miles

Selected Spring Monitoring Stations



Selected Spring Monitoring Stations

<u>Map ID</u>	<u>Site Name</u>
1	Lithia Main Spring
2	Buckhorn Main Spring
3	Sulphur Springs at Sulphur Springs
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
Magnitude:	1 st
Discharge measurement location:	5 mi downstream from head of springs
Discharge contributes to:	Rainbow River, Withlacoochee River
Public Access:	Yes
Period-of-record:	1965
Gage:	Non-recording gage

SILVER SPRINGS (Northern Region)

County:	Marion
Basin:	Ocklawaha River
Magnitude:	1 st
Discharge measurement location:	4 to 5 mi downstream from head of springs
Discharge contributes to:	Silver Springs River, Ocklawaha River, St. Johns River
Public Access:	Yes
Period-of-record:	1932
Gage:	Water-stage recorder

WEEKI WACHEE SPRINGS (Northern Region)

County:	Hernando
Basin:	Coastal Rivers
Magnitude:	1 st
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

SULPHUR SPRINGS (Central Region)

County:	Hillsborough
Basin:	Hillsborough River
Magnitude:	2 nd
Discharge measurement location:	300 ft downstream from gage
Discharge contributes to:	Hillsborough River
Public Access:	Yes
Period-of-record:	1956
Gage:	Water-stage recorder

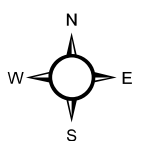
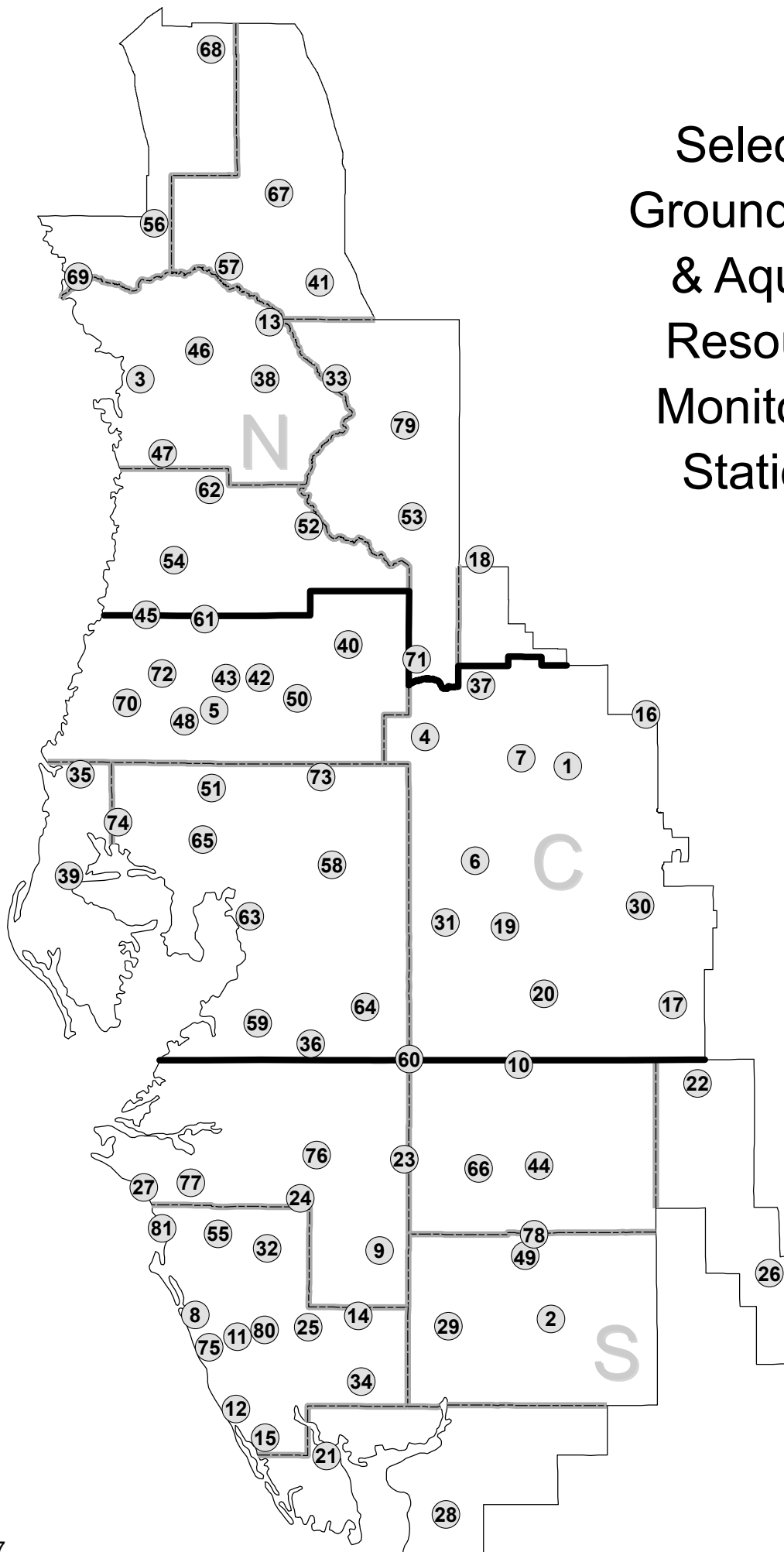
BUCKHORN SPRINGS (Central Region)

County:	Hillsborough
Basin:	Alafia River
Magnitude:	2 nd
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

LITHIA SPRINGS: (Central Region)

County:	Hillsborough
Basin:	Alafia River
Magnitude:	2 nd
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

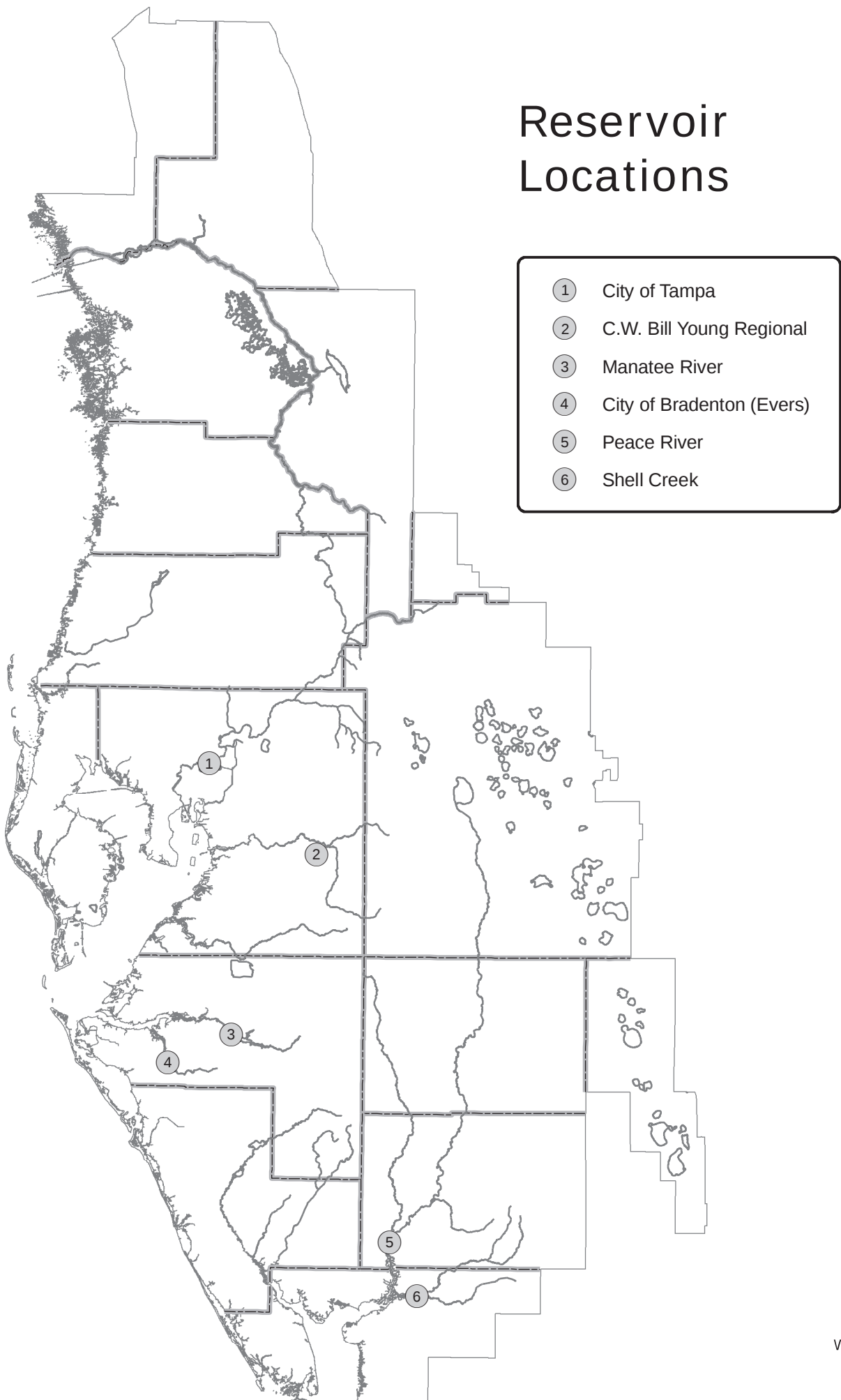
Selected Groundwater & Aquifer Resource Monitoring Stations



Select Groundwater & Aquifer Resource Monitoring Stations

Map ID	Site Name	Map ID	Site Name
1	Lake Alfred Deep nr Lake Alfred	49	ROMP 26 U Fldn Aq Monitor
2	ROMP 16 U Fldn Aq Monitor	50	SR 577 Deep
3	ROMP TR 21-2 U Fldn Aq Chloride Monitor	51	Debuel Road Deep
4	ROMP 87 U Fldn Aq (Avpk) Monitor	52	ROMP 103 U Fldn Aq Monitor
5	Pasco 13 nr Drexel Fldn	53	Webster City Fldn
6	Sanlon Ranch Fldn	54	Weeki Wachee Fldn Repl
7	ROMP 76 U Fldn Aq Monitor	55	Sarasota Service Office U Fldn Aq Monitor
8	ROMP 20 U Fldn Aq (Swnn) Monitor	56	Tidewater 1 Fldn
9	Edgeville 3 Deep	57	CE 14 Dunnellon Deep
10	Cargill FA-1 Fldn	58	DV-1 U Fldn Aq (Swnn) Monitor
11	ROMP TR 5-2 U Fldn Aq (Swnn) Monitor	59	ROMP 50 U Fldn Aq (Avpk) Chloride Monitor
12	Manasota 14 Deep	60	ROMP 40 U Fldn Aq Monitor
13	ROMP 116 U Fldn Aq Monitor	61	Masaryktown Deep
14	Big Slough Deep	62	ROMP 107 U Fldn Aq Monitor
15	Englewood 14 Deep	63	ROMP TR 10-2 U Fldn Aq Monitor
16	Loughman Deep	64	ROMP 48 U Fldn Aq (Tmpa/Swnn) Monitor
17	Coley Deep	65	ROMP 66 U Fldn Aq Monitor
18	Mascotte Deep (L-0062)	66	ROMP 31 U Fldn Aq Monitor
19	ROMP 59 U Fldn Aq Interface Monitor	67	ROMP 120 U Fldn Aq Monitor
20	ROMP 45 U Fldn Aq (Avpk) Monitor	68	ROMP 134 U Fldn Aq (Ocal-Avpk-Oldm) Monitor
21	ROMP TR 3-1 U Fldn Aq Monitor	69	ROMP TR 124 U Fldn Aq Monitor (Avpk) 2
22	ROMP 43XX U Fldn Aq Monitor	70	Moon Lake Deep
23	ROMP 32 U Fldn Aq (Avpk) Monitor	71	ROMP 89 U Fldn Aq Monitor
24	Verna Test 0-1	72	SR 52 Deep West nr Fivay Junction
25	ROMP 19X U Fldn Aq (Swnn) Monitor	73	Hillsborough River State Park Parking Lot Deep
26	ROMP 28X U Fldn Aq Monitor	74	ROMP TR 13-3 U Fldn Aq Monitor
27	ROMP TR 7-1 L Arca Aq Interface Monitor	75	ROMP TR 5-1 U Fldn Aq Sulfate Monitor
28	ROMP TR 1-2 U Fldn Aq Monitor	76	Kibler Deep
29	ROMP 17 U Fldn Aq (Swnn) Monitor	77	ROMP TR 7-4 U Fldn Aq (Swnn) Monitor
30	ROMP 58 U Fldn Aq Monitor	78	Marshall Deep (USGS)
31	ROMP 60 U Fldn Aq (Avpk) Monitor Repl	79	ROMP 111 U Fldn Aq Monitor
32	ROMP 22 U Fldn Aq (Swnn) Monitor	80	ROMP 19 U Fldn Aq (Swnn) Monitor
33	Sumter 13 JC 59 Up Fldn Repl	81	ROMP TR SA-1 U Fldn Aq (Swnn) Monitor
34	ROMP 9 U Fldn Aq (Swnn) Monitor		
35	Tarpon Road Deep		
36	ROMP 123 Htrn As/U Fldn Aq Monitor		
37	ROMP 88 U Fldn Aq Monitor		
38	Inverness DOT Fldn		
39	Pinellas 665 Fldn		
40	Lykes Pasco Fldn		
41	ROMP 119 U Fldn Aq Sulfate Monitor		
42	SR 52 And CR 581 Deep		
43	ROMP 93 U Fldn Aq Monitor		
44	ROMP 30 U Fldn Aq Monitor		
45	ROMP 97 U Fldn Aq Monitor		
46	North Lecanto Deep		
47	Chassahowitzka 1 Deep		
48	Bexley 2 Fldn		

Reservoir Locations



DESCRIPTION OF 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.