

SUWANNEE RIVER WATER MANAGEMENT DISTRICT

MEMORANDUM

TO: Governing Board

FROM: Robbie McKinney, Hydrologic Program Manager, Office of Water Resources

THRU: Hugh Thomas, Executive Director

DATE: August 31, 2025

RE: August 2025 Hydrologic Conditions Report

RAINFALL

- Districtwide average rainfall for the month was 6.48", which was about 15 percent lower than the 1932-2024 average of 7.66" (Table 1, Figure 1). The 12-month period ending August 31 reflected a Districtwide rainfall deficit of 7.21", which was a significant increase to the 1.85" deficit seen at the end of July. District counties ranged from 4" to more than 7" of rainfall on average, with parts of Levy and Suwannee counties receiving more than 12" of rainfall (Figure 2).
- Overall, a 12-month rainfall deficit was present in 4 of the basins, with the Waccasassa Basin showing a large decrease in surplus by the end of August (Figure 3). An area of 12-month surplus greater than 10" was represented in the Waccasassa Basin, while sections with deficits greater than 14" were observed in the Aucilla, Coastal, Suwannee, and Santa Fe basins. The Waccasassa Basin increased its 3-month rainfall surplus, while each of the other basins saw greater deficits by the end of August (Figure 4). Over the past 3 months, the Waccasassa Basin showed a large area with a surplus greater than 10", while areas with greater than 10" of rainfall deficit were scattered throughout the other 4 river basins.

SURFACE WATER

- **Rivers:** Many of the river gages in Figure 5 finished the month in the normal (25th – 75th percentile) range, with gages on the Santa Fe River at Worthington Springs and near Ft. White showing flows in the below normal (10th – 25th percentile) category. Additionally, gages in the Santa Fe Basin (Graham and New River) along with the North Prong St. Marys gage also had below normal flows at the end of the month (Figure 6). Conversely, gages at the Little River, Alapaha at Statenville, and Alapaha near Jennings each had flows in the above normal (75th – 90th percentile) range to end the month. Other monitored river gages in the District saw normal flows by the end of August.
- **Lakes:** Water levels decreased at a majority of the monitored lakes in the District this month (Figure 7). The median decrease in stage across all measured lakes was <0.1', with 11 of the monitored lakes ending the month of August below their respective long-term average. Waters Lake represented the largest water level decrease in August with a drop of around 0.6' since last month.
- **Springs:** Flow measurements were made at 14 springs in August by the U.S. Geological Survey (USGS), District staff, and contractors. Blue Hole saw spotty flows within the normal range throughout August (Figure 8). Madison Blue Spring, on the other hand, began with below normal flows before increasing into the normal category throughout the remainder of the month (Figure 9).

GROUNDWATER

Upper Floridan Aquifer (UFA) levels across the District ranged from low (10th – 25th percentile) to extremely high (>90th percentile) levels this month (Figure 10). Overall, groundwater levels decreased by a median of about 0.1' since the end of July and ended August with a Districtwide average around the 50th percentile.

Index wells near Live Oak, Lake City, and Cedar Key were higher than their respective historical monthly average level, while the other 9 wells were below long-term averages at the end of the month (Figure 11). Long-term District UFA well levels ended August in the low, normal, or very high (>90th percentile) categories (Figure 12a). The monitored long-term wells with records that extend back to at least 1964 showed mainly decreasing water levels this month relative to last month (Figure 12b).

CLIMATE AND DROUGHT OUTLOOK

El Niño Southern Oscillation neutral conditions are currently present and favored through the late summer (56% chance from August to October) with a brief period of La Niña conditions favored in the fall and early winter 2025-26 before returning to ENSO-neutral.

The NOAA three-month seasonal outlook suggests above normal temperatures along with above normal precipitation within the District from September to November 2025.

The U.S. Drought Monitor report released on Thursday, September 4th, shows only northern Jefferson County with Abnormally Dry (D0) conditions.

CONSERVATION

Water conservation continues to be necessary to sustain healthy groundwater levels and flows in District springs and rivers. All users are urged to eliminate unnecessary uses. Landscape irrigation during Daylight Saving Time (March 9, 2025, to November 2, 2025) is limited to twice per week based on a District water conservation rule that applies to residential landscaping, public or commercial recreation areas, and businesses that are not regulated by a District-issued water use permit. Information about SRWMD's year-round conservation measures is available at <http://www.srwmd.org/index.aspx?NID=337>.

ACKNOWLEDGMENTS

The Hydrologic Conditions Report is a monthly combined effort between the Offices of Water Resources and Hydrologic Data Services data collection and review programs. Acknowledgment is made to the following staff for their contributions to the timely production of this report:

- Data Collection: Matthew Jordan, Christian Holton, Dylan Mock, Morgan Pearson, Kevin Posada, and Vince Robinson
- QA/QC and Reporting: Susie Hetrick, Robbie McKinney, Brandi Sistrunk, and Mitch Valerio
- Administrative Support/Document Preparation/IT: Paul Buchanan, Bo Cameron, Tyler Jordan, Andrew Neel, and Ashley Kirby

This report is compiled in compliance with Chapter 40B-21.211, Florida Administrative Code, using rainfall (gage-adjusted radar-derived estimates), groundwater (122 wells), surface water (35 stations), and general information such as drought indices and forecasts. Data are provisional and updated as revised data become available. Data are available at <http://www.mysuwanneeriver.com/507/Water-Data-Portal> or upon request.

Table 1: Nexrad Monthly Rainfall Totals by County (inches)

County	August 2025	August Average*	Month % of Normal	Total Last 12 Months	Annual % of Normal*
Alachua	5.01	7.54	67%	43.11	82%
Baker	5.70	7.18	79%	43.25	82%
Bradford	5.11	7.17	71%	41.84	81%
Columbia	7.08	7.05	100%	44.12	83%
Dixie	6.95	9.30	75%	50.29	87%
Gilchrist	6.24	8.00	78%	46.64	85%
Hamilton	6.79	6.36	107%	44.25	85%
Jefferson	4.14	6.78	61%	45.67	82%
Lafayette	6.76	7.94	85%	51.84	94%
Levy	7.49	9.06	83%	55.51	99%
Madison	5.56	6.52	85%	44.96	84%
Suwannee	7.08	6.99	101%	45.40	85%
Taylor	6.34	8.27	77%	48.86	86%
Union	5.60	7.21	78%	43.81	83%

*Based on PRISM LT81 monthly rainfall averages by county (1927-2023)

August 2025 District Average	6.48
August Long-Term Average (1932-2024)	7.66
Historical 12-month Average (1932-2024)	54.76
Past 12-Month Total	47.55
12-Month Rainfall Surplus/Deficit	-7.21

Figure 1: Comparison of District-wide Monthly Rainfall

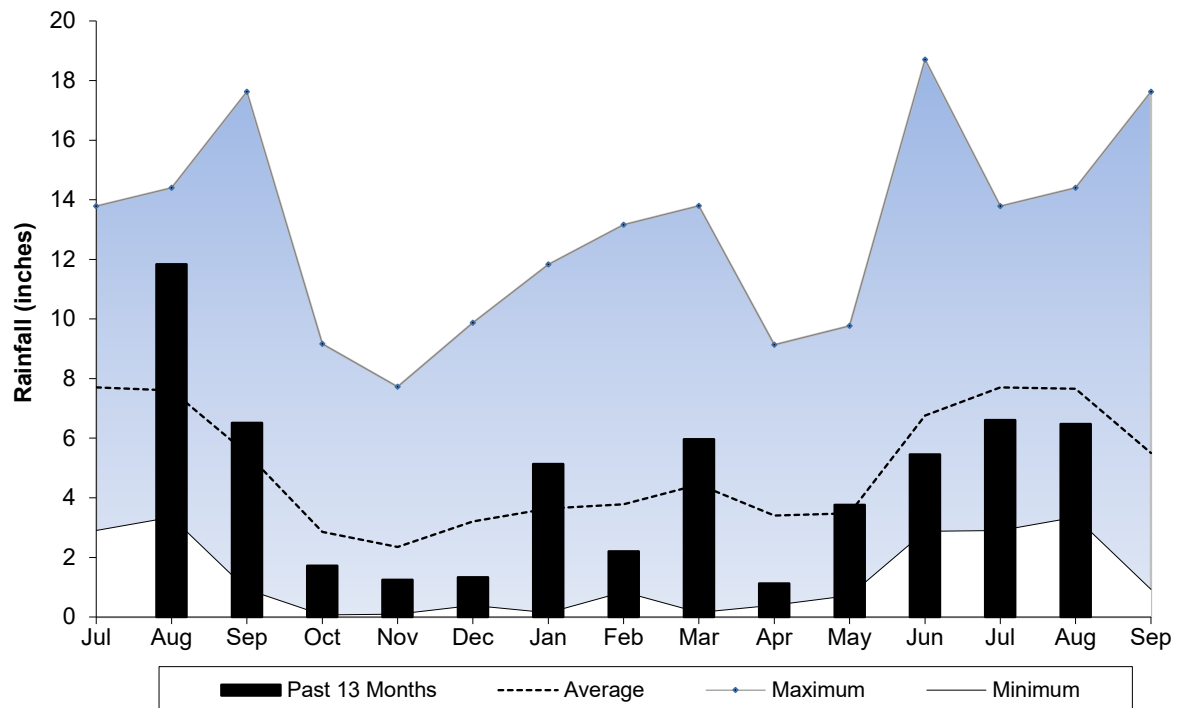


Figure 2: August 2025 SRWMD Gage-adjusted Radar Rainfall

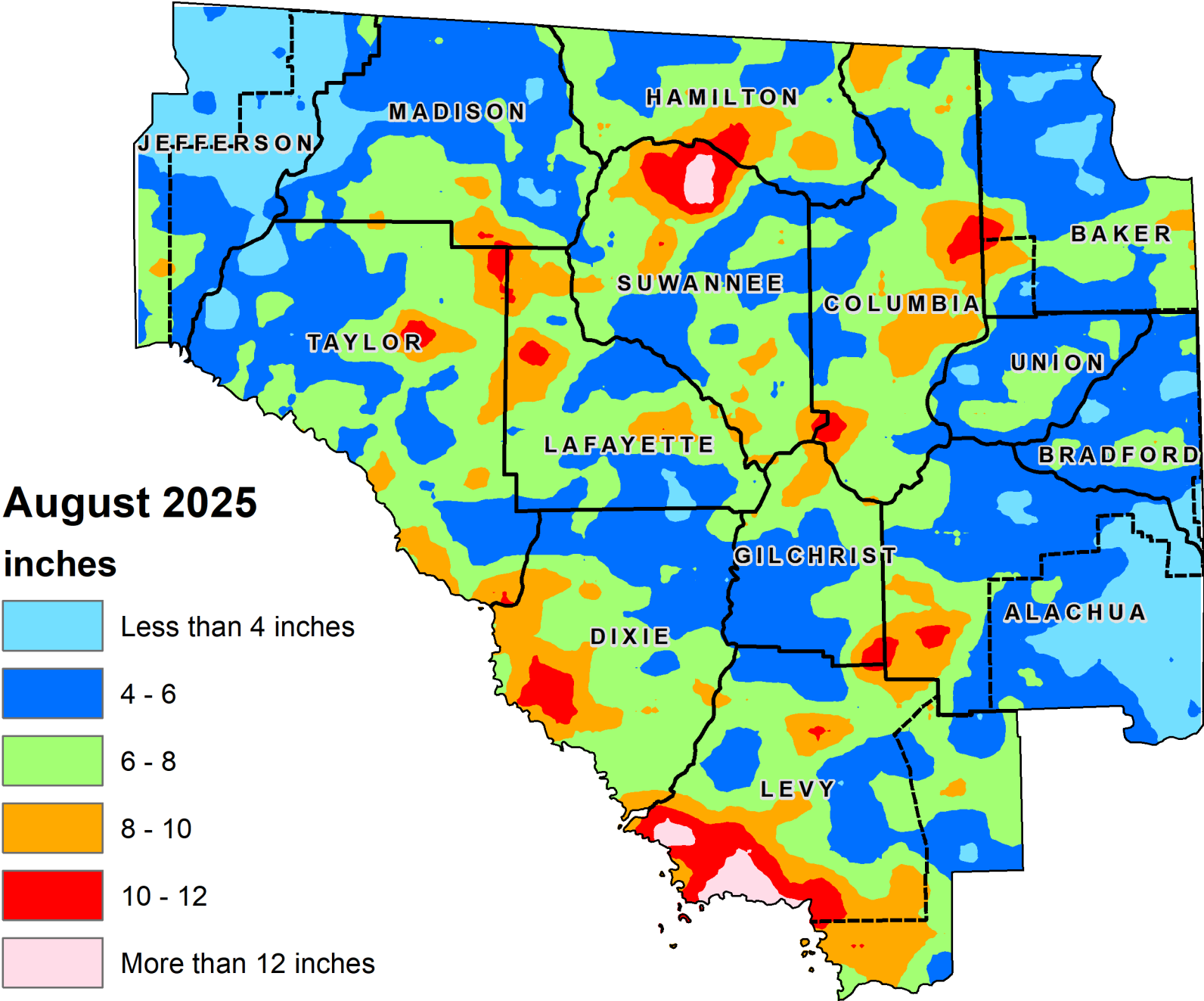


Figure 3: 12 - Month Rainfall Surplus/Deficit by River Basin through August 31, 2025

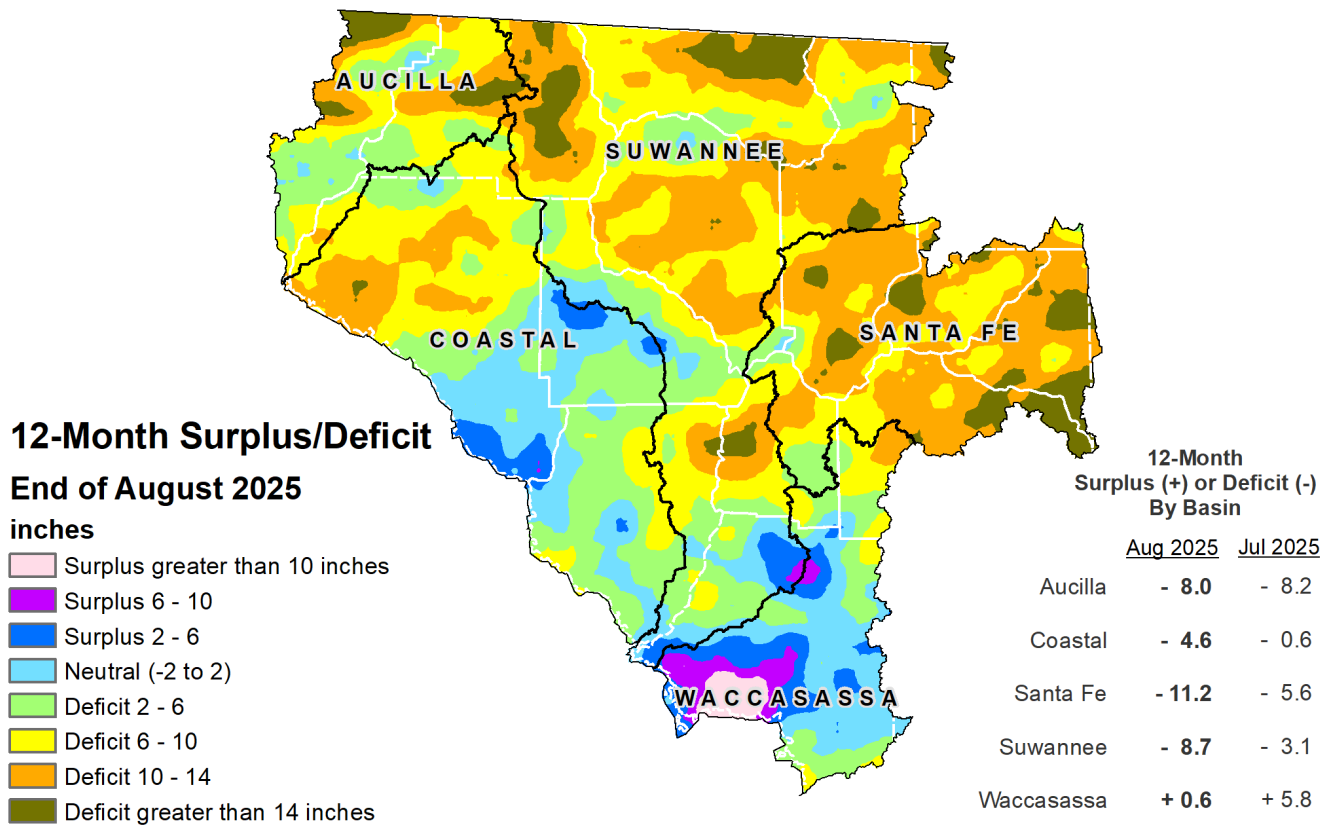


Figure 4: 3 - Month Rainfall Surplus/Deficit by River Basin through August 31, 2025

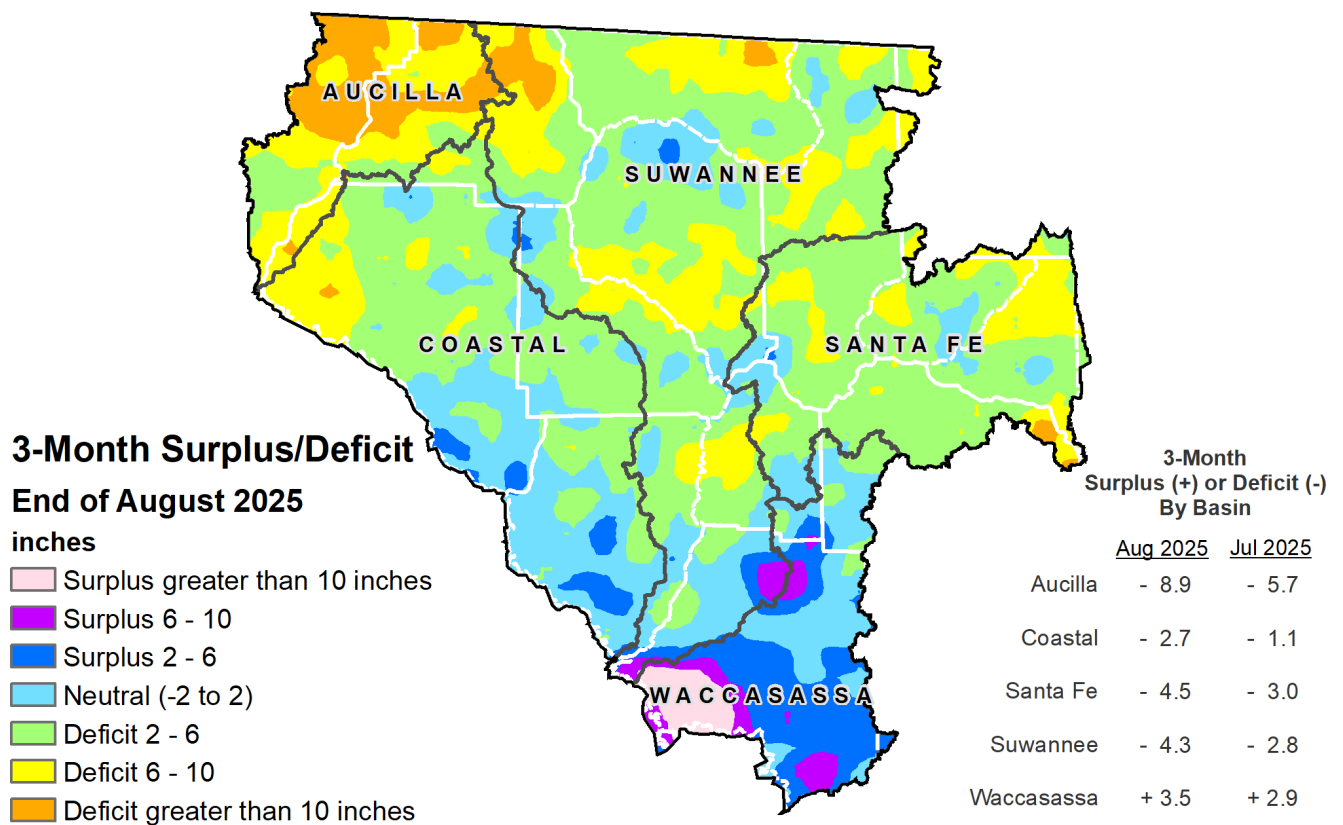


Figure 5: Daily River Flow Statistics

September 1, 2024 through August 31, 2025

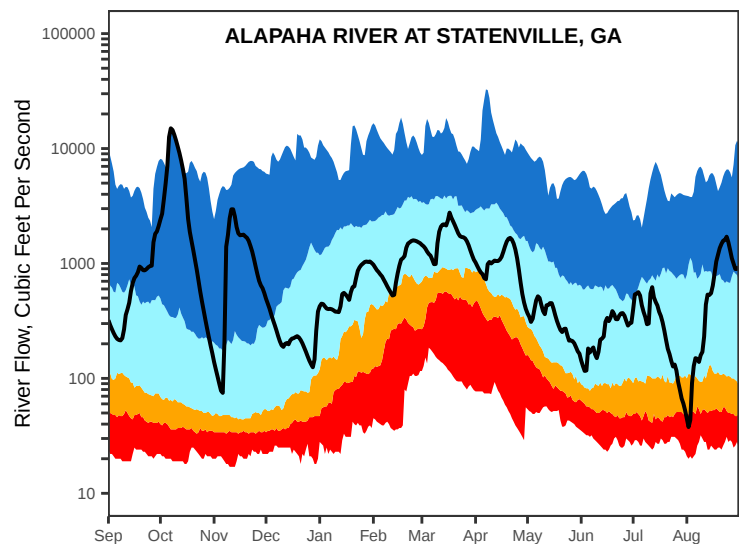
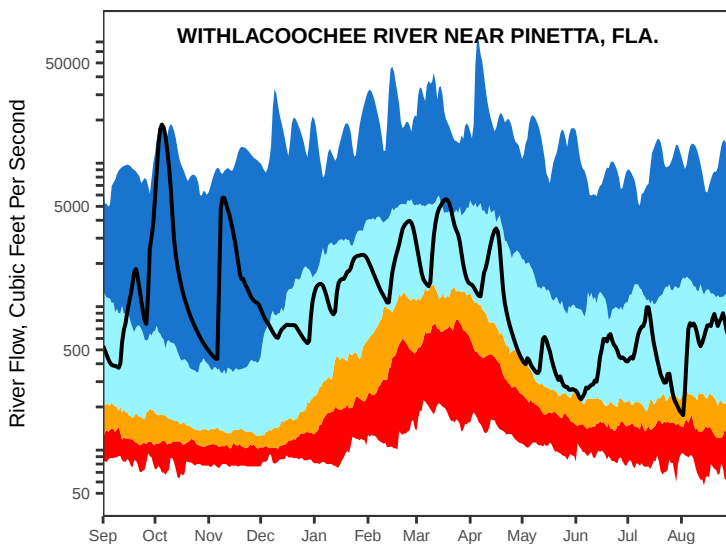
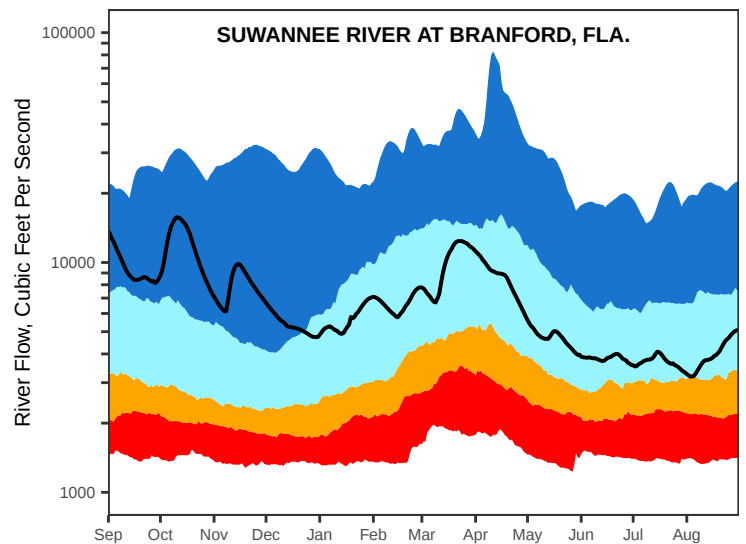
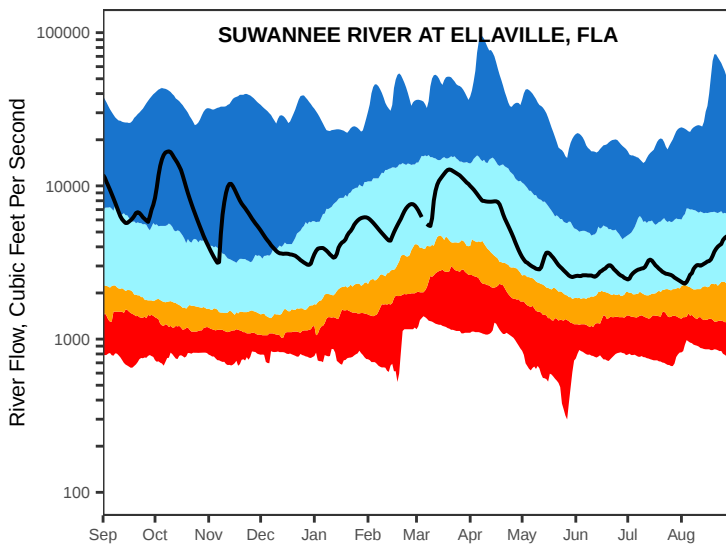
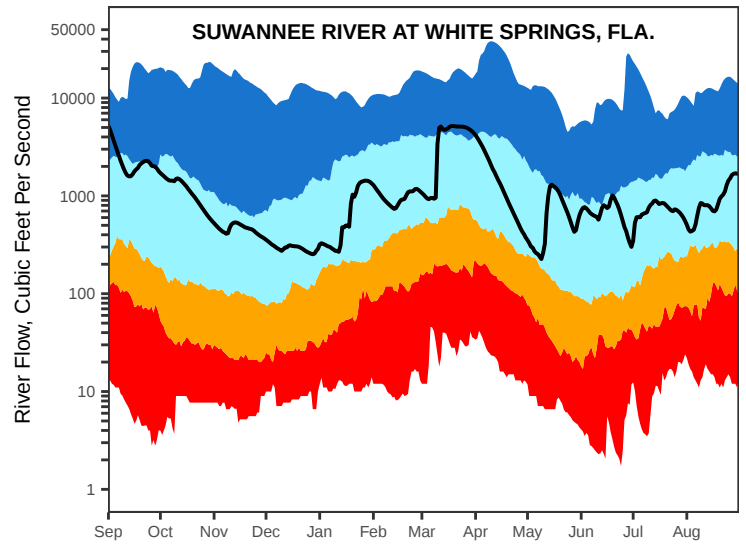
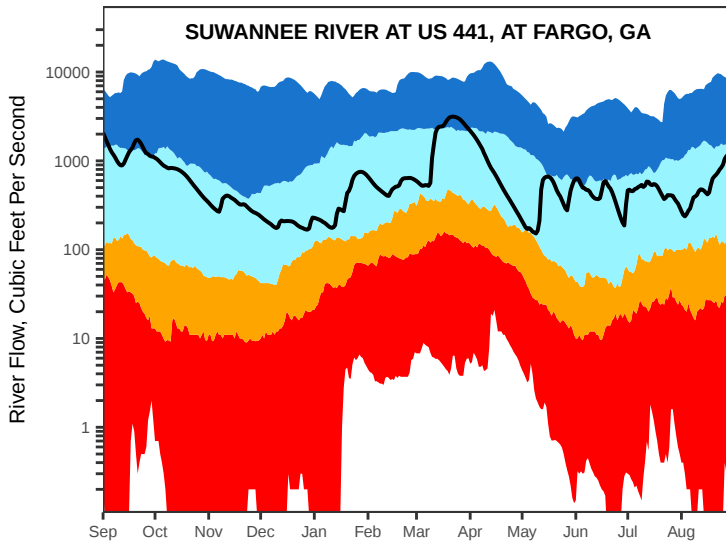
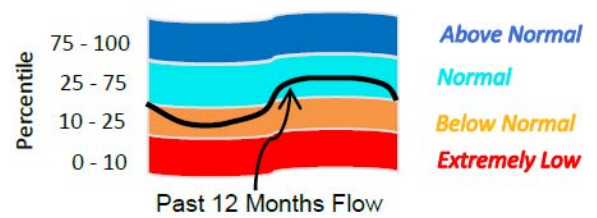
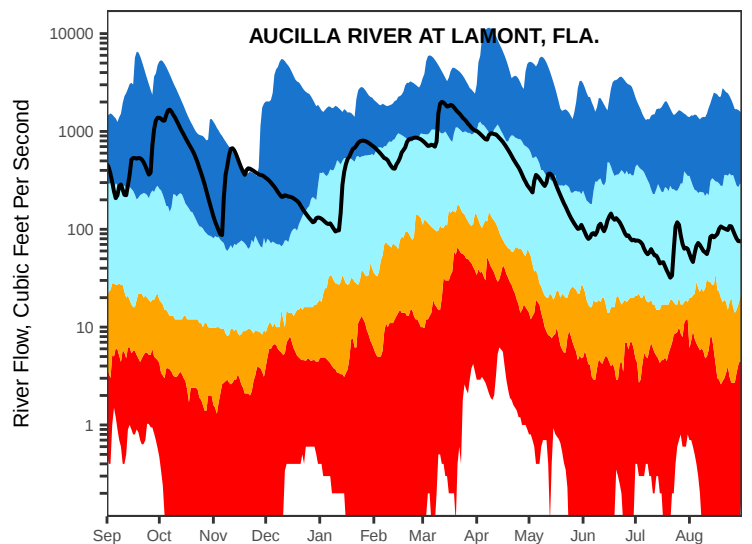
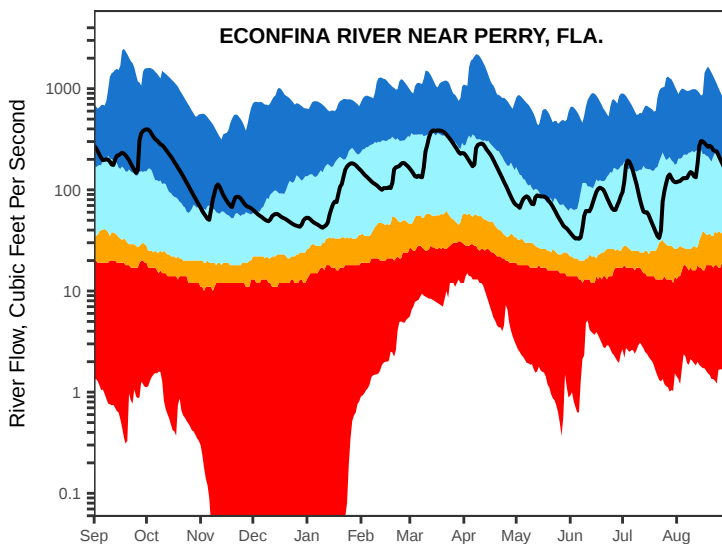
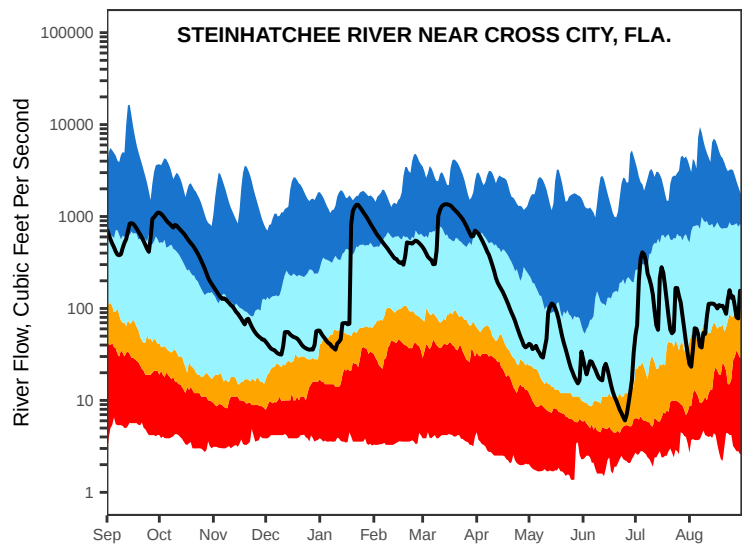
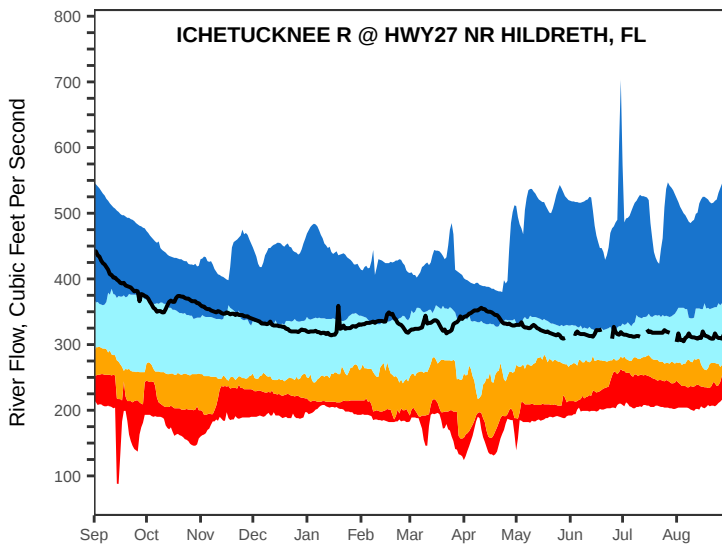
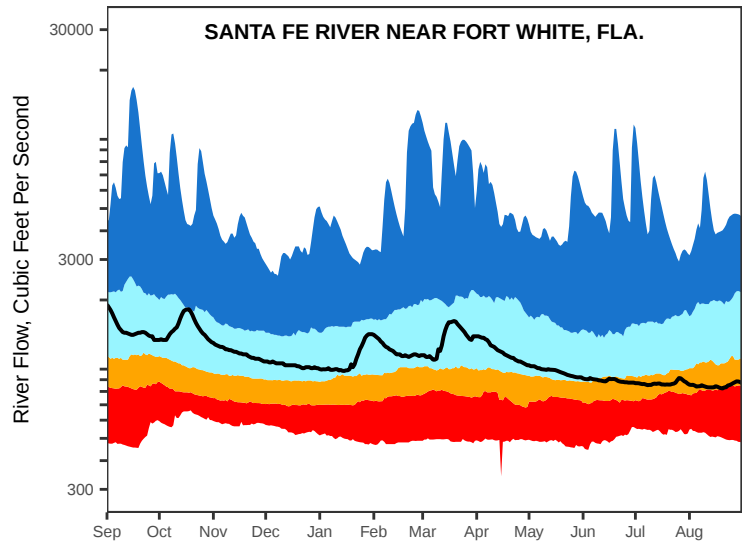
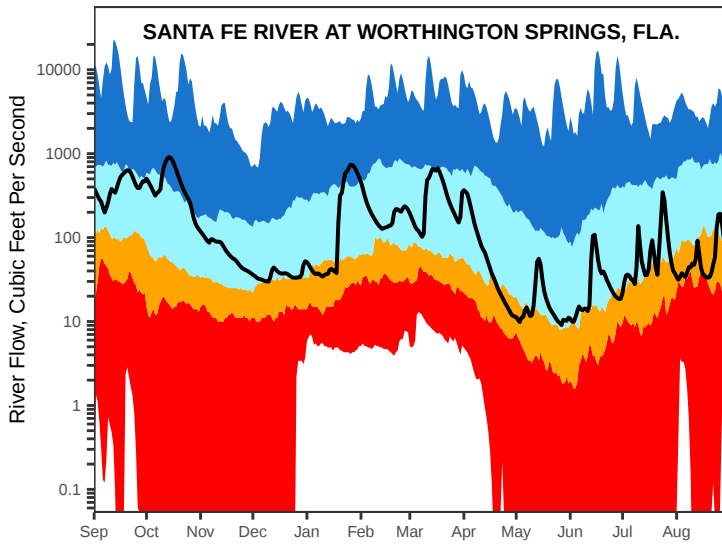
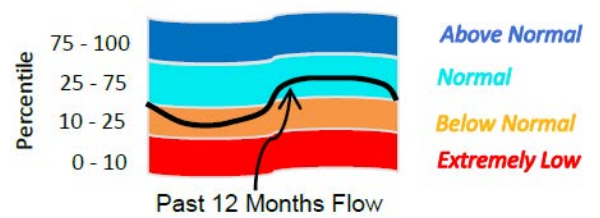


Figure 5, cont.: Daily River Flow Statistics

September 1, 2024 through August 31, 2025

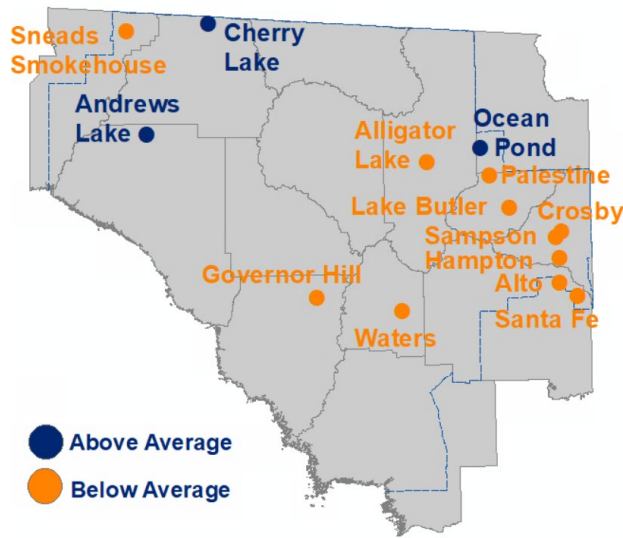


**Figure 6:
Streamflow Conditions
August 2025**

The Cody Scarp (or Escarpment) is an area of relatively steep topographical change that runs across north Florida. The geology above the Scarp consists of sandy soils over thick layers of mostly impermeable sediments such as clay. Streams are well-developed with dendritic (tree-like) drainage patterns. Because of the impermeable sediments, rainfall is collected in ever-growing surface streams as the land elevation falls. Below the Scarp, sandy soils overlay porous limestone. These areas are internally drained, meaning rainfall runs directly into the ground or into sinkholes instead of forming streams. In these areas, rainfall directly recharges the aquifer, which in turn discharges into rivers via springs and river bed seepage. The Scarp is important to the area's hydrology because it demarcates areas where streamflow is dependent almost entirely on recent rainfall and areas where streamflow is heavily influenced by groundwater.



Figure 7: August 2025 Lake Levels



SRWMD lakes react differently to climatic changes depending on their location in the landscape. Some lakes, in particular in the eastern part of the District, are embedded in a surficial or intermediate aquifer over relatively impermeable clay deposits. These lakes rise and fall according to local rainfall and surface runoff. They retain water during severe droughts since most losses occur from evaporation. Other lakes, such as Governor Hill and Waters Lake, have porous or “leaky” bottoms that interact with the Floridan aquifer. These lakes depend on groundwater levels to stay high. If aquifer levels are low, these lakes go dry even if rainfall is normal.

The District currently monitors 14 lakes on a long-term basis; much of the data was originally provided by volunteer observers. Monitoring records began in the 1970s, except for Lakes Butler, Sampson, and Santa Fe, which started in 1957.

Feet Above or Below Historic Average

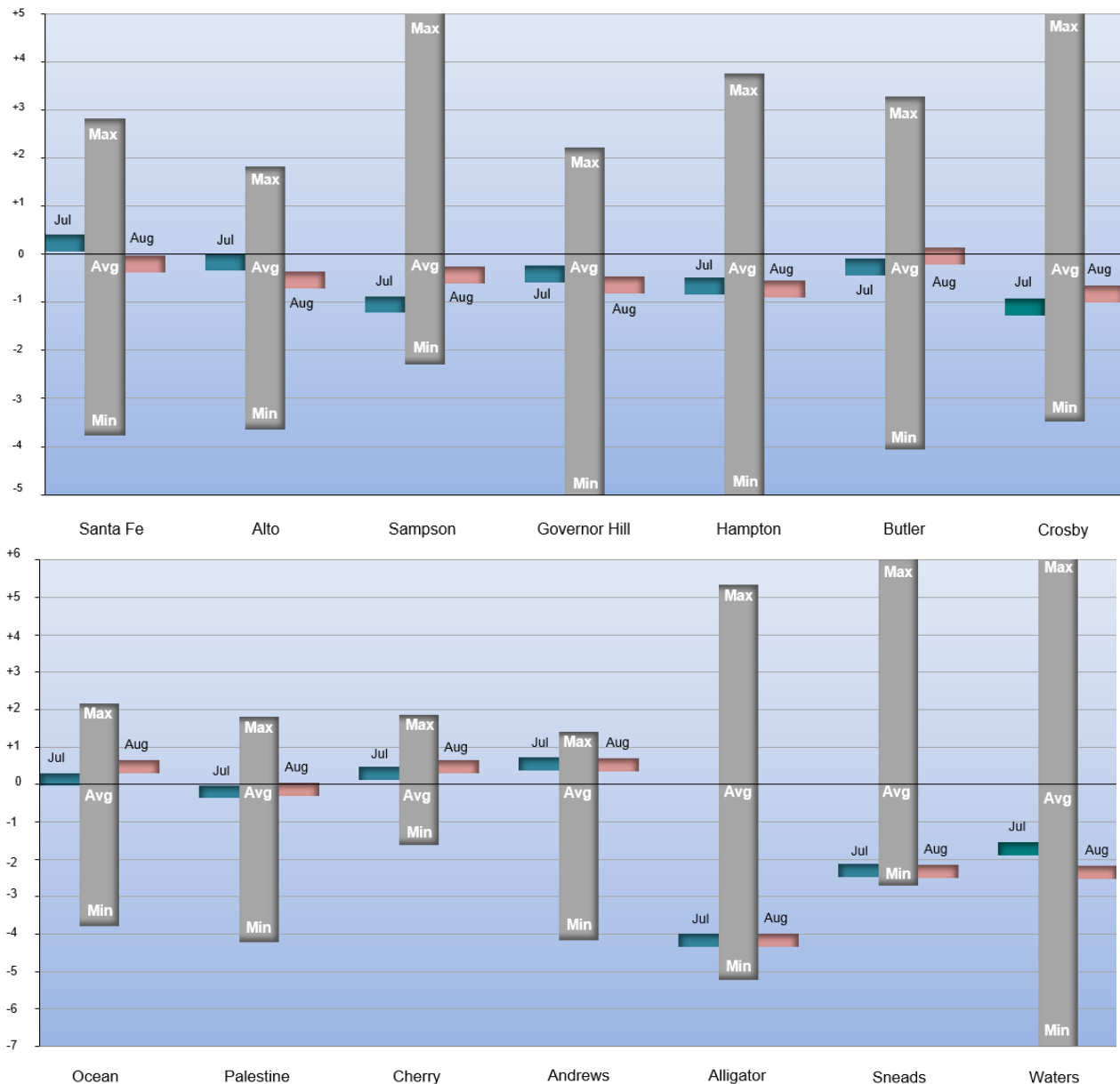


Figure 8: Flow Over the Past 12 Months, Blue Hole (cubic feet per second)

Note: This graph is based on provisional data that are subject to revision

Period 12 Month 09/01/2024 to 09/01/2025

2024-25

Percentile statistics are calculated using data from 05/01/1946 to 09/30/2023

Blue_Hole

■ Max-Q75

■ Q75-Q25

■ Q25-Q10

■ Q10-Min

— Archived Data

— Provisional Data

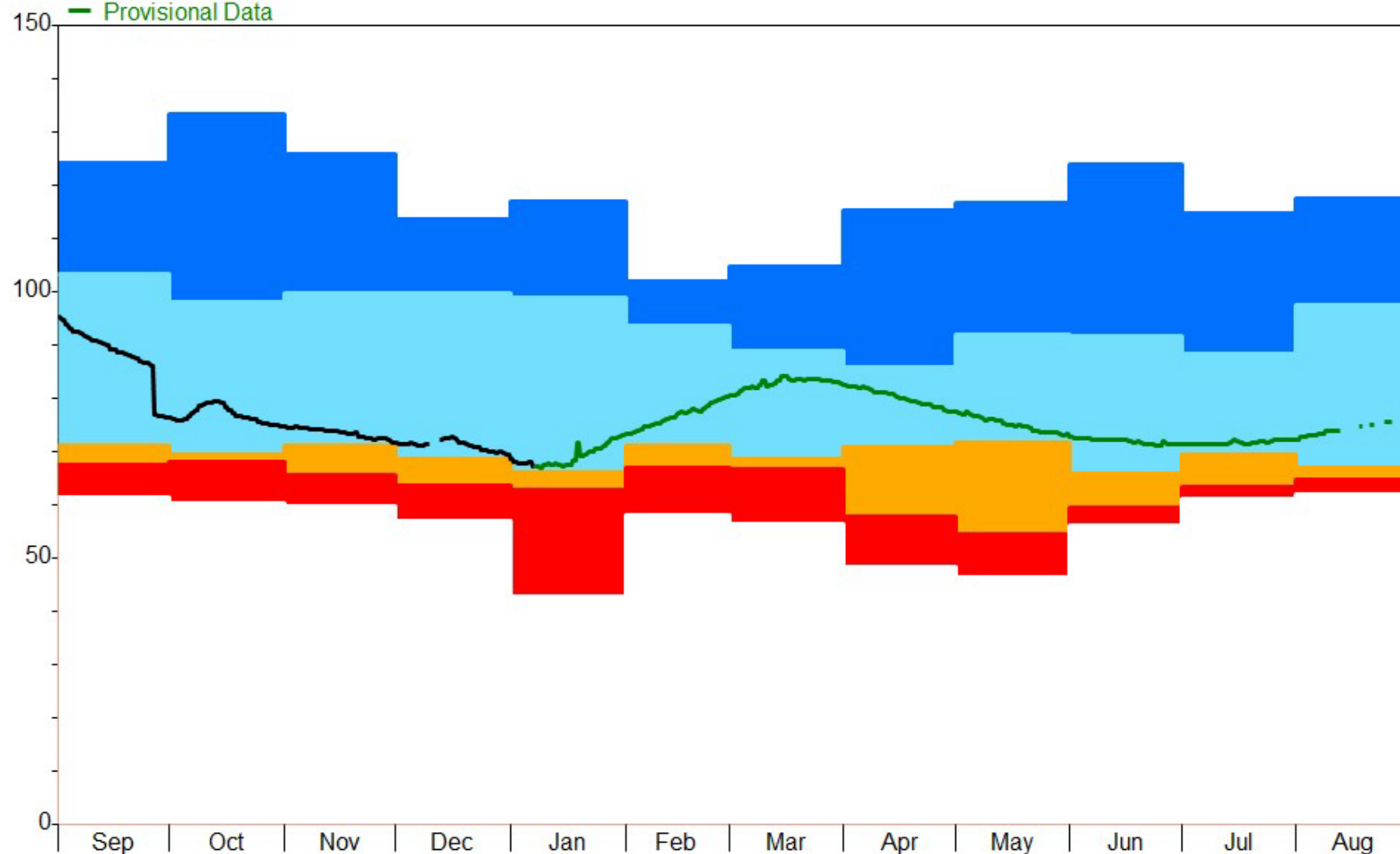


Figure 9: Flow Over the Past 12 Months, Madison Blue Springs (cubic feet per second)

Note: This graph is based on provisional data that are subject to revision

Period 12 Month 09/01/2024 to 09/01/2025

2024-25

Percentile statistics are calculated using data from 03/01/1932 to 09/30/2023

Madison_Blue_Spg

■ Max-Q75

■ Q75-Q25

■ Q25-Q10

■ Q10-Min

— Archived Data

— Provisional Data

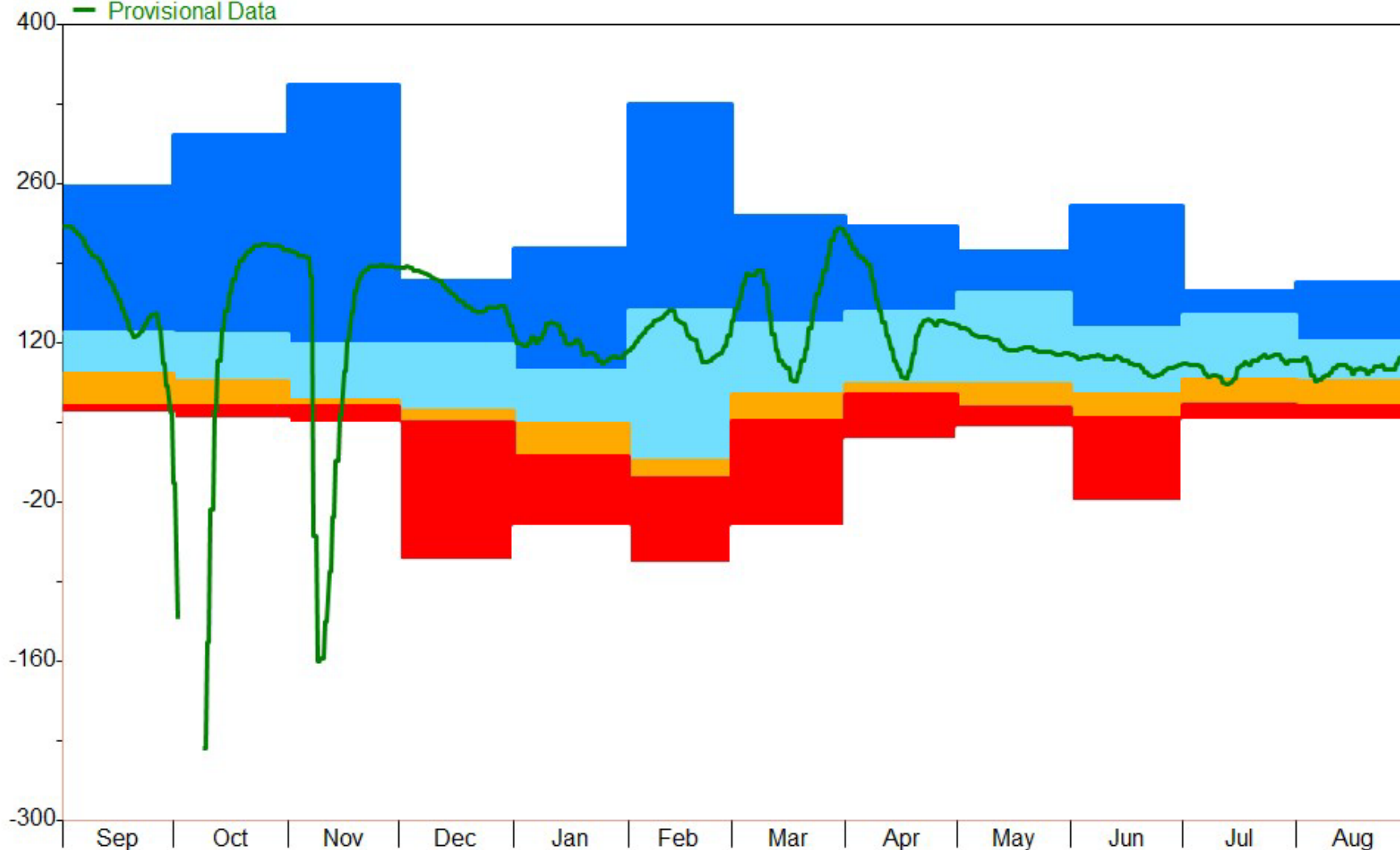
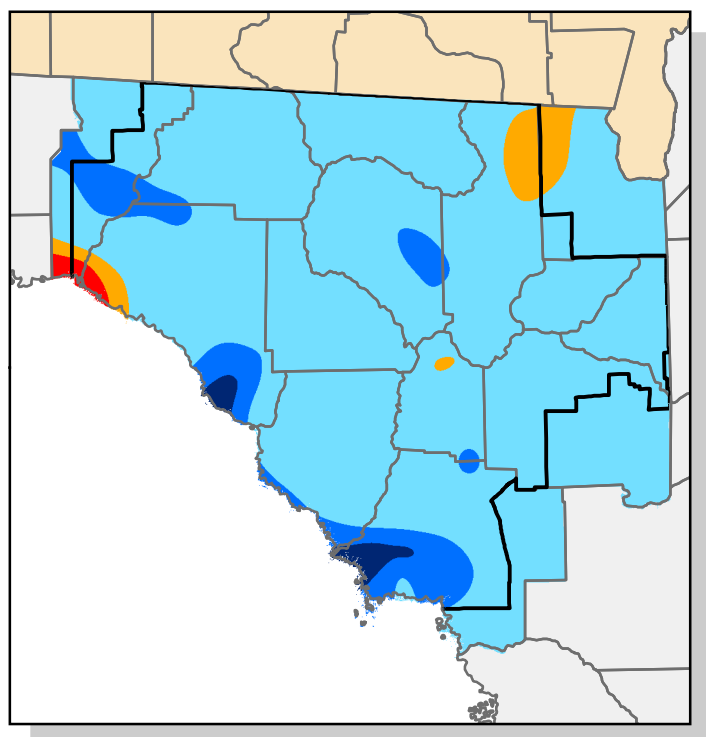


Figure 10

End of August 2025 Upper Floridan Aquifer Conditions

Statistics for wells
compared to historical records
beginning no earlier than 1976



Inset: July Groundwater Percentiles

Additional wells courtesy of SJRWMD, SWFWMD and USGS

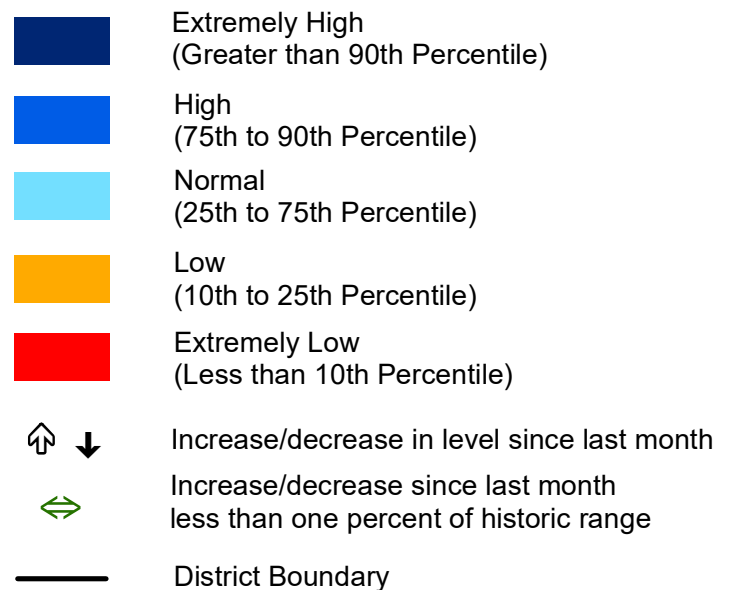
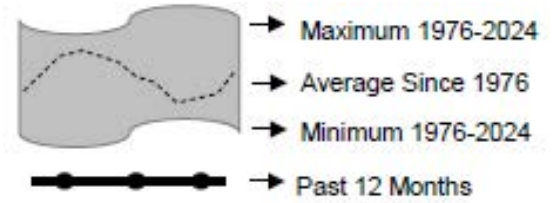
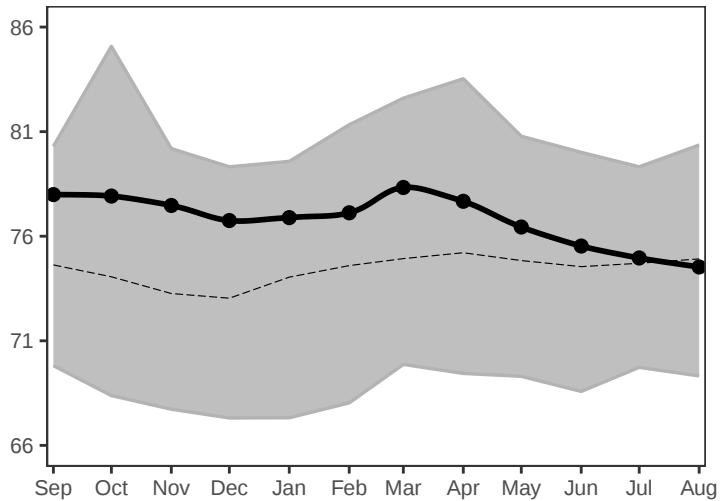


Figure 11: Monthly Groundwater Statistics

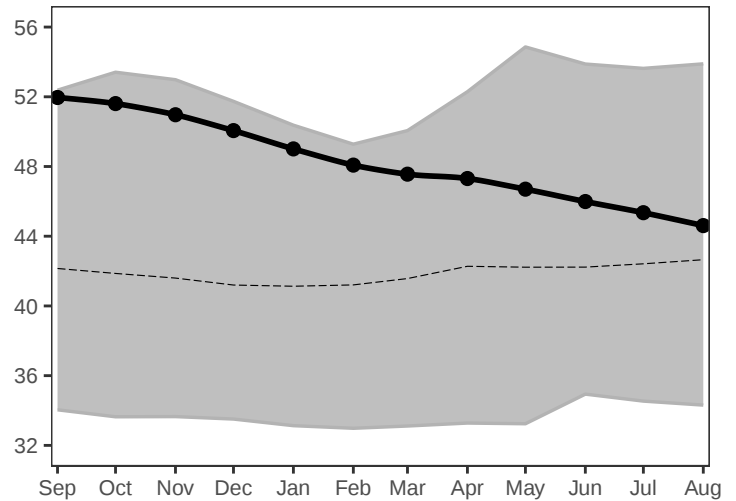
Levels September 2024 through August 2025
Period of Record Beginning 1976



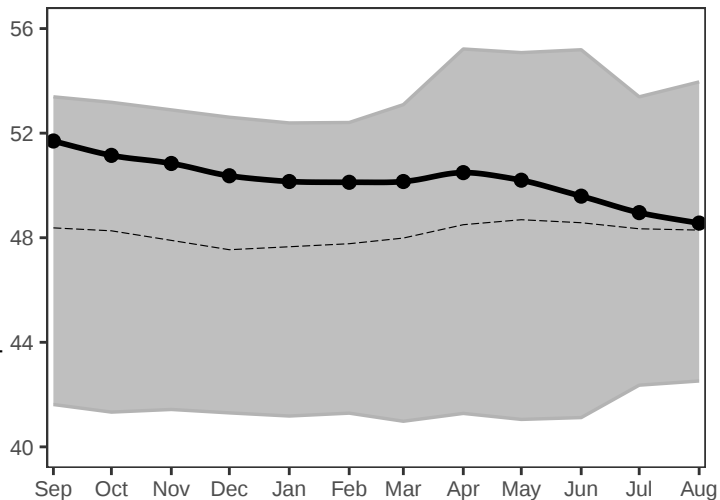
Madison County N010719001
near Greenville



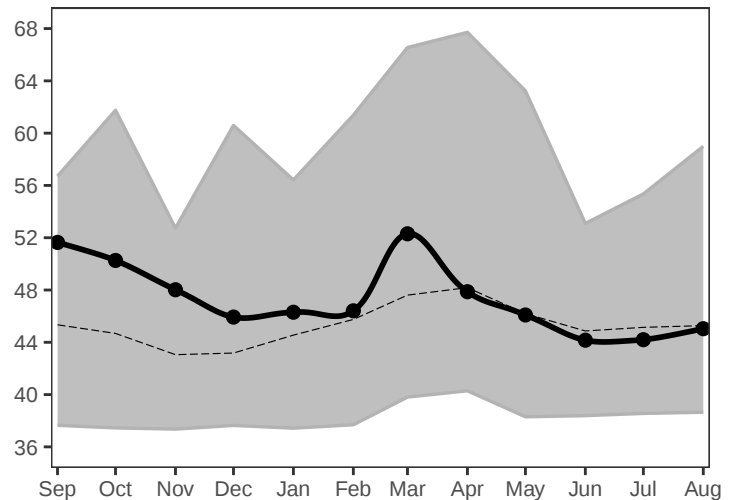
Suwannee County S021335001
near Live Oak



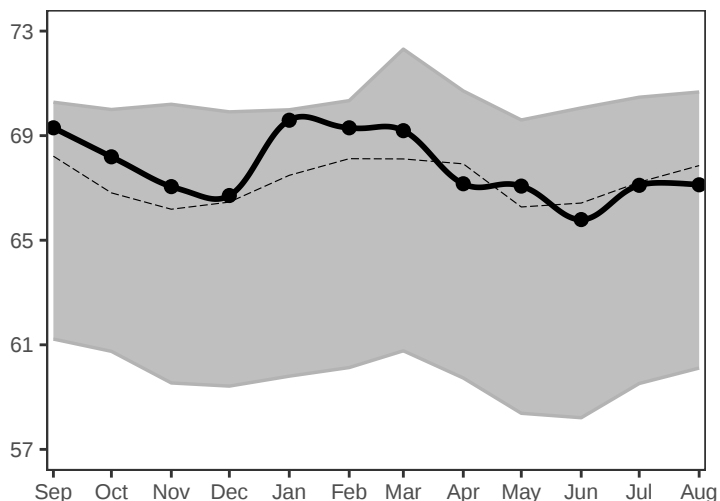
Columbia County S041705001
Lake City



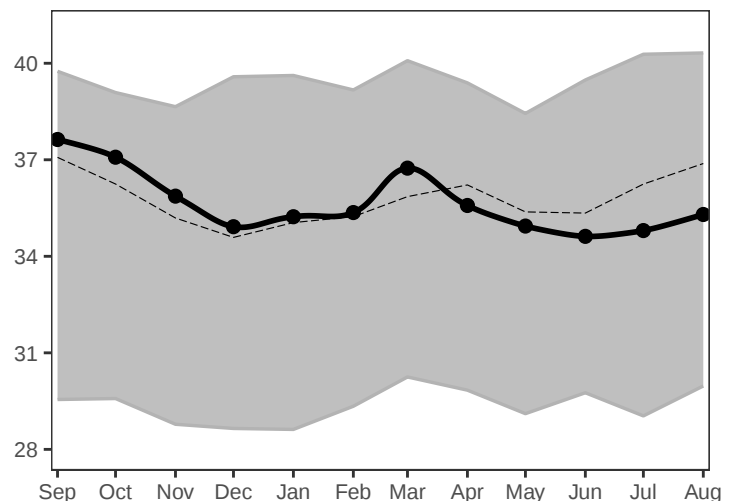
Hamilton County N011422007
near Jasper



Lafayette County S061114001
near Mayo



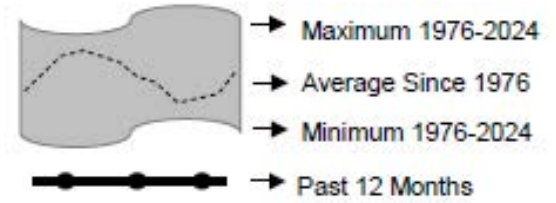
Taylor County S040736005
Perry



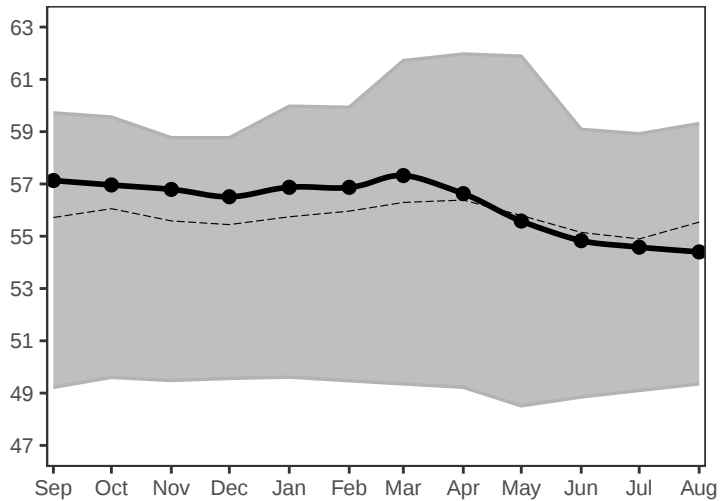
Upper Floridan Aquifer Elevation above NGVD 1929, Feet

Figure 11, cont.: Monthly Groundwater Statistics

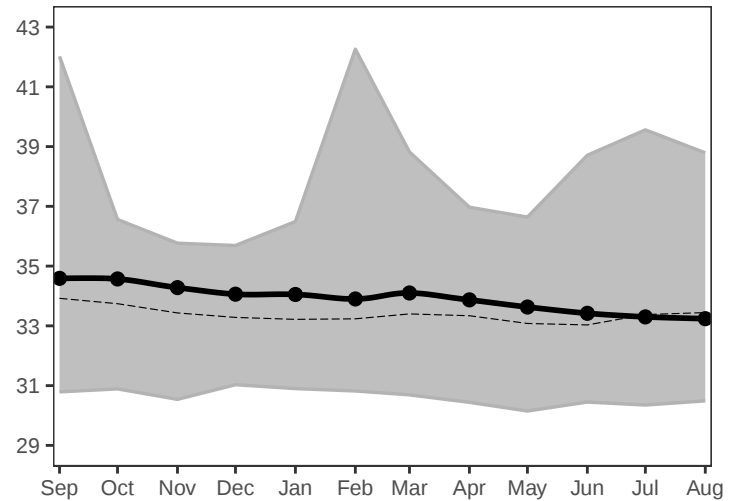
Levels September 2024 through August 2025
Period of Record Beginning 1976



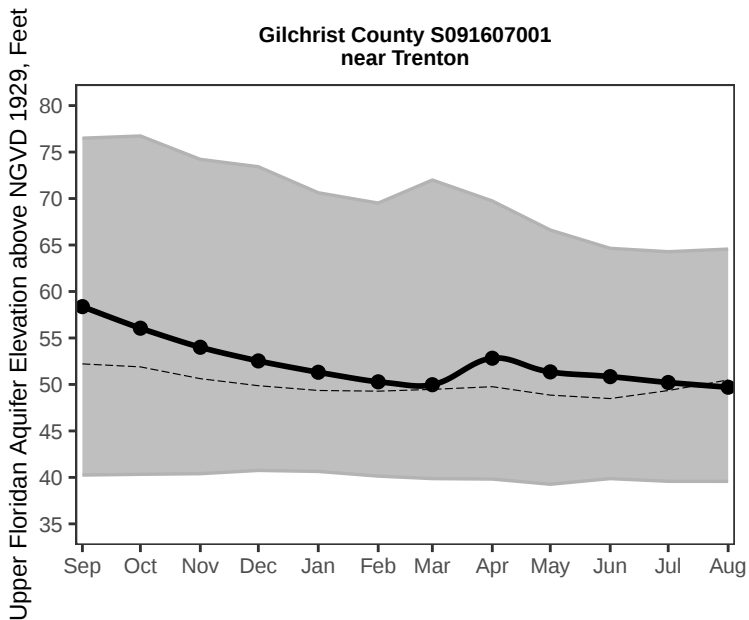
Union County S051933001
near Lake Butler



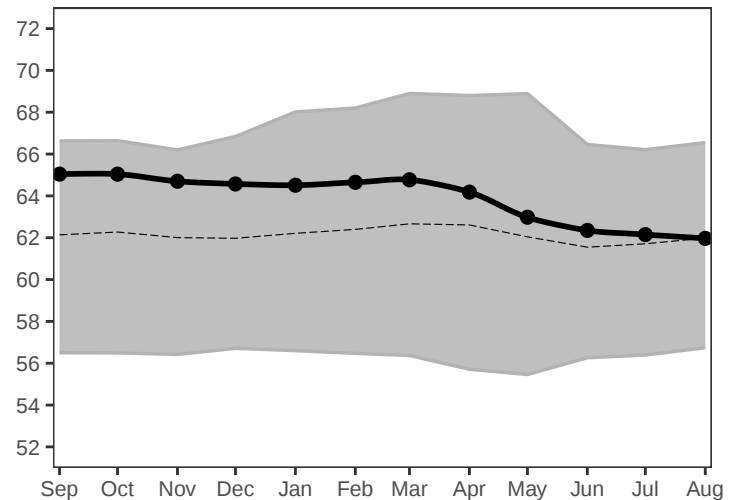
Alachua County S081703001
at High Springs



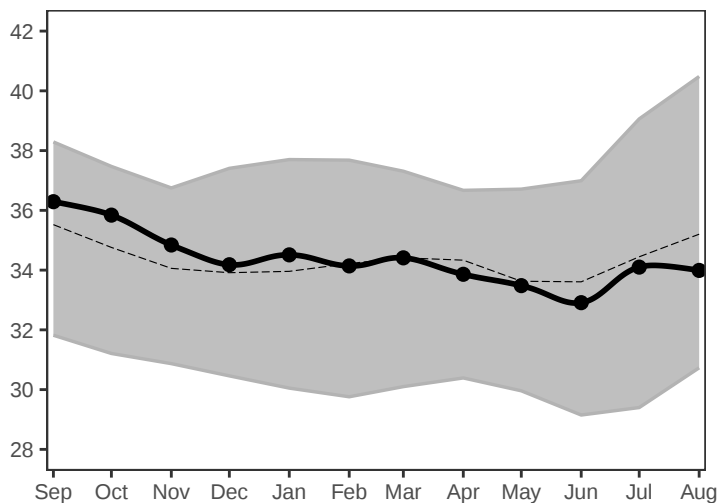
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near Trenton



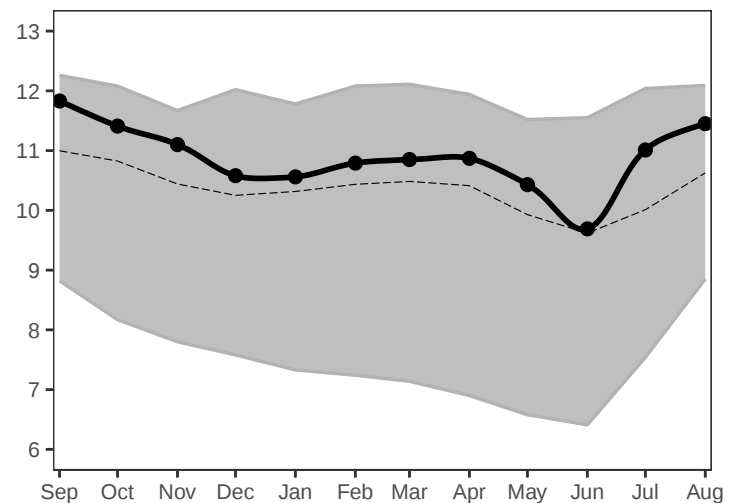
Bradford County S072132001
near Graham

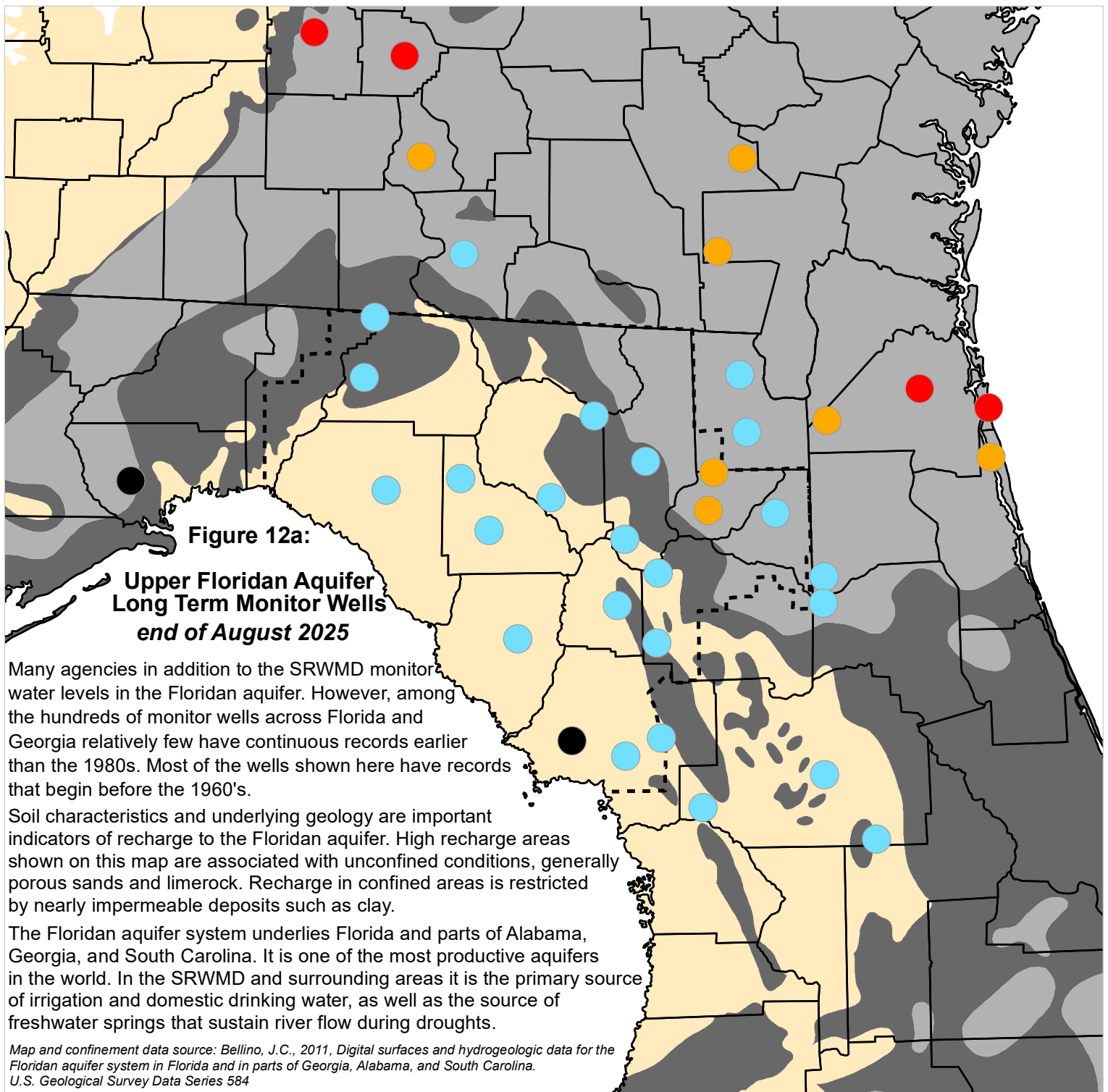


Dixie County S101210001
at Cross City



Levy County S141429001
near Cedar Key





Occurrence of Confined and Unconfined Conditions in the Upper Floridan Aquifer

-  Confined: Upper confining unit is generally greater than 100 feet thick and unbreached. Recharge is low.
-  Semi-confined: Upper confining unit is generally less than 100 feet thick, breached, or both. Recharge is moderate.
-  Unconfined: Upper confining unit is absent or very thin. Recharge is high.
-  SRWMD Boundary

Percentile of Most Recent Water Level Relative to Entire Record

-  Very High (Greater than 90th Percentile)
-  High (75th to 90th Percentile)
-  Normal (25th to 75th Percentile)
-  Low (10th to 25th Percentile)
-  Very Low (Less than 10th Percentile)
-  Data Not Available

Figure 12b: Regional Long Term Upper Floridan Aquifer Levels

Data through August 2025

