



Hydrologic Conditions Report

August 2025

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Summary

August 2025 was characterized by near-normal precipitation and above-normal temperatures (averaging around 81.5 degrees Fahrenheit) that contributed to generally normal to below-normal hydrologic conditions across the Panhandle. Florida entered its climatological wet season as of mid-May, but frequent small rain events were not enough to completely stave off abnormally dry conditions from forming along the Florida-Georgia border in the central and eastern parts of the District.

Rainfall

In August 2025, an average of 7.67 inches of rain was recorded across the Panhandle. This amount was 0.7 inches (9.6%) above the District normal rainfall for the month of August, which is 6.97 inches (Table 1; Figures 1 - 7). Normal rainfall is defined as average monthly rainfall for the 1991-2020 reference period.

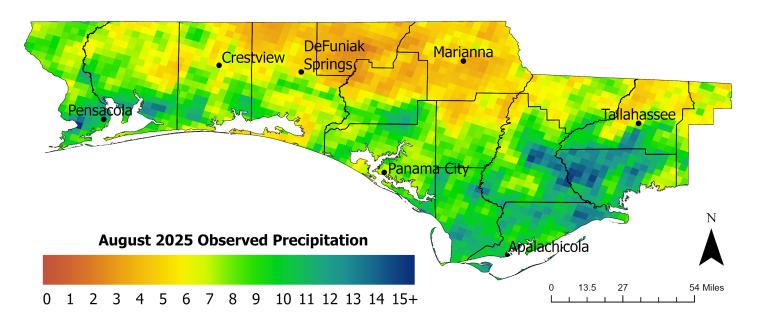
There were near-daily occurring small rain events throughout August 2025 in the District, most of them caused by localized convection or the land-sea breeze circulation regime that is dominant during the summer months in Florida. This dominant regime led to a spatial distribution in the observed rainfall where more precipitation fell near the coasts than inland.

Table 1: August 2025 rainfall compared to 30-year normal monthly rainfall for Tallahassee, Marianna, Niceville, and Pensacola

Station	August Normal Rainfall (1991 to 2020)	August 2025 Observed Rainfall	Percent Difference	
Tallahassee Regional Airport	7.60	7.18	-5.7%	
Marianna Regional Airport	4.93	4.76	-3.5%	
Niceville, FL	9.21	8.85	-4.0%	
Pensacola Regional Airport	7.50	12.00	46.2%	

Source: https://www.weather.gov/wrh/Climate?wfo=tae
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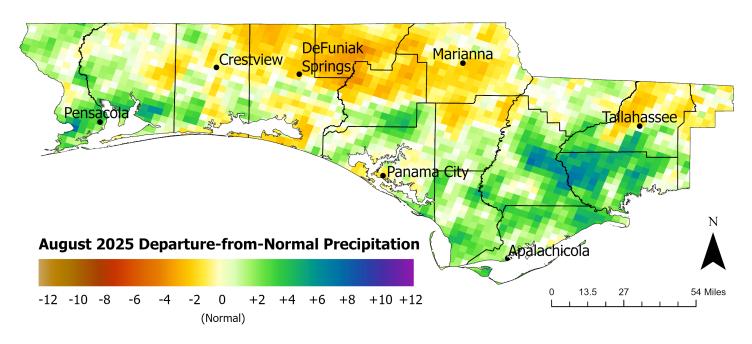
Figure 1: District-wide August 2025 observed rainfall



Source: https://water.weather.gov/precip/download.php

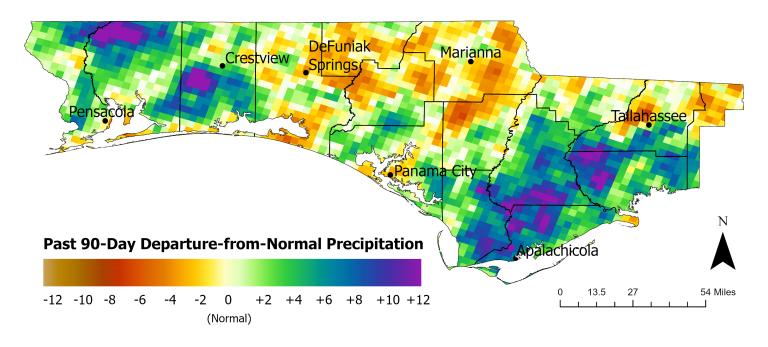


Figure 2: District-wide August 2025 precipitation departure from normal



Source: https://water.weather.gov/precip/download.php

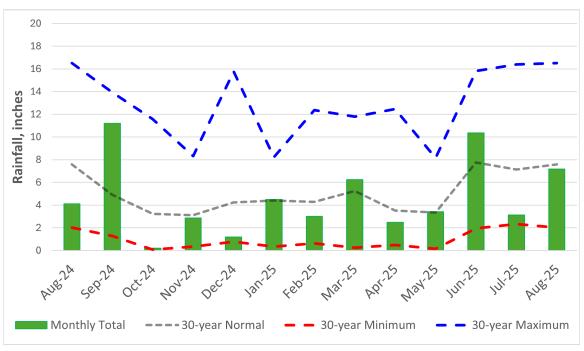
Figure 3: District-wide precipitation departure from normal for the previous 90 days



Source: https://water.weather.gov/precip/download.php

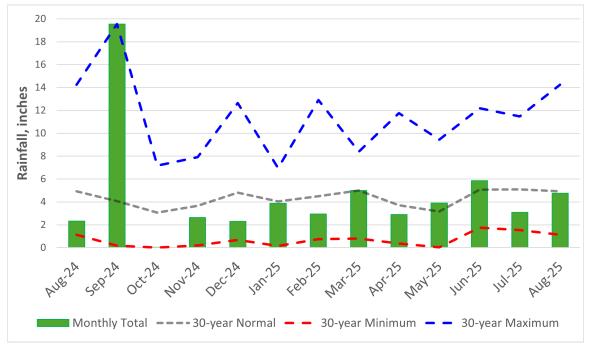


Figure 4: Observed rainfall at Tallahassee Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



Source: https://www.weather.gov/wrh/Climate?wfo=tae

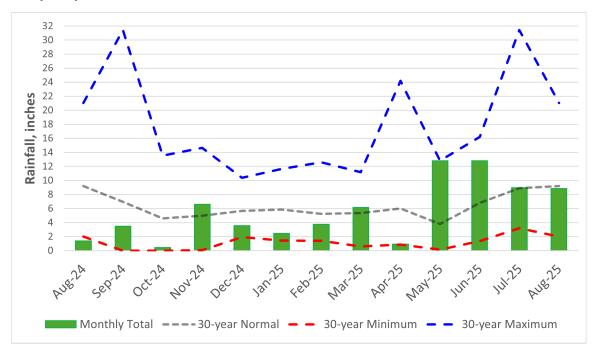
Figure 5: Observed rainfall at Marianna Regional Airport for the past 13 months compared to the 30 -year normal, minimum, and maximum precipitation for each month



Source: https://www.weather.gov/wrh/Climate?wfo=tae

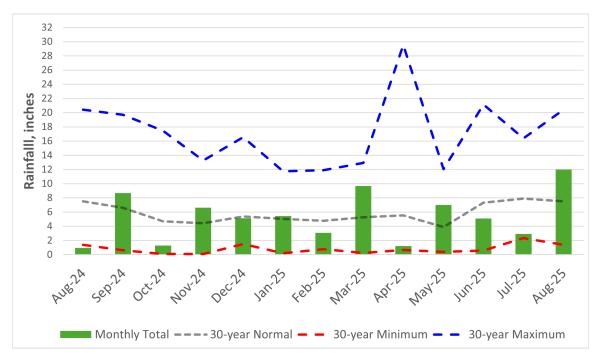


Figure 6: Observed rainfall in Niceville for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



Source: https://www.weather.gov/wrh/Climate?wfo=mob

Figure 7: Observed rainfall at Pensacola Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



Source: https://www.weather.gov/wrh/Climate?wfo=mob



Climate Outlook

According to NOAA's Climate Prediction Center, the forecast issued August 31, 2025, for September 2025 shows equal chances for above- or below-normal temperatures and a slight chance for above-normal rainfall across the Panhandle (Figure 8).

As of September 8, 2025, ENSO-neutral conditions were present and are favored to persist through the late summer months (56% chance). During the summer, ENSO-neutral conditions tend to produce less vertical wind shear, which is favorable for hurricane development. Equatorial sea surface temperatures were near-to-below normal across the majority of the Pacific Ocean, prompting a La Niña Watch to be advised for autumn and early winter. La Niña conditions typically lead to warmer temperatures and less-than-normal precipitation during winter in Northern Florida.

The 2025 Atlantic Hurricane Season began on June 1, 2025, and runs through November 30, 2025. An updated hurricane season outlook was released August 7, 2025. NOAA predicts an above-normal hurricane activity in the Atlantic basin with 50% confidence. There is a 35% chance of the season being near-normal. A near-normal season would have 6 to 18 named storms. Three named storms, Tropical Storm Dexter, Hurricane Erin (Category 5), and Tropical Storm Fernand formed during August 2025 in the Atlantic basin. None of the named storms affected the Florida Panhandle.

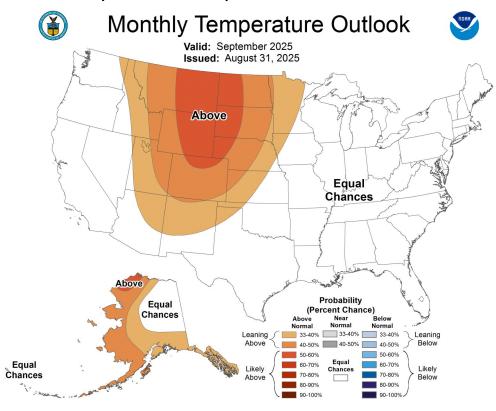
Source: https://www.cpc.ncep.noaa.gov/products/predictions/30day/

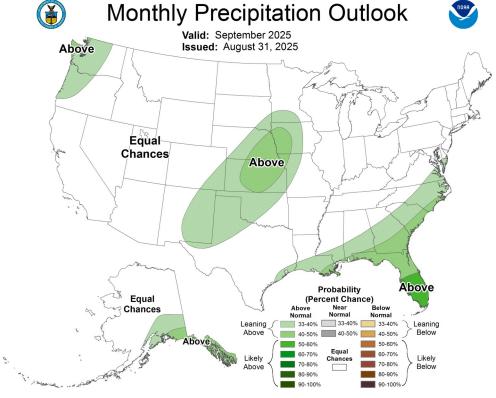
https://www.cpc.ncep.noaa.gov/products/analysis_monitoring/lanina/enso_evolution-status-fcsts-web.pdf https://www.aoml.noaa.gov/2025-atlantic-hurricane-season-outlook/

Source: https://www.cpc.ncep.noaa.gov/products/predictions/30day/



Figure 8: September 2025 Temperature and Precipitation Outlooks for the United States





Source: https://www.cpc.ncep.noaa.gov/products/predictions/30day/



Drought Conditions

The U.S. Drought Monitor report released for September 2, 2025, showed abnormally dry conditions along the Florida-Georgia border in Jackson, Gadsden, Leon, and Jefferson Counties (Figure 9). A majority of rain events during August 2025 were driven by the sea-breeze circulation regime as evidenced by the spatial distribution of rainfall during the month (Figure 1), leaving further inland regions slightly drier than coastal regions.

According to the U.S. Monthly Drought Outlook for September 2025, no drought conditions were expected to develop in the District.

Figure 9: Florida Drought Conditions on September 2, 2025

U.S. Drought Monitor Florida

September 2, 2025

(Released Thursday, Sep. 4, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	-					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	84.57	15.43	7.21	2.49	0.47	0.00
Last Week 08-26-2025	83.34	16.66	7.60	2.49	0.47	0.00
3 Month s Ago 06-03-2025	29.29	70.71	41.25	28.31	3.74	0.00
Start of Calendar Year 01-07-2025	10.12	89.88	29.22	0.00	0.00	0.00
Start of Water Year 10-01-2024	94.54	5.46	0.00	0.00	0.00	0.00
One Year Ago 09-03-2024	77.81	22.19	15.41	6.20	0.00	0.00

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None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

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David Simeral Western Regional Climate Center









droughtmonitor.unl.edu

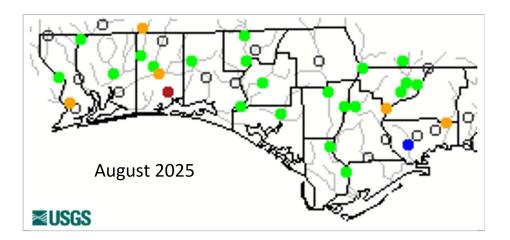
Source: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?FL

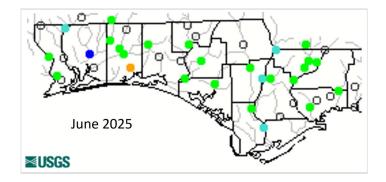


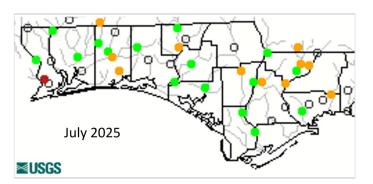
Surface Water

Streamflows. During August 2025, twenty-one streamflow stations in the District on average recorded flows within normal ranges, five streamflow stations recorded below normal flows, one station recorded much above normal flows, and one station recorded much below normal flows (Figures 10 – 16). Stations that recorded below-normal or much-below-normal flows had below-normal rainfall upstream and into the headwaters of the streams (Figure 2 & Figure 10). The St. Marks River near Newport recorded flows classified as below normal for the month (Figure 10) but dipped into much below normal flows during the second half of August 2025 (Figure 11).

Figure 10: Northwest Florida June 2025 to August 2025 monthly streamflow percentiles







Explanation - Percentile classes							
•		•	•		•	•	0
Low	<10	10-24	25-75	76-90	>90	High	Not-ranked
LOW	Much below normal	Below normal	Normal	Above normal	Much above normal		

Source: http://waterwatch.usgs.gov/index.php



Figure 11: Daily streamflows and percentile ranges for USGS station 02326900 St. Marks River Near Newport, Florida

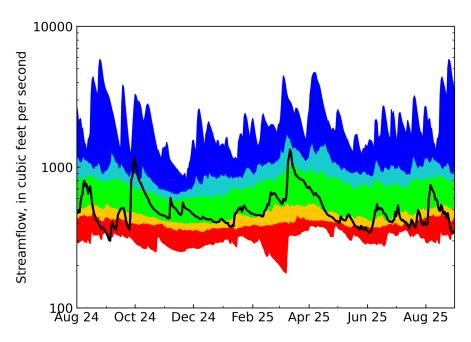


Figure 12: Daily streamflows and percentile ranges for USGS Station 02329000 Ochlockonee River Near Havana, Florida

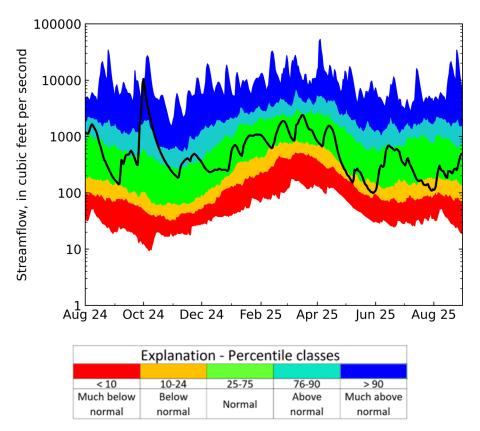




Figure 13: Daily streamflows and percentile ranges for USGS Station 02358700 Apalachicola River Near Blountstown, Florida

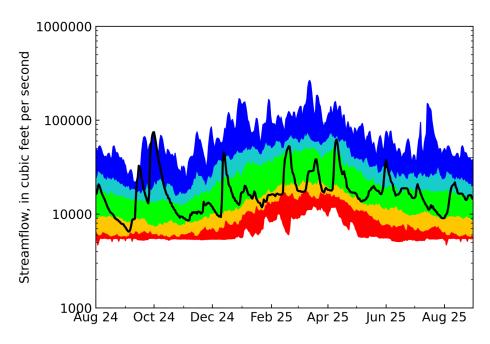
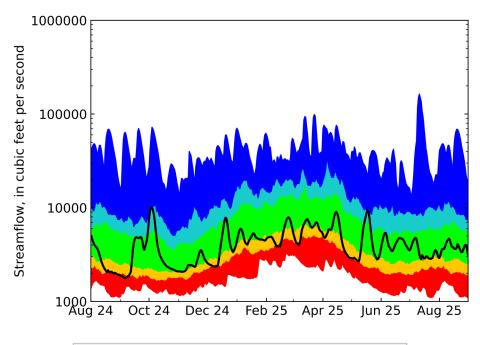


Figure 14: Daily streamflows and percentile ranges for USGS Station 02366500 Choctawhatchee River Near Bruce, Florida



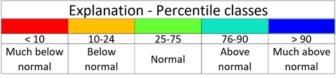




Figure 15: Daily streamflows and percentile ranges for USGS Station 02370000 Blackwater River Near Baker, Florida

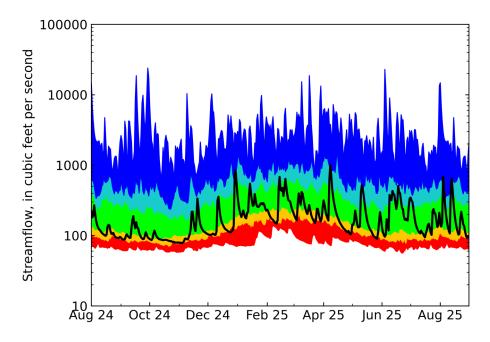
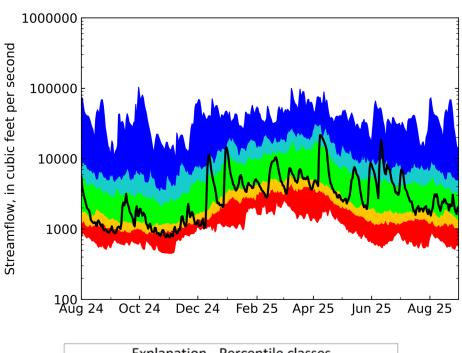
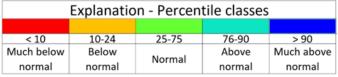


Figure 16: Daily streamflows and percentile ranges for USGS Station 02375500 Escambia River Near Century, Florida







Lake Levels. Water levels at Lake Jackson in Leon County decreased by 0.31 feet during August 2025, ending the month with a stage level of 80.29 feet, NAVD 1988 (Figure 17). The long-term (January 29, 2003, to August 31, 2025) average stage level for Lake Jackson is 80.90 feet, NAVD 1988, and the full pool level is 85.74 feet, NAVD 1988.

At Piney Lake in southern Washington County, water levels increased 0.38 feet in the beginning half of the month and then remained stable around 49.20 feet, NAVD 1988, with frequent rain events throughout August 2025. Piney Lake ended the month with a stage level of 49.10 feet, NAVD 1988 (Figure 18). When the water levels at Piney Lake drop below 51.42 feet, NAVD 1988, the lake separates into two distinct "lobes". Based on the lake level data being collected at Piney Lake since 2022, the lake may have been continuously separated since December 15, 2023.

Figure 17: Daily water levels at Lake Jackson at Miller Landing, Leon County

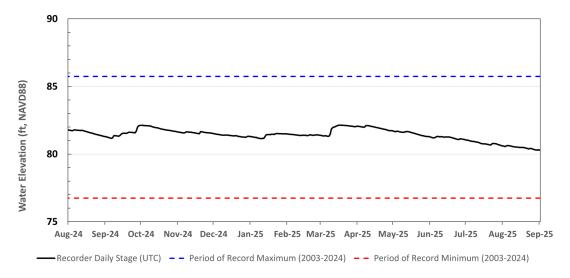
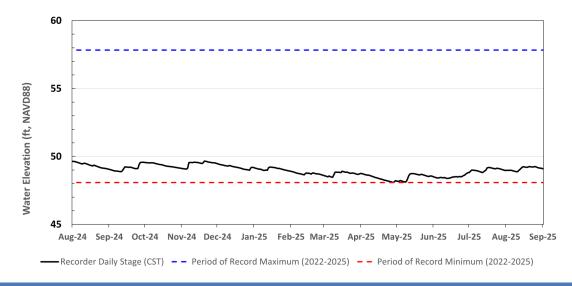


Figure 18: Daily water levels at Piney Lake, Washington County





Spring Flows

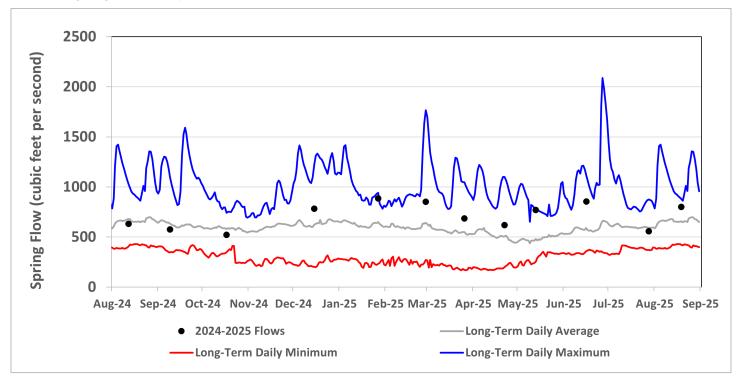
Wakulla and Sally Ward Spring System. Flow from Wakulla Spring increased 244 cubic feet per second (cfs) between the measurements taken in July and August 2025, rising again above the long-term daily average. The most recent flow measurement for Wakulla Spring was 801 cfs, which was conducted on August 19, 2025 (Figure 19). The long-term (October 23, 2024, to August 18, 2025) average flow for the month of August is 660 cfs.

Flow at Sally Ward Spring increased by 7.8 cfs between the measurements taken in July and August 2025. The most recent flow measurement for Sally Ward was 29.9 cfs on August 18, 2025. This measurement was 1.7 cfs higher than the long-term (November 1, 2004, to August 18, 2025) average flow for the month of August of 28.2 cfs.

The Minimum Flow established for the combined Wakulla and Sally Ward Spring System under Florida Administrative Code chapter 40A-8.041 continues to be met. The long-term (October 23, 2004, through August 18, 2025) average flows for Wakulla and Sally Ward springs are 589 cfs and 24.2 cfs, respectively. The combined long-term spring flow for both systems is 613.2 cfs, which exceeds the established Minimum Flow of 538 cfs by 75.2 cfs.

Figure 19: Wakulla Spring flows

Data from October 1, 2023, through August 19, 2025, represent discrete measurements. Daily statistics are based on the October 23, 2004, through August 19, 2025, period of record.



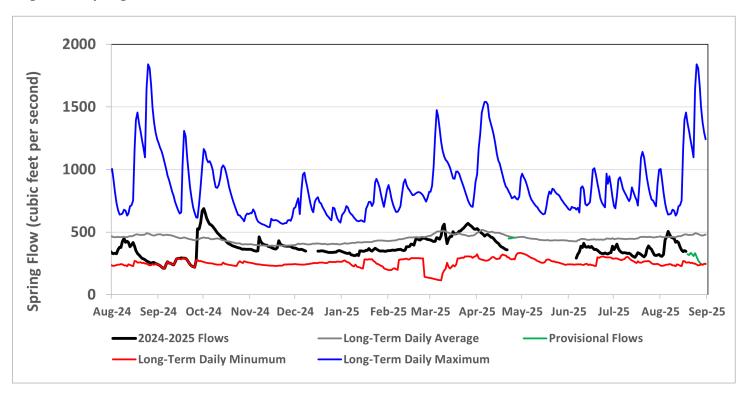


St. Marks River Rise. The mean daily spring flow for August 2025 at the St. Marks River Rise was 355 cfs, based on the available USGS provisional data which extends through August 31, 2025 (Figure 20). This was below the long-term (October 1, 1956, through August 31, 2025) average flow for the month of August of 472 cfs.

The current 30-year moving average spring flow for the St. Marks River Rise based on the most recent approved USGS data (November 15, 1993, through December 3, 2024) is 423 cfs. If the provisional data from December 4, 2024, through August 31, 2025, are included, the 30-year moving average spring flow for the St. Marks River Rise is 422 cfs.

The established Minimum Flow for the St. Marks River Rise is 419 cfs. Whether using the approved or provisional data, the 30-year moving average flow exceeded the established Minimum Flow for the St. Marks River Rise by 4 cfs and 3 cfs, respectively.

Figure 20: Spring flows for the St. Marks River Rise

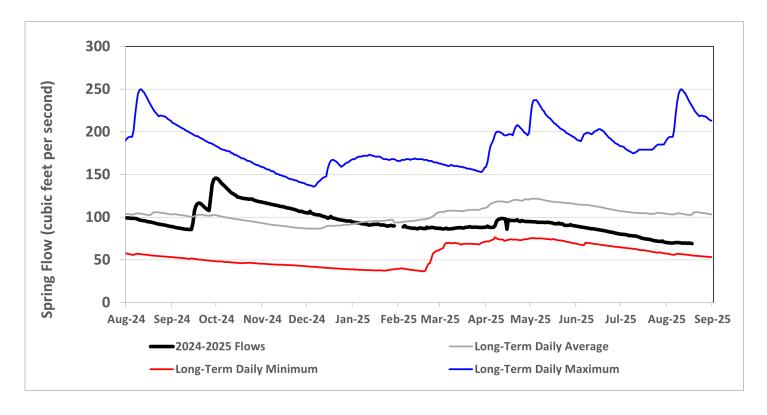




Jackson Blue Spring. Daily flows at Jackson Blue Spring for the month of August 2025 averaged 70.0 cfs. This was below the long-term average flow of 104.1 cfs for the month of June, based on the December 21, 2004, through August 31, 2025, period of record (Figure 21). Flows from Jackson Blue Spring have been below the long-term average flow since January 2025.

Figure 21: Spring flows for Jackson Blue Spring

Data represents daily averages. Long-term flows represent the daily average between December 21, 2004, and August 31, 2025.



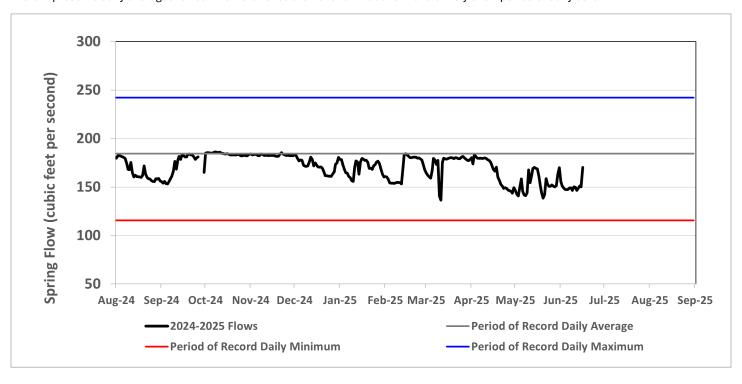


Gainer Spring Group. During June 2025 (June 1 to June 16, 2025), the average flow at the Gainer Spring Group was 151 cfs (Figure 22). The record period (October 28, 2019, through June 16, 2025) average monthly spring flow for the month of June is 183 cfs. It should be noted there is a relatively brief period of record for this system, and spring flows among the highest and lowest on record are to be expected. Data collection was interrupted on July 2, 2025, due to malfunctioning equipment and will resume in September 2025.

Throughout the time-series, there are several drops and recoveries in the spring flow. This is caused by Econfina Creek spiking in stage adjacent to the spring group after rain events. The extra pressure exerted on the groundwater by the higher surface water in the stream slows flow from the spring group. Since Econfina Creek does not tend to stay high for long after the conclusion of a rain event as the stage level quickly drops, the flow from the spring group recovers since there is less head pressure from the stream.

Figure 22: Gainer Spring Group flows

Data represents daily averages. Streamflow statistics are not shown due to the relatively short period of daily data.



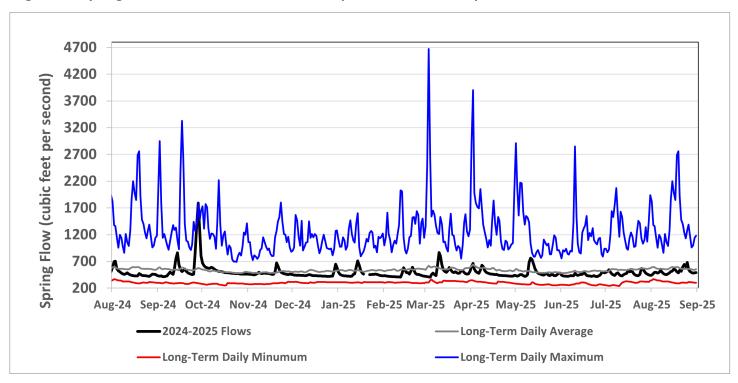


Middle Econfina Creek. The mean daily flow for August 2025 at Middle Econfina Creek was 457 cfs, based on the available USGS provisional data which extends through August 31, 2025 (Figure 23). This was below the long-term (October 1, 1935, through August 31, 2025) average flow for the month of August of 572 cfs.

The current 30-year moving average flow for Middle Econfina Creek based on the most recent approved USGS data (October 1, 1935, through December 3, 2023) is 537 cfs. If the provisional data from December 4, 2024, through August 31, 2025, are included, the 30-year moving average flow for Middle Econfina Creek is 517 cfs.

A Minimum Flow of 486 cfs was formally adopted on June 29, 2025, for Middle Econfina Creek. Whether using the approved or provisional data, the 30-year moving average flow exceeded the established Minimum Flow for Middle Econfina Creek by 51 cfs and 32 cfs, respectively.

Figure 23: Spring flows for Middle Econfina Creek (Econfina @ Bennett)





Aquifer Levels

In the middle of August 2025, of a total of nine Floridan aquifer monitor wells, five were classified as within normal ranges, three were classified as below normal, and one well was classified as having water levels in above normal ranges (Figures 24-30). The three Floridan monitor wells classified as below normal were Jackson Still Floridan monitor well (NWFID 5417) in northern Walton County, Sand Hill Upper Floridan monitor well (NWFID 5597) in northwestern Okaloosa County, and Pittman VISA monitor well (NWFID 5266) in eastern Jackson County (Figure 27). Jackson Still and Sand Hill Upper Floridan monitor wells have continued to have low water levels for the past several months. The Floridan well with groundwater levels classified as above normal was USGS Benchmark monitor well (NWFID 697) in west-central Wakulla County (Figure 29).

Two of three sand-and-gravel aquifer monitor wells had water levels that were classified as within normal ranges in mid-August 2025. Water levels at Allen Tower Deep monitor well (NWFID 5401) in northern Santa Rosa County had been classified as below normal for several months but increased just enough to be classified as within normal ranges. Weller Ave Deep monitor well (NWFID 1382) in southern Escambia County had been classified as above normal for several months but has been classified as within normal ranges since June 2025 (Figure 30). Oak Grove Deep monitor well (NWFID 5479) continued to record below normal groundwater levels, as it has for several months (Figure 24).



Figure 24: Floridan aquifer monitor wells and aquifer level percentiles for mid-August 2025 Percentile class rankings are based on each well's period of record. All wells have a minimum of 20 years of data.

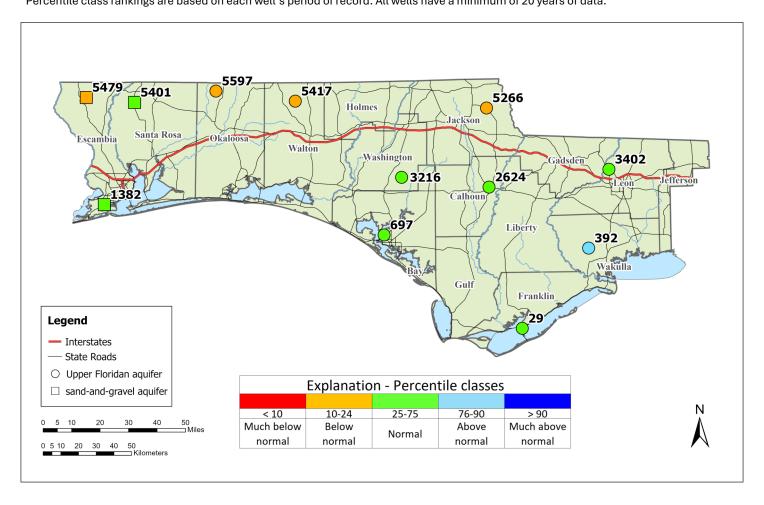




Figure 25: Daily Upper Floridan aquifer levels at USGS-Lake Jackson well (NWFID 3402), Leon County Land surface elevation is 121.40 ft, NAVD 88

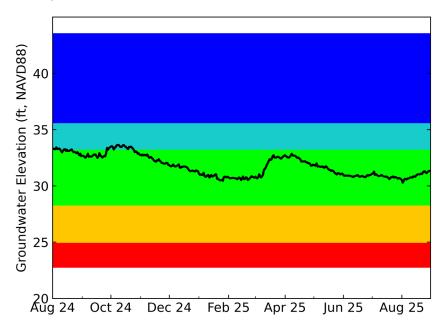
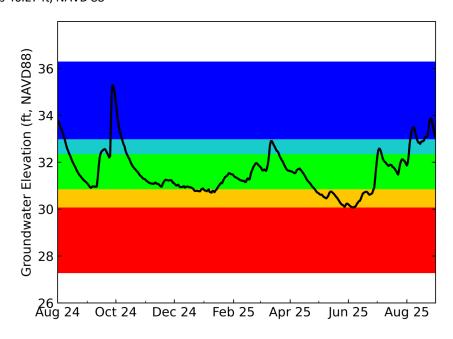


Figure 26: Daily Upper Floridan aquifer levels at USGS Benchmark well (NWFID 392), Wakulla County Land surface elevation is 46.27 ft, NAVD 88



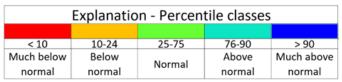




Figure 27: Daily Upper Floridan aquifer levels at NWFWMD Pittman Visa well (NWFID 5266), Jackson County Land surface elevation is 127.31 ft, NAVD 88

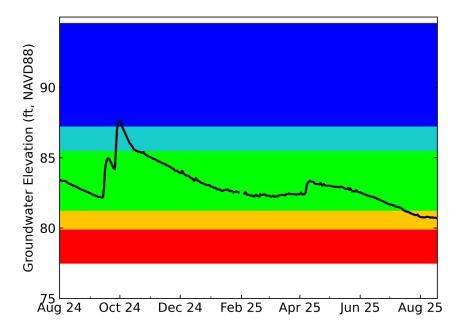


Figure 28: Daily Upper Floridan aquifer levels at USGS-422A Near Greenhead well (NWFID 3216), Washington County

Land surface elevation is 66.75 ft, NAVD 88

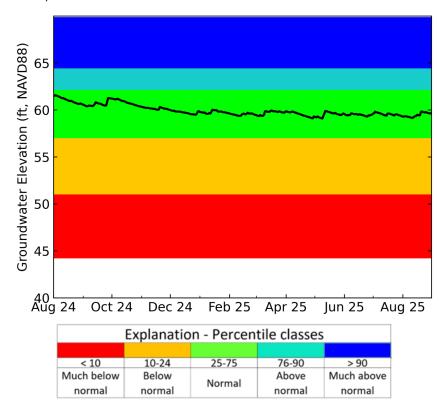




Figure 29: Daily Upper Floridan aquifer levels at Fannin Airport well (NWFID 697), Washington County Land surface elevation is 4.05 ft, NAVD 88

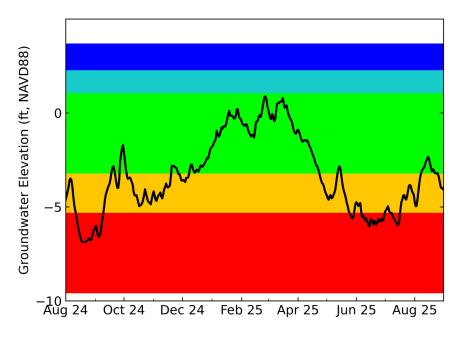


Figure 30: Daily sand-and-gravel aquifer levels at NWFWMD Weller Ave Deep well (NWFID 1382), Escambia County

Land surface elevation is 25.09 ft, NAVD 88

