



# **Hydrologic Conditions Report**

## **July 2025**

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### **Summary**

July 2025 was characterized by below-normal precipitation and above-normal temperatures (averaging around 83.7 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 July 2025, an average of 6.70 inches of rain was recorded across the Panhandle. This amount was 0.47 inches (17.3%) below the District normal rainfall for the month of July, which is 7.17 inches (Table 1; Figures 1 - 7). Normal rainfall is defined as average monthly rainfall for the 1991-2020 reference period.

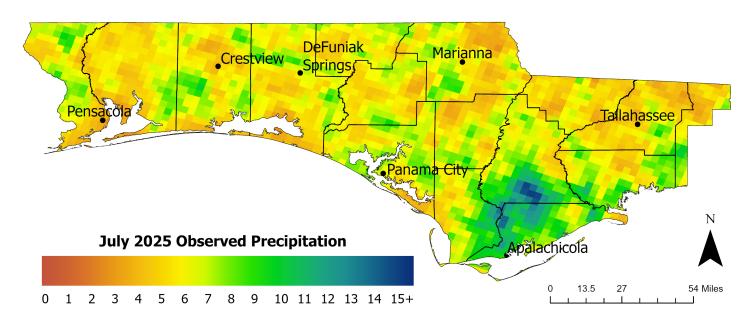
There were many small rain events throughout July 2025 in the District, most of them caused by localized convection or the land-sea breeze circulation regime that is dominant during the summer months in Florida. The most significant rain event occurred on July 1-2, 2025, when storms associated with a weak cold front passed through the District, producing up to 4.00 inches of rain in some parts of Leon, Liberty, and Walton Counties. The Niceville, Florida, rain gauge collected 3.02 inches of rain during this event, which was about a third of the station's total observed rainfall for the month, 8.99 inches (Table 1).

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

Station	July Normal Rainfall (1991 to 2020)	July 2025 Observed Rainfall	Percent Difference
Tallahassee Regional Airport	7.14	3.14	-77.8%
Marianna Regional Airport	5.10	3.10	-48.8%
Niceville, FL	8.91	8.99	0.9%
Pensacola Regional Airport	7.89	2.93	-91.7%

Source: <a href="https://www.weather.gov/wrh/Climate?wfo=tae">https://www.weather.gov/wrh/Climate?wfo=tae</a>

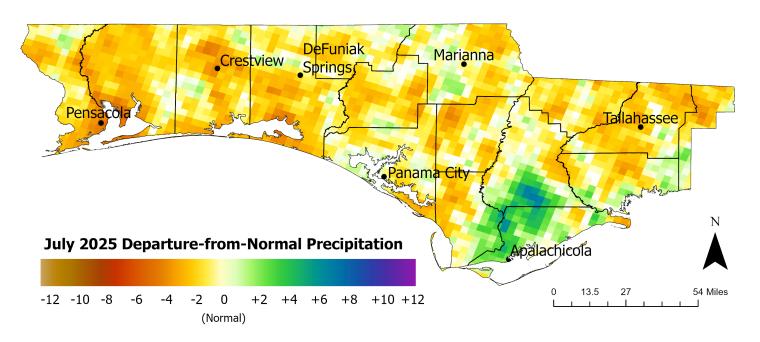
Figure 1: District-wide July 2025 observed rainfall



Source: <a href="https://water.weather.gov/precip/download.php">https://water.weather.gov/precip/download.php</a>

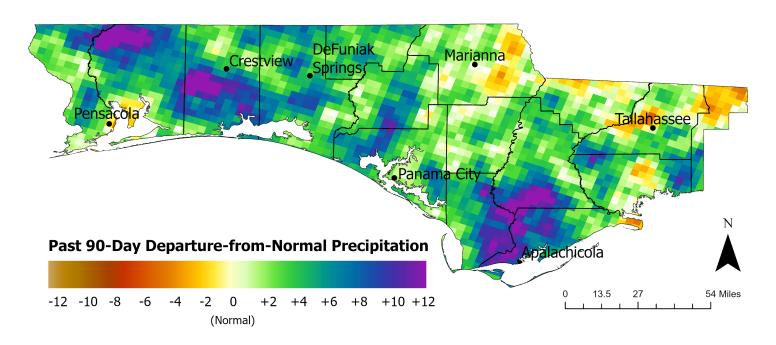


Figure 2: District-wide July 2025 precipitation departure from normal



Source: <a href="https://water.weather.gov/precip/download.php">https://water.weather.gov/precip/download.php</a>

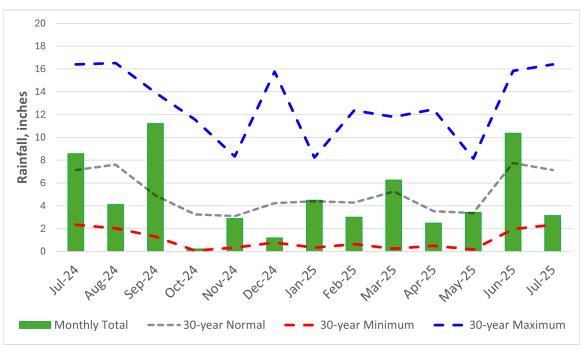
Figure 3: District-wide precipitation departure from normal for the previous 90 days



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

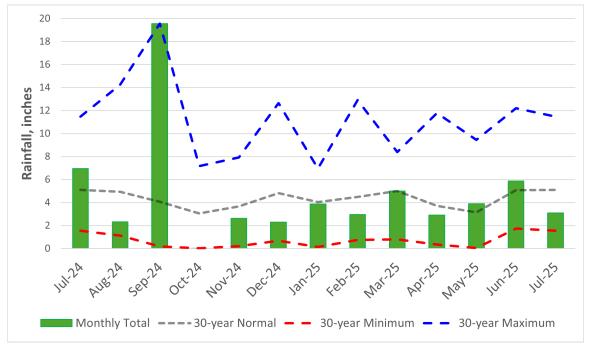


Figure 4: Observed rainfall at Tallahassee Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



Source: <a href="https://www.weather.gov/wrh/Climate?wfo=tae">https://www.weather.gov/wrh/Climate?wfo=tae</a>

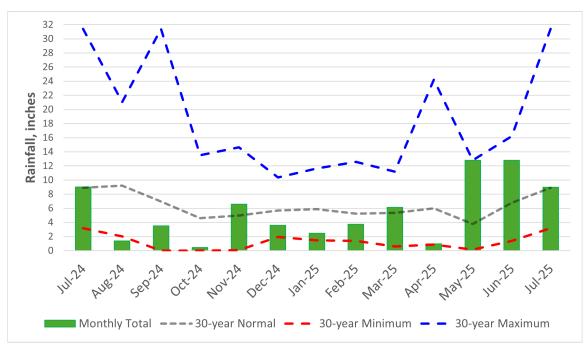
Figure 5: Observed rainfall at Marianna Regional Airport for the past 13 months compared to the 30 -year normal, minimum, and maximum precipitation for each month



Source: <a href="https://www.weather.gov/wrh/Climate?wfo=tae">https://www.weather.gov/wrh/Climate?wfo=tae</a>

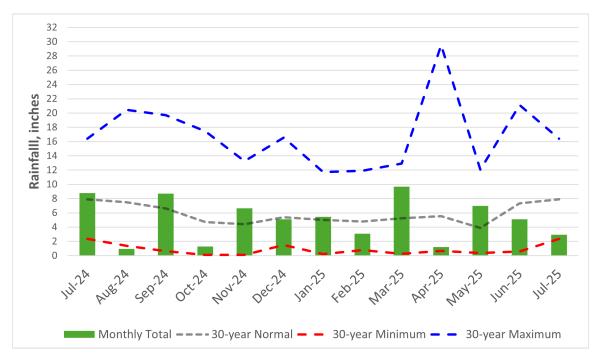


Figure 6: Observed rainfall in Niceville for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



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 July 31, 2025, for August 2025 shows a slight chance for above-normal temperatures and a likely chance for above-normal rainfall across the Panhandle (Figure 8).

As of August 11, 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.

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 is still predicting above-normal hurricane activity in the Atlantic basin but the chances have dropped from 60% to 50%. There is a 35% chance of the season being near-normal. A near-normal season would have 6-18 named storms. One named storm, Tropical Storm Chantal, formed during July 2025 in the Atlantic basin. Tropical Storm Chantal crossed over southern Florida near Naples and did not affect the Panhandle.

Source: <a href="https://www.cpc.ncep.noaa.gov/products/predictions/30day/">https://www.cpc.ncep.noaa.gov/products/predictions/30day/</a>
<a href="https://www.cpc.ncep.noaa.gov/products/analysis\_monitoring/lanina/enso\_evolution-status-fcsts-web.pdf">https://www.cpc.ncep.noaa.gov/products/analysis\_monitoring/lanina/enso\_evolution-status-fcsts-web.pdf</a>

Monthly Temperature Outlook Valid: August 2025 Issued: July 31, 2025 Above (F) Monthly Precipitation Outlook Equal Equal Valid: August 2025 Chances Chances Equal Chances Below Above Equal Below Above Equal Chances Equal

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

Source: <a href="https://www.cpc.ncep.noaa.gov/products/predictions/30day/">https://www.cpc.ncep.noaa.gov/products/predictions/30day/</a>



#### **Drought Conditions**

The U.S. Drought Monitor report released for July 29, 2025, showed abnormally dry conditions along the Florida-Georgia border in the central and eastern parts of the District (Figure 9). The frequent rain events throughout the month were not enough to completely stave off dry conditions in the Panhandle during July 2025 due to the high temperatures and high evapotranspiration rates.

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

Figure 9: Florida Drought Conditions on July 29, 2025

# U.S. Drought Monitor Florida

July 29, 2025 (Released Thursday, Jul. 31, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	57.67	42.33	14.16	9.03	0.80	0.00
Last Week 07-22-2025	57.79	42.21	14.16	9.03	0.80	0.00
3 Month s Ago 04-29-2025	1.26	98.74	82.20	46.75	16.87	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 07-30-2024	86.82	13.18	0.24	0.00	0.00	0.00

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

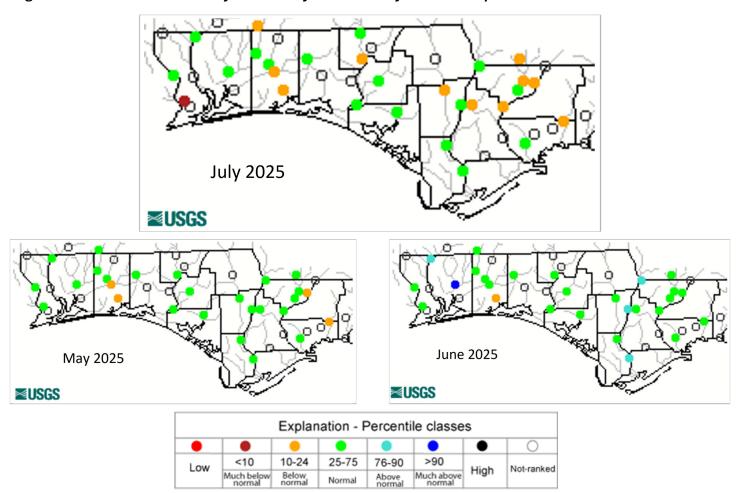
Source: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?FL



#### **Surface Water**

Streamflows. During July 2025, sixteen streamflow stations in the District recorded flows within normal ranges, eleven streamflow stations recorded below normal flows, and one station recorded much below normal flows (Figures 10 – 16). The spatial distribution of streamflow percentile classes generally mirrored the observed precipitation distribution (Figure 1 & Figure 10). Most stations that were recording flows below normal ranges are also in areas that were affected by abnormally dry conditions throughout July 2025 (Figure 9). There was one station, Elevenmile Creek near West Pensacola, that recorded flows that were classified as much below normal (Figure 10). Two stations with depicted time-series, the St. Marks River near Newport (Figure 11) and the Ochlockonee River near Havana (Figure 12), recorded flows that dipped into much below normal ranges during July 2025 but were below normal for most of the month.

Figure 10: Northwest Florida May 2025 to July 2025 monthly streamflow percentiles



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



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

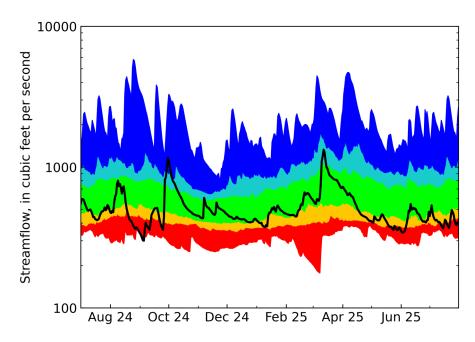


Figure 12: Daily streamflows and percentile ranges for USGS Station 02329000 Ochlockonee River Near Havana, Florida

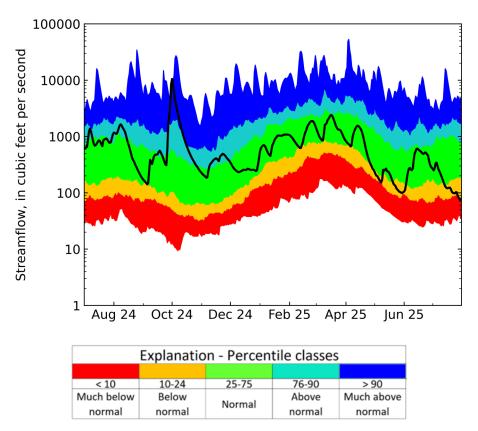




Figure 13: Daily streamflows and percentile ranges for USGS Station 02358700 Apalachicola River Near Blountstown, Florida

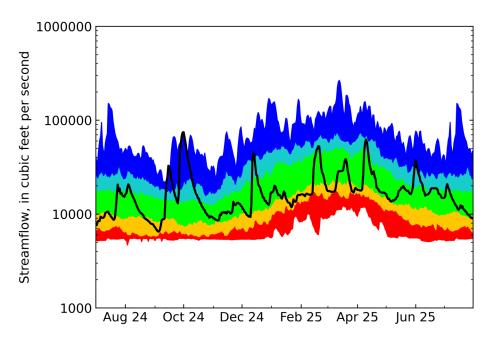
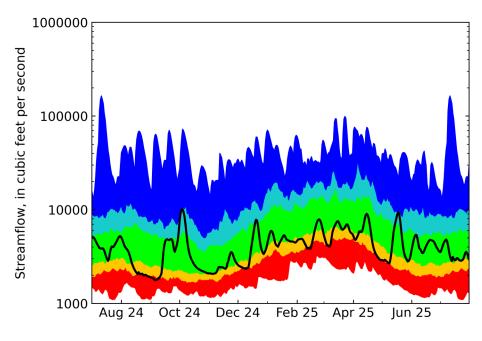


Figure 14: Daily streamflows and percentile ranges for USGS Station 02366500 Choctawhatchee River Near Bruce, Florida



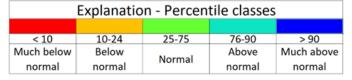




Figure 15: Daily streamflows and percentile ranges for USGS Station 02370000 Blackwater River Near Baker, Florida

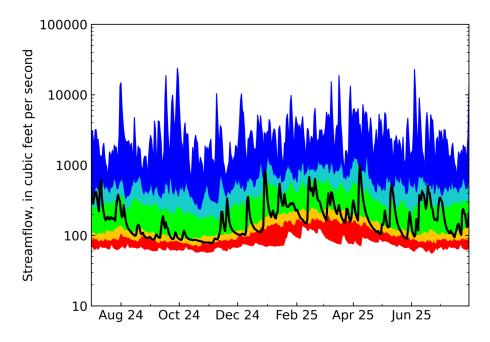
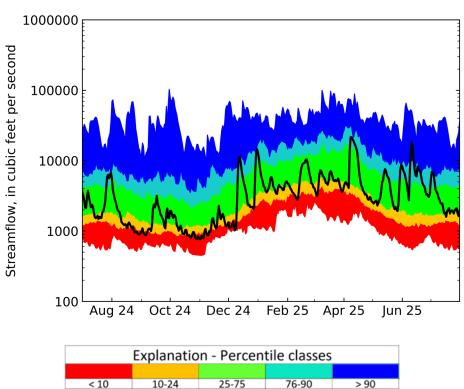


Figure 16: Daily streamflows and percentile ranges for USGS Station 02375500 Escambia River Near Century, Florida



Normal

Above

normal

Much above

normal

Below

normal

Much below

normal



Lake Levels. Water levels at Lake Jackson in Leon County decreased by 0.37 feet during July 2025 until a rain event caused an increase in stage of 0.11 feet on July 23, 2025. The stage level at Lake Jackson continued to decrease 0.19 feet following the rain event, ending the month with a stage level of 80.60 feet, NAVD 1988 (Figure 17). The long-term (January 29, 2003, to July 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 and decreased with frequent rain events throughout July 2025, increasing a net total of 0.15 feet. Piney Lake ended the month with a stage level of 48.97 feet, NAVD 1988 (Figure 18).

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

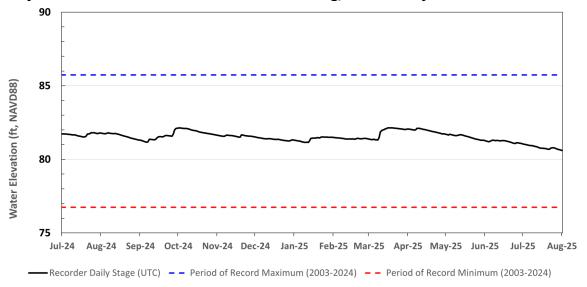
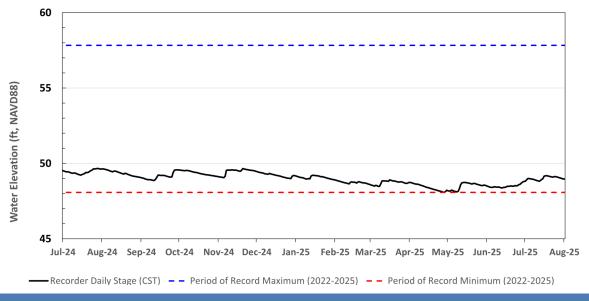


Figure 18: Daily water levels at Piney Lake, Washington County





#### **Spring Flows**

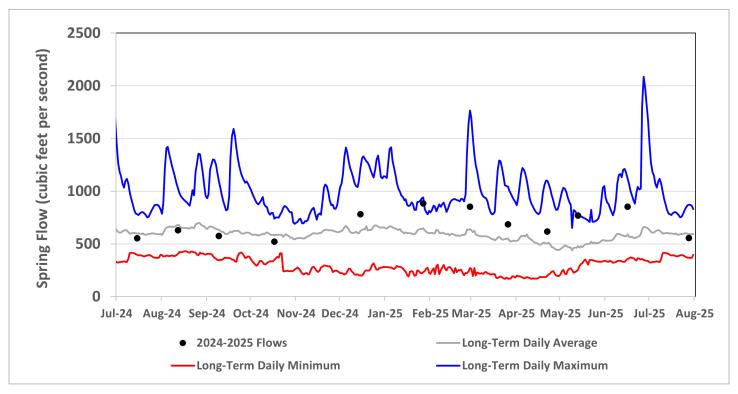
Wakulla and Sally Ward Spring System. Flow from Wakulla Spring decreased 297 cubic feet per second (cfs) between the measurements taken in June and July 2025, dropping below the long-term daily average for the first time since December 2024. The most recent flow measurement for Wakulla Spring was 557 cfs, which was conducted on July 28, 2025 (Figure 19). The long-term (October 23, 2024, to July 28, 2025) average flow for the month of July is 603 cfs.

Flow at Sally Ward Spring decreased by 3.5 cfs between the measurements taken in June and July 2025. The most recent flow measurement for Sally Ward was 22.1 cfs on July 28, 2025. This measurement was 0.7 cfs higher than the long-term (November 1, 2004, to July 28, 2025) average flow for the month of July of 21.4 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 July 28, 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: Daily Wakulla Spring flows

Data from October 1, 2023, through July 28, 2025, represent discrete measurements. Daily statistics are based on the October 23, 2004, through July 28, 2025, period of record.



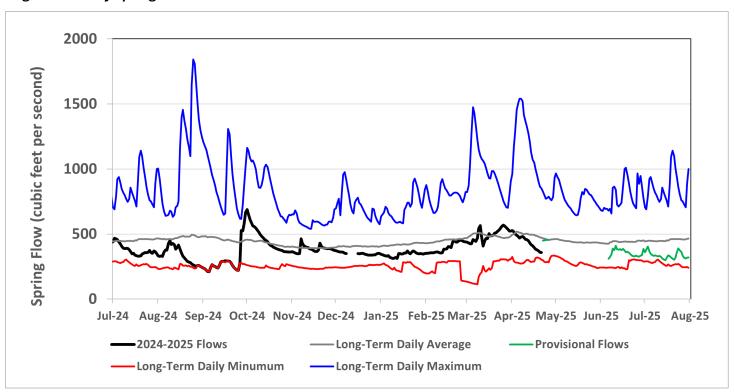


St. Marks River Rise. The mean daily spring flow for July 2025 at the St. Marks River Rise was 360 cfs, based on the available USGS provisional data which extends through July 31, 2025 (Figure 20). This was below the long-term (October 1, 1956, through July 31, 2025) average flow for the month of July of 453 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 July 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: Daily spring flows for the St. Marks River Rise

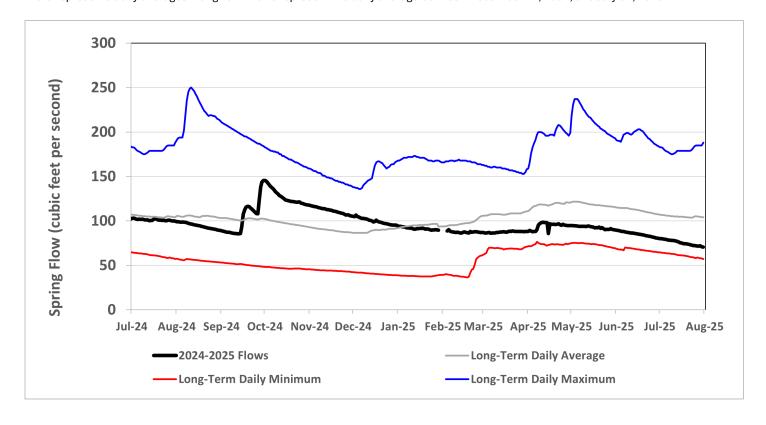




Jackson Blue Spring. Daily flows at Jackson Blue Spring for the month of July 2025 averaged 75.5 cfs. This was below the long-term average flow of 105.1 cfs for the month of June, based on the December 21, 2004, through July 31, 2025, period of record (Figure 21). Flows from Jackson Blue Spring have been below the long-term average flow since January 2025.

Figure 21: Daily spring flows for Jackson Blue Spring

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



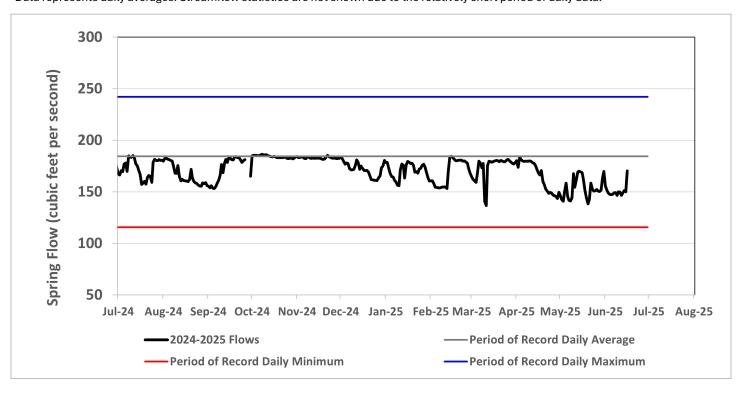


Gainer Spring Group. During June 2025 (June 1 to June 16, 2025), the average flow at the Gainer Spring Group was 151 cfs (Figure 22). The record period (October 28, 2019, through June 16, 2025) average monthly spring flow for the month of June is 183 cfs. It should be noted there is a relatively brief 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.

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 July 2025 at Middle Econfina Creek was 479 cfs, based on the available USGS provisional data which extends through July 31, 2025 (Figure 23). This was below the long-term (October 1, 1935 through July 31, 2025) average flow for the month of July of 549 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 July 31, 2025, are included, the 30-year moving average flow for Middle Econfina Creek is 535 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 49 cfs, respectively.

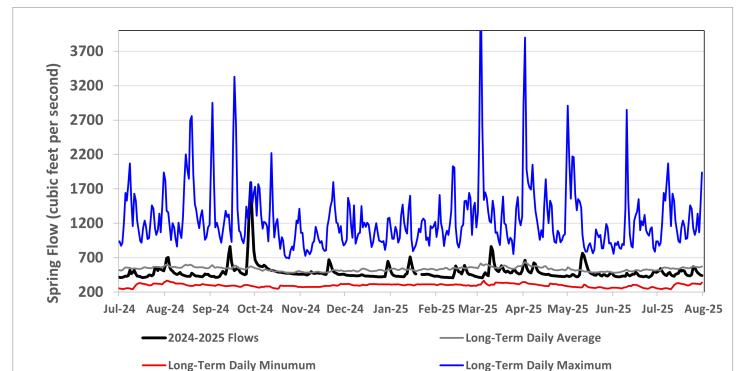


Figure 23: Daily spring flows for Middle Econfina Creek (Econfina @ Bennett)



#### **Aquifer Levels**

In the middle of July 2025, two-thirds of the Floridan aquifer monitor wells were classified as within normal ranges. There were two Floridan monitor wells classified as below normal and one well classified as much below normal (Figures 24 – 30). The Floridan wells classified as below normal were Jackson Still Floridan monitor well (NWFID 5417) in northern Walton County and Sand Hill Upper Floridan monitor well (NWFID 5597) in northwestern Okaloosa County. 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 much below normal was Fannin Airport Floridan monitor well (NWFID 697) in coastal Bay County (Figure 29).

Two of three sand-and-gravel aquifer monitor wells had water levels that were classified as within normal ranges in July 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-July 2025
Percentile class rankings are based on each well's period of record. All wells have a minimum of 20 years of data.

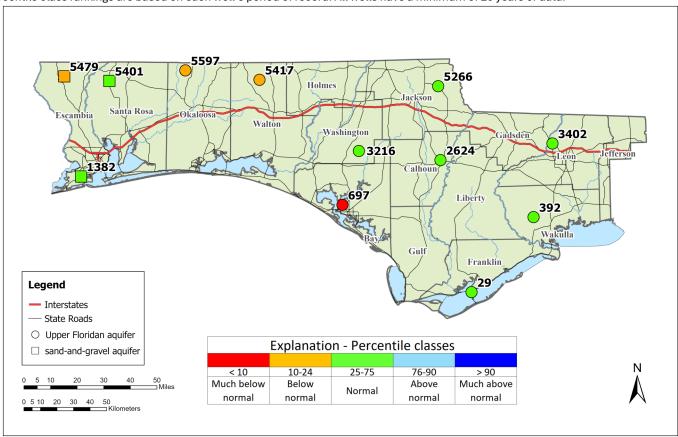




Figure 25: Daily Upper Floridan aquifer levels at USGS-Lake Jackson well (NWFID 3402), Leon County Land surface elevation is 121.40 ft, NAVD 88

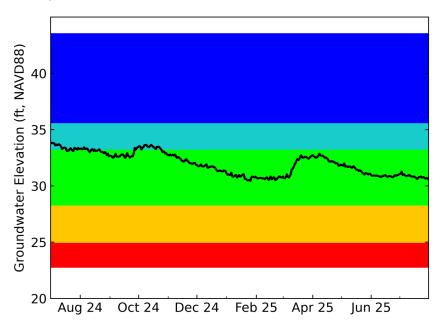


Figure 26: Daily Upper Floridan aquifer levels at USGS Benchmark well (NWFID 392), Wakulla County Land surface elevation is 46.27 ft, NAVD 88

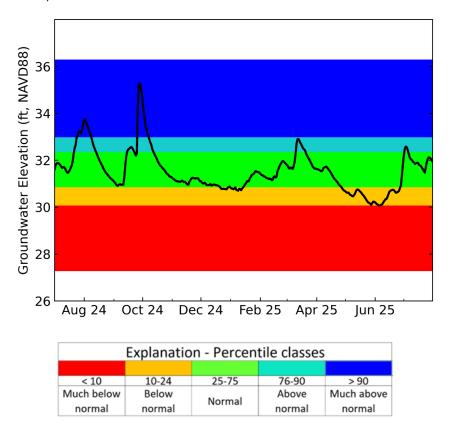




Figure 27: Daily Upper Floridan aquifer levels at NWFWMD Pittman Visa well (NWFID 5266), Jackson County Land surface elevation is 127.31 ft, NAVD 88

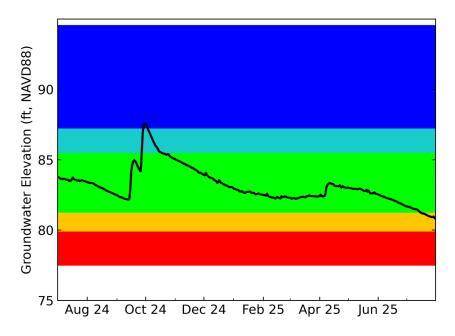


Figure 28: Daily Upper Floridan aquifer levels at USGS-422A Near Greenhead well (NWFID 3216), Washington County

Land surface elevation is 66.75 ft, NAVD 88

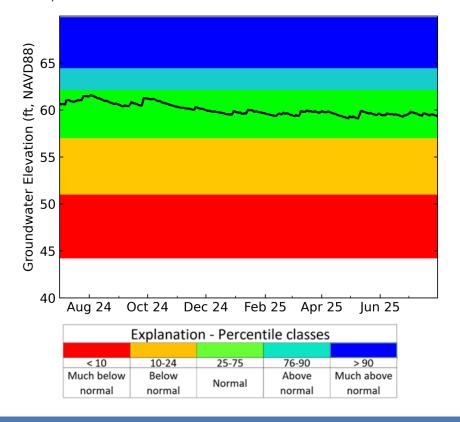




Figure 29: Daily Upper Floridan aquifer levels at Fannin Airport well (NWFID 697), Washington County Land surface elevation is 4.05 ft, NAVD 88

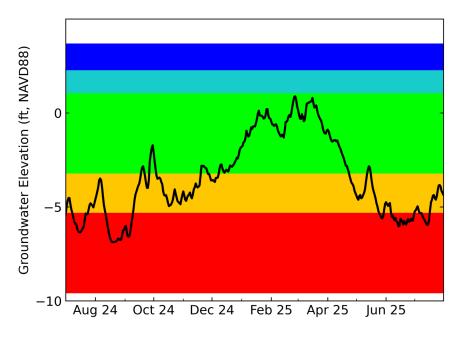


Figure 30: Daily sand-and-gravel aquifer levels at NWFWMD Weller Ave Deep well (NWFID 1382), Escambia County

Land surface elevation is 25.09 ft, NAVD 88

