



Hydrologic Conditions Report

June 2025

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Summary

June 2025 was characterized by above-normal precipitation and above-normal temperatures (averaging around 80.8 degrees Fahrenheit) that contributed to generally normal hydrologic conditions across the Panhandle. Florida entered its climatological wet season as of mid-May and frequent rain events staved off drought conditions throughout the month.

Rainfall

In June 2025, an average of 7.68 inches of rain was recorded across the Panhandle. This amount was 1.22 inches (17.3%) above the District normal rainfall for the month of June, which is 6.46 inches. Though the average across the Panhandle was above normal, rainfall at Pensacola Airport was 2.22 inches lower than normal. (Table 1; Figures 1 - 7). Normal rainfall is defined as average monthly rainfall for the 1991-2020 reference period.

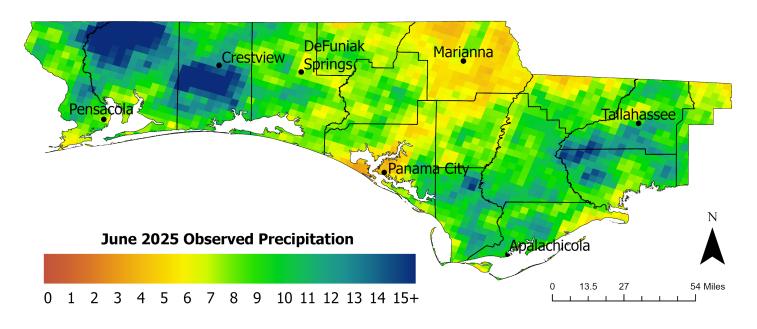
There were many rain events throughout June 2025 in the District, most of them caused by localized convection or the land-sea breeze circulation regime that is dominant during the summer months in Florida. One significant rain event occurred on June 9, 2025, when storms caused by rising air along an upper-level trough combined with localized convection resulted in around 10 inches of rainfall in Northern Santa Rosa County. Another significant precipitation event occurred on June 25-26, 2025, when low-level convergence of moist airmasses produced 0.5 to 4 inches of rain and hail ranging in size between pea-sized and walnut-sized in Leon, Gadsden, Jackson, and Wakulla Counties.

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

| Station | June Normal Rainfall (1991 to 2020) | June 2025 Observed Rainfall | Percent Difference | |
|------------------------------|--|--------------------------------|--------------------|--|
| Tallahassee Regional Airport | 7.76 | 10.37 | 28.8% | |
| Marianna Regional Airport | 5.07 | 5.87 | 14.6% | |
| Niceville, FL | 6.79 | 12.81 | 61.4% | |
| Pensacola Regional Airport | 7.32 | 5.10 | -35.7% | |

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

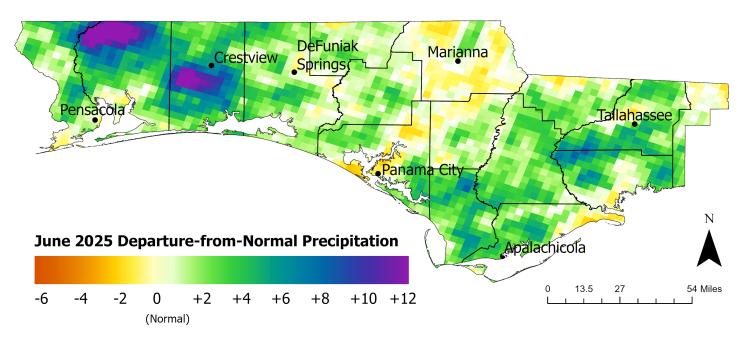
Figure 1: District-wide June 2025 observed rainfall



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

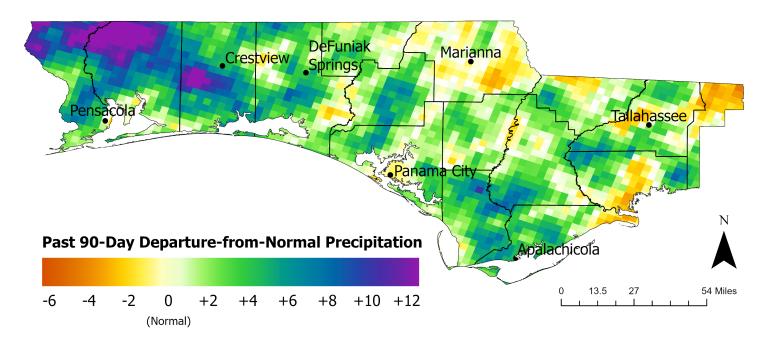


Figure 2: District-wide June 2025 precipitation departure from normal



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

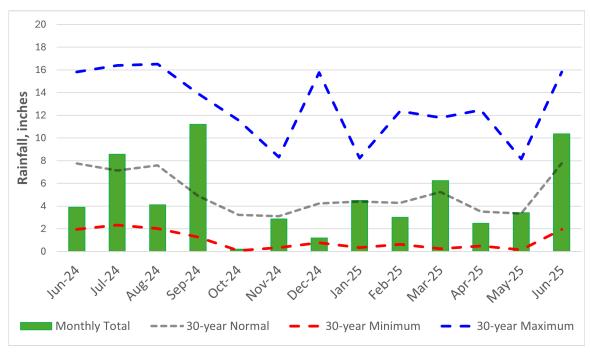
Figure 3: District-wide precipitation departure from normal for the previous 90 days



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

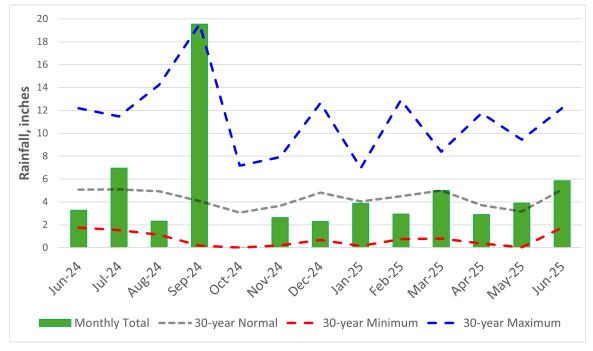


Figure 4: Observed rainfall at Tallahassee Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



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

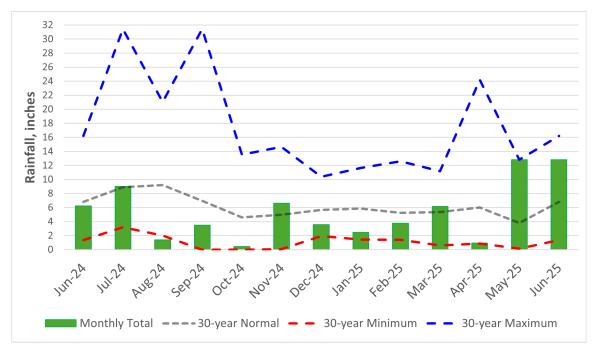
Figure 5: Observed rainfall at Marianna Regional Airport for the past 13 months compared to the 30 -year normal, minimum, and maximum precipitation for each month



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

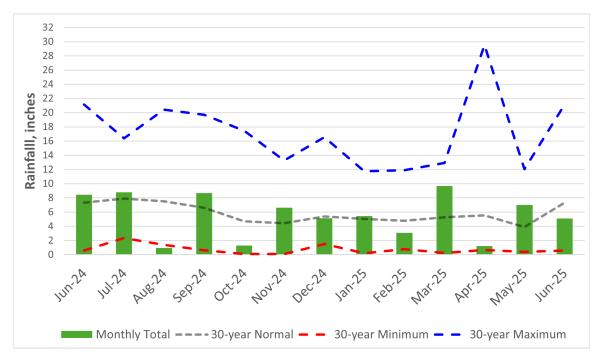


Figure 6: Observed rainfall in Niceville for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



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 June 30, 2025, for July 2025 shows a slight-to-likely chance for above-normal temperatures and a slight chance for above-normal rainfall amounts across the Panhandle (Figure 8).

As of July 7, 2025, ENSO-neutral conditions were present and are favored to persist through the summer months (82% 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. According to the hurricane season outlook released May 22, 2025, NOAA is predicting above-normal hurricane activity in the Atlantic basin. Two named storms, Tropical Storm Andrea and Tropical Storm Barry, formed during June 2025 in the Atlantic basin. Neither affected the District.

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

Monthly Temperature Outlook Valid: July 2025 Issued: June 30, 2025 Above Equal Chances (F) Monthly Precipitation Outlook Valid: July 2025 Issued: June 30, 2025 Equal Below Above Chances Above Probability (Percent Chance) Equal Equal Below Chances Above Equal Below Equal

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





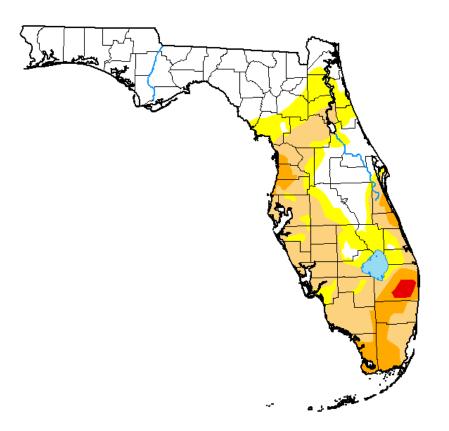
Drought Conditions

Frequent rain events throughout the month staved off drought conditions in the Panhandle during June 2025. The U.S. Drought Monitor report released for July 1, 2025, showed no drought conditions present in the District (Figure 9).

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 1, 2025

U.S. Drought Monitor Florida



July 1, 2025 (Released Thursday, Jul. 3, 2025) Valid 8 a.m. EDT

Drought Conditions (Percent Area)

| | - | | | | | |
|---|-------|-------|-------|-------|-------|------|
| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
| Current | 45.36 | 54.64 | 36.80 | 9.00 | 0.77 | 0.00 |
| Last Week 06-24-2025 | 41.72 | 58.28 | 39.40 | 10.40 | 0.77 | 0.00 |
| 3 Month s Ago 04-01-2025 | 45.56 | 54.44 | 39.95 | 11.52 | 0.00 | 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 07-02-2024 | 42.27 | 57.73 | 22.98 | 0.00 | 0.00 | 0.00 |

| Int | 0 | ne | it۱ | 1. |
|------|---|----|-----|----------|
| 1110 | U | 10 | 11 | <u> </u> |

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

Author:

Curtis Riganti National Drought Mitigation Center









droughtmonitor.unl.edu

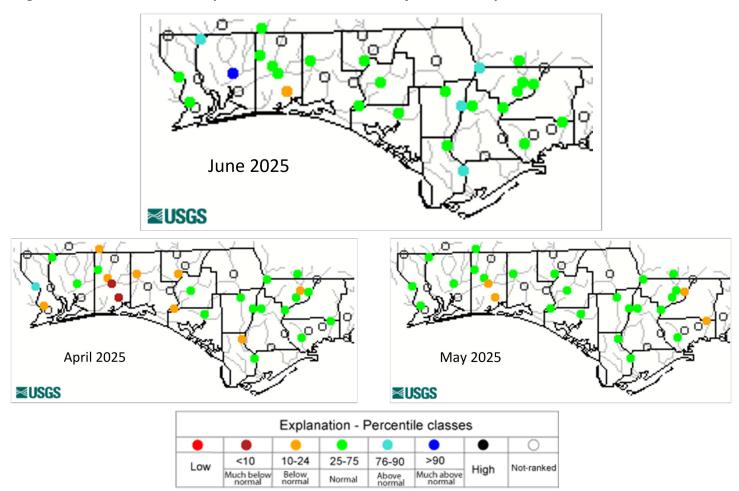
Source: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?FL



Surface Water

Streamflows. During June 2025, most streamflow stations in the District recorded flows within normal ranges (Figures 10 – 16). This is likely due to frequent precipitation events that occurred throughout the month, creating an overall surplus of rainfall for much of the District (Figures 2 & 3). Three stations along the Apalachicola River (Figure 13) and one station at the Escambia River near Century, Florida (Figure 16), recorded flows above normal. One station, Coldwater Creek near Milton, Florida, recorded flows that were much above normal, a result of over 20 inches of rainfall throughout the month upstream of the station. The only station recording flows below normal was Juniper Creek near Niceville, Florida, despite receiving over 12 inches of rain in the area upstream of the station. Juniper Creek near Niceville has been recording flows classified as below normal or much below normal for the past three months (Figure 10).

Figure 10: Northwest Florida April 2025 to June 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

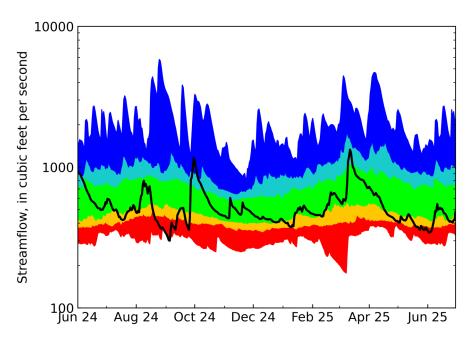


Figure 12: Daily streamflows and percentile ranges for USGS Station 02329000 Ochlockonee River Near Havana, Florida

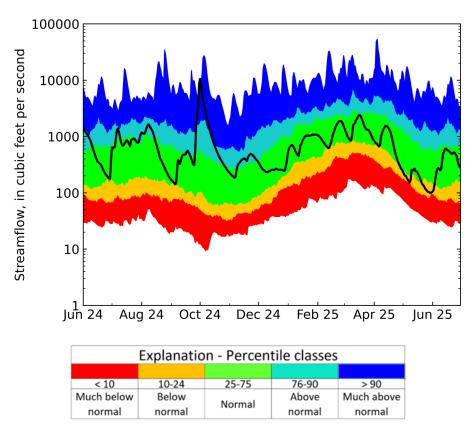




Figure 13: Daily streamflows and percentile ranges for USGS Station 02358700 Apalachicola River Near Blountstown, Florida

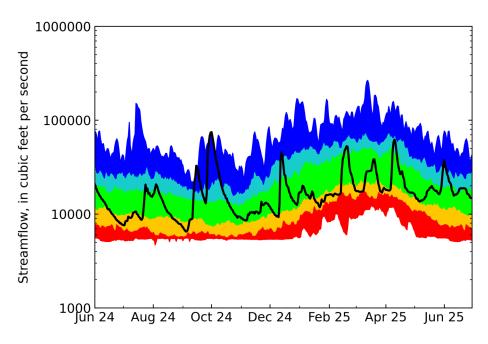
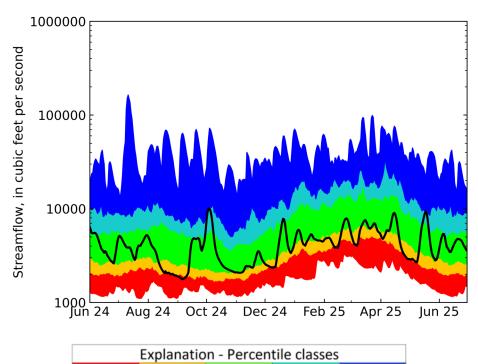


Figure 14: Daily streamflows and percentile ranges for USGS Station 02366500 Choctawhatchee River Near Bruce, Florida



25-75

Normal

76-90

Above

normal

> 90

Much above

normal

10-24

Below

normal

< 10

Much below

normal



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

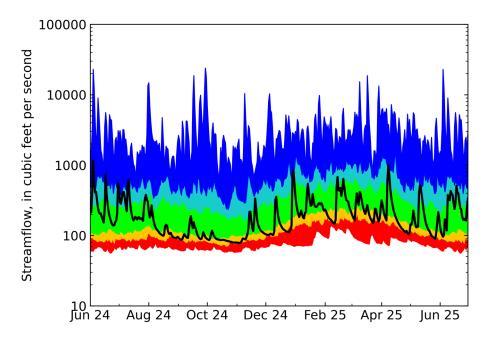
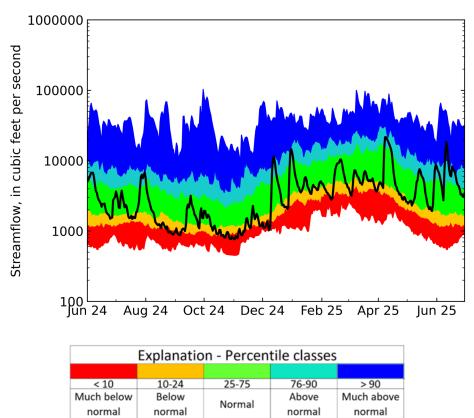


Figure 16: Daily streamflows and percentile ranges for USGS Station 02375500 Escambia River Near Century, Florida





Lake Levels. Water levels at Lake Jackson in Leon County decreased by 0.21 feet during the month. Lake Jackson ended the month with a stage level of 81.07 feet, NAVD 1988. (Figure 17). The long-term (January 29, 2003, to June 30, 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 remained generally stable around 48.46 feet, NAVD 1988, for the first half of the month before gradually increasing by 0.36 feet for the remainder of the month. Piney Lake ended the month with a stage level of 48.82 feet, NAVD 1988 (Figure 18).

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

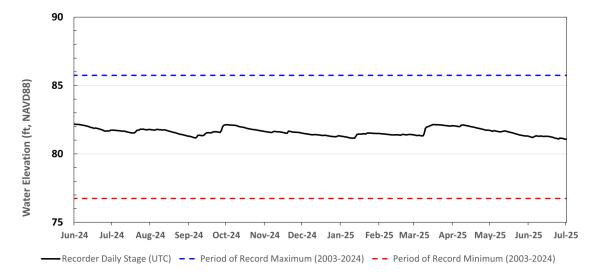
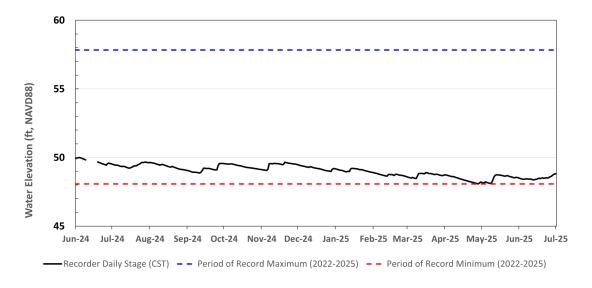


Figure 18: Daily water levels at Piney Lake, Washington County





Spring Flows

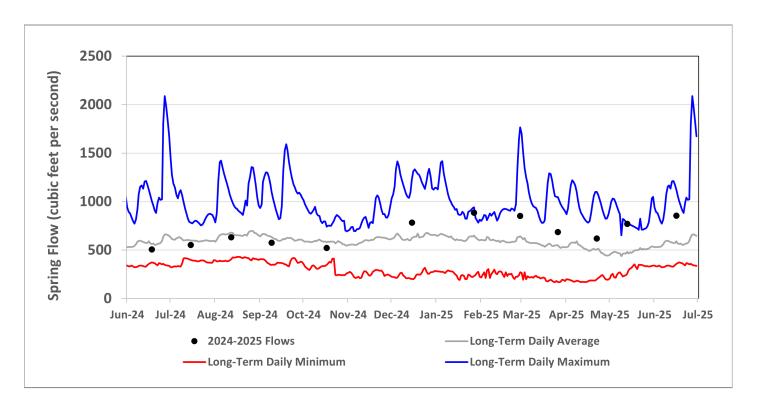
Wakulla and Sally Ward Spring System. Flow from Wakulla Spring increased 85 cubic feet per second (cfs) between the measurements taken in May and June 2025. Flow from Wakulla Spring has remained above the long-term daily average flow since December 2024. The most recent flow measurement for Wakulla Spring was 854 cfs, which was conducted on June 16, 2025 (Figure 19). The long-term (October 23, 2024, to June 16, 2025) average flow for the month of June is 580 cfs.

Flow at Sally Ward Spring increased by 3 cfs between the measurements taken in May and June 2025. The most recent flow measurement for Sally Ward was 25.6 cfs on June 16, 2025. This measurement was 4 cfs lower than the long-term (November 1, 2024, to June 16, 2025) average flow for the month of June of 29.6 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 June 16, 2025) average flows for Wakulla and Sally Ward springs are 589 cfs and 24.3 cfs, respectively. The combined long-term spring flow for both systems is 613 cfs, which exceeds the established Minimum Flow of 538 cfs by 75 cfs.

Figure 19: Daily Wakulla Spring flows

Data from October 1, 2023, through June 16, 2025, represent discrete measurements. Daily statistics are based on the October 23, 2004, through June 16, 2025, period of record.



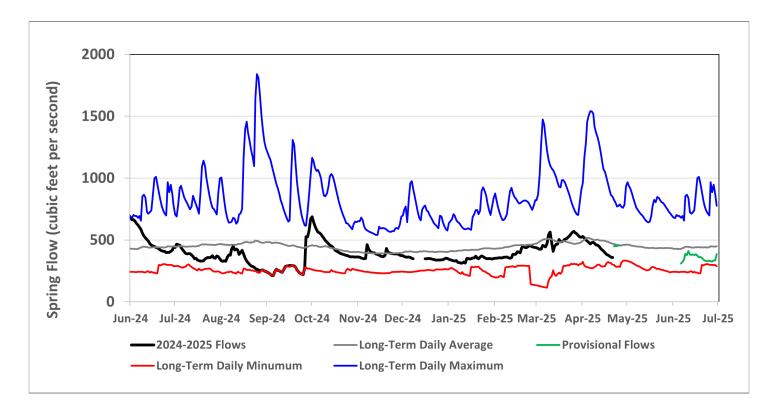


St. Marks River Rise. The mean daily spring flow for May 2025 at the St. Marks River Rise was 356 cfs, based on the available USGS provisional data which extends through June 30, 2025 (Figure 20). This was below the long-term (October 1, 1956, through June 30, 2025) average flow for the month of June of 439 cfs. Data collection paused on April 27, 2025, due to malfunctioning equipment and resumed June 5, 2025.

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 June 30, 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

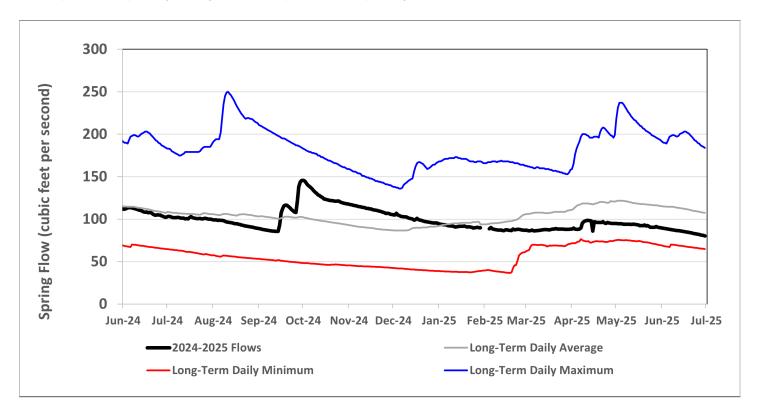




Jackson Blue Spring. Daily flows at Jackson Blue Spring for the month of June 2025 averaged 85.2 cfs. This was below the long-term average flow of 111.9 cfs for the month of June, based on the December 21, 2004, through June 30, 2025 period of record (Figure 21). Flows from Jackson Blue Spring have been 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 June 30, 2025.



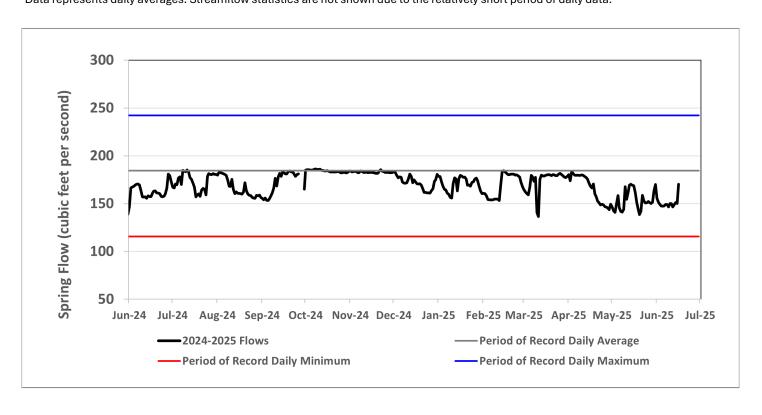


Gainer Spring Group. During June 2025 (June 1 to June 16, 2025), the average flow at the Gainer Spring Group was 151 cfs (Figure 22). The record period (October 28, 2019, through June 16, 2025) average monthly spring flow for the month of June is 183 cfs. It should be noted there is a relatively brief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

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.



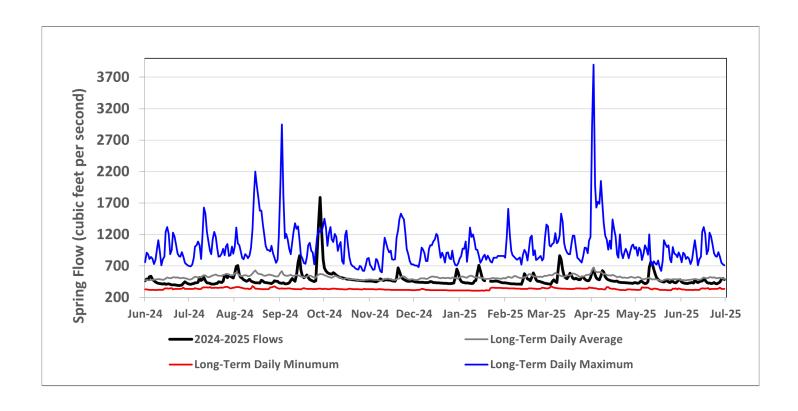


Middle Econfina Creek. The mean daily flow for June 2025 at Middle Econfina Creek was 444 cfs, based on the available USGS provisional data which extends through June 30, 2025 (Figure 23). This was below the long-term (October 1, 1935 through June 30, 2025) average flow for the month of June of 487 cfs.

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 June 30, 2025, are included, the 30-year moving average flow for middle Econfina Creek is 527 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 41 cfs, respectively.

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





Aquifer Levels

In the middle of June 2025, about half of the Floridan aquifer monitor wells were classified as within normal ranges. There were three 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, Sand Hill Upper Floridan monitor well (NWFID 5597) in northwestern Okaloosa County, and USGS Benchmark Floridan monitor well (NWFID 392) in west-central Wakulla 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).

Sand-and-gravel aquifer monitor wells have continued to record below normal groundwater levels except for the Weller Ave Deep monitor well (NWFID 1382) in southern Escambia County (Figure 24), which had been classified as above normal for several months but is now classified as within normal ranges (Figure 30).

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

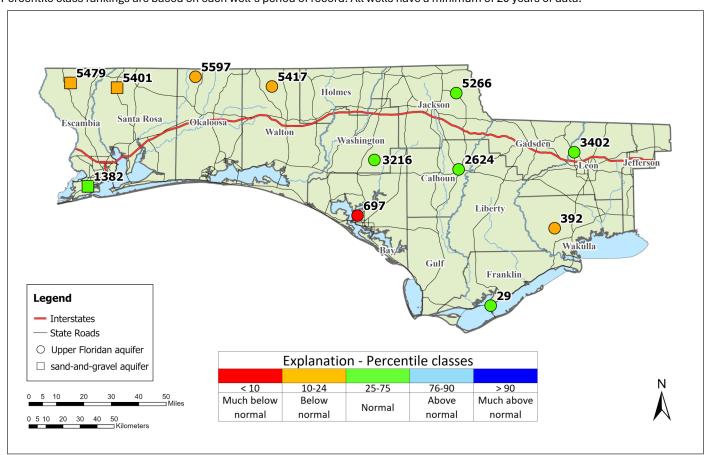




Figure 25: Daily Upper Floridan aquifer levels at USGS-Lake Jackson well (NWFID 3402), Leon County Land surface elevation is 121.40 ft, NAVD 88

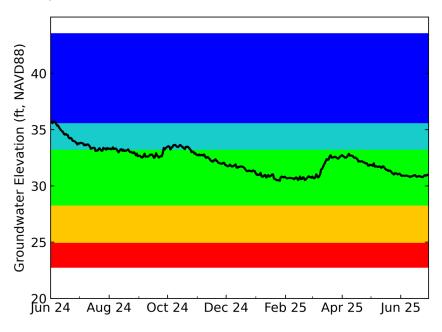
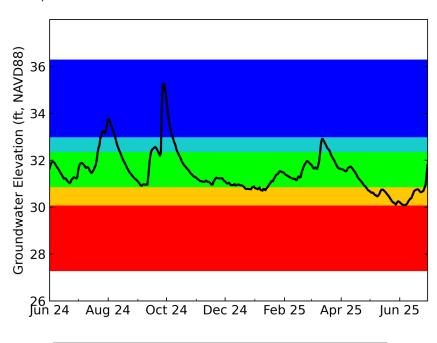


Figure 26: Daily Upper Floridan aquifer levels at USGS Benchmark well (NWFID 392), Wakulla County Land surface elevation is 46.27 ft, NAVD 88



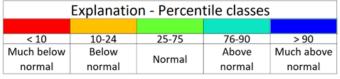




Figure 27: Daily Upper Floridan aquifer levels at NWFWMD Pittman Visa well (NWFID 5266), Jackson County Land surface elevation is 127.31 ft, NAVD 88

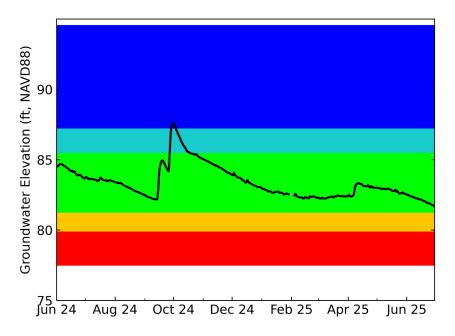


Figure 28: Daily Upper Floridan aquifer levels at USGS-422A Near Greenhead well (NWFID 3216), Washington County

Land surface elevation is 66.75 ft, NAVD 88

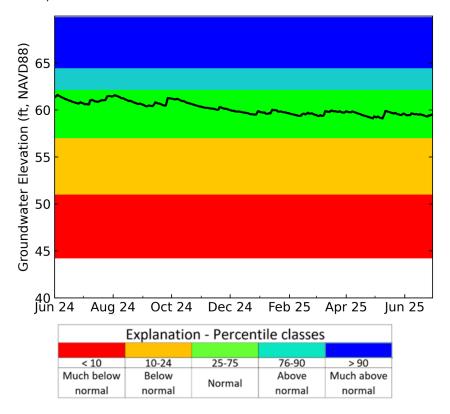




Figure 29: Daily Upper Floridan aquifer levels at Fannin Airport well (NWFID 697), Washington County Land surface elevation is 4.05 ft, NAVD 88

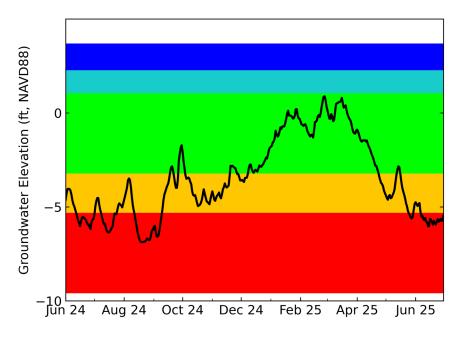


Figure 30: Daily sand-and-gravel aquifer levels at NWFWMD Weller Ave Deep well (NWFID 1382), Escambia County

Land surface elevation is 25.09 ft, NAVD 88

