



## **Hydrologic Conditions Report**

### October 2025

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For additional information, write or call:

Northwest Florida Water Management District

81 Water Management Drive

Havana, FL 32333-4712

(850) 539-5999

www.nwfwater.com

### **Summary**

October 2025 was characterized by below-normal precipitation and near-normal temperatures (averaging around 70.2 degrees Fahrenheit) that contributed to generally belownormal hydrologic conditions across the Panhandle. Drought conditions slowly worsened through most of the District compared to September 2025 except for in southern Escambia County, which received much-above-normal rainfall for the month.

### **Rainfall**

In October 2025, an average of 3.06 inches of rain was recorded across the Panhandle. This amount was 0.56 inches (17%) below the District normal rainfall for the month of October, which is 3.62 inches (Table 1; Figures 1 - 7). Normal rainfall is defined as average monthly rainfall for the 1991-2020 reference period.

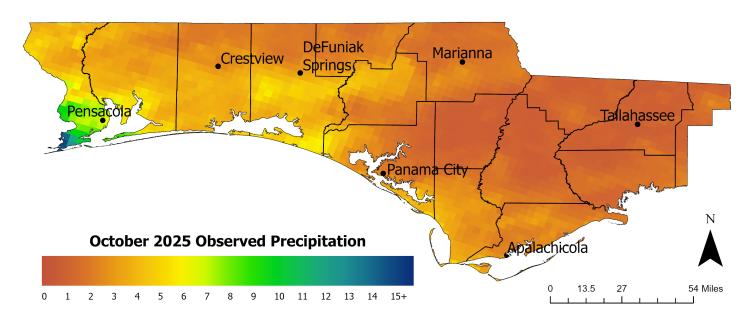
The majority of rain events in October 2025 were the result of synoptic-scale systems like cold fronts and upper-level troughs. The most significant rain event occurred October 26-28, 2025, and was caused by a frontal system. The storms associated with the front generally produced between 0.15 and 5.00 inches of rain throughout the District with some small areas in coastal Escambia County receiving as much as 9.00 inches. The highest rainfall from this storm was observed in regions along the Gulf Coast with the most rainfall occurring in the southern half of Escambia County. This rain event provided 2.00 inches of rain for Niceville and 4.40 inches of rain for Pensacola (Table 1; Figures 4-7).

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

Station	October Normal Rainfall (1991 to 2020)	October 2025 Observed Rainfall	Percent Difference	
Tallahassee Regional Airport	3.24	0.95	-109.3%	
Marianna Regional Airport	3.06	1.81	-51.3%	
Niceville, FL	4.60	3.29	-33.2%	
Pensacola Regional Airport	4.70	6.98	39.0%	

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

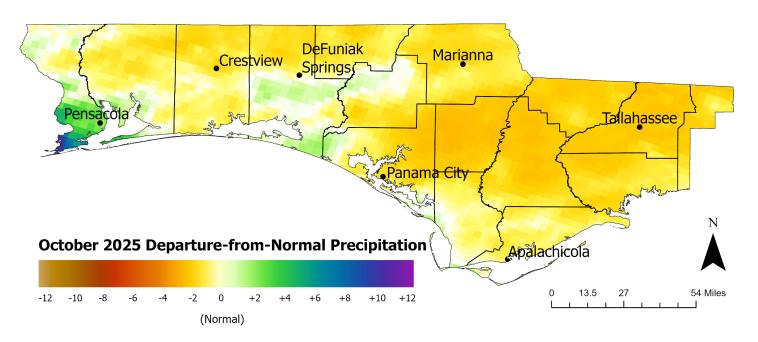
Figure 1: District-wide October 2025 observed rainfall



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

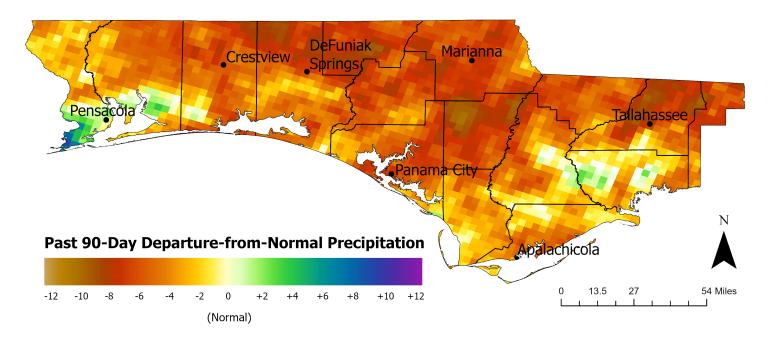


Figure 2: District-wide October 2025 precipitation departure from normal



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

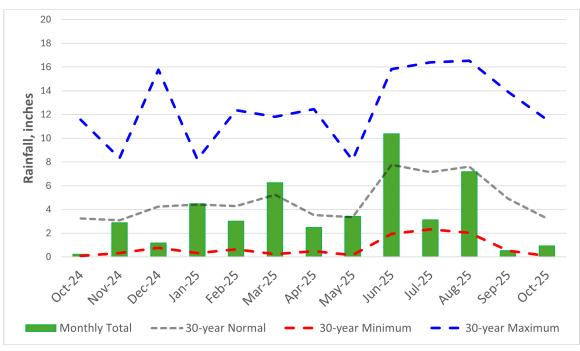
Figure 3: District-wide precipitation departure from normal for the previous 90 days



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

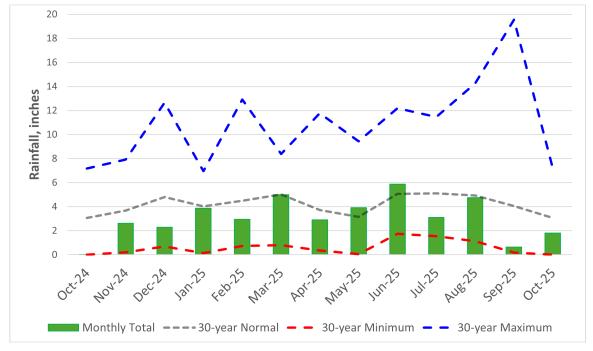


Figure 4: Observed rainfall at Tallahassee Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



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

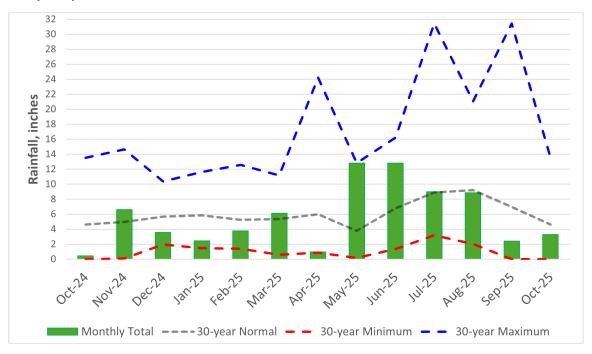
Figure 5: Observed rainfall at Marianna Regional Airport for the past 13 months compared to the 30-year normal, minimum, and maximum precipitation for each month



Source: 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 October 31, 2025, for November 2025 shows a slight chance for above-normal temperatures in the western tip of the Panhandle and along part of the coast and equal chances for above-, below-, or near-normal temperatures in the eastern portion of the District. There is also a slight chance of below-normal precipitation across the Panhandle (Figure 8).

As of November 3, 2025, La Niña conditions were present and favored to persist through December 2025 through February 2026. La Niña conditions typically lead to warmer temperatures and below-normal precipitation during winter in Northern Florida.

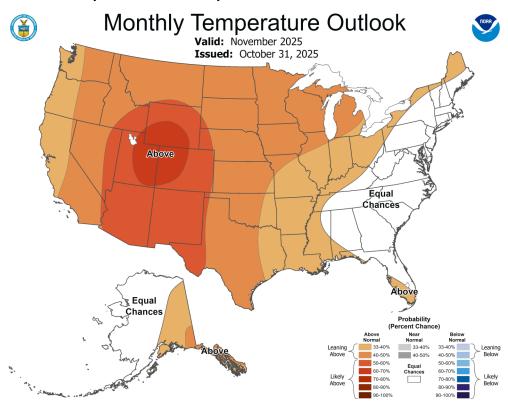
The 2025 Atlantic Hurricane Season began on June 1, 2025, and runs through November 30, 2025. An updated hurricane season outlook was released August 7, 2025. NOAA predicted above-normal hurricane activity in the Atlantic basin with 50% confidence. There is a 35% chance of the season being near-normal.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

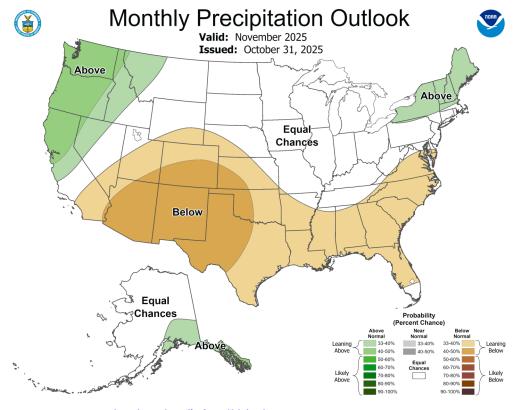
Source: https://www.cpc.ncep.noaa.gov/products/predictions/30day/

 $\frac{\text{https://www.cpc.ncep.noaa.gov/products/analysis\_monitoring/lanina/enso\_evolution-status-fcsts-web.pdf}{\text{https://www.aoml.noaa.gov/2025-atlantic-hurricane-season-outlook/}}$ 



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









### **Drought Conditions**

The U.S. Drought Monitor report released for November 4, 2025, showed most of the District under at least abnormally dry conditions with the majority of the Panhandle under severe or extreme drought conditions (Figure 9). This was due to a severe rainfall deficit throughout the District through September and October 2025 (Figure 3). There was some improvement to dry conditions in the southern half of Escambia County due to the muchabove-normal rainfall amounts received during the month (Figure 1 & 2).

According to the U.S. Monthly Drought Outlook for November 2025, existing drought conditions were expected to persist in the District. This is likely due to the forecasted slight chance for below-normal precipitation in November 2025 (Figure 8).

Figure 9: Florida Drought Conditions on November 4, 2025

# U.S. Drought Monitor Florida

### November 4, 2025

(Released Thursday, Nov. 6, 2025) Valid 7 a.m. EST

Drought Conditions (Percent Area)

		None	D0-D4	D1-D4	D2-D4	D3-D4	D4
	Current	29.36	70.64	40.61	23.25	10.79	0.00
	Last Week 10-28-2025	31.40	68.60	35.95	23.25	10.72	0.00
	3 Month's Ago 08-05-2025	61.47	38.53	13.81	9.03	1.67	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 09-30-2025	42.27	57.73	30.65	6.18	0.00	0.00
	One Year Ago 11-05-2024	78.49	21.51	5.43	0.44	0.00	0.00

Intensity:

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

<u>Author:</u>

Richard Tinker CPC/NOAA/NWS/NCEP









droughtmonitor.unl.edu

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

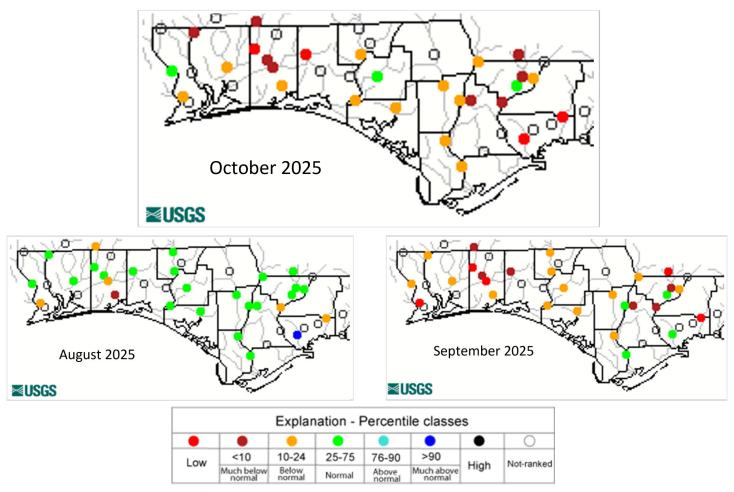


### **Surface Water**

Streamflows. During October 2025, three streamflow stations in the District recorded flows within normal ranges, twelve streamflow stations recorded below normal flows, eight stations recorded much below normal flows, and four stations recorded low flows (Figures 10 – 16). The classification of "low" indicates that the estimated streamflow is the lowest value ever measured for that day of the year.

This distribution of percentile classes is a direct result of the dry conditions observed since September 2025 (Figures 1 – 3 & Figure 9). Most stations with depicted time-series graphs received a small bump in flow during and following the significant rain event that occurred at the end of the month (Figures 13 – 16). The St. Marks River near Newport recorded record low flows that continued to decline throughout the duration of the month (Figures 10 & 11). Similarly, Blackwater River near Milton also recorded record low flows starting in September 2025 and remained low through October 2025 (Figure 15).

Figure 10: Northwest Florida August 2025 to October 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

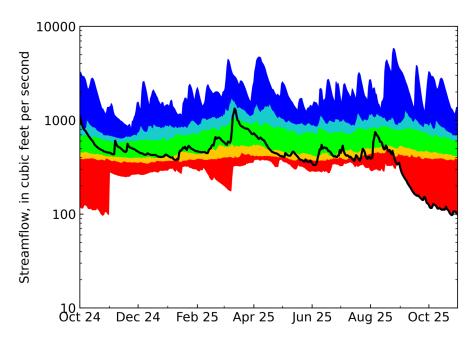


Figure 12: Daily streamflows and percentile ranges for USGS Station 02329000 Ochlockonee River Near Havana, Florida

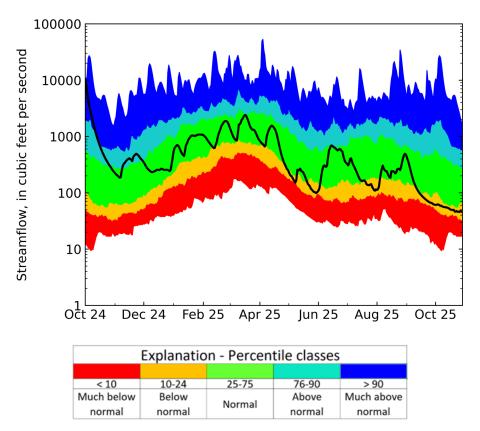




Figure 13: Daily streamflows and percentile ranges for USGS Station 02358700 Apalachicola River Near Blountstown, Florida

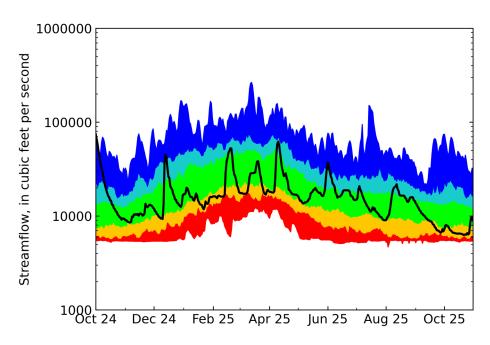
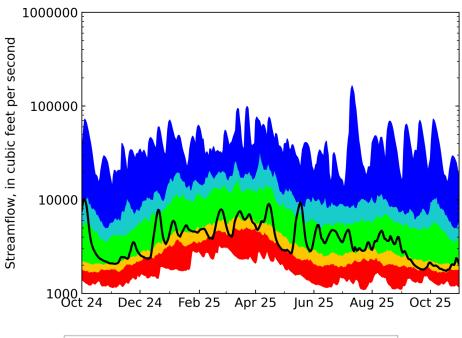


Figure 14: Daily streamflows and percentile ranges for USGS Station 02366500 Choctawhatchee River Near Bruce, Florida



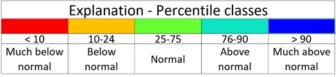




Figure 15: Daily streamflows and percentile ranges for USGS Station 02370000 Blackwater River Near Baker, Florida

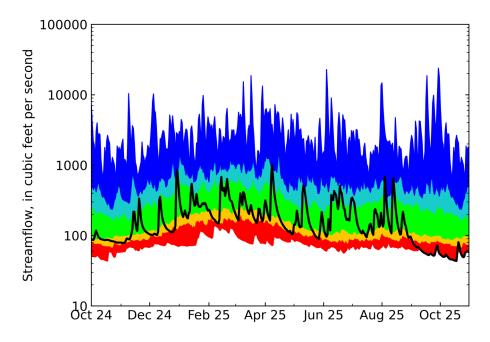
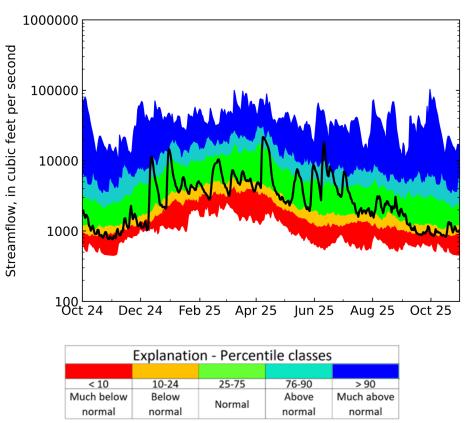


Figure 16: Daily streamflows and percentile ranges for USGS Station 02375500 Escambia River Near Century, Florida





Lake Levels. Water levels at Lake Jackson in Leon County decreased by 0.71 feet during October 2025, ending the month with a stage level of 78.80 feet, NAVD 1988 (Figure 17). The long-term (January 29, 2003, to October 31, 2025) average stage level for Lake Jackson is 80.89 feet, NAVD 1988, and the full pool level is 85.74 feet, NAVD 1988.

At Piney Lake in southern Washington County, water levels decreased 0.52 feet during October 2025, ending the month with a stage level of 47.92 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

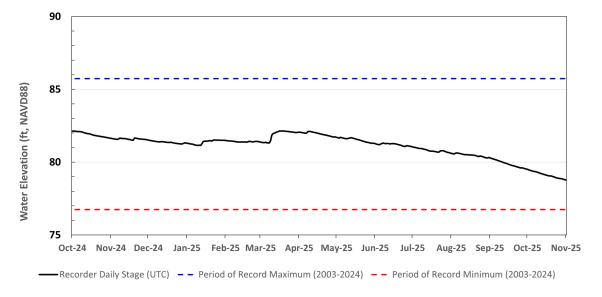
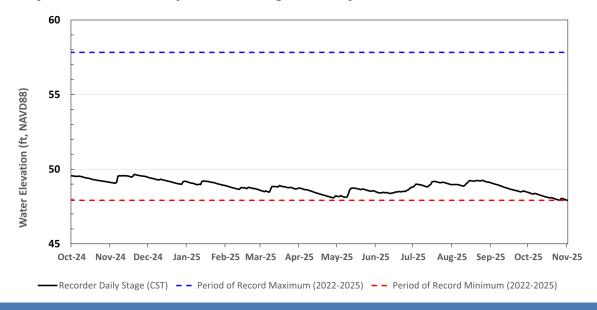


Figure 18: Daily water levels at Piney Lake, Washington County





### **Spring Flows**

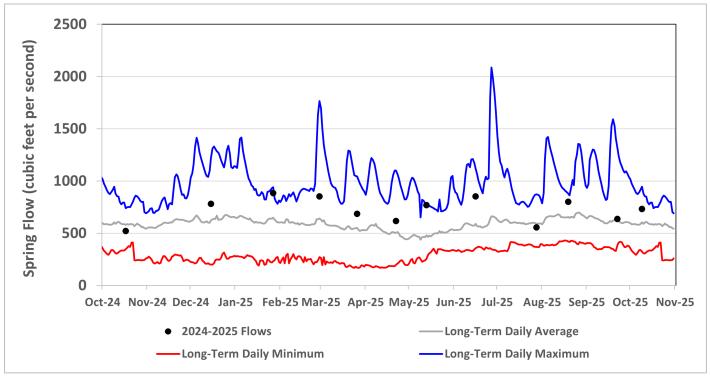
Wakulla and Sally Ward Spring System. Flow from Wakulla Spring increased 97 cubic feet per second (cfs) between the measurements taken in September and October 2025. The most recent flow measurement for Wakulla Spring was 733 cfs, which was conducted on October 9, 2025 (Figure 19). The long-term (October 23, 2024, to October 9, 2025) average flow for the month of October is 583 cfs.

Flow at Sally Ward Spring decreased by 1.2 cfs between the measurements taken in September and October 2025. The most recent flow measurement for Sally Ward was 25.4 cfs on October 9, 2025. This measurement was 3.1 cfs higher than the long-term (November 1, 2004, to October 9, 2025) average flow for the month of October of 24.6 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 October 9, 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 October 9, 2025, represent discrete measurements. Daily statistics are based on the October 23, 2004, through October 9, 2025, period of record.



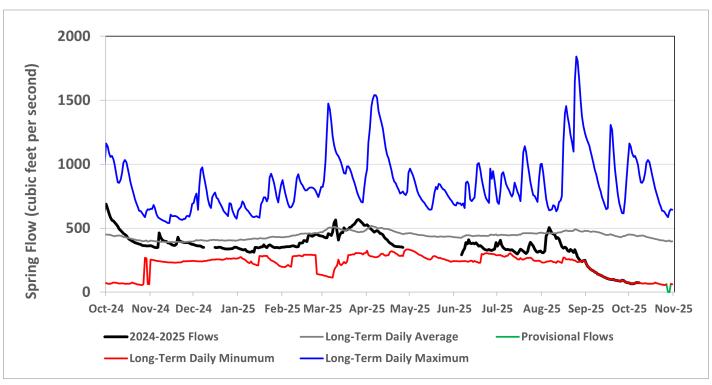


St. Marks River Rise. The mean daily spring flow for October 2025 at the St. Marks River Rise was 67 cfs, based on the available USGS provisional data which extends through October 31, 2025 (Figure 20). This was much below the long-term (October 1, 1956, through October 31, 2025) average flow for the month of October of 424 cfs. Flows this month were so low that there was a new long-term minimum flow every day in October.

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 October 31, 2025, are included, the 30-year moving average spring flow for the St. Marks River Rise is 420 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 1 cfs, respectively.

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

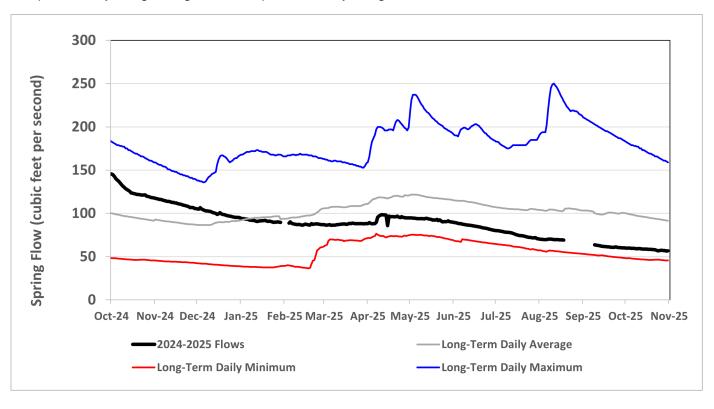




Jackson Blue Spring. Daily flows at Jackson Blue Spring for the month of October 2025 averaged 58.5 cfs. This was below the long-term average flow of 95.6 cfs for the month of October, based on the December 21, 2004, through October 31, 2025, period of record (Figure 21). Flows from Jackson Blue Spring have been below the long-term average flow since January 2025.

Figure 21: Spring flows for Jackson Blue Spring





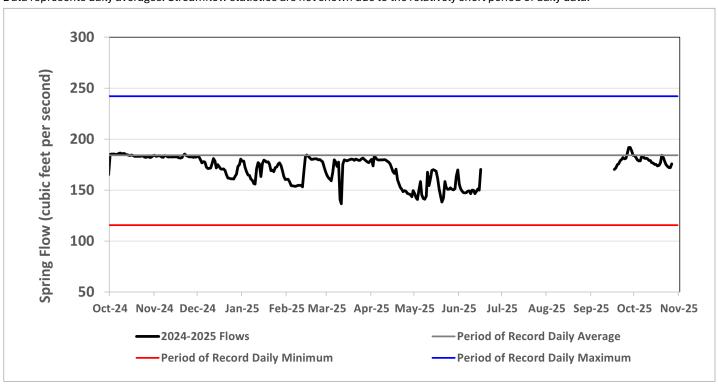


Gainer Spring Group. During October 2025 (October 1 through 27, 2025), the average flow at the Gainer Spring Group was 178 cfs (Figure 22). The record period (October 28, 2019, through October 27, 2025) average monthly spring flow for the month of October is 180 cfs. It should be noted that there is 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 resumed September 16, 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.



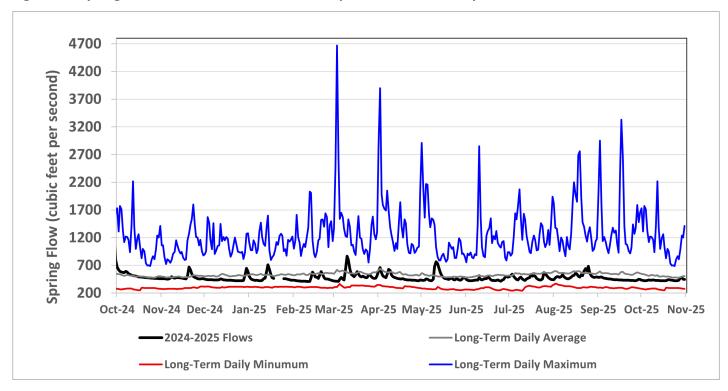


Middle Econfina Creek. The mean daily flow for October 2025 at Middle Econfina Creek was 433 cfs, based on the available USGS provisional data which extends through October 31, 2025 (Figure 23). This was below the long-term (October 1, 1935, through October 31, 2025) average flow for the month of October of 505 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 October 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, which includes the Gainer, Sylvan, and Williford spring groups. 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 31 cfs, respectively.

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





### **Aquifer Levels**

In the middle of October 2025, of a total of nine Floridan aquifer monitor wells, four were classified as within normal ranges, two were classified as below normal, and three were classified as having water levels in much below normal ranges (Figures 24 – 30). Most Floridan monitor wells with percentiles continued to decline through October 2025 except for Fannin Airport monitor well (NWFID 697). Groundwater levels at Pittman VISA Floridan monitor well (NWFID 5266) in eastern Jackson County continued to decline and were classified as much below normal (Figure 27). Jackson Still Floridan monitor well (NWFID 5417) in northern Walton County and Sand Hill Upper Floridan monitor well (NWFID 5597) in northwestern Okaloosa County had below normal water levels for the past several months but decreased even further into much below normal ranges. The areas surrounding the Pittman VISA (NWFID 5266), Jackson Still (NWFID 5417), and Sand Hill (NWFID 5597) Floridan monitor wells received very little rainfall and were under extreme drought conditions (Figure 9) during the month which contributed to the low water levels recorded at these wells (Figure 1).

Two of three sand-and-gravel aquifer monitor wells had water levels that were classified as within normal ranges in mid-October 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, increased just enough to be classified as within normal ranges in August 2025, and then dropped back to below normal ranges in September 2025 and then increased again in October 2025 to be considered 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-October 2025 Percentile class rankings are based on each well's period of record. All wells have a minimum of 20 years of data.

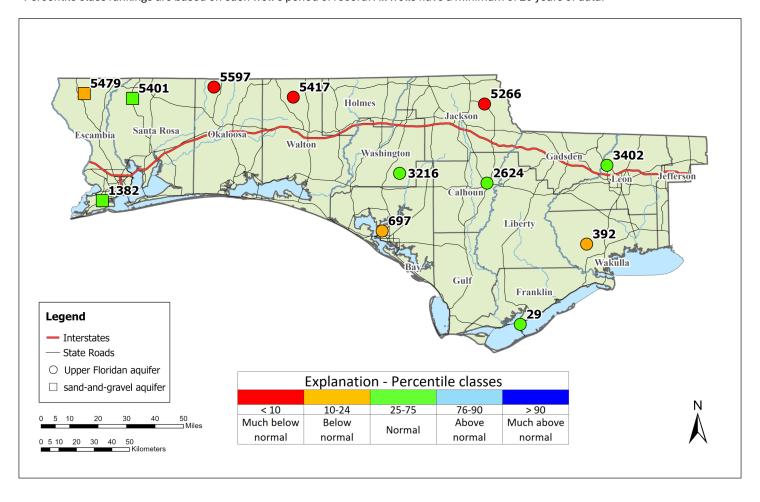




Figure 25: Daily Upper Floridan aquifer levels at USGS-Lake Jackson well (NWFID 3402), Leon County Land surface elevation is 121.40 ft, NAVD 88

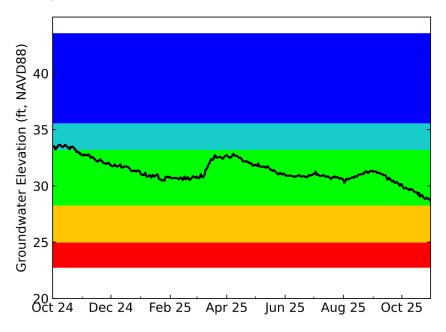
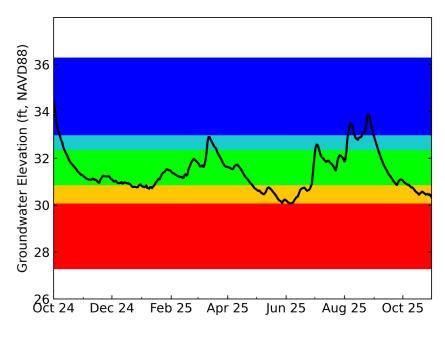


Figure 26: Daily Upper Floridan aquifer levels at USGS Benchmark well (NWFID 392), Wakulla County Land surface elevation is 46.27 ft, NAVD 88



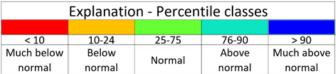




Figure 27: Daily Upper Floridan aquifer levels at NWFWMD Pittman Visa well (NWFID 5266), Jackson County Land surface elevation is 127.31 ft, NAVD 88

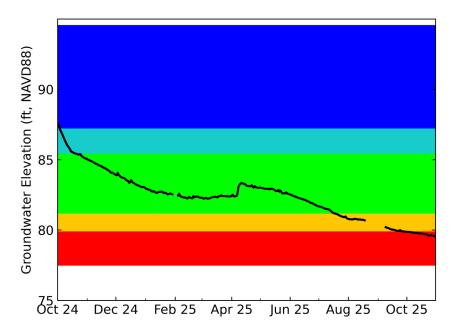


Figure 28: Daily Upper Floridan aquifer levels at USGS-422A Near Greenhead well (NWFID 3216), Washington County

Land surface elevation is 66.75 ft, NAVD 88

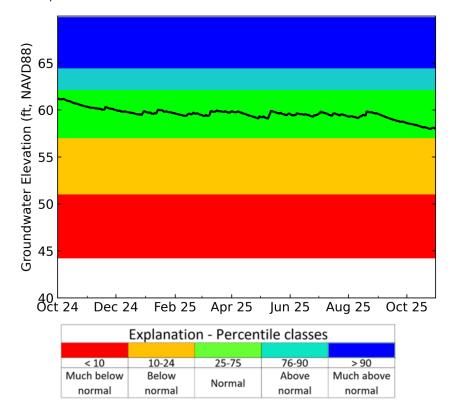




Figure 29: Daily Upper Floridan aquifer levels at Fannin Airport well (NWFID 697), Washington County Land surface elevation is 4.05 ft, NAVD 88

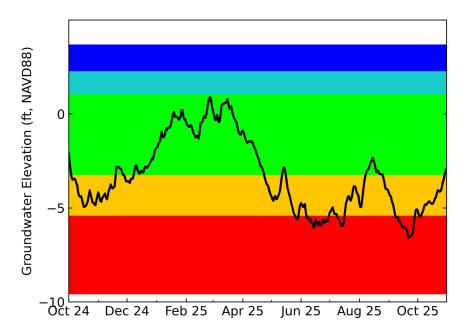


Figure 30: Daily sand-and-gravel aquifer levels at NWFWMD Weller Ave Deep well (NWFID 1382), Escambia County

Land surface elevation is 25.09 ft, NAVD 88

