

September 2025 Monthly Weather Summary

Temperature Overview

Cooler than average conditions observed during August stretched into September, with all long-term climate sites measuring below normal average monthly temperatures. There were several onshore flow events throughout the month, leading to more cloud cover than normal for September, which mostly affected the daytime high temperatures which were more than 2 degrees cooler than normal at some locations (with near normal low temperatures). Generally, below to near normal temperatures persisted through the first part of the month, with warming trend in the last week of September. Daily average temperatures skyrocketed to near 10°+ above normal as a surface high situated offshore pumped in warm and humid conditions until a cold front moved through and brought temperatures back closer to normal by the end of the month. Overall, September was uneventful in terms of temperature extremes, with no top 10 performances in either the warmest or coldest September categories. There were two records set, both at Richmond. A record low maximum of 67° was set on the 10th as an early season cold-air damming set up developed across the area. A record high minimum of 72° was tied on the 25th in southwest flow ahead of an approaching cold front.

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Precipitation Overview

As we have seen during most of the summer months, there was a wide spread in monthly precipitation totals across the forecast. The winners in terms of highest measured rainfall throughout the month were the lower Eastern Shore and areas between the Middle Peninsula and Virginia Beach. Wallops Island measured 6.95" (+2.62" above normal) while the Co-op sites at Cape Charles and Williamsburg measured 8.74" (+4.53" above normal) and 9.82" (+4.42" above normal), respectively. Conversely, northeast North Carolina saw quite a rainfall deficit, where Elizabeth City measured only 1.48" (-3.04" below normal) and Edenton measured a mere 0.77" (-4.85" below normal). The main rainmaker of the month was a coastal low that impacted the region on September 16th/17th, bringing upwards of almost 10" over the course of a few days to the Virginia Beach area. Many areas in east/southeast Virginia received 2-5" of rain during this event, while areas to the west received between 0.5-3". The coastal low tracked more north than initially thought, which kept North Carolina mostly dry during the event and did not help inflate monthly precipitation totals. The only daily precipitation record was measured at Richmond on the 27th as a slow-moving cold front pushed through the area, with a daily rainfall total of 2.18".

The following table on page 3 shows detailed temperature and precipitation statistics for September 2025 at many locations within the Wakefield CWA. On page 4, daily average temperature departures are shown at Richmond and Norfolk for September, followed by September precipitation maps (page 5), with daily records set during the month at our 4 main long-term sites on the last page.

Tabular Summary of Data for Selected Climate Sites (September):

September 2025 Temperature Summary Data

* also on other dates

All Normals are 1991-2020

Site	Avg Max		Avg Min		Avg Temp		Daily Highs						Daily Mins						Remarks
	(°F)		(°F)		(°F)		Warmest (°F)			Coolest (°F)			Warmest (°F)			Coolest (°F)			
	Actual	Dep	Actual	Dep	Actual	Dep	Actual	Date	Dep	Actual	Date	Dep	Actual	Date	Dep	Actual	Date	Dep	
Richmond	80.0	-1.2	61.2	0.1	70.6	-0.6	92	6th	-1	66	*17th	-1	72	25th	0	52	9th	3	
Norfolk	79.0	-2.4	66.3	-0.3	72.7	-1.3	95	6th	3	68	*17th	-1	72	*27th	-3	60	17th	4	
Salisbury	79.2	-0.3	60.0	0.1	69.6	-0.1	93	6th	2	69	16th	3	72	25th	-1	53	*22nd	9	
Wallops Island	76.7	-2.0	62.5	-0.5	69.6	-1.2	85	19th	-4	69	17th	2	72	25th	-2	56	9th	6	
Elizabeth City	80.2	-1.6	64.0	-0.9	72.1	-1.3	91	6th	-1	67	16th	-5	71	*26th	-4	56	4th	4	
Ashland, VA	78.7	-0.5	59.6	0.1	69.2	-0.1	88	*6th	-2	66	17th	0	70	*25th	-1	49	9th	4	
Cape Charles, VA	76.9	-1.0	63.9	0.0	70.4	-0.5	87	6th		67	17th		72	*25th		56	3rd		
Wakefield, VA	79.2	-2.6	60.2	0.0	69.7	-1.3	92	6th	0	64	16th	-5	71	25th	-1	53	*3rd	7	
Williamsburg, VA	78.3	-2.2	62.6	-0.5	70.4	-1.4	91	6th	0	64	17th	-5	72	25th	-1	57	*13th	7	
Edenton, NC	79.4	-2.1	64.2	-0.9	71.8	-1.5	91	6th	1	68	17th	-4	71	*26th	-3	58	*22nd	6	

September 2025 Precipitation Summary Data

* also on other dates

All Normals are 1991-2020

Site	Total Pre		# Pre Days		# Pre Days		Greatest	Total Snow	# Snow Days	# Snow Days	Greatest		Remarks
	(in.)		(≥0.01")		(≥0.10")		(in.)				(in.)	(in.)	
	Actual	Dep	Actual	Dep	Actual	Dep	Act Date				Daily Date	Storm Date	
Richmond	5.68	1.07	12	3	10	4	2.18 27th						
Norfolk	6.64	1.24	10	1	5	-1	3.45 16th						
Salisbury	3.40	-1.08	9	0	4	-2	2.15 16th						
Wallops Island	6.95	2.62	9	1	6	0	3.52 16th						
Elizabeth City	1.48	-3.04	10	0	3	-3	0.79 16th						
Ashland, VA	3.87	-0.32	12	4	8	2	1.42 17th						
Cape Charles, VA	8.74	4.53	9		6		4.36 16th						
Wakefield, VA	5.82	-0.23	15	6	8	2	1.86 16th						
Williamsburg, VA	9.82	4.42	13	3	9	3	4.49 16th						
Edenton, NC	0.77	-4.85	6	-2	2	-5	0.30 *27th						

* **"Dep"**= **Departure** from the 30-year normals (1991-2020). Temperature departures are shaded orange for 1 F or more warmer than average (dark red for 4 F or greater anomalies) and blue for 1 F or more cooler than average (dark blue for 4 F or more below normal). Similarly, precipitation departures are shaded green for 0.50" or more wetter than average (dark green for 2.00" or more) and tan for 0.50" or more drier than average (dark brown for 2.00" or more drier). Snowfall departures are shaded purple for 1" or more above average and tan for 1" or more below average. ****Rankings in Remark section are included for Co-op sites where a complete period of record is of sufficient duration.**
N/A in Remarks section indicates sites with a shorter period of record, leading to rankings being of less significance

Daily Average Temperature Departures at Richmond & Norfolk, VA (September)

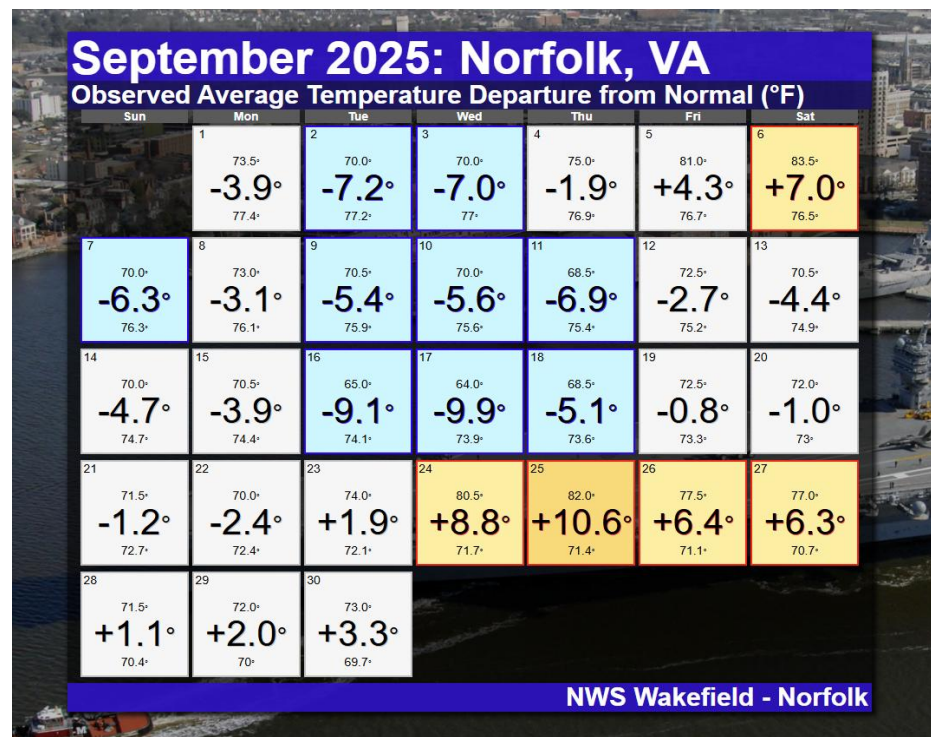
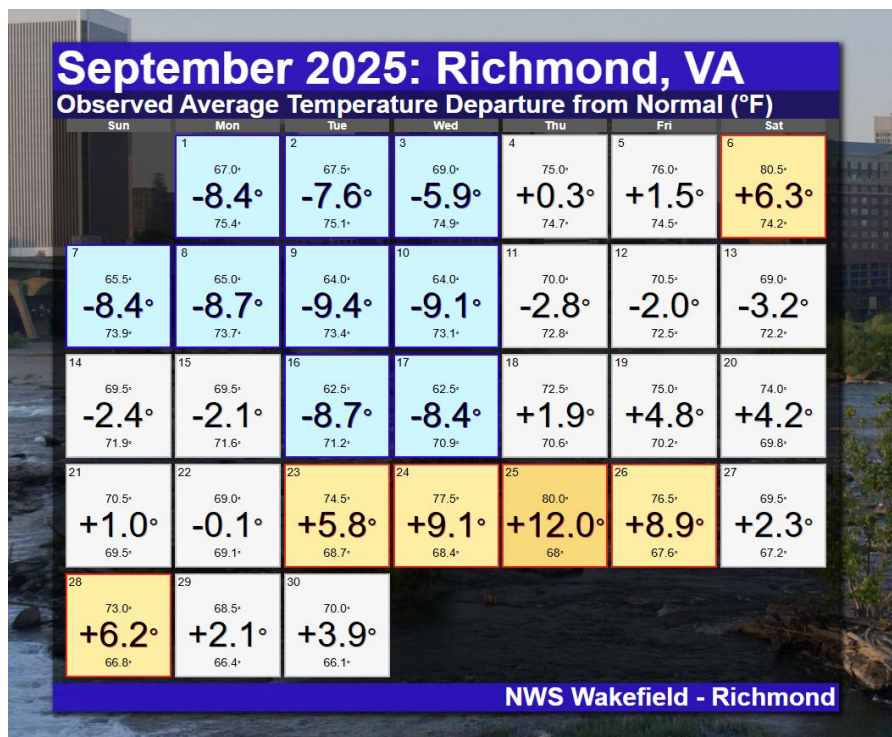


Figure 2: Daily Average Temperature Departures at RIC and ORF

Regional Precipitation Maps: September 2025

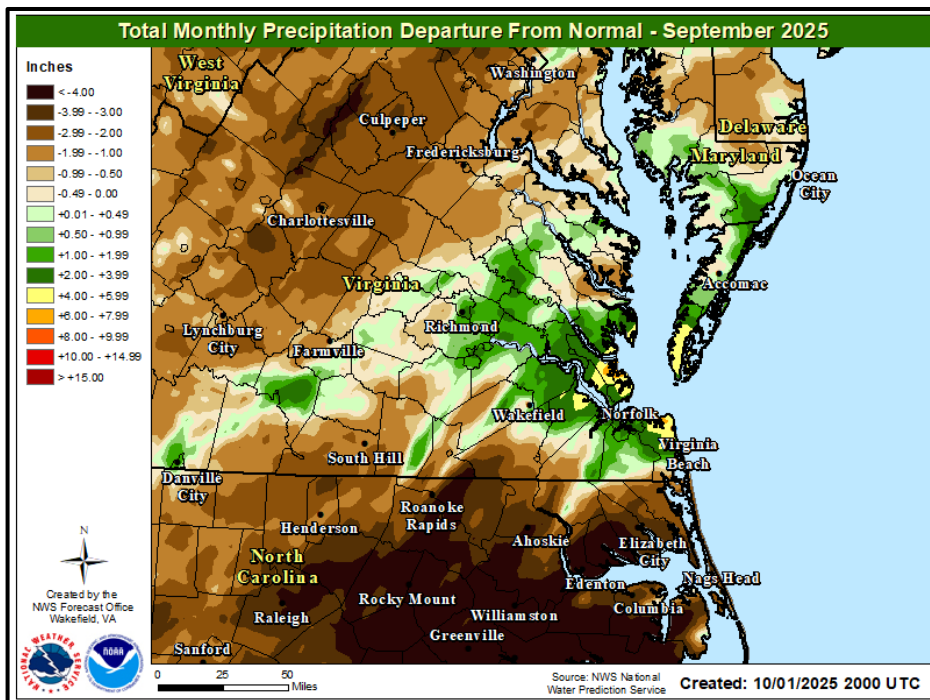
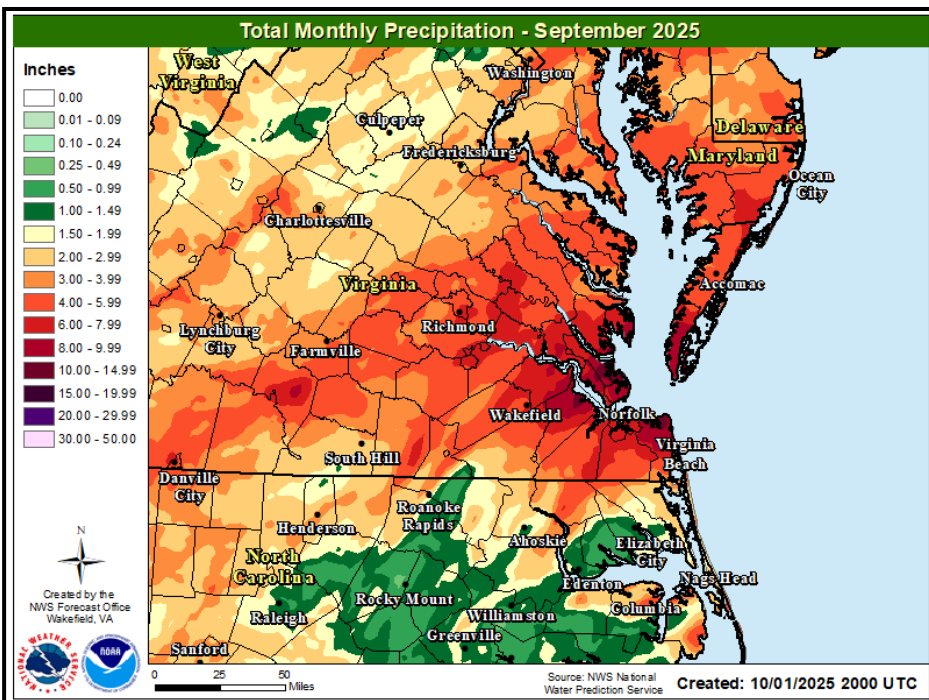


Figure 3: *Total Precipitation* for the month is shown in the map on the left. *Departure* from the 30-year normals (1991-2020) is shown on the map on the right.

Daily Records for Long Term Sites (September):

Norfolk, VA Records (Period of Record 152 yrs./1874-2025) **tie*

Record Highs: none set.
Record Low Maximums: none set.
Record Lows: none set.
Record High Minimums: none set.
Daily Precipitation: none set.

Richmond, VA Records (Period of Record 129 yrs./1897-2025) **tie*

Record Highs: none set.
Record Low Maximums: 67° (10th).
Record Lows: none set.
Record High Minimums: *72° (25th).
Daily Precipitation: 2.18" (27th).

Salisbury, MD Records (Period of Record 119 yrs./1907-2025) **tie*

Record Highs: none set.
Record Low Maximums: none set.
Record Lows: none set.
Record High Minimums: none set.
Daily Precipitation: none set.

Elizabeth City, NC Records (Period of Record 92 yrs./1934-2025) **tie*

Record Highs: none set.
Record Low Maximums: none set.
Record Lows: none set.
Record High Minimums: none set.
Daily Precipitation: none set.