

January 2024 Climate Review

Temperature Overview

January 2024 averaged out warmer than normal across the local area, but with changeable temperatures throughout the month. Overall, the first third of the month was warm, the middle third cold, ending with a warm final third. Across the continental US, temperatures were above average from the upper midwest to the east coast, with much above average values for Minnesota, Wisconsin, and northern New England. Temperatures were colder than average across the central and southern plains into portions of the deep south (primarily due to an intense mid-month cold snap), with generally near-normal monthly averages elsewhere (see Figure 1 for national temperature departures). Regionally, the state of Virginia was classified as being “above average” with 2024 ranking as the 41st warmest January on record; Maryland had its 25th warmest, while North Carolina was 43rd warmest (period of record is 130 years 1895-2024). Locally, average temperatures were generally between 2 and 4 degrees warmer than the long-term means. (see table on page 3).

Looking at daily high temperature departures at Richmond and Norfolk (Figure 2), the month started out near normal during the first week, followed by a warm 2nd week, with conditions that then turned cold from about the 15th through the 21st. At the start of this cold spell, snowfall occurred on the 15th-16th across the northern half of the forecast area. While it was 10 to 15 degrees colder than normal during this stretch, no daily records were set at any of our 4 long-term climate stations as the airmass was modified in comparison to the conditions from the northern high plains into the south-central US. The cold spell ended rather abruptly on the 23rd as high pressure became centered off the east coast for several days as a slow-moving low-pressure system lifted north from the Gulf of Mexico through the Ohio Valley. With southerly flow in place, high temperatures soared to 20 to 30 degrees above average with overnight lows as much as 35 degrees above daily normals on the 25th and 26th. Salisbury set a daily record high on the 25th (75F), while Norfolk and Elizabeth City, NC both tied their daily records at 77F. All 4 climate sites recorded a low temperature of at least 60F on the 25th, enough to set daily record high minimums. Norfolk, Richmond, and Elizabeth City set another daily record high min the following day on the 26th. Norfolk’s low temperature of 65F on the 26th also set a new record warmest minimum temperature for any date in January. The tally for number of days with a high 5 or more degrees above normal and below normal was 13 warm vs. 6 cool at both Richmond and Norfolk.

January 2024 Climate Review

Precipitation & Snowfall Overview

January 2024 precipitation was well above normal across much of the region, though far southeast Virginia and northeast NC received near to slightly below average totals. Regionally, the state of Virginia recorded its 8th wettest January while Maryland was 6th wettest, both being classified as “much above average”. North Carolina was classified as “above average” at 19th wettest, though our local portion in northeast North Carolina was slightly drier than normal. There were primarily two heavy rainfall events early in the month that brought heavy rain to the region: low pressure originating over the Gulf of Mexico tracked northeast across the local area on the 6th resulting in a widespread 0.75 to 1.25” followed by a slow-moving system on the 9th that brought anywhere from 1 to 3” of rainfall to the area, with the highest totals observed from central Virginia to the Maryland eastern shore. The event on the 9th was even accompanied by some thunderstorms during the late afternoon and evening with some localized wind damage across the piedmont. Daily record precipitation amounts were set on the 9th at Richmond (2.35”), Salisbury (2.56”), Norfolk (1.58”), and Elizabeth City (1.03”).

Conditions finally turned cold enough for snow on the 15th, at least over the northern portions of the forecast area. Snowfall amounts ranged from less than one inch across the east and south side of metro Richmond, to 1-3” over the north side of the metro, with local amounts more than 3”. While this was certainly not a major snow event with no records being set, it was more than what had occurred all last winter in 2022-23 when the entire region, including the northern areas received no measurable snowfall. Another small snow event occurred across northeast portions of the forecast area on the 19th when 1-2” of snowfall was observed from the northern Neck to the Maryland eastern shore, with the highest amounts across Dorchester County Maryland. After that, conditions trended too warm for any additional snowfall for the remainder of the month, with a few more moderate rainfall events during the final week of January.

The following table on page 3 shows detailed temperature and precipitation statistics for January 2024 at many locations within the Wakefield CWA. Page 4 shows national temperature and precipitation departures and state averaged rankings. On page 5, daily high temperature departures are shown at Richmond and Norfolk, followed by precipitation maps across the local area on page 6, with daily records set during the month at our 4 main climate sites on the last page.

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

January 2024 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)			Coldest (°F)		Warmest (°F)			Coldest (°F)				
	Actual	Dep	Actual	Dep	Actual	Dep	Actual	Date	Dep	Actual	Date	Dep	Actual	Date	Dep	Actual		Date	Dep
Richmond	51.3	3.5	32.0	3.2	41.6	3.3	78	26th	8	32	16th	4	62	25th	12	14	17th	3	
Norfolk	53.5	2.8	36.5	2.9	45.0	2.8	77	26th	5	34	20th	4	65	4th	12	22	17th	3	
Salisbury	49.4	3.9	31.6	3.6	40.5	3.7	75	26th	7	28	20th	2	61	25th	12	18	22nd	10	
Wallops Island	49.1	2.9	32.1	2.6	40.6	2.7	76	26th	10	29	20th	2	51	*26th	4	19	17th	7	
Elizabeth City	54.7	2.4	33.8	0.7	44.3	1.6	77	26th	5	35	20th	2	62	26th	8	18	*22nd	2	
Ashland, VA	49.4	2.6	31.1	3.9	40.2	3.2	77	26th	8	30	20th	3	61	*26th	12	11	17th	3	
Corbin, VA	46.5	1.5	26.9	0.6	36.7	1.0	78	26th	11	28	20th	2	61	25th	15	6	17th	-1	
Louisa, VA	49.4	4.2	29.1	3.7	39.2	3.9	78	26th	10	32	*20th	5	63	26th	15	6	17th	2	
Painter, VA	50.3	2.1	34.4	4.0	42.3	3.0	73	26th	6	32	21st	2	55	26th	3	19	22nd	5	
Wakefield, VA	52.3	2.5	30.4	2.2	41.3	2.3	75	26th	4	33	20th	3	62	25th	11	12	22nd	3	
Williamsburg, VA	51.2	2.1	32.4	1.8	41.8	2.0	75	26th	4	32	20th	2	60	26th	9	16	17th	3	
Edenton, NC	53.5	1.1	36.4	2.0	45.0	1.6	74	26th	4	35	21st	0	53	*27th	0	18	22nd	2	

January 2024 Precipitation & Snowfall 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.)		(≥0.1")		(≥1.0")		(in.)				
	Actual	Dep	Actual	Dep	Actual	Dep	Act	Date	Act	Dep	Act	Dep	Act	Dep	Daily	Date		Storm	Date(s)
Richmond	5.76	2.53	12	2	7	1	2.35	9th	0.5	-3.2	1	-1	0	-1	0.5	15th	0.5	15th	9th wettest January
Norfolk	3.20	-0.21	12	1	5	-1	1.58	9th	T	-3.2	0	-2	0	-1	T	15th	T	15th	
Salisbury	5.44	1.93	13	2	7	0	2.56	9th	1.4	-1.1	2	1	1	0	1.2	19th	1.2	19th	
Wallops Island	4.28	1.13	13	2	8	2	1.24	9th	0.1	-3.4	1	-1	0	-1	0.1	19th	0.1	19th	
Elizabeth City	2.55	-0.75	12	3	6	0	1.03	9th	0.0	-0.8	0	-1	0	-1					
Ashland, VA	6.08	2.79	11	1	8	1	2.10	9th	3.2	-2.7	2	-1	1	-1	3.0	15th	3.2	15-16th	
Corbin, VA	6.73	3.45	11	3	6	0	2.70	10th	3.1	-0.5	3	1	2	1	2.0	16th	2.1	15-16th	
Louisa, VA	5.28	2.28	7	-2	6	1	1.78	9th	2.6	-1.9	2	0	2	1	1.6	15th	2.6	15-16th	
Painter, VA	4.39	0.84	12	1	8	1	1.77	9th	M		M		M						
Wakefield, VA	5.08	1.25	14	4	8	1	1.84	9th	T	-3.5	0	-2	0	-1	T	*19th	T	*19th	
Williamsburg, VA	5.33	1.56	15	4	9	2	1.97	9th	T	-1.7	0	-1	0	-1	T	15th	T	15th	
Edenton, NC	2.54	-0.96	6	-3	6	-1	1.15	10th	0.0	-0.9	0	-1	0	-1					

* **"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.

National Temperature & Precipitation Departure: January 2024

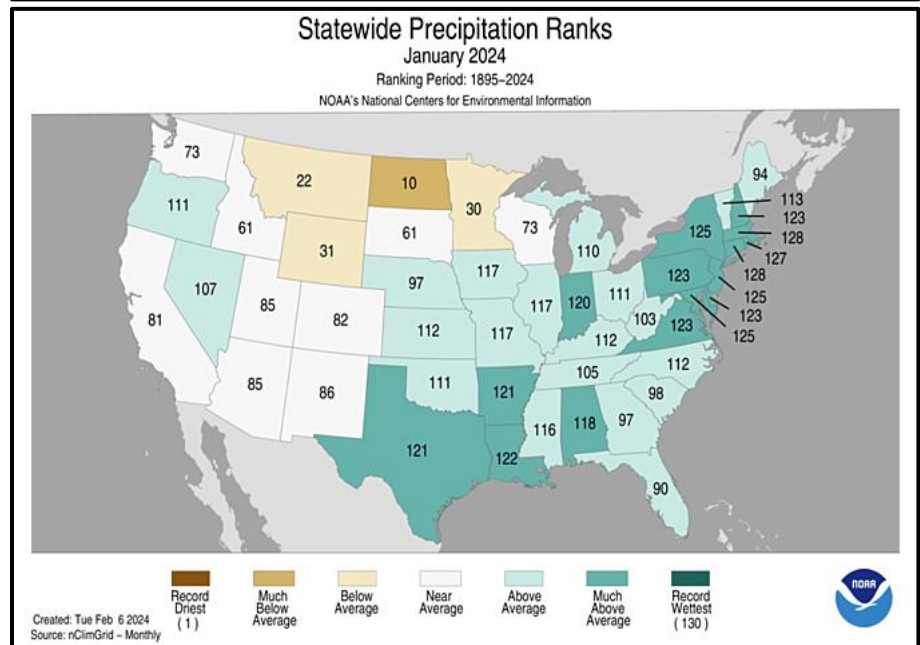
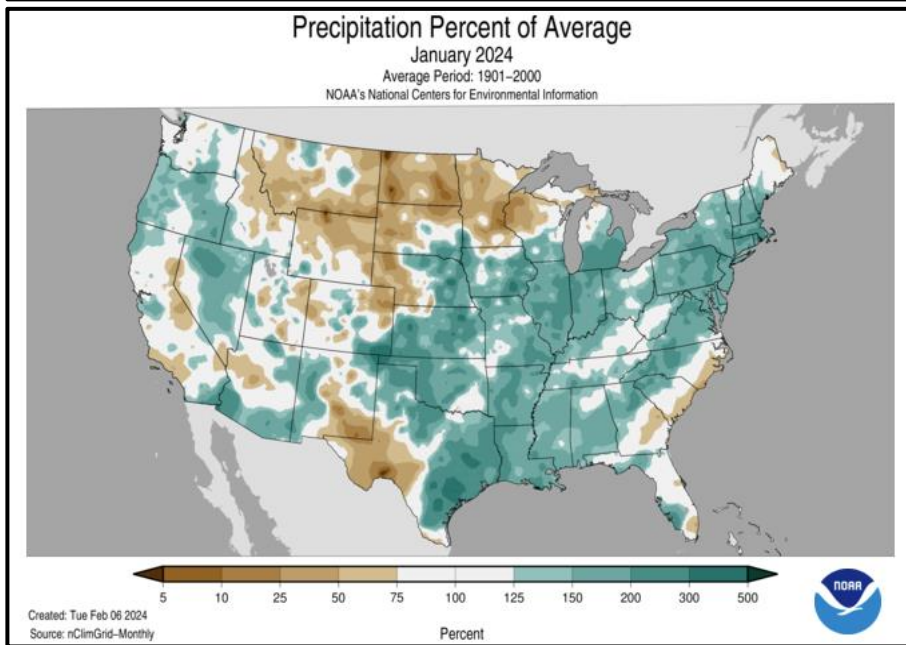
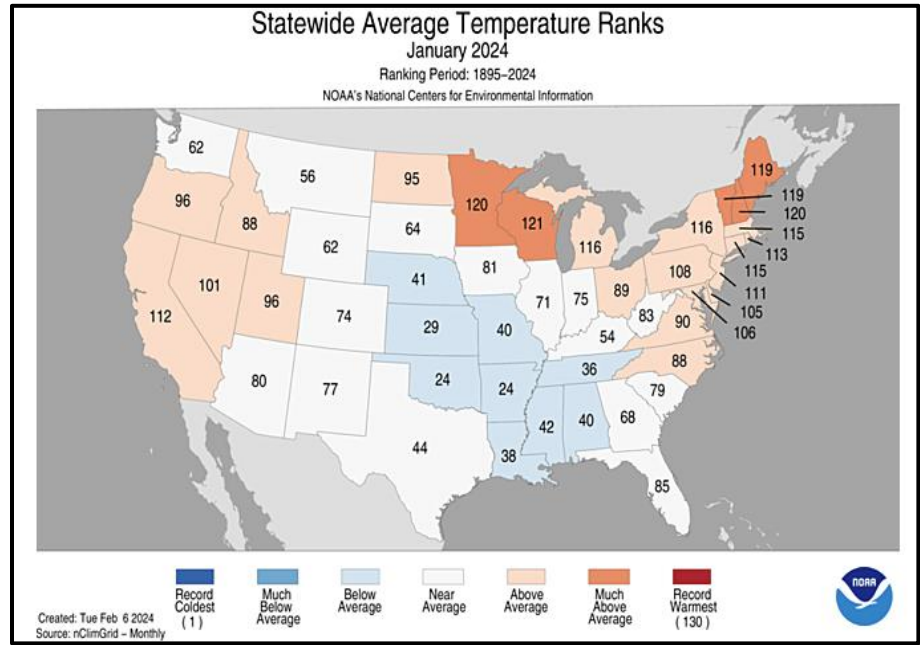
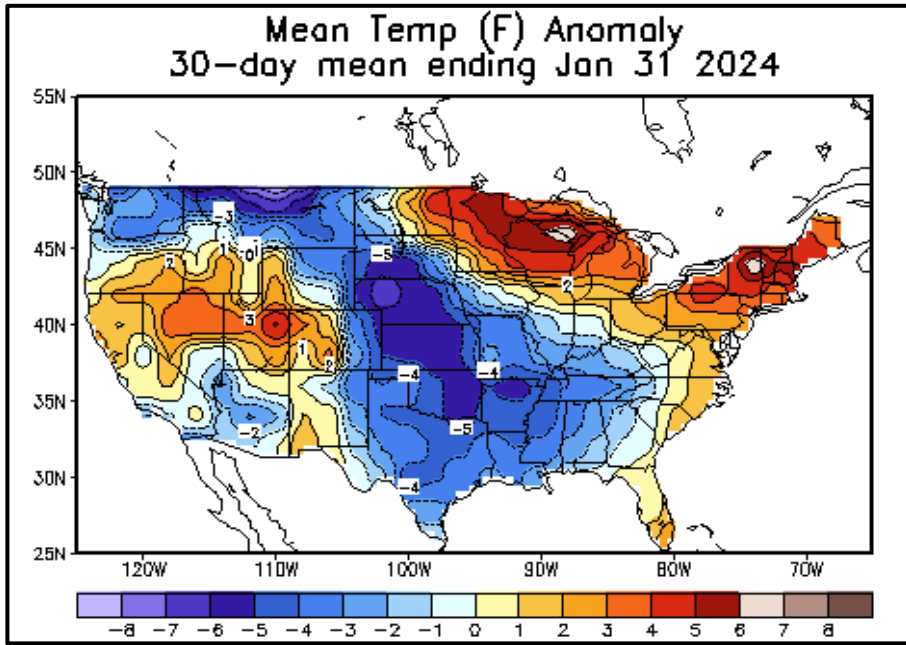


Figure 1: Avg. Temperature & Precipitation Departure and Statewide Ranks *Source: NCEI & CPC*

Daily High Temperature Departures at Richmond & Norfolk, VA

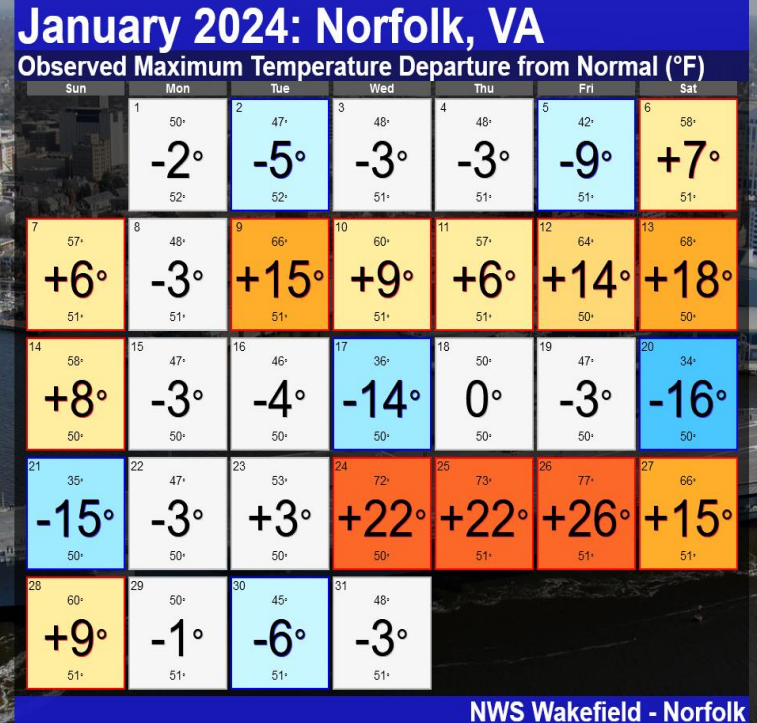
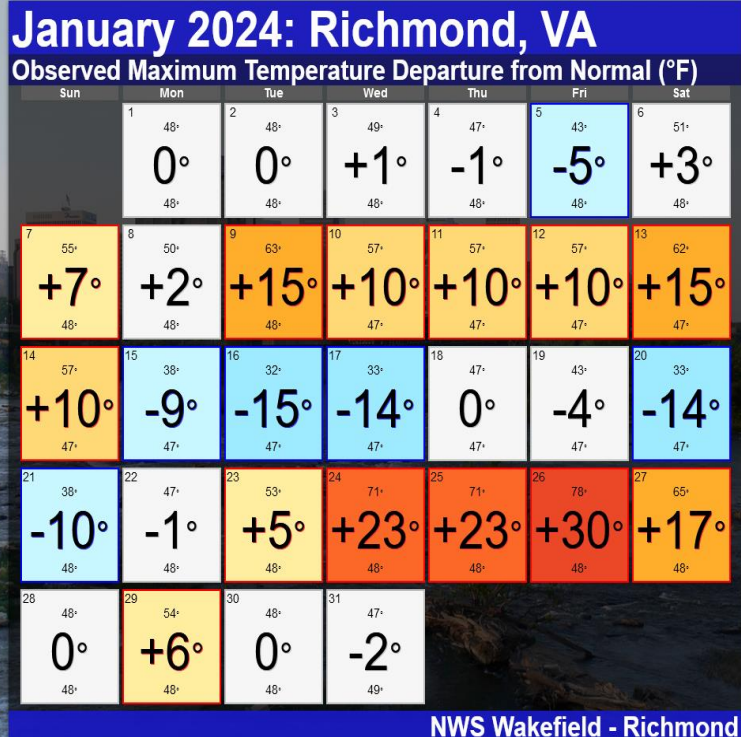


Figure 2: Daily High Temperature Departures at RIC and ORF

Regional Precipitation Maps: January 2024

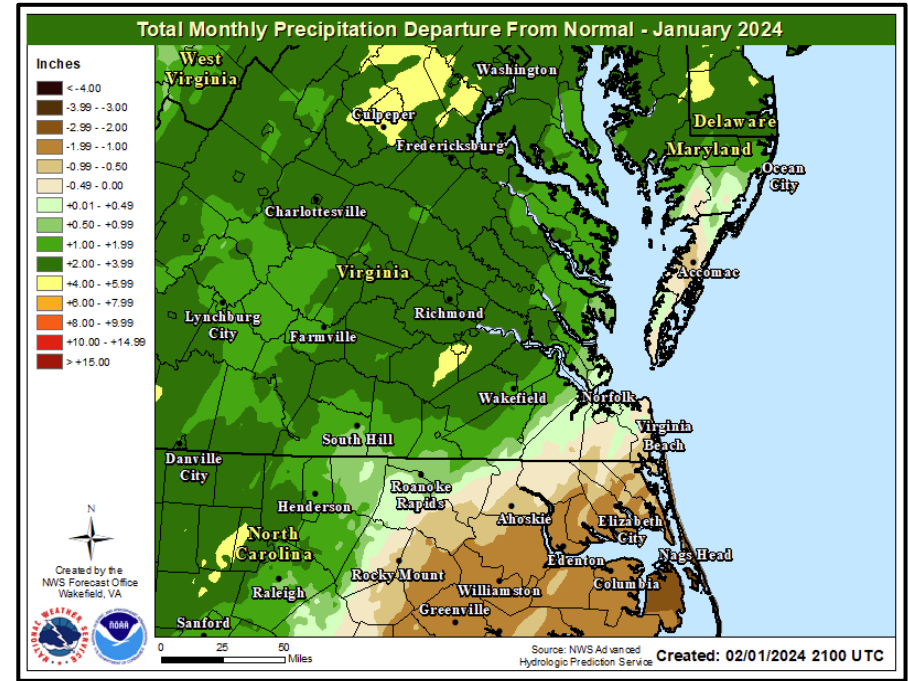
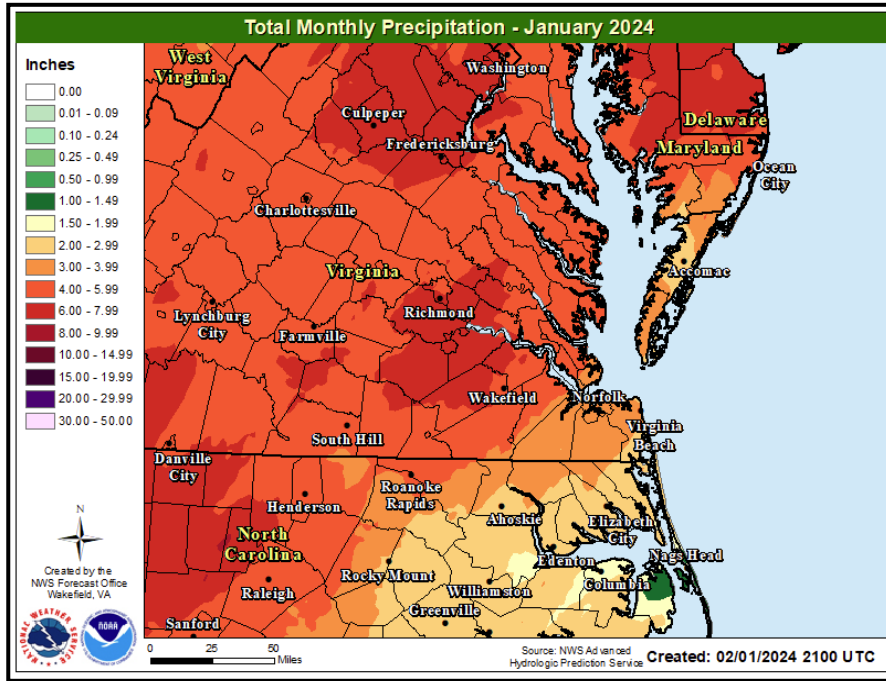


Figure 4: *Total Precipitation* for the month is shown in the map on the left. *Departures* from the 30-year normals (1991-2020) are shown on the map on the right.

Daily Records for Long Term Climate Sites (January):

Norfolk, VA Records (Period of Record 151 yrs./1874-2024)

**tie*

Record Highs: *77 (26th).

Record Low Maximums: none set.

Record Lows: none set.

Record High Minimums: 65 (26th), 62 (25th).

Daily Precipitation: 1.58" (9th).

Richmond, VA Daily Records (Period of Record 128 yrs./1897-2024)

**tie*

Record Highs: none set.

Record Low Maximums: none set.

Record Lows: none set.

Record High Minimums: 60 (26th), 62 (25th).

Daily Precipitation: 2.35" (9th).

Salisbury, MD Daily Records (Period of Record 118 yrs./1907-2024)

**tie*

Record Highs: 75 (26th).

Record Low Maximums: none set..

Record Lows: none set.

Record High Minimums: 61 (25th).

Daily Precipitation: 2.56" (9th).

Elizabeth City, NC Daily Records (Period of Record 91 yrs./1934-2024)

**tie*

Record Highs: *77 (26th).

Record Low Maximums: none set.

Record Lows: none set.

Record High Minimums: 62 (26th), 60 (25th).

Daily Precipitation: 1.03" (9th).