

Winter 2019-2020 Review

General Summary

Meteorological winter (Dec-Feb) will go down as one of the warmest on record across the region with average temperatures running 4 to 7 degrees above the 1981-2010 means. At our 2 climate sites with the longest period of record (Richmond and Norfolk), no individual winter month ranked among the 10 warmest, however when taken together as a 3 month season both sites finished in the top 10: Richmond at 6th warmest and Norfolk at 4th warmest. Overall, the winter season was not extreme in terms of setting record highs: Norfolk only set 2 daily record highs (and no record high minimums) while Richmond set 3 daily record highs and one record high minimum. What made 2019-2020 so warm was the lack of any sustained cold weather, in fact all 4 of our main climate sites had their coldest temperature for the season ranking as the warmest for the entire period of record (either tying one previous season or being a new record outright). As an example, at the Richmond Airport the temperature failed to drop below 20 F for the entire winter, the first time that has happened in the period of record that dates back to the late 1800s. By contrast, the number of days where the temperature reached 70 F or higher at Richmond was just 4, about average for a winter season.

Seasonal precipitation totals ranged primarily from 10 to 15 inches across the region with measureable precipitation falling on 30 to 40 days. Overall, this is wetter than average but not by an excessive amount and did not rank among the top ten wettest winter seasons at our long term climate sites (Richmond and Norfolk).

By convention, seasonal snowfall amounts calculate water year snowfall totals that will account for Fall, winter, and spring snowfalls rather than focusing on just the Dec-Feb period. For the season thus far, snowfall has been well below normal and limited to a few sporadic light accumulation events (the first of which occurred in some portions of the forecast area on November 12-13th). The only moderate snow accumulation for the season was the relatively recent event on Feb 20-21st across interior south central and southeast Virginia, and northeast North Carolina when 2 to 4 inches of snow was recorded.

The series of pages that follow show various statistics for the 2019-2020 winter season and will expand on the above narrative in much more detail.

Tabular Summary of Data for Main Climate Sites:

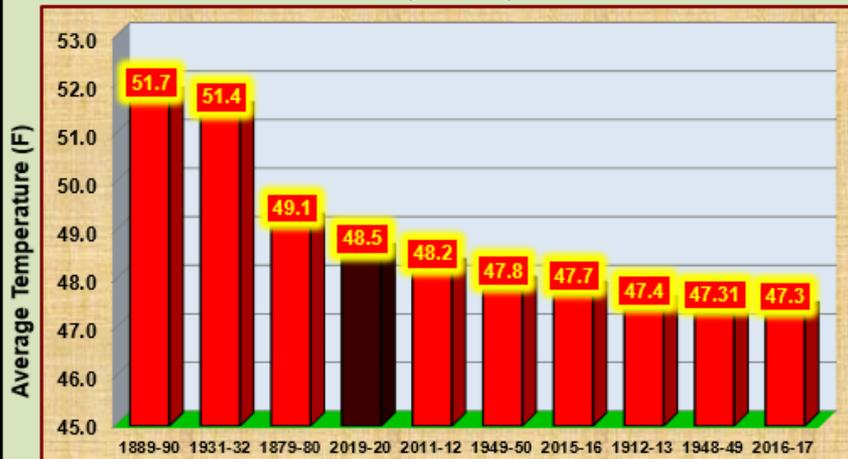
Winter (DJF) 2019-2020 Temperature Summary Data											*also on other dates
Site	Avg Max		Avg Min		Avg Temp		Warmest		Coldest		Significance / Remarks (if Top Ten List, etc.)
	(°F)		(°F)		(°F)		(°F)		(°F)		
	Actual	Dep	Actual	Dep	Actual	Dep	Date		Date		
Richmond	53.7	3.9	34.4	4.3	44.0	4.1	73	12/30	20	*2/22	6th Warmest
Norfolk	56.9	6.5	40.1	5.7	48.5	6.1	78	12/30	25	2/22	4th Warmest
Salisbury	52.5	6.0	32.6	4.3	42.5	5.2	72	*1/11	18	*2/22	5th Warmest
Elizabeth City	59.6	6.6	40.2	6.6	49.9	6.6	78	2/13	23	*2/22	Warmest on record
Wakefield	56.0	4.9	34.0	5.0	45.0	5.0	77	12/30	17	2/22	N/A

Winter (DJF) 2019- 2020 Precipitation & Snowfall Summary Data											
Site	Total Pre		# Pre Days		Greatest		Total Snow		# Snow Days		Significance / Remarks (if Top Ten List, etc.)
	(in.)		(≥0.01")		(in.)		(in.)		(≥0.1")		
	Actual	Dep	Actual	Dep	Actual	Date	Act	Dep	Act	Dep	
Richmond	10.45	1.39	32	3	1.60	2/6	1.5	-8.8	3	-3	
Norfolk	10.10	0.32	34	4	1.54	12/9	0.4	-5.4	2	-2	
Salisbury	M	####	M	####	M	M	0.5	-10.0	1	-4	
Elizabeth City	12.57	3.57	40	9	3.09	2/6	1.4	-2.6	1	0	
Wakefield	14.51	4.43	37	7	2.03	2/11	3.6	-4.4	1	-4	

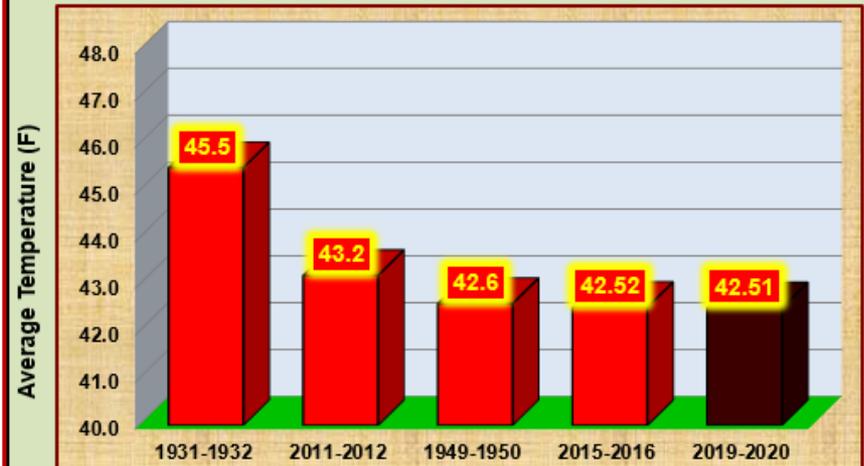
* **“Dep”= Departure** from the 30-year normals (1981-2010). Temperature departures are shaded orange for 1 F or more warmer than average and blue for 1 F or more cooler than average. Similarly, precipitation departures are shaded green for 0.50” or more wetter than average and tan for 0.50” or more drier than average and snowfall departures are shaded purple for 0.5” or more above average and tan for 0.5” or more below average.

Warmest Winters at Main Climate Sites

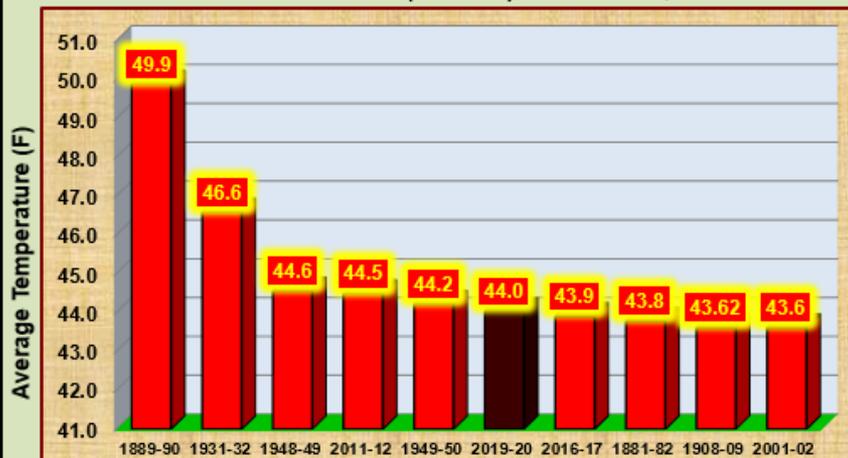
Ten Warmest Winters (Dec-Feb) at Norfolk, VA



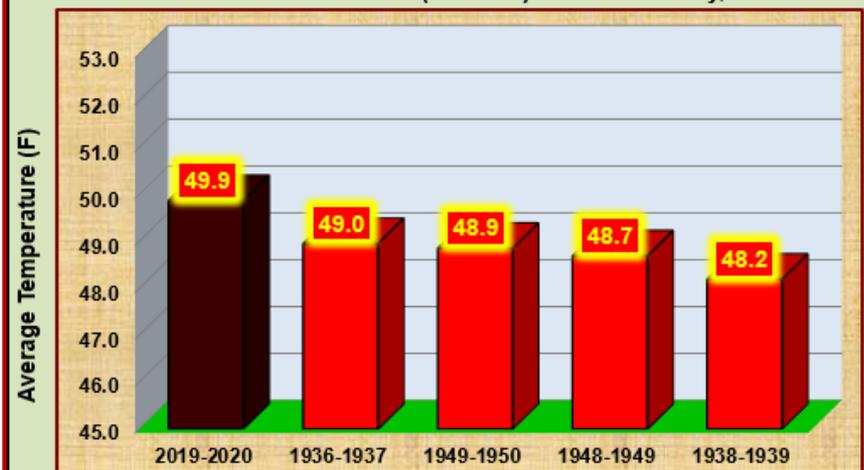
Five Warmest Winters (Dec-Feb) at Salisbury, MD



Ten Warmest Winters (Dec-Feb) at Richmond, VA



Five Warmest Winters (Dec-Feb) at Elizabeth City, NC



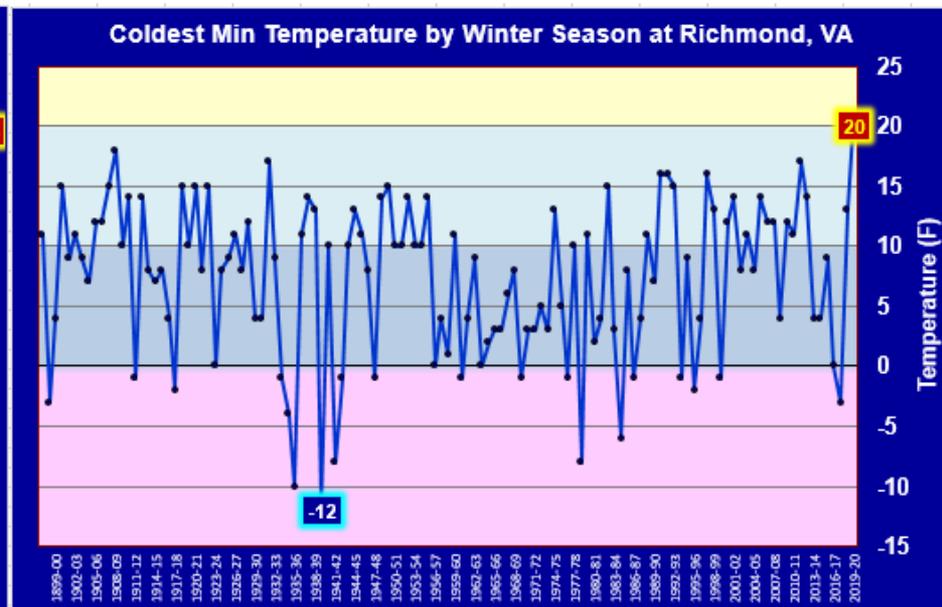
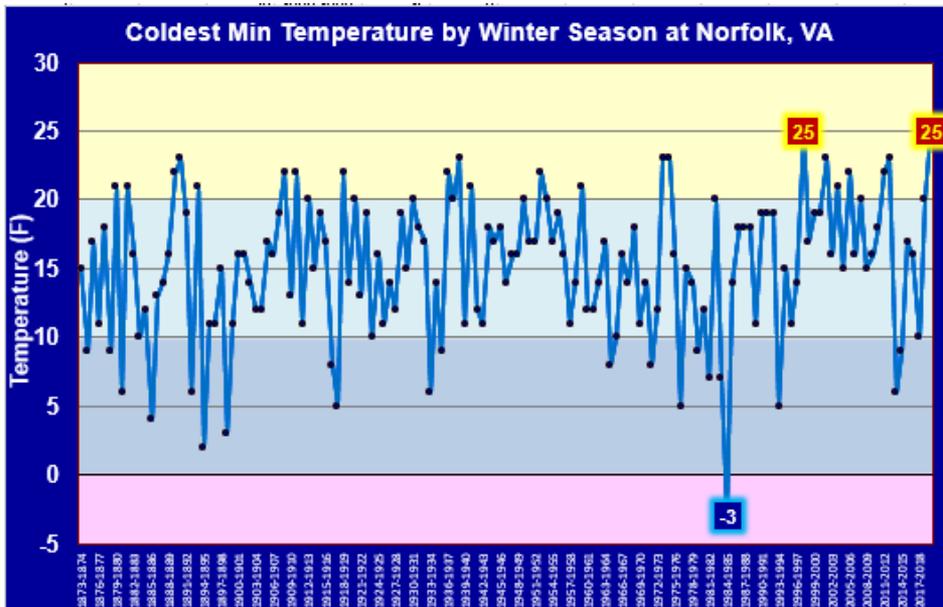
- A top 5 List is used for Salisbury, MD and Elizabeth City, NC due to a shorter and somewhat less complete period of record.

Coldest Temperature for a Winter Season

Station	2019- 2020 Coldest Min	1981-2010 Average	Coldest on Record	Warmest “Coldest Min”
Norfolk	25 F (2/22)	16 F	-3 F (Jan 1985)	25 F (1997-98 & 2019-20)
Richmond	20 F *(2/22)	8 F	-12 (Jan 1940)	20 F (2019-20)
Salisbury	18 F *(2/22)	5 F	-10 (Jan 1942)	18 F (1997-98 & 2019-20)
Elizabeth City	23 F *(2/22)	13 F	-2 F (Jan 1985)	23 F (2019-20)

* Also occurred on other dates this winter

- Richmond's previous warmest "coldest min" temperature for a winter season was 18 F (1908-09).
- Elizabeth City's previous warmest "coldest min" temperature for a winter season was 21 F (2001-02, 1997-98, 1974-75).



Snowfall for the Season

Station	**2019- 2020 Total Snowfall	1981-2010 Average	Snowiest Season on Record	Least Snowy Season on Record
Norfolk	0.4"	5.8"	41.9" (1979-80)	T *(1997-98)
Richmond	1.5"	10.3"	38.9" (1961-62)	T (1918-19)
Salisbury	0.5"	10.5"	51.8" (1995-96)	T *(1991-92)
Elizabeth City	1.4"	4.0"	39.0" (1979-80)	T *(2018-19)

- ****Snowfall amounts listed are for the season which begins in Fall, includes Dec-Feb, and ends in Spring. Additional snowfall is possible over the next month.**
- **Norfolk has recorded 7 seasons with only a trace (T) of snowfall. The most recent season is listed. In total, 13 seasons have had less than the 0.4" for the 2019-2020 season.**
- **Richmond has recorded one season with only a trace (T) of snowfall in 1918-19. In total, 11 seasons have had less than the 1.5" for the 2019-2020 season.**
- **Snow Data from the sites at Salisbury, MD and Elizabeth City, NC are not as complete as Richmond and Norfolk and contain several seasons with some MM data. For the "least snowy season" statistic, the most recent season with only a trace (T) is listed.**