



NWS Wilmington, Ohio December 2015 Regional Climate Summary

Regional Climate Summary

December 2015 will be remembered for record warmth, abundant rain, and an overall lack of significant wintry weather across the region. Several extended periods of much above normal temperatures impacted the area, including breaking numerous daily record high maximums and minimums. The last 10 days of the month featured a very active weather pattern that led to record rainfall and a severe weather event that yielded numerous straight-line wind damage reports and three confirmed tornadoes.

Temperatures

For the month of December, temperatures were much above normal across the region as a result of persistent zonal flow and ridging in the eastern United States.

Despite the seasonably cold start to the month, a significant warmup developed by the 5th, leading to 9 consecutive days with highs at or above 50F for Cincinnati (CVG), 8 for Dayton (DAY), and 8 for Columbus (CMH). From the 11th through the 14th, high temperatures exceeded 60F for all three sites, breaking numerous records. For CVG, a record high max of 70F was set 12/12, breaking the old record of 64F set in 1929/1949/2007. For DAY, a record high maximum (69F) and minimum (58F) were set on the 12th, breaking the old records of 62F (1972) and 46F (1965), respectively. Additionally, a record high minimum of 55F was tied on the 13th (1929), and a record high maximum of 66F (1901) was tied on the 14th. For CMH, both a record high maximum (68F) and a record high minimum (56F) were set on the 12th, breaking the old records of 65F (1949) and 48F (1965), respectively. A record high maximum of 65F (1995) was tied at CMH on the 14th.

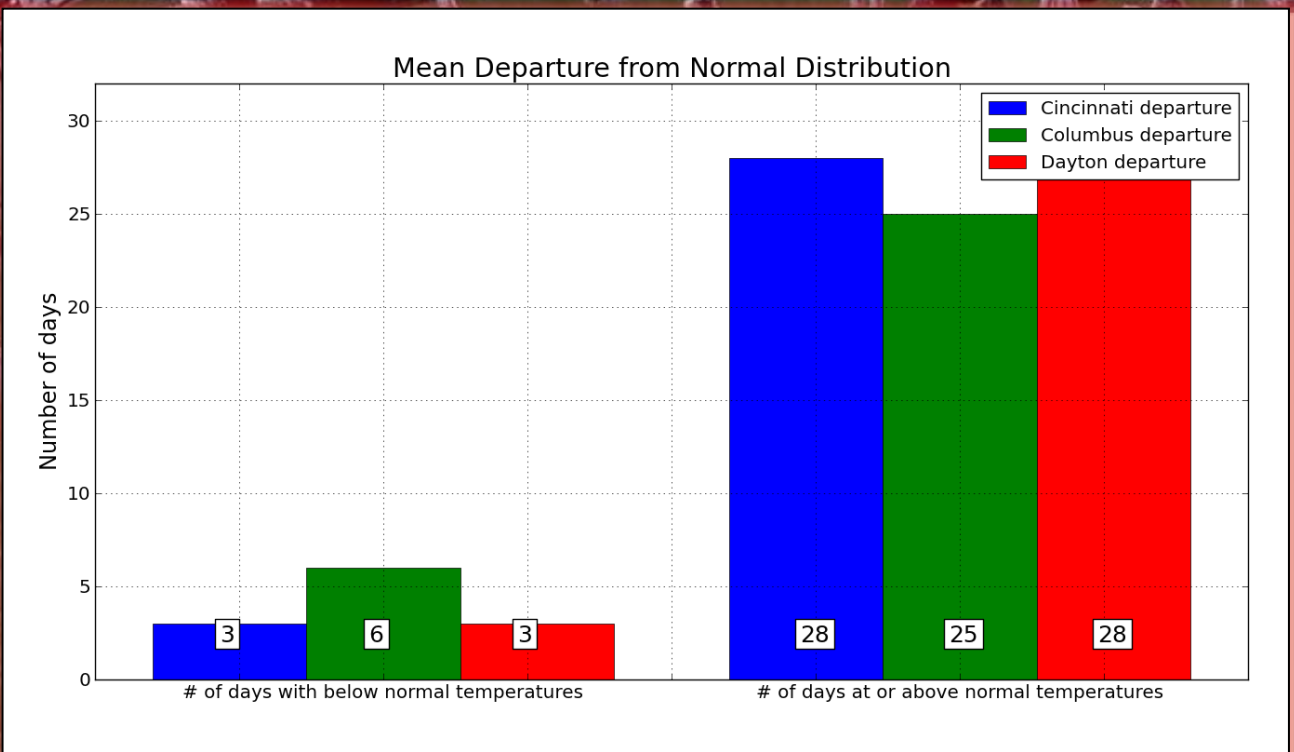
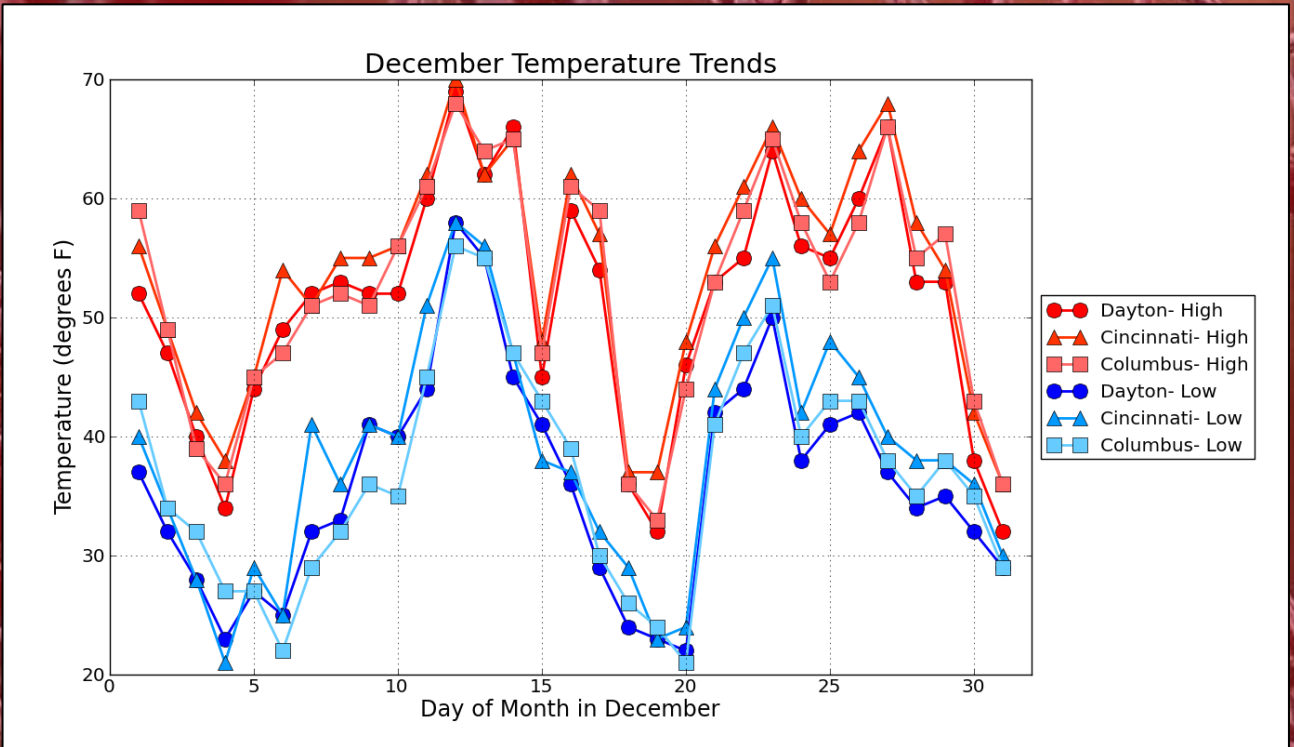
Even though a weak cold front passed through the region at the middle of the month, the unseasonable warmth continued across the area. By the 20th, an expansive ridge began to build back into the eastern U.S. which allowed for an extended period of much above normal temperatures, with highs in the 50s and 60s across the Ohio Valley for over a week. Once again, numerous records were broken. For CVG, a daily record high maximum was tied on both the 23rd (66F/1933) and 26th (64F:1875/1889). On the 23rd, DAY set a daily record high maximum of 64F, breaking the old record of 59F set in 1957, and tied a record high minimum of 50F (1895). Dayton also set a record high maximum on the 26th (60F – old record 59F in 1922) and tied a record high maximum on the 27th (66F/2008). For CMH, a record high minimum of 47F was set on the 22nd, breaking the old record of 46F (1931). On the 23rd, a record high maximum (65F) broke the old record of 62F (1933) and a record high minimum (51F) was tied (1941). A cold front moved through early on the 29th, bringing an end to the record-setting warmth across the region.

For the month of December, Cincinnati was the 3rd warmest (records since 1872), Columbus was the warmest (records since 1878), and Dayton was also warmest on record (since 1893).

Site	Avg Temp (°F)	Avg High Temp (°F)	Avg Low Temp (°F)	Departure From Normal (°F)	Maximum Temperature (°F)	Minimum Temperature (°F)
Cincinnati (CVG)	46.2	53.9	38.6	12.1	70	21
Columbus (CMH)	44.7	52.5	36.9	11.2	68	21
Dayton (DAY)	43.7	51.3	36.1	12.5	69	22



Temperatures (Continued)



Precipitation

A strong cold front moved through the area to start the month of December, bringing rain showers and snow showers to the region. With colder air across the area late on the 2nd into the early morning hours on the 3rd, the first trace of snow of the season was recorded at CVG. DAY recorded the first measurable snow (0.2") on the 2nd. CMH also had a trace of snow.

Following the snow showers early in the month, a dry weather pattern developed across the region for the first full week of December, with little precipitation across the area. A cold front early on the 14th dropped about a quarter of an inch of rain across the area, but overall precipitation remained below normal for all 3 sites at the halfway point of the month. A generally dry pattern with only light precipitation settled in across the area for almost a week before an active weather pattern developed near the winter solstice.

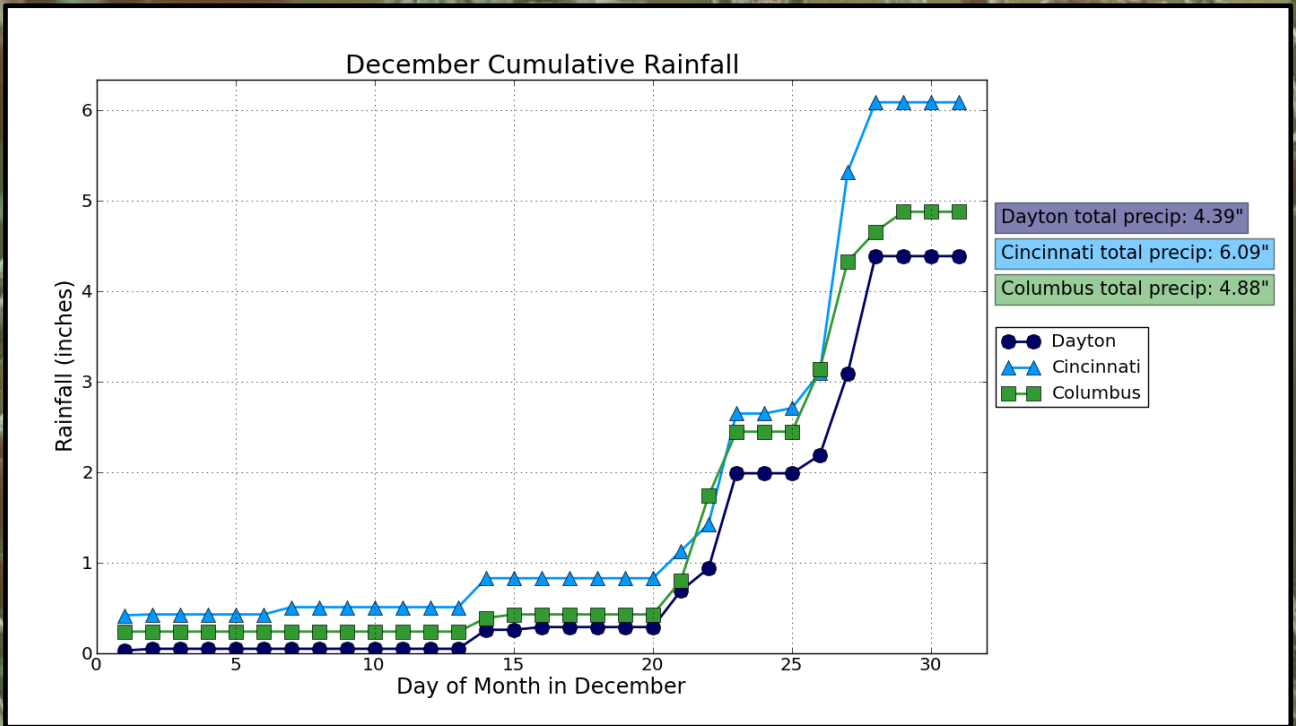
Persistent southerly flow allowed for moisture to stream into the Ohio Valley, leading to an extended wet period across the area. Much above normal precipitation was observed across the area from the 21st through the 28th, including a 3-day period of persistent moderate to heavy rain from the 26th-28th. Several records were set during this wet period. On the 27th, CVG (2.22") broke its old daily record of 1.09" set in 1902 and CMH (1.19") broke its old daily record of 0.90" set in 1968. A daily record rainfall of 1.30" was set on the 28th at DAY, breaking the old record of 1.05" set in 1988. Total rainfall during the 3-day period exceeded 3 inches across much of the region.

While Cincinnati and Columbus recorded their 8th wettest December, Dayton just missed a top ten December, finishing with 4.39 inches.

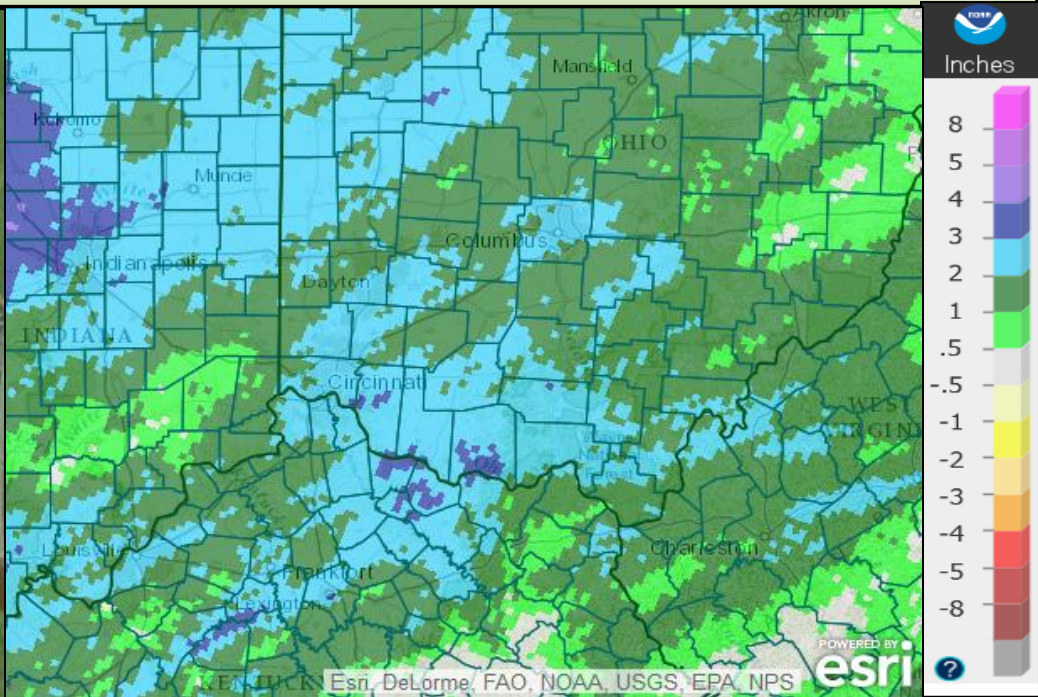
Site	Total Precipitation (in.)	Departure From Normal (in.)	Max Daily Precipitation (in./date)		Total Snowfall (in.)	Max Daily Snowfall (in./date)	
Cincinnati (CVG)	6.09"	+ 2.72"	2.22"	12/27	T	T	12/2, 12/3, 12/18, 12/31
Columbus (CMH)	4.88"	+ 1.91"	1.19"	12/27	T	T	12/3, 12/18, 12/31
Dayton (DAY)	4.39"	+ 1.27"	1.30"	12/28	0.2"	0.2"	12/2



Precipitation (Continued)

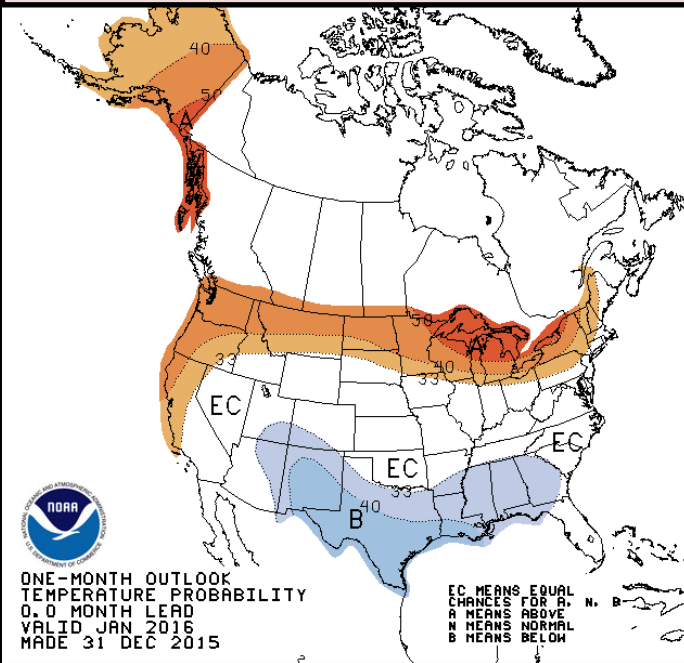


December Precipitation Departure From Normal



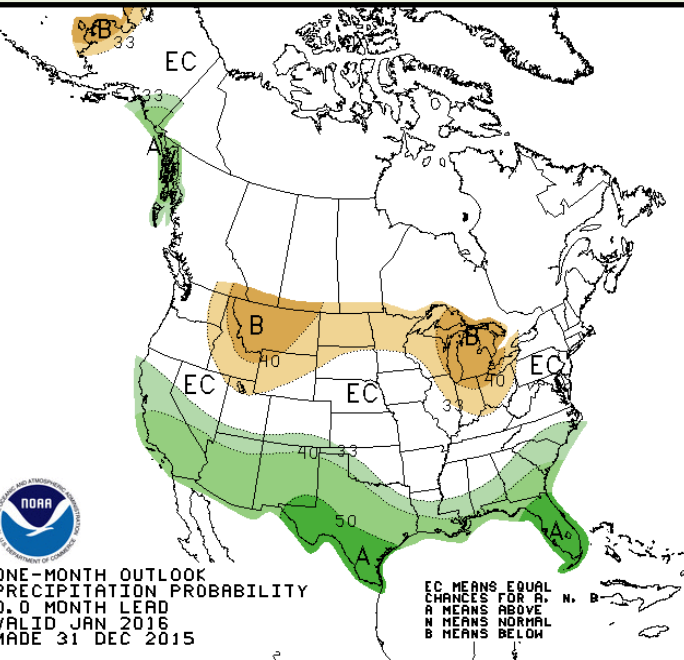
January Climate Outlook

January Temperature Outlook



January is normally the coldest and snowiest month of the year. One of the warmest Januaries on record dates back to 1880 while more recently the coldest on record occurred in 1977. The Climate Prediction Center outlook for January 2016 calls for the area to have an increased likelihood of below normal precipitation. There are equal chances for temperatures meaning there is not a strong clear signal for below normal, normal, or above normal temperatures.

January Precipitation Outlook



Site	January Normal Avg Temp (°F)	January Normal High (°F)	January Normal Low (°F)
Cincinnati (CVG)	30.8	38.7	23.0
Columbus (CMH)	29.6	36.5	22.6
Dayton (DAY)	27.5	34.7	20.3

Site	January Normal Precipitation (in.)	January Normal Snowfall (in.)
Cincinnati (CVG)	3.00	6.5
Columbus (CMH)	2.73	9.2
Dayton (DAY)	2.71	7.9

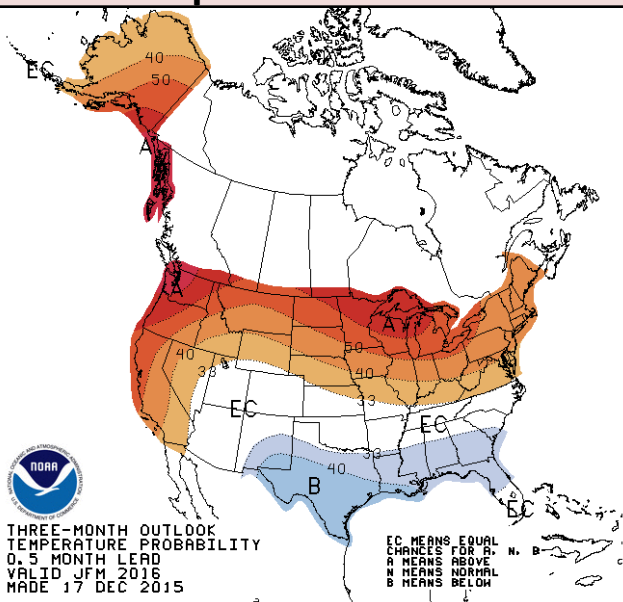


January-March Outlook

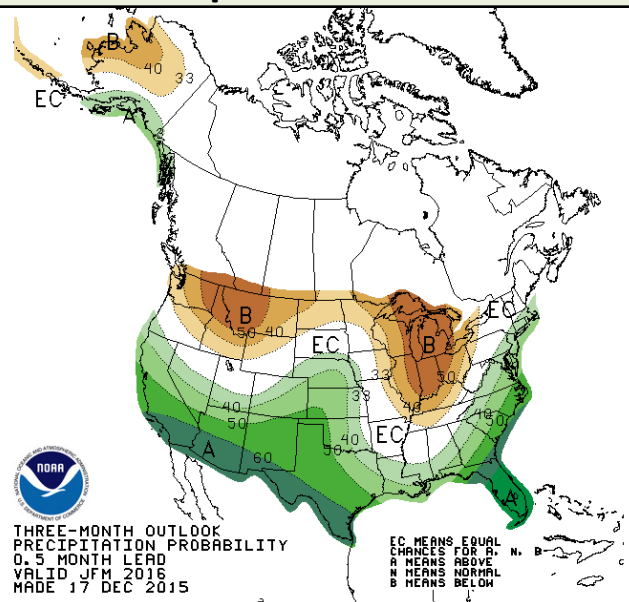
A strong El Niño has developed and is expected to continue through the winter months. El Niño is expected to gradually weaken in the upcoming spring. The latest January to March outlook from the Climate Prediction Center (CPC) indicates an increased likelihood of above normal temperatures and below normal precipitation across the area, which is typical of strong El Niño events. Historically, during strong El Niño periods, below normal snowfall occurred across the area.

No two El Niño events are the same and big snowfall events in addition to cold temperatures are still possible even with a strong El Niño. El Niño is not the only driving force behind what will happen, however it is expected to continue to play a significant role this winter.

Three-Month (JFM) Temperature Outlook



Three-Month (JFM) Precipitation Outlook



Severe & Winter Weather

Severe Weather

Two squall lines moved through on the 23rd. One cell on the second line become super cellular. Several damaging wind reports were received. Additionally, 3 tornadoes occurred. An EF1 tornado occurred south of Butler in Pendleton County Kentucky, an EF0 tornado occurred near Fountain City in Wayne County Indiana, and an EF0 tornado was confirmed east of Arcanum in Darke County Ohio.

Flooding

Several rounds of rain occurred later in the month. Moderate to heavy rainfall led to high water and road closures on the 27th. In addition, river flooding developed along several area rivers and creeks. Rivers receded below flood stage by the end of the month.

Winter Weather

Light snow occurred across portions of the area multiple times during the month (2nd, 3rd, 18th, and 31st). Dayton received measurable snow on the 2nd of 0.2. Cincinnati and Columbus received only trace amounts of snow during the month and have yet to have their first measurable snowfall for the season. The record for the latest seasonal first measurable snow at Cincinnati is 0.1 on 1/12/83 and for Columbus 0.1 on 1/2/29.

