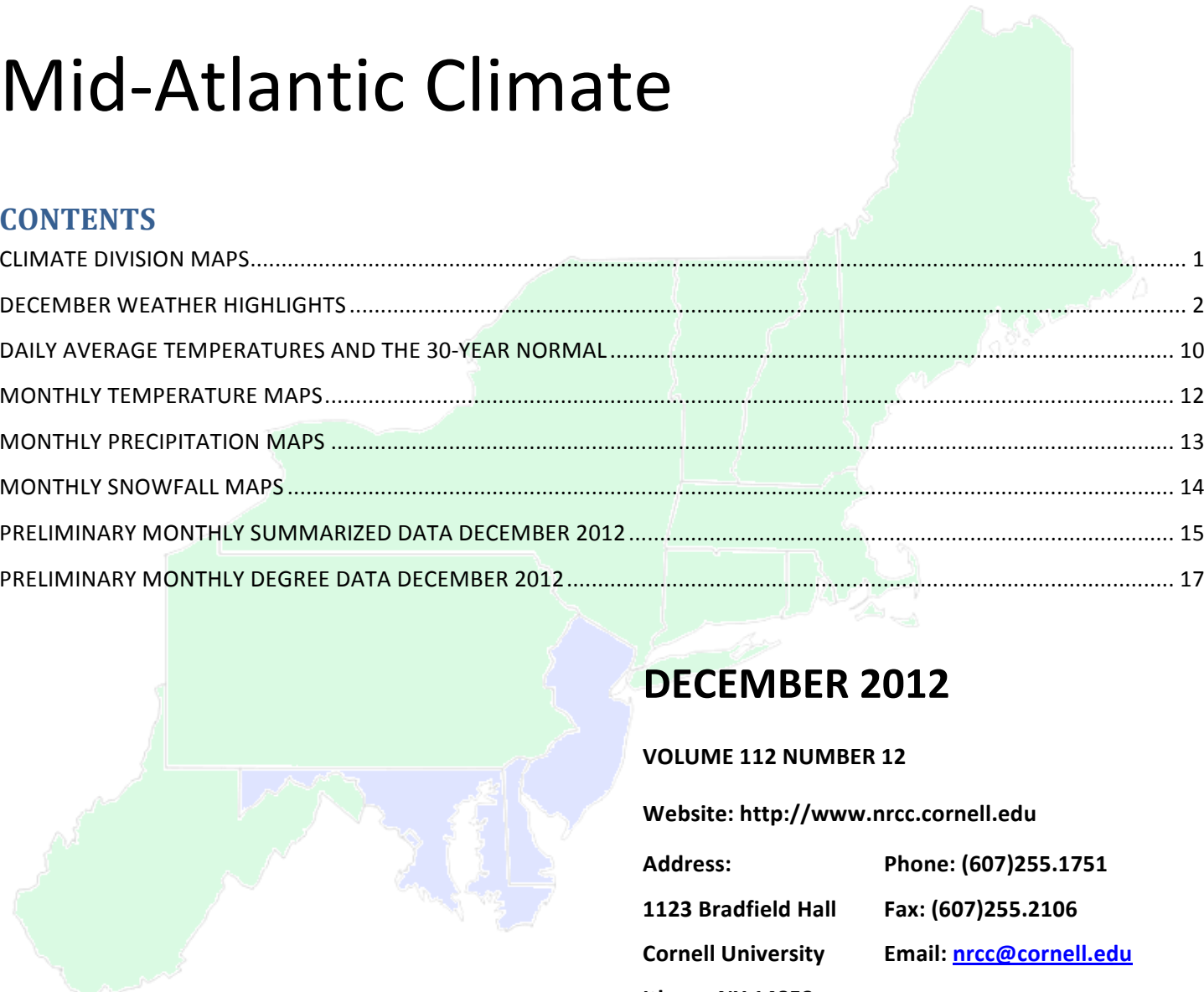


Northeast Regional Climate Center

Mid-Atlantic Climate

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DECEMBER 2012

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CLIMATE DIVISION MAPS

New Jersey



New Jersey Climate Divisions

- 1 Northern
- 2 Southern
- 3 Coastal

Delaware



Delaware Climate Divisions

- 1 Northern
- 2 Southern

Maryland



Maryland Climate Divisions

- 1 Southern Eastern Shore
- 2 Central Eastern Shore
- 3 Lower Southern
- 4 Upper Southern
- 5 Northern Eastern Shore
- 6 Northern Central
- 7 Appalachian Mountain
- 8 Allegheny Plateau

DECEMBER WEATHER HIGHLIGHTS

After a cooler than normal November in the Mid-Atlantic December returned to 2012's trend of warmer than normal temperatures. The average temperature of 41.5 degrees was 5.1 degrees above average and made it the 9th warmest December in 118 years. All states and divisions reported December 2012 as one of their top 15 warmest. Ranks for divisions are below. As for the states, departures were: New Jersey, +4.6 degrees (8th warmest); Delaware, +5.4 degrees (8th warmest); and Maryland, +5.4 degrees (9th warmest). The region's maximum temperature, 74 degrees, occurred in Snow Hill, MD, and Salisbury, MD, on the 3rd and 4th respectively. December capped what was already a warmer than normal year. Both Delaware and New Jersey reported 2012 to be their warmest year since 1895 while in Maryland it was the 2nd warmest on record.

Climate Division Rank (warmest since 1895)

Maryland

| | |
|-------------------------|------------------|
| --Northeastern Shore | 3 rd |
| --Southeastern Shore | 4 th |
| --Central Eastern Shore | 7 th |
| --Upper Southern | 7 th |
| --North Central | 9 th |
| --Allegheny Plateau | 10 th |
| --Lower Southern | 10 th |
| --Appalachian Mtn. | 14 th |

New Jersey

| | |
|------------|-----------------|
| --Northern | 6 th |
| --Coastal | 8 th |
| --Southern | 8 th |

Delaware

| | |
|------------|-----------------|
| --Northern | 7 th |
| --Southern | 8 th |

December 2012 was wetter than normal in the Mid-Atlantic. With 4.72 inches of precipitation, 129 percent of normal, it was the 24th wettest December on record. All states, and their divisions, received above average precipitation. New Jersey was the wettest state at 146 percent of normal precipitation (17th wettest) while Maryland received 119 percent of normal and Delaware received 114 percent of normal. Southern New Jersey was the site of the greatest monthly and daily precipitation. Estell Manor received 7.36 inches of precipitation in December while the Freehold/Marlboro area received 3.48 inches of precipitation on the 27th. Located in the Allegheny Plateau of Maryland, Deep Creek was the site of the greatest monthly and daily snowfall. The site received 28.0 inches in December, 8.0 inches of which fell on the 22nd. Despite a wet end to the year, 2012 wrapped up drier than normal for the Mid-Atlantic. Delaware, receiving only 75 percent of normal precipitation, reported 2012 as its 6th driest year on record. Maryland and New Jersey fared a little better at 90 and 92 percent of normal.

At the beginning of the month, warm air ahead of an advancing cold front helped several cities set new maximum temperature records. Highs on the 3rd reached up to 71 degrees in the Mid-Atlantic. On the 18th, a storm dropped ¼ inch hail in parts of New Jersey. A few days later, from the 20th to the 21st, another storm brought strong winds, with gusts of 60+ mph, and 2 to 3 inches of rain. Flooding and road closures were reported in several tidal zones of southern New Jersey, Maryland's Eastern Shore, and coastal Delaware. In Garrett County, in western Maryland, freezing rain caused numerous accidents on Interstate 68, which was shut down for over 4 hours. A Nor'easter on the 26th created difficulties for holiday travelers with a messy mix of precipitation. Four inches of rain in coastal New Jersey, 9 inches of snow in western Maryland and light sleet in Delaware were reported. The weather conditions snarled traffic and caused flight delays. The storm's strong winds caused coastal flooding in some areas of New Jersey affected by Sandy.

Yearly Temperature Records (°F)

| <u>Station</u> | <u>Date</u> | <u>New</u> | <u>Previous</u> |
|-------------------------|-------------|------------|-----------------|
| Wilmington, DE | 2012 | 57.5 | 57.2 in 1973 |
| Newark, NJ | 2012 | 57.8 | 57.6 in 1990 |
| Washington Dulles, DC | 2012 | 57.9 | 57.1 in 1998 |
| Washington National, DC | 2012 | 61.5 | 60.2 in 1991 |

Daily Maximum Temperature Records (°F)

| <u>Station</u> | <u>Date</u> | <u>New</u> | <u>Previous</u> |
|-------------------------|-------------|------------|-----------------|
| Wilmington, DE | 3 | 68 | 68 in 2009 |
| Washington National, DC | 3 | 71 | 70 in 1950 |

Daily High Minimum Temperature Records (°F)

| <u>Station</u> | <u>Date</u> | <u>New</u> | <u>Previous</u> |
|-------------------------|-------------|------------|-----------------|
| Baltimore, MD | 17 | 47 | 47 in 1984 |
| Washington National, DC | 17 | 48 | 48 in 1984 |

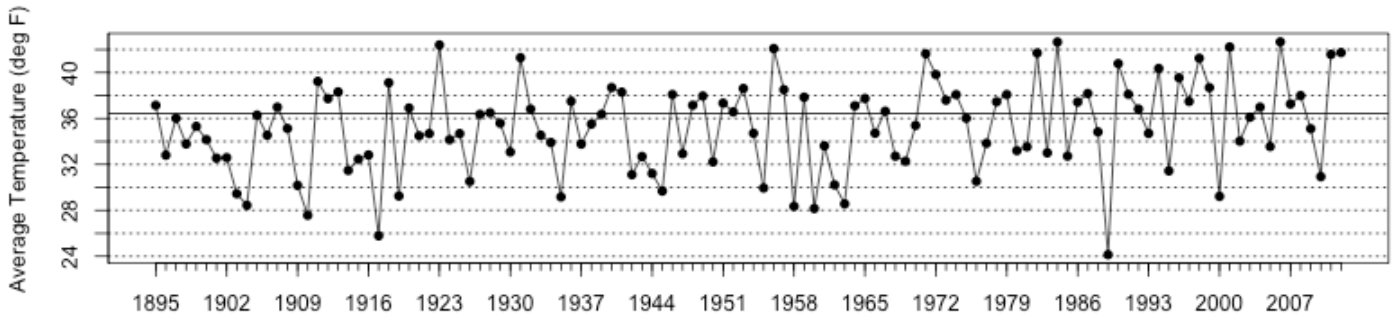
Daily Precipitation Records (inches)

| <u>Station</u> | <u>Date</u> | <u>New</u> | <u>Previous</u> |
|-------------------------|-------------|------------|-----------------|
| Atlantic City, NJ | 8 | 1.46 | 1.30 in 1974 |
| Washington Dulles, DC | 26 | 1.41 | 1.00 in 1969 |
| Washington National, DC | 26 | 1.42 | 1.31 in 1943 |
| Atlantic City, NJ | 26 | 2.60 | 2.44 in 2009 |

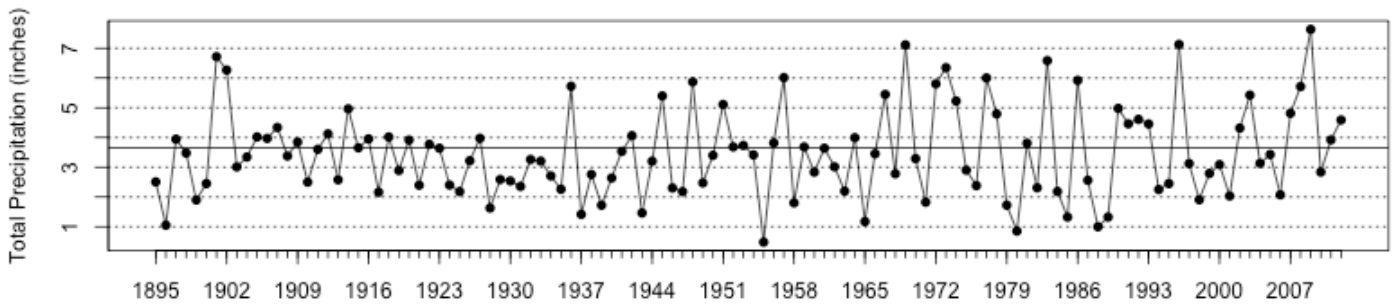
Daily Snowfall Records (inches)

| <u>Station</u> | <u>Date</u> | <u>New</u> | <u>Previous</u> |
|-----------------------|-------------|------------|-----------------|
| Washington Dulles, DC | 29 | 0.9 | 0.3 in 1993 |

Mid Atlantic Average December Temperatures



Mid Atlantic December Precipitation Totals



The 2012 values depicted on these graphs are based on preliminary data.

Finishing the Year on a Mild and Damp Note: December 2012 Report
Sandy and Record Warmth: 2012 Report

Dr. David A. Robinson, New Jersey State Climatologist
 NJ Agricultural Experiment Station, Rutgers University

Following a sub-average November in the temperature department, the first such month across NJ since January 2011, above-average temperatures reappeared in December. The mean temperature this last month of 2012 was 40.7°, which is 5.1° above average and ranks as the 5th warmest December (tied with 1984) since records commenced in 1895 (Table 1). Remarkably, the December 2012 average is only 0.7° cooler than this past November! The closest these months had been to each other previously was in 1923 when December was only 1.4° cooler than November.

| Rank | Year | Dec. Avg. Temp. |
|------|------|-----------------|
| 1 | 2006 | 42.2° |
| 2 | 2001 | 41.7° |
| 3 | 1923 | 41.0° |
| 4 | 2011 | 40.8° |
| 5 | 2012 | 40.7° |
| 5 | 1984 | 40.7° |
| 7 | 1982 | 40.3° |
| 7 | 1998 | 40.3° |
| 9 | 1956 | 40.1° |
| 10 | 1990 | 40.0° |

Table 1. The ten warmest Decembers across New Jersey since 1895.

Only the most commonly cold locations had daily low temperatures fall into the teens, the two most notable locations being Walpack (Sussex County) on nine occasions and Pequest (Warren) eight times. The latter station joined High Point Monument (Sussex) in falling below freezing on 25 mornings, while Walpack did so 20 times. On the opposite side of the ledger, Atlantic City Marina (Atlantic) only dropped to 30° on the 31st, 31° on the 6th, and 32° on the 23rd, 29th, and 30th, while Harvey Cedars (Ocean) dropped to 30° on the 31st, 31° on three mornings, and 32° twice.

Walpack and Pequest both cooled to 19° on the 6th and 18° on the 7th. Walpack was 17° on the 13th, with Pequest at 18°. The 14th saw Walpack at 14°, Pequest 15°, and four other stations within the 54 station [NJ Weather and Climate Network](#) between 17° to 19°. Three coastal stations only fell to between 33°-35° on the 14th. The mid-December cold spell concluded on the 15th when Walpack fell to 17° and Pequest to 18°.

Cold weather returned for the holiday period, with Walpack down to 19° on the 23rd, Pequest and Berkeley Township (Ocean) at 15° on the 24th, Walpack to 17° and High Point to 18° on the 26th, and Pequest and Walpack down to 17° and 19°, 17° and 18°, and 17° and 15°, respectively, on the 28th, 29th and 30th. The 31st just beat out the 14th as the coldest morning of the month. With the ground snow-covered in north Jersey, the temperature fell to 13° at Walpack, 17° at Hope (Warren) and Pequest, and to the upper teens and low 20s at a number of other locations. Only West Cape May at 33° remained above freezing.

On the mild side, maximum temperatures reached 60° or higher at one or more location on seven December days. Piney Hollow (Gloucester) topped out at 61° on the 1st while in the north, Wantage (Sussex) only reached 33°. The 3rd saw Mansfield (Burlington) and Egg Harbor (Atlantic) reach 69°. The 4th was the warmest day of December, with Red Lion (Burlington) and Piney Hollow up to 70°, seven stations at 69°, and 32 other stations between 60°-68°. Harvey Cedars (Ocean) was coolest at 55°. Cherry Hill hit 61° on the 5th, with four stations at 60°. Four stations reached 65° on the 10th. Three locations hit 61° and eleven made it to 60° on the 11th, while High Point Monument only got to 37°. The 18th brought the last 60° weather of 2012 to NJ, with 62° in Cherry Hill (Camden) and 61° at Egg Harbor.

The first half of December was rather tranquil, while that was anything but the case during a stormy second half. All told, statewide precipitation (rain and melted snow/sleet) averaged 5.56" for the month. This is 1.65" above normal and ranks as the 17th wettest of the past 118 years. Coastal sections were the wettest, with 8.22" at Howell (Monmouth), 8.30" and 7.86" at Woodbine (Cape May) stations, 8.05" in Brick (Ocean), and 7.60" at both Egg Harbor (Atlantic) and Stafford (Ocean) townships. On the dry side western areas only saw 3.88" in Pennsville (Salem), 4.11" in Lawrence Township (Mercer), and 4.19" at Wantage (Sussex).

Statewide snowfall averaged 2.4" in December, which is 2.5" below normal and ranks 73rd most snowy of the past 118 years. The northern third of NJ with 6.2" ranked 55th snowiest, the central area with 2.7" was 70th, and the south with 0.3" 83rd snowiest (suggesting there are many Decembers without much southern snowfall). Snowfall accumulated to 11.3" and 9.4" at two West Milford (Passaic) stations, 10.2" at Hardyston (Sussex), and 9.6" and 9.3" at two Wantage stations. At best, only flurries fell during December down the coast from Ocean County to Cape May and up Delaware Bay to Gloucester County. Given the snowy November in central and northern areas, seasonal snowfall to date ranks 43rd snowiest for the state, 31st for the north, 38th for central areas, and 61st in the south.

The only precipitation of note prior to mid month was an interval of dismal conditions from the 7th to 11th. Occasional light rain fell over most of NJ during this period, although some heavy rain fell in the south from the 7th into the 8th. Two stations in Woodbine (Cape May) received 3.37" and 3.27", and in Atlantic County, Linwood and Egg Harbor both caught 3.13". Totals fell off rapidly toward the north, with Ewing (Mercer) and Newton (Sussex) coming in at the low end with 0.61" and 0.62", respectively. Fog was quite extensive around NJ on the 10th.

The 16th to 18th saw the next round of inclement weather visit NJ, particular up north. Rain totaled as much as 1.47" in Bloomfield (Essex), 1.46" in New Providence (Union), and 1.44" in West Milford (Passaic). Less fell in the southern half of the state, with only 0.20" in Upper Township (Cape May) and 0.22" at Stone Harbor (Cape May). On the 18th some pre-dawn thunder was heard in Gloucester County as well as in central areas during the afternoon.

A major weather pattern change took place from late on the 20th into the morning of the 21st. The new atmospheric alignment was destined to bring stormy conditions and seasonable temperatures to NJ for the remainder of 2012. Heavy rain fell from Hunterdon and Warren counties northeastward into Morris, eastern Sussex and northern Passaic counties. Jefferson Township (Morris) received 3.11", Franklin Township (Hunterdon) 3.16", Stockton (Hunterdon) 3.01", and Rockaway Township (Morris) 2.66". Coastal areas saw the least fall, with 0.25" in Lacey Township (Ocean) and 0.37" at Long Branch (Monmouth). Strong winds accompanied the storm, with Sandy Hook (Monmouth) gusting to 64 mph, High Point Monument (Sussex) and Sea Girt (Monmouth) both to 57 mph, and Millville (Cumberland) to 56 mph. Four other NJWxNet stations exceeded 50 mph, with 22 coming in between 40-49 mph. Strong winds continued into the 22nd, with High Point Monument reaching 56 mph, Brick (Ocean) 50 mph, and eleven stations between 40-46 mph. Some thunder was heard in central NJ.

While not a major precipitation event, one from the late afternoon of the 24th to early morning on the 25th brought the first measurable snow to a good portion of NJ since late (or in many places early) November. Lebanon (Hunterdon) and Phillipsburg (Warren) saw the most snow, with 2.0" falling at both locations. The 14 counties from Burlington and Monmouth northward received measurable snow, though except in the northwest there was not enough to leave an inch on the ground Christmas morning

and qualify as an "official" White Christmas. Rain to the south and melted snow to the north mostly totaled between 0.10" and 0.20", with 0.31" topping the list in New Brunswick (Middlesex) and 0.26" at Stafford Township (Ocean).

A major storm pounded NJ from midday on the 26th to midday on the 27th. In a highly unusual, perhaps unprecedented event, more than 5.0" of rain fell in some coastal areas while over 5.0" of snow accumulated at higher elevations in north Jersey. Howell (Monmouth) received 5.95" of rain, with Berkeley Township (Ocean) at 5.42", Eatontown (Monmouth) with 4.14", and 3.98" in Stafford Township (Ocean). Considerably less moisture fell to the west, with only 0.40" at Mount Olive (Morris), 0.47" in Pittstown (Hunterdon), and 0.50" in Greenwich (Warren). Top snow totals included 7.2" in Highland Lakes (Sussex) and 5.9" at Hardyston (Sussex). Portions of Passaic, Morris and Bergen counties also received more than 3.0" of snow, with twelve counties from Mercer and Middlesex northward measuring some of the white stuff. There was even some icing at higher elevations, including 0.10" at Highland Lakes. Thunderstorms rumbled through central and northeastern portions of the state during the nighttime hours. Adding insult to injury were tides that were several feet above normal. Some dunes were breached, as flooding occurred in Sea Bright (Monmouth) at high tide on the morning of the 27th. Tides were stirred up by winds that gusted strongly along the coast. Top gusts included 74 mph in Brick (Ocean), 70 mph at Tuckerton (Ocean), 68 mph at Harvey Cedars (Ocean), 61 mph at Sandy Hook (Monmouth), and 60 mph in Sea Girt (Monmouth). High Point Monument in far NJ Sussex County topped out at 63 mph, however most inland locations saw maximum gusts in the 30-50 mph range, thus power outages were not extensive.

Winds stayed strong following the storm, with a 63 mph gust at Wantage (Sussex) and 57 mph in Oceanport (Monmouth) on the 27th, and 52 mph at Wantage on the 28th. Conditions calmed prior to the last storm of 2012 visiting NJ. From the morning through the evening of the 29th as much as 0.47" of rain, melted snow, and sleet fell in Saddle Brook (Bergen), with 0.41" and 0.40" of rain in the Ocean County townships of Lacey and Berkeley, respectively. Counties from Camden, Burlington, and Monmouth northward received measurable snow. Snow accumulated to 3.0" or more in some parts of nine counties from Hunterdon, Somerset, and Warren counties northward (except in Hudson), mostly at higher elevations. West Milford topped the list at 5.2", followed by 4.5" in Bethlehem (Hunterdon) and Wantage (Sussex).

The highest barometric pressure of December occurred on the 1st, and ranged from 30.50"-30.55". The lowest pressures occurred during the quick-hitting storm on the 21st, falling to about 29.05". Aside from the windy days mentioned earlier in this report, gusts reached 45 mph at High Point Monument on the 5th, 18th, and 19th, with a maximum of 56 mph on the 30th. Wantage experienced gusts of 43 mph on the 6th and 41 mph on the 10th.

2012 Annual Overview

For the second consecutive year, a major statewide annual climate record has been broken. 2011 established a new record for the greatest amount of precipitation, while 2012 set a new standard for highest mean annual temperature. The 56.0° average is 2.8° above the 1981-2010 mean and 3.8° greater than the 1895-2011 full-period mean. Nine of the ten warmest calendar years since 1895 have occurred since 1990 (Table 2).

| Rank | Year | Annual Avg. Temp. |
|------|------|-------------------|
| 1 | 2012 | 56.0° |
| 2 | 1998 | 55.6° |
| 3 | 2006 | 55.3° |
| 4 | 2011 | 55.2° |
| 5 | 2010 | 54.9° |
| 6 | 1949 | 54.8° |
| 6 | 2002 | 54.8° |
| 8 | 1990 | 54.7° |
| 9 | 1991 | 54.6° |
| 10 | 1999 | 54.4° |

Table 2. Warmest years in New Jersey since statewide records commenced in 1895.

The mean temperature for the 12 months ending in December is not the warmest of any consecutive 12 month interval back to 1895 (it ranks 12th), as that honor goes to the 56.9° average for both the April 2011 through March 2012 and June 2011 through May 2012 periods. Every 12 month interval ending with a month in 2012 ranks in the top 14 out of the 1405 12-month periods that have been observed since January-December 1895, illustrating just how warm the past two years have been. Only October 2001 to September 2002 and November 2001 to October 2002 enter into this exclusive top 14 list.

Annual statewide precipitation averaged 43.21". This is 3.73" below average and ranks as the 8th driest calendar year of the past 30. It is only the 47th driest for the entire 118 period of record, demonstrating how much wetter recent decades have been than ones earlier in the 20th century. The central coastal area was wettest in 2012, the two stations in Stafford Township (Ocean) leading the way with 59.12" and 57.89". Lavallette (Ocean) received 55.62", Woodland Township (Burlington) 55.17", Brick Township (Ocean) 54.16", and Berkeley Township (Ocean) 53.36". Western areas of central and southern NJ were driest in 2012, with 38.45" in Winslow Township (Camden), 38.55" and 38.84" at two Ewing Township (Mercer) stations, 39.04" in Woodstown (Salem), and 39.46" at Moorestown (Burlington).

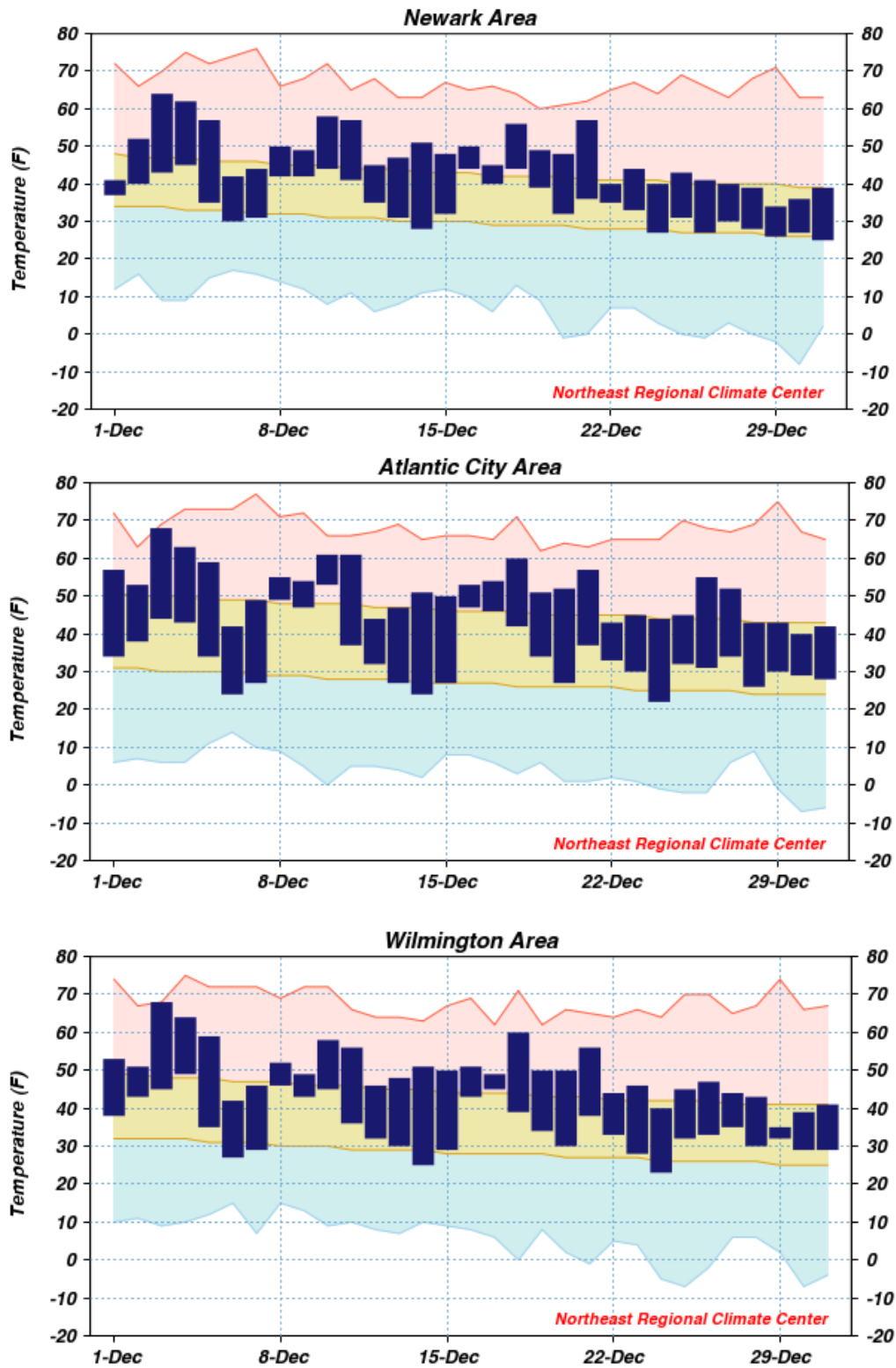
Snowfall was sparse from January to April, above average in November, and about half of average in December. As is usually the case, the hills of northern NJ saw the most snow, with a calendar year total of 26.4" in West Milford (Passaic), 25.1" at Hardyston (Sussex), and 22.7" in Jefferson Township (Morris). The Cape May county communities of Upper Township (0.5"), Wildwood Crest (0.7"), and Middle Township (0.9") failed to make it to the inch mark in 2012.

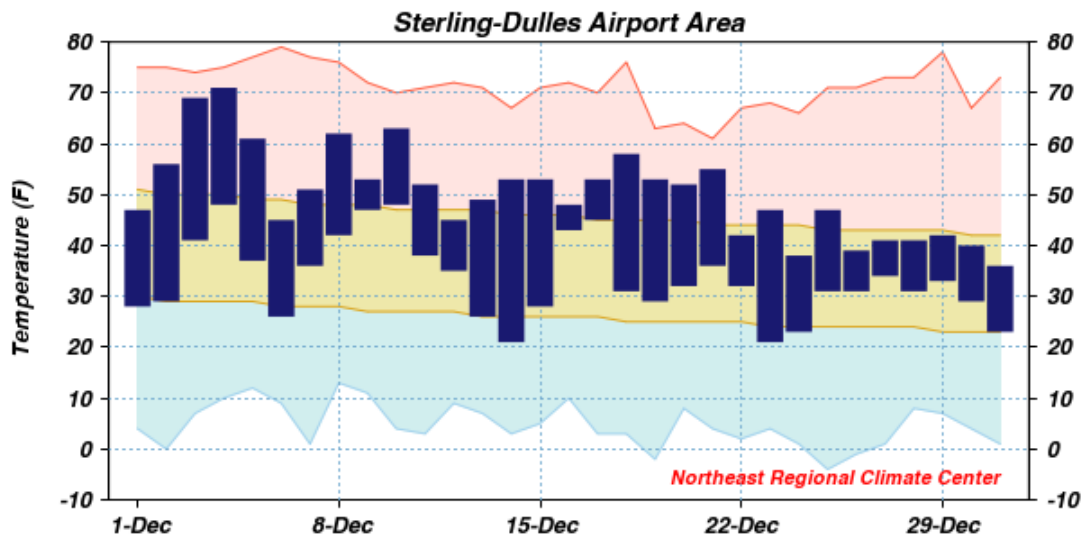
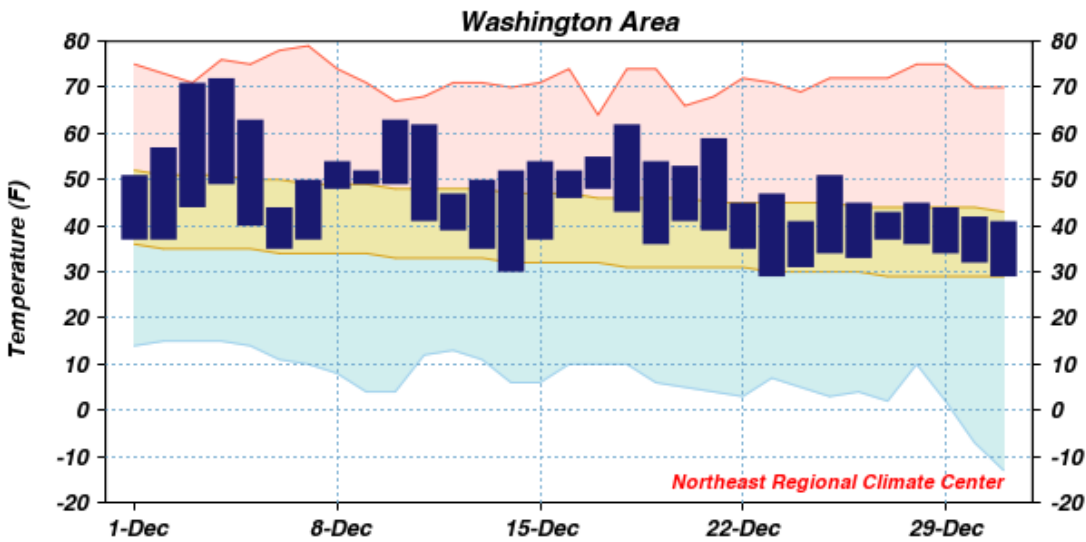
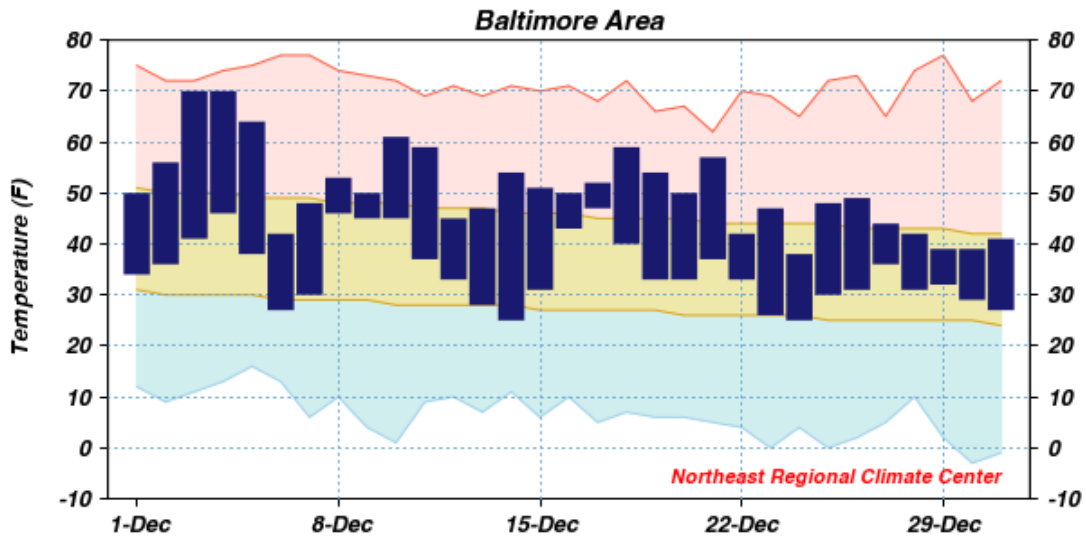
The listing below includes the ONJSC's ranking of the top 10 events of 2012, each including a few key highlights. More about each can be found in the monthly narratives posted on njclimate.org. There is absolutely no debate when it comes to Sandy taking top honors, while some readers may wish to rearrange the others or replace several with ones of their own. The latter might be

appropriate on a local level, however the goal of this list is to pay homage to impactful events across the entire state or an extreme event within a region.

1. Hurricane/Post Tropical Cyclone Sandy (October 28-30)
 - a. Winds gusting as high as 88 mph
 - b. Record coastal storm surge central coast and northward
 - c. As much as 12.71" of rain in Cape May County
 - d. All-time record low barometric pressure of 946 mb (27.94") at landfall
 - e. Coastal devastation; 80% of NJ without power
 - f. 40 deaths
2. South Jersey derecho (June 30)
 - a. Winds gusting as high as 81 mph
 - b. Considerable tree damage
 - c. Power out to over 200,000 customers
 - d. 5 deaths
3. Record warm calendar year
 - a. 56.0° annual average is 2.8° above the 1981-2010 normal
 - b. 5 months ranked either warmest (March), 3rd warmest (February, May), or 5th warmest (July, December) of their respective month dating back 118 years
 - c. 7 of the 10 warmest calendar years dating back to 1895 have occurred since 1998
4. Rather snowless January through April
 - a. Only 23% of average snow fell across the state from January-April, leaving the October 29, 2011 storm the snowiest of the 2011/12 "winter"
5. Early spring green up
 - a. Growing season 3-4 weeks ahead of average, resulting from a mild winter, especially a record warm March (8.7° above average)
6. November 7 snow storm
 - a. Unseasonably early accumulating snow, particularly in the eastern half of the state and especially in interior Monmouth and Ocean counties where up to 13" fell
7. Severe summer thunderstorms (June-early September)
 - a. 3 deaths from lightning (individual storms)
 - b. Rainfall exceeded 3.00" at one or more locations in 7 events
 - c. Wind gusts exceeded 50 mph on a number of occasions
 - d. EF0 tornado in Mount Ephraim (Camden County) on September 4 (only confirmed NJ tornado in 2012)
8. Forest and brush fires (first 3 weeks of April)
 - a. Several from several hundred to 1000 acres; statewide, though concentrated in the Pinelands
 - b. Late season nor'easter on April 22 greatly reduced fire danger
9. Wintry November
 - a. First month with below average temperatures (4.1° below average) since January 2010
 - b. Record streak of 21 consecutive months without a month being below average broken
 - c. Two measurable snow events making for the 6th snowiest November since 1895 (statewide average)
10. Driest year since 2001
 - a. Statewide average of 43.21" (3.73" below normal) is the 8th driest of the past 30 years
 - b. Northeast, central and southwest counties driest
 - c. Of NJ's 21 counties, only Ocean, Atlantic and Cape May were above average for the year

DAILY AVERAGE TEMPERATURES AND THE 30-YEAR NORMAL



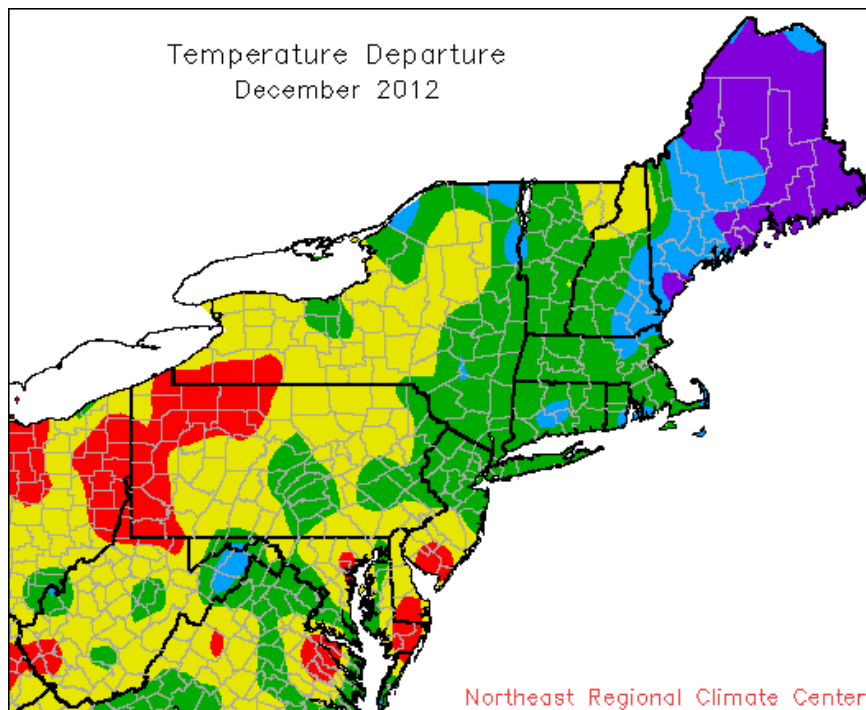
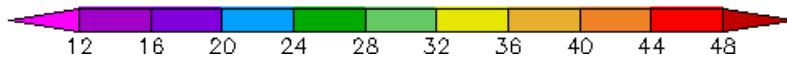
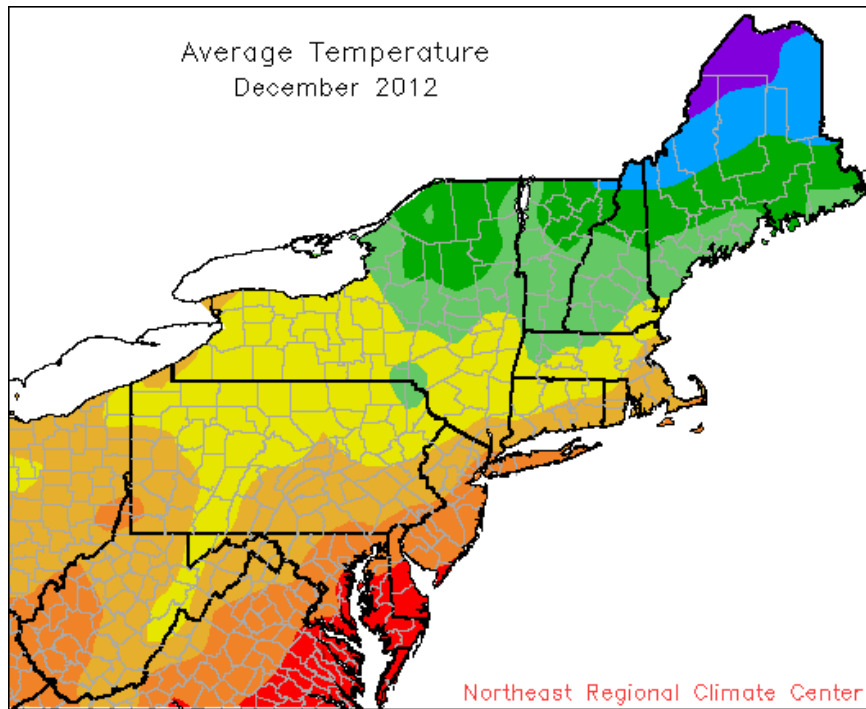


Area between normal max and min temperatures has tan shading.

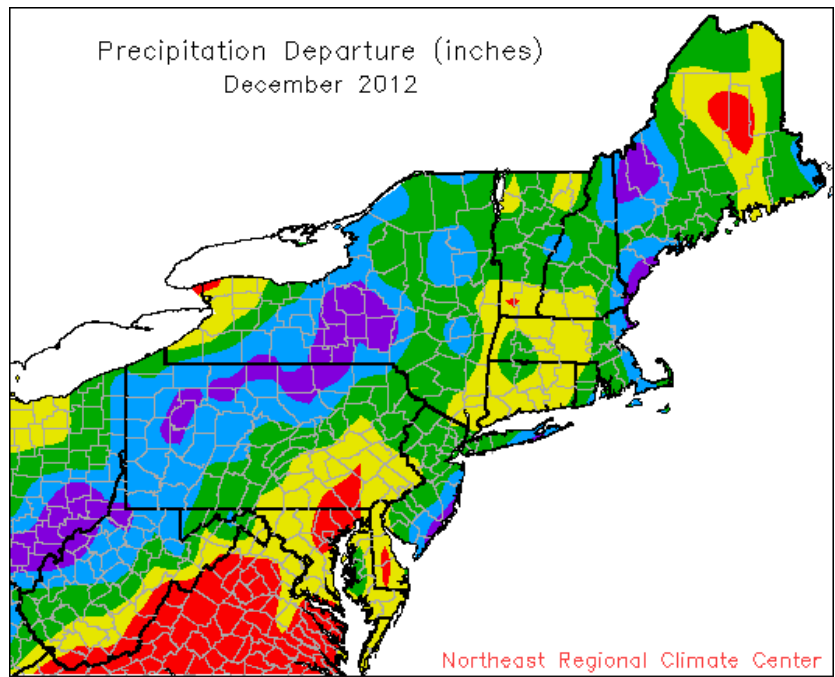
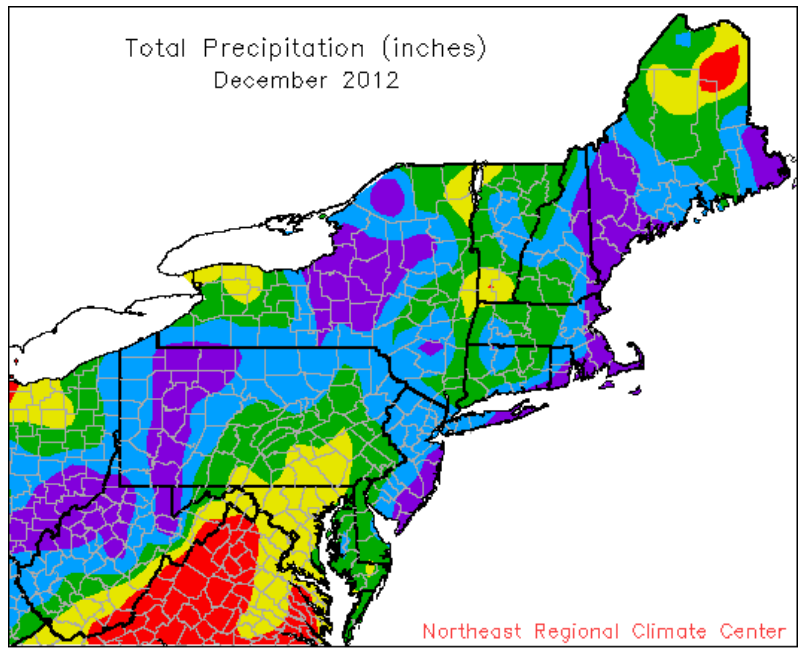
Red line connects record high temperatures.

Light blue line connects record low temperatures.

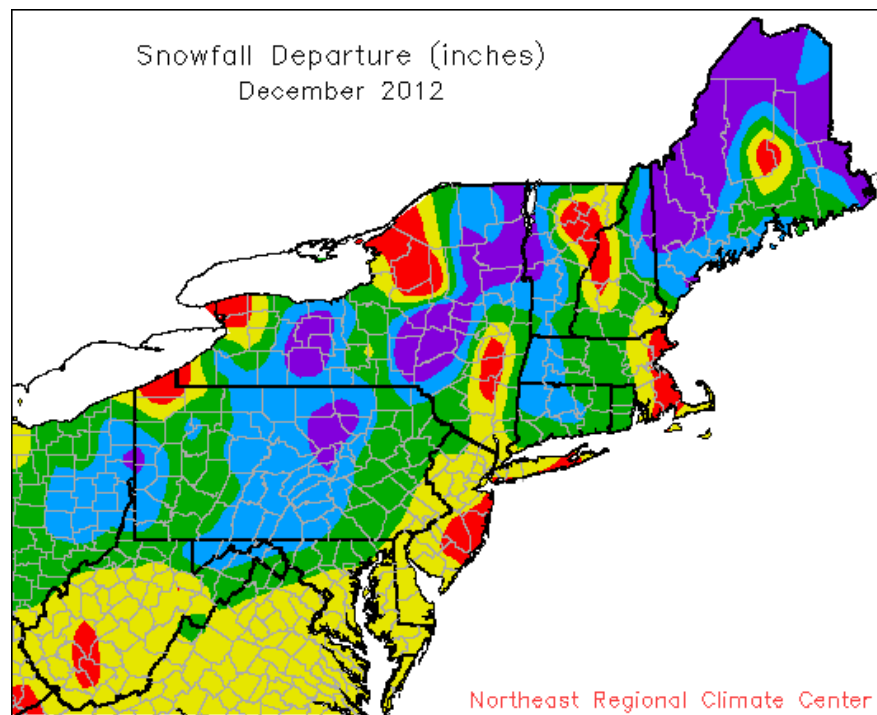
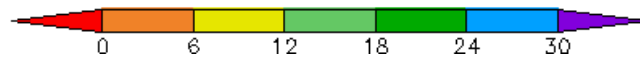
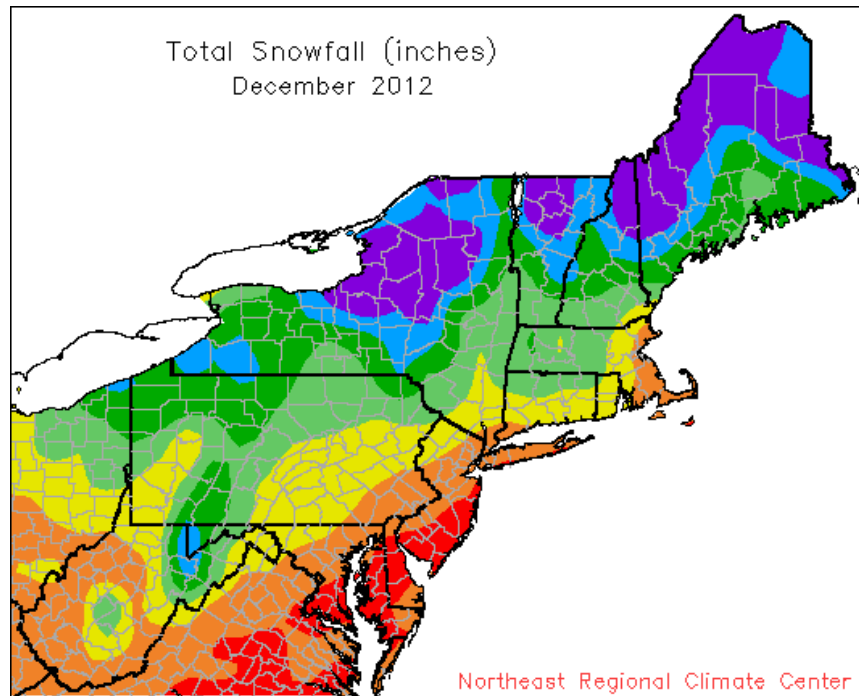
MONTHLY TEMPERATURE MAPS



MONTHLY PRECIPITATION MAPS



MONTHLY SNOWFALL MAPS



PRELIMINARY MONTHLY SUMMARIZED DATA DECEMBER 2012

| STATION | TEMPERATURE (F) | | | | | | | | PRECIPITATION (INCHES) | | | | | | | | | | | |
|--------------------|------------------|------------|------------|-------|------------|------------|----------------|------------|------------------------|-----------|----------------|-------|--------------|------------|-----|------------|------------|------|-----|-----|
| | MONTHLY AVERAGES | | | | EXTREMES | | NUMBER OF DAYS | | | | MONTHLY TOTALS | | | EXTREMES | | SNOWFALL | | | | |
| | AVG MAX | AVG MIN | MON AVG | DEPRT | MON MAX | DAY MIN | MON 50+ | DAY 32- | MON 32- | DAY 0- | MON TOT | DEPRT | DAYS 0.1+ | DLY MAX | DAY | MON TOT | DLY MAX | | | |
| -DE: NORTHERN- | | | | | | | | | | | | | | | | | | | | |
| WILMINGTON NEW CAS | 49.5 | 35.0 | 42.2 | 5.5 | 68 | 3 | 23 | 24 | 15 | 0 | 14 | 0 | 3.92 | 0.44 | 9 | 1.05 | 21 | 0.4 | 0.4 | 29 |
| WILMNGTON PORTER * | 46.8 | 35.0 | 40.9 | 4.7 | 64 | 3 | 27 | 31+ | | | | | | | | | | NM | | |
| -DIVISION- | | | 41.6 | 5.1 | | | | | | | | | 3.92 | 0.17 | | | | 0.4 | | |
| -DE: SOUTHERN- | | | | | | | | | | | | | | | | | | | | |
| DOVER | 51.8 | 37.0 | 44.4 | 5.2 | 71 | 4+ | 24 | 14 | 18 | 0 | 13 | 0 | | | | | | | | |
| -DIVISION- | | | 44.4 | 5.5 | | | | | | | | | 4.22 | 0.60 | | | | | | |
| -STATE- | | | 43.8 | 5.4 | | | | | | | | | 4.15 | 0.51 | | | | 0.1 | | |
| -MD: SOUTHEASTERN- | | | | | | | | | | | | | | | | | | | | |
| SALISBURY WICOMICO | 56.1 | 37.6 | 46.9 | 7.9 | 74 | 4 | 25 | 31+ | 23 | 0 | 10 | 0 | 3.26 | -0.45 | 6 | 1.75 | 26 | | | |
| SNOW HILL 4 N | 55.6 | 37.5 | 46.6 | 5.9 | 74 | 3 | 23 | 31+ | 24 | 0 | 12 | 0 | 4.81 | 1.14 | 6 | 1.86 | 27 | NM | | |
| SALISBURY 2N | 54.1 | 37.5 | 45.8 | | 72 | 4 | 25 | 31+ | 20 | 0 | 8 | 0 | 4.10 | | 6 | 1.39 | 26 | 0 | | |
| -DIVISION- | | | 46.4 | 6.2 | | | | | | | | | 4.06 | 0.40 | | | | 0 | | |
| -MD: CENTRAL EAST- | | | | | | | | | | | | | | | | | | | | |
| ROYAL OAK 2 SSW | 52.4 | 36.9 | 44.6 | 4.5 | 70 | 4 | 26 | 14 | 21 | 0 | 11 | 0 | 5.04 | 1.30 | 9 | 1.65 | 8 | T | T | |
| -DIVISION- | | | 44.6 | 5.3 | | | | | | | | | 5.04 | 1.50 | | | | 0 | | |
| -MD: LOWER SOUTHE- | | | | | | | | | | | | | | | | | | | | |
| MECHANICSVILLE 5 N | 51.4 | 32.0 | 41.7 | 4.4 | 72 | 5 | 23 | 15+ | 17 | 0 | 22 | 0 | 4.20 | 0.50 | 6 | 1.36 | 27 | | | |
| SOLOMONS * | 52.1 | 39.5 | 45.9 | 4.7 | 71 | 5 | 29 | 31 | | | | | | | | | | 0 | | |
| -DIVISION- | | | 43.8 | 5.2 | | | | | | | | | 4.20 | 0.68 | | | | 0 | | |
| -MD: UPPER SOUTHE- | | | | | | | | | | | | | | | | | | | | |
| BALTIMORE WASH INT | 50.7 | 34.7 | 42.7 | 6.0 | 70 | 4+ | 25 | 24+ | 17 | 0 | 13 | 0 | 3.11 | -0.26 | 7 | 1.05 | 26 | 1.4 | 1.0 | 26 |
| BELTSVILLE | 50.5 | 34.0 | 42.3 | 5.4 | 70 | 5+ | 24 | 14 | 17 | 0 | 15 | 0 | 2.81 | -0.32 | 3 | 1.37 | 27 | 0.3 | 0.3 | 25 |
| DALECARLIA RSVR | 50.7 | 35.0 | 42.9 | 5.3 | 70 | 6+ | 26 | 24+ | 15 | 0 | 15 | 0 | 4.39 | 1.17 | 6 | 1.80 | 27 | 0 | | |
| LAUREL 3 W | 49.6 | 35.7 | 42.7 | 4.9 | 71 | 4 | 27 | 31+ | 14 | 0 | 11 | 0 | 3.34 | -0.43 | 8 | 1.10 | 26 | NM | | |
| MD SCI CTR BALTIM* | 53.6 | 41.3 | 47.4 | 8.0 | 69 | 3 | 32 | 31 | 22 | 0 | | | | | | | | NM | | |
| NATL ARBORETUM DC | 51.2 | 35.0 | 43.1 | 3.9 | 72 | 5 | 24 | 15 | 18 | 0 | 14 | 0 | 3.28 | 0.08 | 7 | 1.51 | 27 | | | |
| OXON HILL | 51.0 | 35.7 | 43.4 | 4.8 | 72 | 5 | 25 | 23+ | 16 | 0 | 11 | 0 | 3.27 | -0.00 | 5 | 1.56 | 27 | 0.8 | 0.5 | 30 |
| UPPER MARLBORO 3 N | 51.6 | 33.2 | 42.4 | 5.0 | 73 | 5 | 22 | 15+ | 18 | 0 | 18 | 0 | 3.71 | 0.57 | 6 | 1.43 | 27 | | | |
| -DIVISION- | | | 43.4 | 5.8 | | | | | | | | | 3.41 | 0.05 | | | | 0.6 | | |
| -MD: NORTHEASTERN- | | | | | | | | | | | | | | | | | | | | |
| STEVENSVILLE | 50.2 | 37.5 | 43.9 | 4.7 | 68 | 4 | 25 | 7 | 15 | 0 | 7 | 0 | 3.81 | | 7 | 1.30 | 21 | T | T | |
| -DIVISION- | | | 43.9 | 6.5 | | | | | | | | | 3.81 | 0.26 | | | | 0 | | |
| -MD: NORTHERN CEN- | | | | | | | | | | | | | | | | | | | | |
| ABERDEEN PHILLIPS | 49.2 | 34.5 | 41.8 | 4.5 | 70 | 4 | 23 | 25+ | 14 | 0 | 15 | 0 | | | | | | 1.2 | 1.0 | 30 |
| CONOWINGO DAM | 47.2 | 32.6 | 39.9 | 3.3 | 61 | 5 | 24 | 14 | 11 | 0 | 21 | 0 | 4.12 | 0.09 | 9 | 1.75 | 21 | 1.3 | 1.0 | 30 |
| CYLBURN | 49.0 | 34.3 | 41.6 | 5.8 | 68 | 4 | 26 | 19+ | 13 | 0 | 17 | 0 | | | | | | NM | | |
| DAMASCUS 3 SSW | 47.0 | 34.3 | 40.6 | 5.3 | 68 | 4 | 23 | 31 | 12 | 0 | 18 | 0 | 3.59 | -0.04 | 7 | 1.34 | 26 | 5.7 | 2.8 | 24 |
| EMMITTSBURG 2 SE | 46.7 | 31.2 | 39.0 | 4.7 | 71 | 5 | 20 | 15 | 11 | 0 | 18 | 0 | 3.61 | 0.28 | 9 | 1.33 | 21 | 9.0 | 4.0 | 27 |
| FREDERICK 2 NNE | 48.7 | 32.9 | 40.8 | 5.5 | 71 | 5 | 22 | 23 | 13 | 0 | 16 | 0 | 3.37 | 0.06 | 7 | 1.41 | 27 | 4.0 | 2.0 | 27+ |
| MILLERS 4 NE | 48.2 | 33.5 | 40.9 | 6.7 | 71 | 4 | 23 | 31 | 13 | 0 | 17 | 0 | 4.13 | 0.49 | 8 | 1.41 | 21 | 9.4 | 3.3 | 29 |
| -DIVISION- | | | 40.7 | 5.2 | | | | | | | | | 3.76 | 0.27 | | | | 5.1 | | |
| -MD: APPALACHIAN - | | | | | | | | | | | | | | | | | | | | |
| CUMBERLAND 2 | 45.9 | 30.7 | 38.3 | 2.7 | 72 | 5 | 20 | 31 | 8 | 0 | 20 | 0 | 3.59 | 0.74 | 8 | 1.08 | 27 | | | |
| FROSTBURG 2 | 41.6 | 28.2 | 34.9 | 5.0 | 65 | 5 | 19 | 7+ | 6 | 5 | 24 | 0 | 4.51 | 1.22 | 13 | 1.10 | 27 | | | |
| SHARPSBURG 5 S | 48.3 | 29.5 | 38.9 | 5.3 | 73 | 5 | 20 | 31+ | 15 | 0 | 22 | 0 | 3.33 | 0.18 | 6 | 1.36 | 27 | | | |
| -DIVISION- | | | 37.4 | 4.2 | | | | | | | | | 3.81 | 0.75 | | | | | | |
| -MD: ALLEGHENY PL- | | | | | | | | | | | | | | | | | | | | |
| OAKLAND 1 SE | 44.2 | 28.0 | 36.1 | 6.3 | 65 | 5 | 17 | 24+ | 12 | 4 | 22 | 0 | 5.94 | 2.09 | 18 | 0.75 | 18 | 28.0 | 8.0 | 22 |
| SINES DEEP CREEK | 41.4 | 26.5 | 33.9 | | 62 | 5 | 15 | 31+ | 8 | 7 | 23 | 0 | 6.86 | | 16 | 1.13 | 21 | | | |
| KITZMILLER 1 W | 44.6 | 29.4 | 37.0 | | 68 | 5 | 20 | 31+ | 8 | 4 | 21 | 0 | | | | | | NM | | |
| -DIVISION- | | | 35.7 | 5.1 | | | | | | | | | 6.40 | 2.79 | | | | 28 | | |
| -STATE- | | | 42.0 | 5.4 | | | | | | | | | 4.15 | 0.67 | | | | 3.7 | | |
| -NJ: NORTHERN- | | | | | | | | | | | | | | | | | | | | |
| BELVIDERE BRG * | 43.5 | 28.3 | 35.9 | 3.2 | 65 | 5 | 14 | 13 | | | | | 6.40 | 2.79 | 6 | 2.74 | 30 | | | |

| STATION | TEMPERATURE (F) | | | | | | | | PRECIPITATION (INCHES) | | | | | | | | | | |
|--------------------|------------------|------------|------------|-------|------------|------------|----------------|------------|------------------------|------------|----------------|-----------|------------|----------|--------------|------------|------------|------------|------------|
| | MONTHLY AVERAGES | | | | EXTREMES | | NUMBER OF DAYS | | | | MONTHLY TOTALS | | | EXTREMES | | SNOWFALL | | | |
| | AVG MAX | AVG MIN | MON AVG | DEPRT | MON MAX | DAY MIN | MON MAX | DAY MIN | 50+ MAX | 32- MIN | 32- MIN | 0- MIN | MON TOT | DEPRT | DAYS 0.1+ | DLY MAX | DAY MAX | MON TOT | DLY MAX |
| BOONTON 1 SE * | 45.3 | 31.2 | 38.3 | 5.1 | 60 | 4 | 24 | 29+ | | | | | | | | | | | |
| BOUND BROOK 2 W | | | | | | | | | | | | 4.81 | 1.02 | 9 | 1.48 | 21 | | NM | |
| CANOE BROOK * | 46.5 | 31.8 | 39.2 | 5.5 | 62 | 10+ | 23 | 31 | 9 | 0 | | 5.64 | 1.51 | 10 | 1.46 | 21 | 4.0 | 4.0 | 30 |
| CHATHAM 2 W * | 28.2 | | | | | | 16 | 31 | | | | | | | | | | | |
| FLEMINGTON 5 NNW | 45.5 | 30.3 | 37.9 | 4.7 | 64 | 5 | 20 | 14 | 7 | 1 | 20 | 0 | | | | | | | |
| HARRISON | 46.4 | 34.5 | 40.4 | 4.0 | 63 | 4 | 27 | 31+ | 9 | 0 | 14 | 0 | 5.46 | 1.53 | 9 | 1.70 | 27 | | |
| LAMBERTVILLE | | | | | | | | | | | | | 4.96 | 0.80 | 8 | 2.09 | 21 | NM | |
| NEWARK INTL AP | 47.4 | 34.8 | 41.1 | 4.6 | 64 | 3 | 25 | 31 | 11 | 0 | 14 | 0 | 5.06 | 1.25 | 11 | 0.95 | 26 | 1.9 | 1.5 |
| PHILLIPSBURG EAST* | 44.6 | 30.2 | 37.4 | 4.5 | 67 | 5 | 23 | 15 | | | | | | | | | | | |
| RINGWOOD | 45.2 | 30.3 | 37.7 | | 61 | 4 | 22 | 29 | 9 | 1 | 21 | 0 | | | | | | NM | |
| SUSSEX 2 NW * | 43.1 | 29.7 | 36.4 | 6.2 | 61 | 5 | 20 | 31+ | | | | | | | | | | | |
| WAYNE | 47.3 | 32.1 | 39.7 | | 61 | 4 | 24 | 30+ | 12 | 1 | 18 | 0 | 5.73 | | 9 | 1.68 | 21 | NM | |
| TOCKS ISLAND | 43.9 | 29.8 | 36.9 | | 62 | 4 | 22 | 15+ | 8 | 1 | 20 | 0 | | | | | | NM | |
| -DIVISION- | | | 38.3 | 4.6 | | | | | | | | | 5.66 | 1.66 | | | | 3 | |
| -NJ: SOUTHERN- | | | | | | | | | | | | | | | | | | | |
| ATLANTIC CITY INTL | 51.4 | 34.5 | 42.9 | 5.7 | 68 | 3 | 22 | 24 | 19 | 0 | 15 | 0 | 7.15 | 3.46 | 9 | 2.60 | 26 | T | T |
| ESTELL MANOR | 51.9 | 33.5 | 42.7 | 6.5 | 69 | 5 | 22 | 14 | 21 | 0 | 18 | 0 | 7.36 | 3.29 | 8 | 2.85 | 27 | | |
| FREEHOLD MARLBORO | 49.8 | 32.5 | 41.1 | 5.0 | 69 | 5 | 23 | 25 | 15 | 0 | 20 | 0 | 6.47 | 2.40 | 9 | 3.48 | 27 | NM | |
| HAMMONTON 1 NE | 50.9 | 33.1 | 42.0 | 5.9 | 69 | 5 | 24 | 25 | 18 | 0 | 19 | 0 | | | | | | 0 | |
| HIGHTSTOWN 2 W | 48.5 | 30.8 | 39.6 | 4.1 | 69 | 5 | 21 | 24 | 12 | 0 | 20 | 0 | 4.96 | 1.19 | 8 | 1.72 | 27 | 2.6 | 1.5 |
| INDIAN MILLS | 50.1 | 33.4 | 41.7 | 5.8 | 68 | 4 | 20 | 24 | 17 | 0 | 15 | 0 | 5.56 | 1.54 | 10 | 1.68 | 27 | 0 | |
| MILLVILLE MUNI AP | | | | | | | | | | | | | 5.60 | 2.08 | 11 | 1.78 | 26 | NM | |
| NEW BRUNSWICK 3 SE | 48.3 | 31.8 | 40.0 | 4.4 | 69 | 5 | 23 | 24+ | 13 | 0 | 19 | 0 | 5.12 | 1.06 | 8 | 1.78 | 27 | 1.6 | 1.1 |
| SOMERDALE 4 SW | 46.6 | 31.6 | 39.1 | | 65 | 5 | 20 | 24+ | 12 | 0 | 19 | 0 | 4.88 | 0.91 | 10 | 1.55 | 21 | | |
| TRENTON MERCER CO | 47.6 | 33.5 | 40.6 | 5.3 | 67 | 4 | 23 | 24 | 11 | 0 | 16 | 0 | 4.23 | 0.53 | 10 | 1.10 | 21 | NM | |
| PHILADELPHIA MT HO | 48.6 | 33.5 | 41.1 | | 68 | 5 | 23 | 25 | 14 | 0 | 19 | 0 | 5.03 | | 9 | 1.59 | 27 | 0.3 | 0.3 |
| -DIVISION- | | | 41.1 | 4.6 | | | | | | | | | 5.64 | 1.76 | | | | 0.7 | |
| -NJ: COASTAL- | | | | | | | | | | | | | | | | | | | |
| CAPE MAY 2 NW | 52.2 | 37.5 | 44.9 | 5.5 | 68 | 3 | 26 | 14 | 21 | 0 | 10 | 0 | 5.36 | 1.89 | 10 | 2.70 | 26 | 0 | |
| LONG BRANCH OAKHUR | 50.0 | 33.6 | 41.8 | 4.0 | 64 | 4 | 25 | 25+ | 17 | 0 | 17 | 0 | 7.13 | 3.24 | 10 | 3.22 | 27 | NM | |
| -DIVISION- | | | 43.3 | 4.5 | | | | | | | | | 6.24 | 2.58 | | | | 0 | |
| -STATE- | | | 40.2 | 4.6 | | | | | | | | | 5.69 | 1.79 | | | | 1.5 | |

*= One to four days of missing temperature data + = This value also occurred on one or more previous dates this month.

All means are for the years 1981-2010. NM = Snowfall is not measured.

These data are considered preliminary, published data from the National Climatic Data Center may differ somewhat from the values shown here.

PRELIMINARY MONTHLY DEGREE DATA DECEMBER 2012

| STATION | HEATING DEGREE DAYS (BASE 65) | | | | COOLING DEGREE DAYS (BASE 65) | | | | GROWING DEGREE DAYS (BASE 50) | | | |
|--|-------------------------------|-------|--------|--------|-------------------------------|-------|--------|--------|-------------------------------|-------|--------|--------|
| | MONTH | MONTH | SEASON | SEASON | MONTH | MONTH | SEASON | SEASON | MONTH | MONTH | SEASON | SEASON |
| -DE: NORTHERN- WILMINGTON NEW CAST | 699 | -180 | 1646 | -131 | 0 | 0 | 1387 | 242 | | | | |
| -DE: SOUTHERN- DOVER | 633 | -167 | 1503 | -35 | 0 | 0 | 1532 | 216 | | | | |
| -MD: SOUTHEASTERN SHORE- SALISBURY WICOMICO | 555 | -251 | 1299 | -325 | 0 | 0 | 1732 | 579 | | | | |
| SNOW HILL 4 N | 565 | -187 | 1362 | -99 | 0 | 0 | | | | | | |
| SALISBURY 2N | 588 | | | | 0 | | | | | | | |
| -MD: CENTRAL EASTERN SHORE- ROYAL OAK 2 SSW | 624 | -148 | 1457 | 0 | 0 | 0 | 1665 | 242 | | | | |
| -MD: LOWER SOUTHERN- MECHANICSVILLE 5 NE | 714 | -143 | 1737 | -36 | 0 | 0 | | | | | | |
| -MD: UPPER SOUTHERN- BALTIMORE WASH INTL | 684 | -193 | 1597 | -184 | 0 | 0 | 1569 | 405 | | | | |
| BELTSVILLE | 696 | -174 | 1623 | -131 | 0 | 0 | 1433 | 195 | | | | |
| DALECARLIA RSVR | 680 | -171 | 1629 | -36 | 0 | 0 | 1509 | 101 | | | | |
| LAUREL 3 W | 682 | -163 | 1512 | -128 | 0 | 0 | 1662 | 269 | | | | |
| NATL ARBORETUM DC | 671 | -131 | | | 0 | -1 | | | | | | |
| OXON HILL | 661 | -157 | 1518 | -73 | 0 | 0 | 1598 | 215 | | | | |
| UPPER MARLBORO 3 NN | 691 | -165 | 1646 | -94 | 0 | 0 | 1514 | 317 | | | | |
| -MD: NORTHEASTERN SHORE- STEVENSVILLE | 647 | -153 | 1499 | 5 | 0 | 0 | 1511 | 285 | | | | |
| -MD: NORTHERN CENTRAL- ABERDEEN PHILLIPS F | 712 | -145 | | | 0 | 0 | | | | | | |
| CONOWINGO DAM | 767 | -115 | 1849 | 93 | 0 | 0 | | | | | | |
| CYLBURN | 714 | -192 | | | 0 | 0 | | | | | | |
| DAMASCUS 3 SSW | 746 | -176 | | | 0 | 0 | | | | | | |
| EMMITSBURG 2 SE | 801 | -151 | 1969 | -62 | 0 | 0 | 972 | 113 | | | | |
| FREDERICK 2 NNE | 745 | -177 | | | 0 | 0 | | | | | | |
| MILLERS 4 NE | 741 | -214 | 1774 | -238 | 0 | 0 | 1073 | 278 | | | | |
| -MD: APPALACHIAN MOUNTAIN- CUMBERLAND 2 | 820 | -91 | | | 0 | 0 | | | | | | |
| FROSTBURG 2 | 923 | -166 | 2387 | -113 | 0 | 0 | 550 | 143 | | | | |
| SHARPSBURG 5 S | 800 | -172 | 1974 | -27 | 0 | 0 | | | | | | |
| -MD: ALLEGHENY PLATEAU- OAKLAND 1 SE | 889 | -202 | | | 0 | 0 | | | | | | |
| SINES DEEP CREEK | 956 | | | | 0 | | | | | | | |
| KITZMILLER 1 W | 861 | | 2222 | | 0 | | | | | | | |
| -NJ: NORTHERN- FLEMINGTON 5 NNW | 831 | -153 | 1957 | -167 | 0 | 0 | | | | | | |
| HARRISON | 757 | -130 | | | 0 | 0 | | | | | | |
| NEWARK INTL AP | 735 | -147 | 1609 | -141 | 0 | 0 | 1450 | 258 | | | | |
| RINGWOOD | 839 | | 1948 | | 0 | | | | | | | |
| WAYNE | 780 | | | | 0 | | | | | | | |
| TOCKS ISLAND | 864 | | 2045 | | 0 | | 834 | | | | | |
| -NJ: SOUTHERN- ATLANTIC CITY INTL | 678 | -184 | 1644 | -125 | 0 | 0 | 1218 | 163 | | | | |
| ESTELL MANOR | 684 | -207 | 1682 | -175 | 0 | 0 | 1202 | 228 | | | | |
| FREEHOLD MARLBORO | 732 | -162 | | | 0 | 0 | | | | | | |
| HAMMONTON 1 NE | 705 | -189 | 1678 | -172 | 0 | 0 | 1318 | 247 | | | | |
| HIGHTSTOWN 2 W | 780 | -133 | | | 0 | 0 | | | | | | |
| INDIAN MILLS | 713 | -191 | 1722 | -171 | 0 | 0 | | | | | | |
| NEW BRUNSWICK 3 SE | 767 | -144 | 1767 | -145 | 0 | 0 | 1206 | 253 | | | | |
| SOMERDALE 4 SW | 794 | | 1956 | | 0 | | 1244 | | | | | |
| TRENTON MERCER CO A | 751 | -168 | 1758 | -137 | 0 | 0 | 1234 | 269 | | | | |
| PHILADELPHIA MT HOL | 736 | | 1734 | | 0 | | 1268 | | | | | |
| -NJ: COASTAL- | | | | | | | | | | | | |

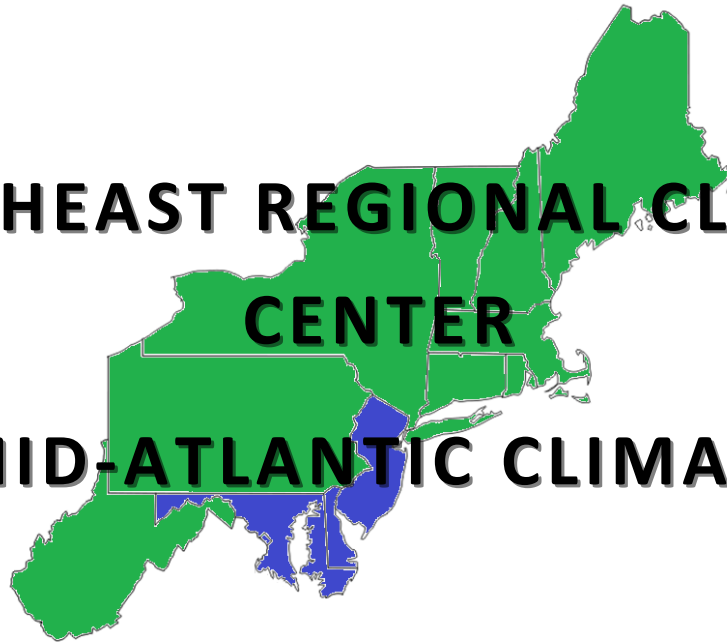
| STATION | HEATING DEGREE DAYS (BASE 65) | | | | COOLING DEGREE DAYS (BASE 65) | | | | GROWING DEGREE DAYS (BASE 50) | | | |
|---------------------|-------------------------------|-------|--------|--------|-------------------------------|-------|--------|--------|-------------------------------|-------|--------|--------|
| | MONTH | MONTH | SEASON | SEASON | MONTH | MONTH | SEASON | SEASON | MONTH | MONTH | SEASON | SEASON |
| CAPE MAY 2 NW | 617 | -178 | 1388 | -149 | 0 | 0 | 1365 | 277 | | | | |
| LONG BRANCH OAKHURS | 709 | -136 | 1632 | -100 | 0 | 0 | | | | | | |

The heating season begins July 1 and ends June 30. The cooling season begins January 1 and ends December 31.
 The growing season begins March 1 and ends October 31. All departures are calculated from the 1981 - 2010 mean.
 These data are considered preliminary, published data from the National Climatic Data Center may differ somewhat from the values shown here.

NORTHEAST REGIONAL CLIMATE

CENTER

MID-ATLANTIC CLIMATE



**Northeast
Regional
Climate
Center**



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Cornell University
Ithaca, NY 14853-1901