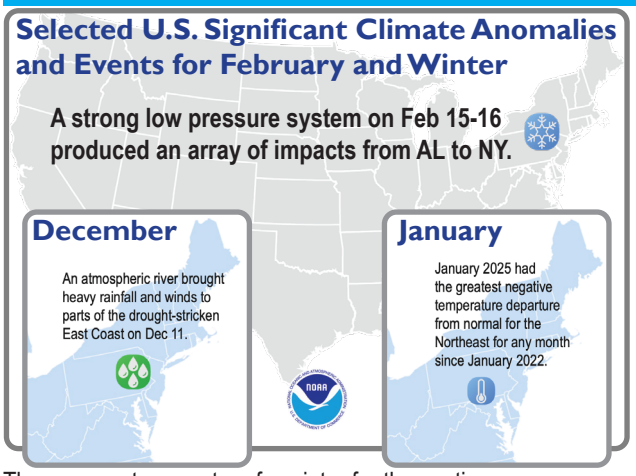
Quarterly Climate Impacts and Outlook

Northeast Region

March 2025

National Significant Events – *December 2024–February 2025*

Selected U.S. Significant Climate Anomalies and Events for February and Winter



The average temperature for winter for the contiguous U.S. was 1.9°F above the 20th-century average. Average temperatures for December, January, and February were 5.6°F above average (fourth warmest), 0.9°F below average, and 1.0°F above average, respectively. Globally, it was the second-warmest December, the warmest January, the third-warmest February, and the second-warmest winter. The contiguous U.S. winter precipitation was 0.92 inches below average. During December, January, and February, precipitation was exactly average, 0.92 inches below average (sixth driest), and exactly average, respectively.

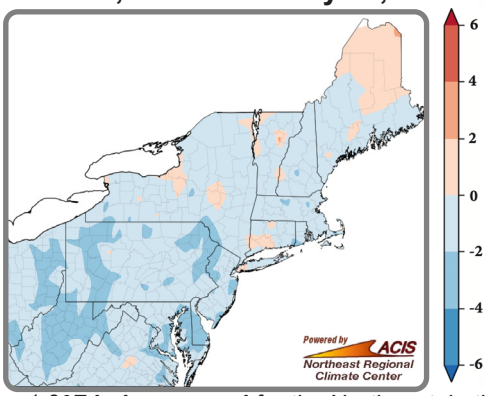
Highlights for the Northeast

- **December** was the only **colder-than-normal** month in 2024. Despite this, 2024 became the **warmest year on record** for 22 of the Northeast's 35 major sites. While December precipitation varied, Providence, RI, had its **wettest December day** on December 11 with 4.60 inches.
- The Northeast saw some of its **coldest temperatures in a decade** in **January**, being an outlier compared to other parts of the U.S. and globe, which were warmer. The month was **record dry** for LaGuardia Airport, NY.
- Beckley, WV, had its **wettest February day** with 2.31 inches of precipitation on February 15 and its **wettest February** with 7.53 inches. This first half of February featured Beckley's wettest, seventh-wettest, and eighth-wettest February days since records began there in 1893.
- Lake-effect areas of central New York saw **excessive snowfall** this winter, especially in February. Palermo had 136.1 inches of snow in February, with preliminary data indicating that was the **greatest snowfall total** for any February for any site in New York for all years of record.
- The Northeast had its **first colder-than-normal winter** since 2018.
- While the overall footprint of **drought and abnormal dryness contracted** during winter, drought persisted in an area from Maryland to Maine.
- There were **several notable storms** during winter. In February, southern West Virginia saw several rounds of flash flooding, with a few waterways reaching **record- or near-record high levels** and at least three deaths. This is in stark contrast to the extreme drought the state had in fall 2024.
- New Jersey had a windy January. On 16 days, winds gusted to 40 mph or higher at NJWxNet stations, a **record high number** for the network.

Regional Climate Overview – *December 2024–February 2025*

Temperature

Departure from Normal (°F)
December 1, 2024–February 28, 2025

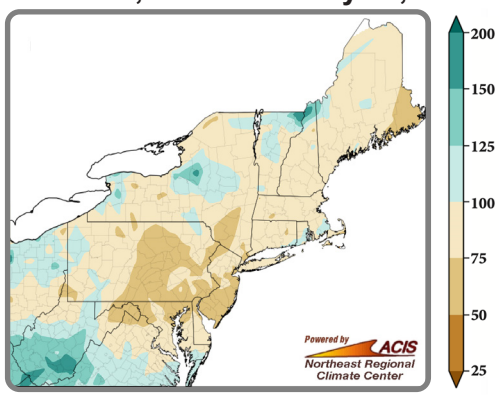


Winter was 1.3°F **below normal** for the Northeast, in the middle third of all years. It was the region's **first colder-than-normal winter** since 2018. **December** was 0.5°F **below normal**, in the warmest third of all years. **January** was 2.6°F **below normal**, in the middle third of all years. West Virginia had its 12th-coldest January. **February** was 0.8°F **below normal**, in the middle third of all years.

Normals based on 1991–2020 data; rankings based on 1895–2025.

Precipitation

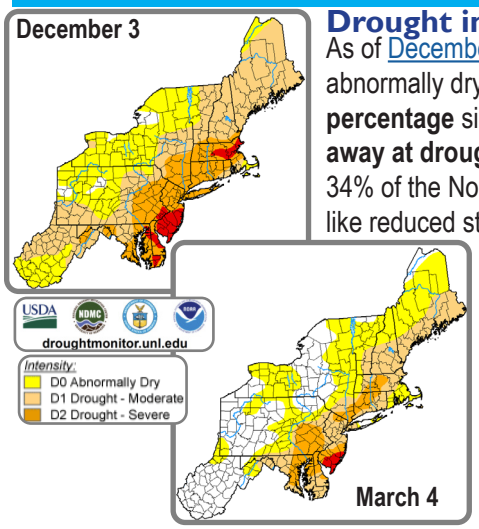
Percent of Normal (%)
December 1, 2024–February 28, 2025



Winter precipitation in the Northeast was 89% of normal, in the **middle third** of all years. It was among the 20 driest winters for three states. **December** precipitation was 101% of normal, in the **middle third** of all years. Rhode Island had its 13th-wettest December. **January** was the **seventh driest** for the region at 50% of normal and among the 20 driest for 11 states. **February** precipitation was 118% of normal, in the **wettest third** of all years. West Virginia had its seventh-wettest February.

Contact: Ellen Mecray (Ellen.L.Mecray@noaa.gov)
Samantha Borisoff (sgh58@cornell.edu)

Regional Climate Overview – *December 2024–February 2025*



Drought in the Northeast

As of December 3, the U.S. Drought Monitor showed 65% of the Northeast in drought and 33% as abnormally dry. Only 2.31% of the region was not in drought or abnormal dryness, its **second-lowest percentage** since the U.S. Drought Monitor began in 2000. Enough precipitation fell in December to **chip away at drought** or keep conditions from deteriorating. The January 7 U.S. Drought Monitor showed 34% of the Northeast in drought and 32% as abnormally dry. January's dry weather along with factors like reduced streamflow and groundwater levels caused **conditions to deteriorate** in a few spots. The February 4 U.S. Drought Monitor showed 35% of the Northeast in drought and 37% as abnormally dry. Frequent storms in February allowed **drought and abnormal dryness to contract**. The March 4 U.S. Drought Monitor showed 31% of the Northeast in drought and 36% as abnormally dry. For current conditions, see the Northeast DEWS Dashboard.

Impacts on water resources persisted during winter including **record or near-record low streamflow and/or groundwater levels**, the salt front on the Delaware River being farther north than usual at times, and **mandatory water restrictions** for parts of Pennsylvania and Massachusetts. Reservoir levels generally remained below or near average in New Jersey.

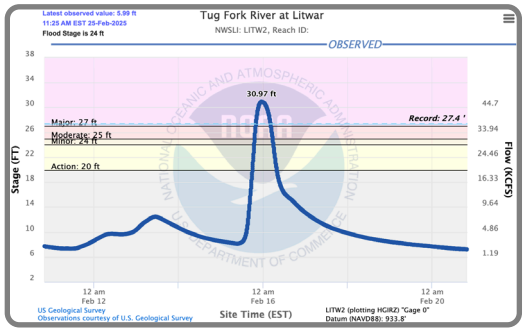
Regional Impacts and Updates – *December 2024–February 2025*

Winter Conditions

Winter precipitation was below normal for much of the Northeast. Despite this, there were **several notable winter storms**.

- **December 11–12**: Many areas saw heavy rain, with over 4 inches in southern New England. Providence, RI, had its **wettest December day** (and 10th all-time wettest day) on the 11th with 4.60 inches, while a few sites had one of their 10 wettest December days. Wind gusts of up to 66 mph downed trees and power lines, with thousands of customers losing power in New England.
- **January 6**: A storm dropped 6 to 12 inches of snow on parts of West Virginia, Maryland, and Delaware, with Dulles Airport, VA, and Washington, D.C., having their **snowiest day in six years** with 7.2 inches and 6.0 inches, respectively. Storm impacts included school closures and transportation issues.
- **January 31**: Parts of West Virginia saw heavy rain, with January 31 becoming the **second-wettest January day** at Elkins with 1.89 inches of precipitation and the **third wettest** at Beckley with 1.86 inches. The rain, along with melting snow in some areas, led to flooding that inundated roads and caused a few water rescues. There were several rockslides, one of which derailed a train.
- **February 5–7**: The region saw a mix of precipitation types including up to 12 inches of snow in northern New York and northern New England and up to 0.50 inches of ice accretion from freezing rain in parts of Maryland, downing trees and creating slick roads. The greatest rain totals of up to 4 inches were in southern West Virginia, where several sites had one of their **10 wettest February days**. Flooding led to closed roads, rockslides, and a few water rescues. A **rare Flash Flood Emergency** was issued for some areas.
- **February 15–17**: Southern West Virginia saw up to 4 inches of rain, with Beckley having its **wettest February day** with 2.31 inches of precipitation on the 15th and a **record wet February**. The heavy rain and wet antecedent conditions caused some waterways to reach **record to near-record high levels**, producing devastating flash flooding. The National Weather Service issued a **rare Flash Flood Emergency** for a few locations. Floodwaters washed out roads and inundated buildings and vehicles, leading to over 130 water rescues and at least three deaths. There were also rockslides and disruptions to freight rail service. Multiple areas in the Northeast saw freezing rain, with the greatest ice accretions over 0.25 inches and reports of damaged trees and wires. The greatest snowfall totals of 12 to 18 inches were in northern New York and northern New England. Strong winds and cold air moved in behind the storm. The highest gusts generally ranged from 40 to 70 mph, with downed trees and power lines leading to road closures, power outages, disruptions at ski resorts, and at least one fatality. Whiteout conditions contributed to road closures and hazardous travel. February 16 was New Jersey's **windiest day since Sandy** in October 2012, with seven NJWxNet stations gusting to 60–71 mph and over half of the stations gusting over 40 mph. The strong winds also caused parts of New Jersey and New York to have exceptionally low tides. On the same day, Elkins, WV, had one of its highest February wind gusts at 74 mph. A lake-effect snow event also occurred in central New York, with the greatest totals ranging from 36 to 60 inches.

Ice-covered tree branch in northern New Jersey on February 17. Credit: Nick Stefano



The Tug Fork River at Litwar, WV, reached a record-high level on February 15.

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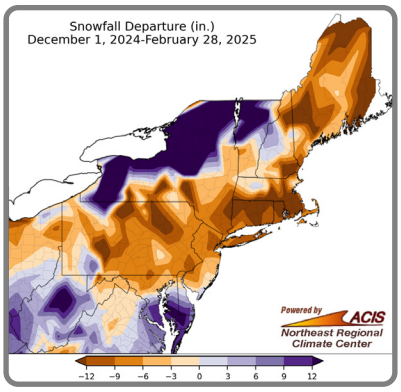
Regional Impacts and Updates – *December 2024–February 2025*



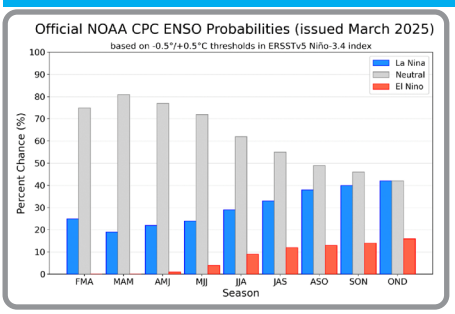
Winter Conditions Continued

December snowfall was **below or near normal** for much of the Northeast, while **January and February** snowfall ranged from more than 12 inches below normal to over 12 inches above normal. Lake-effect areas of New York saw a **significant surplus**, with some sites accumulating 48 to 76 inches of snow in just the two weeks of January and up to 75 inches of snow in just five days in February. Palermo saw 136.1 inches of snow in February, preliminarily the **greatest snowfall total** for any February for any site in New York for all years of record. Snowfall totals for the full winter season exceeded 200 inches at several sites. The weight of heavy snow caused dozens of roofs to collapse, but conditions were good for ski resorts and snowmobile clubs.

Snow in Palermo, NY, in February. Credit: Jim Maryinuk

A cold air outbreak from January 20 to 22 produced the **coldest temperatures in a decade** for some sites as lows dropped below zero. For instance, on January 22, the low of -9°F at Pittsburgh, PA, was the site's coldest temperature since February 2015, while the low of -5°F in Harrisburg, PA, was its coldest temperature since January 1994. Winds chills plummeted as low as -30°F in multiple locations. The cold weather led to school delays, an uptick in heating service calls, and, in Maryland, an increased number of cold-related emergency room and urgent care visits. It was also implicated in a few deaths across the Northeast. This January was the coldest January for Elkins and Charleston, WV, since 1981 and 1985, respectively. Meanwhile, Walpack and Sandyston, NJ, saw **six consecutive days with subzero lows** in January, a feat rarely achieved in New Jersey.

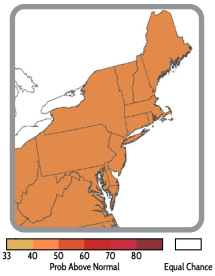
Regional Outlook – *Spring 2025*



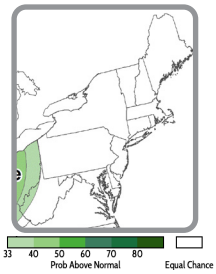
ENSO

Weakening La Niña conditions were present in the equatorial Pacific Ocean during February. NOAA's Climate Prediction Center indicates ENSO-neutral conditions are expected to emerge next month, with a 62% chance of ENSO-neutral conditions continuing through summer.

Temperature and Precipitation



Normal April–June average temperatures range from the upper 40s in northern New England to the mid 60s in parts of the Mid-Atlantic. NOAA's Climate Prediction Center (CPC) favors **above-normal temperatures** for **April–June** for the entire Northeast (map left).



Normal April–June precipitation ranges from 9 inches in western New York to more than 15 inches in parts of West Virginia. **Above-normal precipitation** is favored for **April–June** for western portions of West Virginia (map right). **Equal chances** of below-, near-, or above-normal precipitation were forecast for most of the Northeast. As La Niña conditions wane, these outlooks were driven by long-term trends.

Spring Flooding

According to NOAA, there is "**a low threat of significant spring flooding**" for the Northeast based on factors such as below-normal winter precipitation, current snowpack and soil moisture, and projected spring weather. However, **very heavy rain** can cause flooding at any time of the year, even in areas that have little to no snow cover. NOAA's flood inundation mapping services provide visualizations of flooding extent, along with a flood inundation forecast. The NOAA Eastern Region Climate Services webinar on March 27 will focus on the spring flood outlook and inundation mapping. Register for the webinar here or view the recording on the Northeast Regional Climate Center's website.

Northeast Partners

National Oceanic and Atmospheric Administration offices including:

- NESDIS/National Centers for Environmental Information
- NWS, Eastern Region
- NWS, Climate Prediction Center
- NWS, National Operational Hydrologic Remote Sensing Center
- NMFS, Fisheries Science Centers and Regional Office, Atlantic
- NOS, Office for Coastal Management
- NOS, National Centers for Coastal Ocean Science
- OAR, Climate Program Office and Geophysical Fluid Dynamics Lab
- OAR, National Sea Grant Office
- NOAA's North Atlantic and Great Lakes Regional Collaboration Teams

And the following other offices:

- Northeast Regional Climate Center
- National Integrated Drought Information System
- Consortium of Climate Risk in the Urban Northeast
- Cooperative Institute for the North Atlantic Research
- Northeast Region State Climatologists
- Mid-Atlantic RISA

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