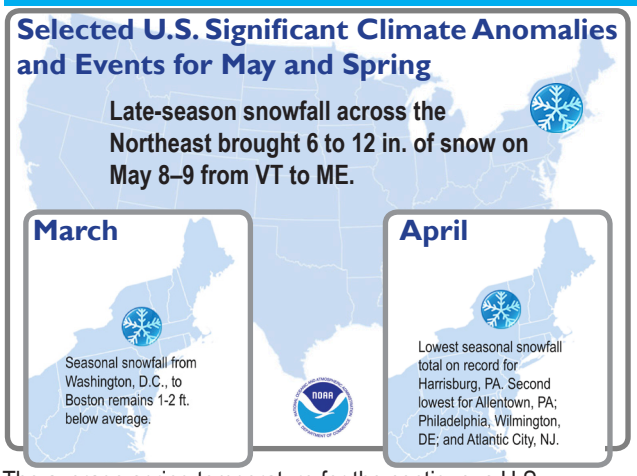
Quarterly Climate Impacts and Outlook

Northeast Region

June 2020

National Significant Events – *March–May 2020*

Selected U.S. Significant Climate Anomalies and Events for May and Spring



The average spring temperature for the contiguous U.S. was 52.6°F, 1.7°F above the 20th-century average. Average temperatures for March, April, and May were 4.6°F above average (10th warmest), 0.2°F below average, and 0.6°F above average, respectively. Globally, it was the second warmest March, the second warmest April, the warmest May, and the second warmest spring. The contiguous U.S. spring precipitation total was 8.40 inches, 0.46 inches above average. March, April, and May precipitation was 0.32 inches above average, 0.05 inches below average, and 0.13 inches above average, respectively.

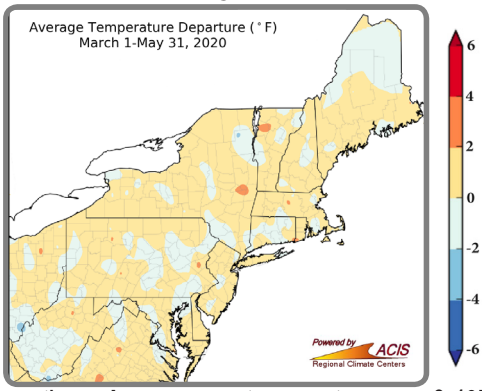
Highlights for the Northeast

- **March** was **mild**, ranking among the 10 warmest Marches for some sites. **April** was **cool**. For example, Newark, NJ, **failed to reach 70°F** in April for the **first time on record.** Early **May** brought **record cold temperatures**, while late **May** had **record warmth.** See Regional Impacts for details.
- **Snowfall** was **below normal** this **spring**. Some sites including Baltimore, Philadelphia, and Boston set/tied their record for **least snowy March**. It was the **first time** with **no measurable snow in February and March** for Bridgeport, CT; Islip and Kennedy Airport, NY; and Allentown and Harrisburg, PA. On **May 9**, the New York City area climate sites had their **latest occurrence of snow** on record. See Regional Impacts for details.
- The region experienced two **strong storm systems** during April and some **severe weather** during spring. See Regional Impacts for details.
- Several **temperature and precipitation records** were set during spring:
  - *Warmest March day*: Beckley (WV)
  - *Greatest number of March days with measurable (0.01") precipitation*: Huntington, Charleston, Martinsburg (WV) and Wilmington (DE)
  - *Greatest number of April days with measurable precipitation*: Erie and State College (PA), Dulles Airport (VA), Morgantown (WV)
  - *Fewest number of 70°F days in April*: Newark (NJ), Hartford (CT), JFK and LaGuardia Airports (NY), Altoona and State College (PA)
  - *Coldest May temperature*: JFK and LaGuardia Airports and Binghamton (NY), Harrisburg (PA)
  - *Hottest May temperature*: Scranton (PA) and Burlington (VT)
  - *Wettest May and spring*: Charleston (WV)

Regional Climate Overview – *March–May 2020*

Temperature

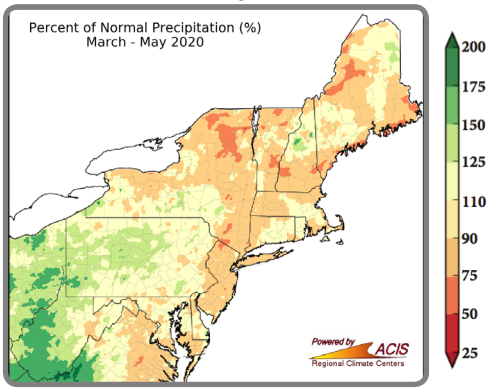
Departure from Normal (°F)
March 1–May 31, 2020



Climate normals based on 1981–2010 data; Rankings based on 1895–2020.

Precipitation

Percent of Normal (%)
March 1–May 31, 2020



The Northeast's **spring** average temperature was 0.4°F above normal, ranking in the **warmest third** of all years. The region had its **10th warmest March** at 5.0°F above normal. It ranked among the 15 warmest Marches on record for 11 of the 12 Northeast states. **April** was 2.7°F below normal, ranking in the **coldest third** of all years. **May** was 1.1°F **below normal**, ranking in the middle third of all years.

The Northeast saw 98% of normal precipitation during **spring**, ranking in the **middle third** of all years. West Virginia had its 11th wettest spring on record. **March** precipitation was 97% of normal, ranking in the **middle third** of all years. **April** precipitation was 119% of normal, ranking in the **wettest third** of all years. It was the fifth wettest April for West Virginia and the 19th wettest for Maryland and Massachusetts. **May** precipitation was 80% of normal, ranking in the **middle third** of all years.

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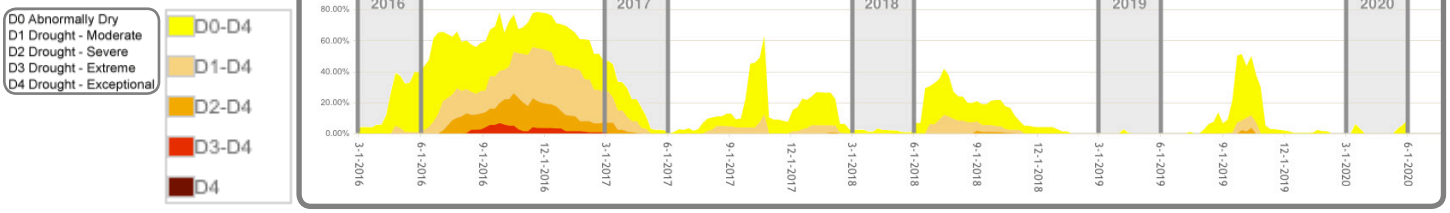
Regional Climate Overview – *March–May 2020*

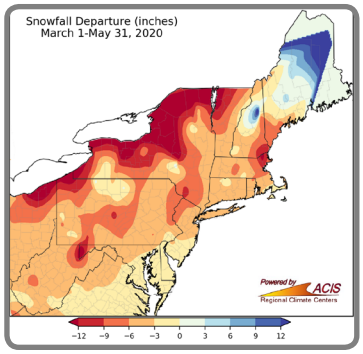
Drought in the Northeast



In **early March**, the U.S. Drought Monitor showed **no abnormal dryness or drought** in the Northeast. Precipitation deficits, low streamflow, and below-normal groundwater levels led to **abnormal dryness** being introduced in New Jersey, New York, and southern New England in mid-March. The **March 17** U.S. Drought Monitor showed 6% of the Northeast was abnormally dry. This dryness eased by late March. The region was **free of abnormal dryness and drought** in **April** and the first half of **May**. Precipitation deficits, low streamflow, and other indicators led to the introduction of **abnormal dryness** in New York and New England by mid-May. The **May 26** U.S. Drought Monitor showed 5% of the Northeast was abnormally dry. Ipswich and Georgetown, MA, enacted **mandatory water restrictions**, while as of June 2, Maine had seen **600 wildfires**, more than in all of 2019. In early June, **dryness expanded** to include part of every Northeast state except New Jersey, with the **June 16** U.S. Drought Monitor showing 36% of the region as abnormally dry.

Regional Impacts and Updates – *March–May 2020*

Spring Temperatures and Snowfall



The weather pattern that brought the Northeast a **mild** winter persisted through **March**. In fact, Portland, ME, recorded its earliest 70°F day on March 9, five days earlier than the previous record. Most areas saw **below-normal snowfall**, with the largest deficits of more than 12 inches in northwestern Pennsylvania, New York, northern Vermont, and northern New Hampshire.

A pattern shift in **April** brought **colder, stormier conditions** to the Northeast. The highest temperature reached during April ranked as the **coldest on record** for April at some sites including Boston, MA; Bridgeport, CT; and Newark, NJ. Sites such as Hartford, CT, and JFK and LaGuardia Airports, NY, **did not reach 70°F** this April, tying the April record. Around 25% of New Jersey's blueberry crop was damaged by cold conditions. April **snowfall** ranged from 6 inches below normal in parts of New York and Vermont to more than 6 inches above normal in parts of Maine, New Hampshire, Pennsylvania, and New York.

From **May 8–11**, **Arctic air** spilled into the Northeast. Low temperatures were in the 20s and 30s, as much as 30°F colder than normal, with a few sites recording their **coldest May temperature** and others ranking it among their 10 coldest. High temperatures on May 9 struggled to make it to 50°F, as much as 30°F below normal. Binghamton, NY, had its **coldest max temperature for May**, while other sites ranked their high temperatures among their 10 coldest. Strong winds and cold temperatures damaged vegetable crops in Delaware. Much of the region also saw snowfall on May 8 and/or 9. Elkins, WV, saw an inch of snow for only the second time in May, having its **snowiest May day** and **snowiest May**. Concord, NH, saw measurable snow in May for the **first time in over 50 years**, and Burlington, VT, observed its third latest measurable snow. In coastal/southern locations such as eastern Massachusetts, the New York City metro area, and Delaware, snow fell several times during the day, which is **unusual for May**. While these areas only saw a trace, it made **May a snowier month than February** for Islip, NY. May snowfall was near or above normal for most areas. Just over two weeks later, from **May 26 and 29**, parts of the region, particularly New York, New England, and northern Pennsylvania, experienced **unusually warm temperatures**. The warmest locations had highs in the 80s and 90s, around 20°F above normal, with a few sites having their **hottest May day** and others having one of their three hottest. It was the third earliest occurrence of a day above 90°F in Buffalo, NY. Low temperatures ranked as the **warmest for May** at Caribou, ME, and Burlington and among the 10 warmest for May at other sites. Caribou also had a dewpoint of 70°F for the **first time in May**.

Snowfall in Plainview, NY, on May 9, 2020. Credit: John Murray, NWS OKX.

Most of the Northeast saw **below-normal snowfall** during **spring** and the **snow season** (October–May). Sites such as Philadelphia, PA; Baltimore, MD; and Atlantic City, NJ, tied their record for **least snowy spring**, while others had one of their three least snowy. It was only the second time since 1885 that Philadelphia recorded **no snowfall during spring**. Allentown and Harrisburg, PA, had their **least snowy seasons**, while other sites ranked this season among their 10 least snowy. Philadelphia and Washington, D.C., saw less than an inch of snow for the season for only the third time since 1885. The snowy exception was northern Maine, where Caribou recorded its 10th snowiest spring and its sixth snowiest season.

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Regional Impacts and Updates – *March–May 2020*

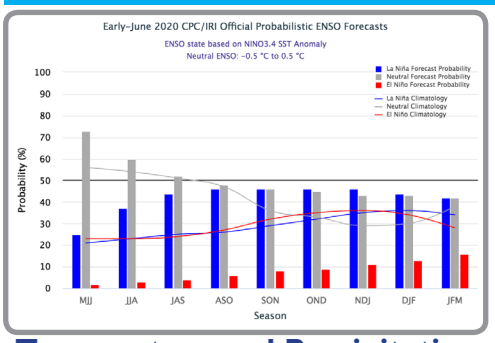
Damage in Maryland from a tornado on April 13, 2020. Credit: NWS Mount Holly

Spring Storms

From **April 7–9**, southern areas saw **severe weather**. In western Pennsylvania, there were three weak **tornadoes** and the Pittsburgh International Airport recorded its **second highest thunderstorm wind gust** at 75 mph. Straight-line winds caused significant damage in western West Virginia. The storm rapidly strengthened over the Gulf of Maine to a near-record pressure level for April for Maine, resulting in strong wind gusts for the Northeast and a **major late season snowstorm** for parts of New England from **April 9–10**. Snow totals were up to 21 inches, with Caribou, ME, having its **second snowiest April day**. The heavy, wet snow and strong winds caused more than 266,000 customers in Maine, around a third of the state, to lose power. From **April 12–13**, **wind gusts** of 40–60 mph were common across the Northeast, with the highest gusts reaching 82 mph near Lanoka Harbor, NJ, and 80 mph in Milton, MA. The strong winds downed trees, damaged roofs, and caused power outages. **Two weak tornadoes** also touched down in northern Maryland. On **April 21**, severe thunderstorms produced several **waterspouts**, one of which came onshore, and **straight-line winds** of up to 80 mph, causing damage in New Jersey.

Parts of West Virginia saw several rounds of **heavy rain** during **May**. A slow-moving storm from **May 18–21** dropped up to 5 inches of rain, with Charleston having its third wettest May day. The remnants of **Tropical Storm Bertha** brought up to 3 inches of rain on May 28. Both events caused flooding, which led to road closures. There were two notable days in May with **severe weather** in northern parts of the region. On **May 15**, severe thunderstorms in New York and New England produced an **EF-1 tornado** and straight-line winds of up to 100 mph. An EF-1 tornado damaged trees in eastern New York on **May 29**. Southern parts of the region did not see much severe weather in May. This trend was also noted across the U.S. which had its **fewest number of tornado watches** on record.

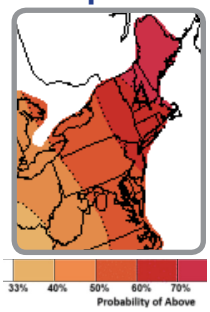
Regional Outlook – *Summer 2020*



ENSO

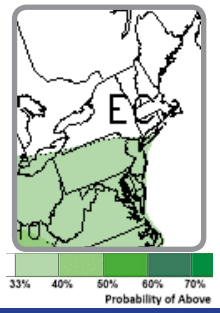
During May, El Niño-Southern Oscillation **(ENSO)-neutral conditions** were observed in the equatorial Pacific Ocean. NOAA's Climate Prediction Center indicates there is a 60% chance ENSO-neutral conditions will continue through summer and nearly equal chances (40–50%) of ENSO-neutral or La Niña conditions during autumn and winter.

Temperature and Precipitation



Normal July–September average temperatures range from the 50s in northern New England to the 70s in the Mid-Atlantic. NOAA's Climate Prediction Center favors **above-normal temperatures** for **July–September** in the Northeast (map above).

Above-normal precipitation is favored for **July–September** for southern areas, with **equal chances** of below-, near-, or above-normal precipitation for New York and New England (map right). Normal July–September precipitation ranges from less than 10 inches in parts of New York to more than 15 inches in northern New England.



Atlantic Hurricane Season

	2020 Atlantic Season Outlook	Average Season
Number of Named Storms	13-19	12
Number of Hurricanes	6-10	6
Number of Major Hurricanes	3-6	3

NOAA's 2020 Atlantic hurricane season outlook indicates an **above-normal season** is most likely, with "a likely range of 13–19 named storms (winds of 39+ mph), of which 6–10 could become hurricanes (winds of 74+ mph), including 3–6 major hurricanes (Category 3, 4, or 5; winds of 111+ mph)." Several factors including a lack of El Niño conditions, warmer-than-normal sea surface temperatures, reduced wind shear, weaker trade winds, and an enhanced west African monsoon favor increased storm activity. For the sixth consecutive year the **season started early**, with the first storm forming on May 16, the second storm on May 27, and already the third storm on June 2. The season runs from June 1–November 30, peaking from mid-August–late October.

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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