

December Conditions & Northeast DEWS Discussion

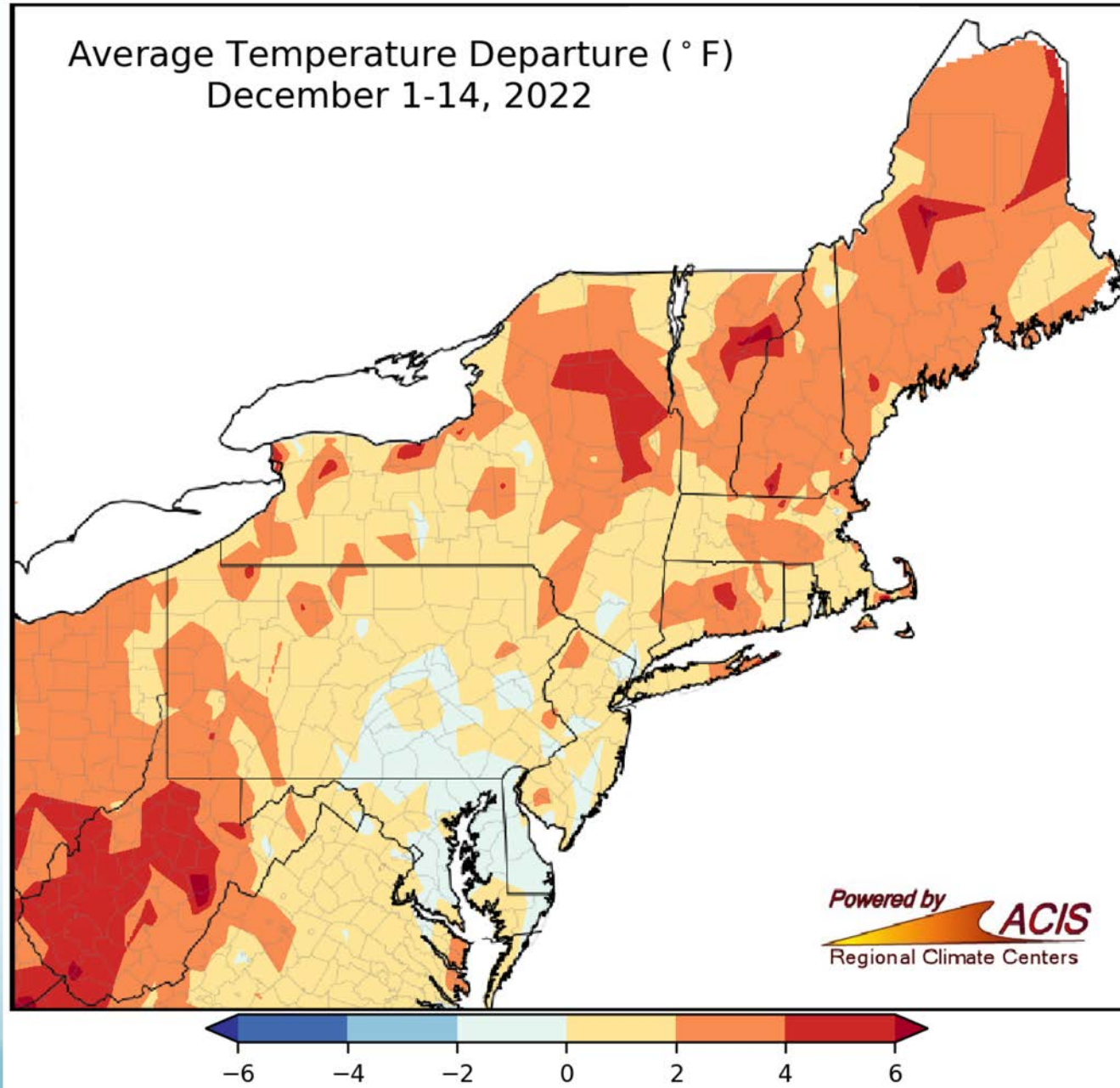
By: Samantha Borisoff, Climatologist
Northeast Regional Climate Center



Northeast Regional
Climate Center

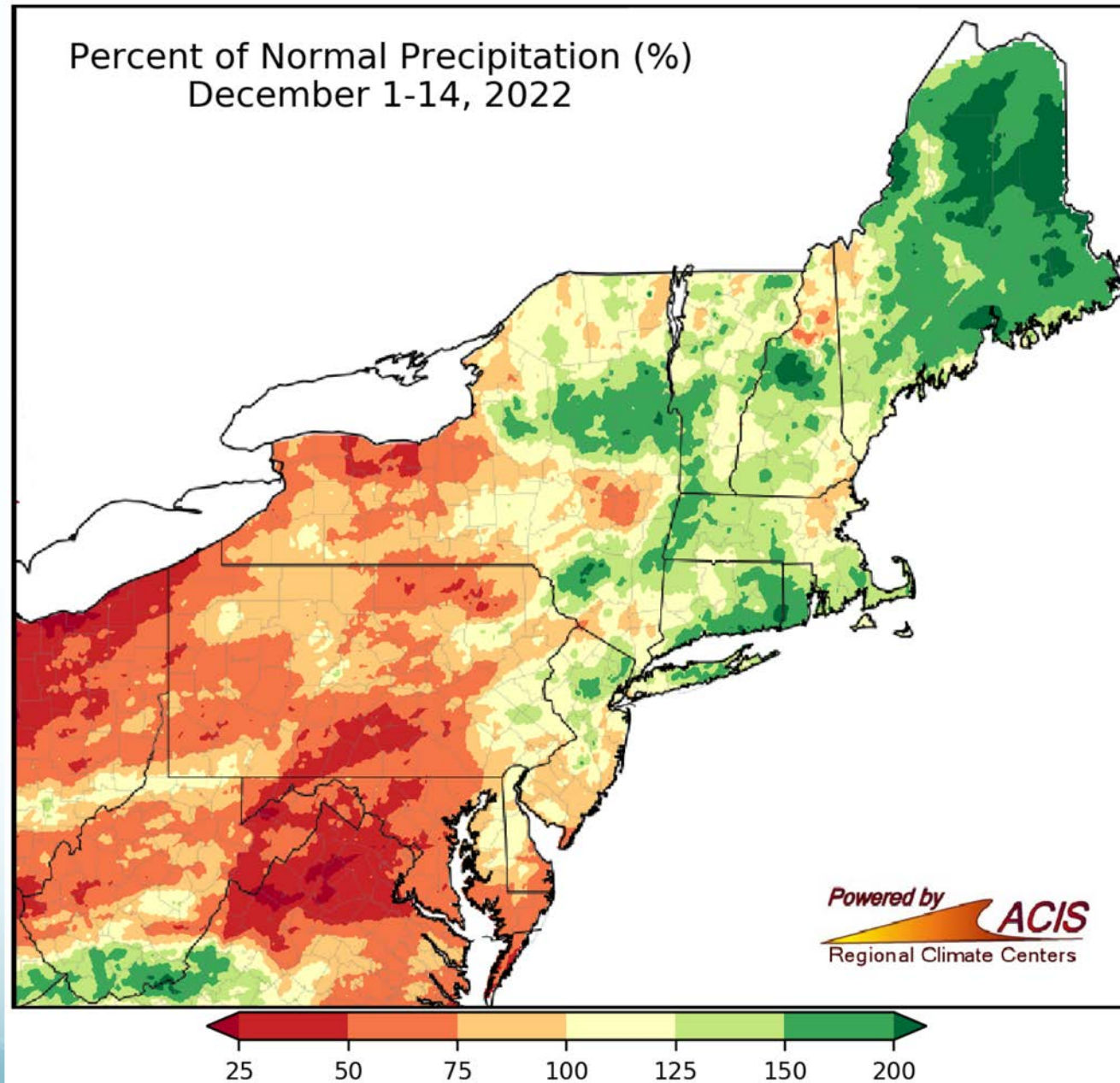


December Temperatures



From 2°F below normal to 6°F above normal

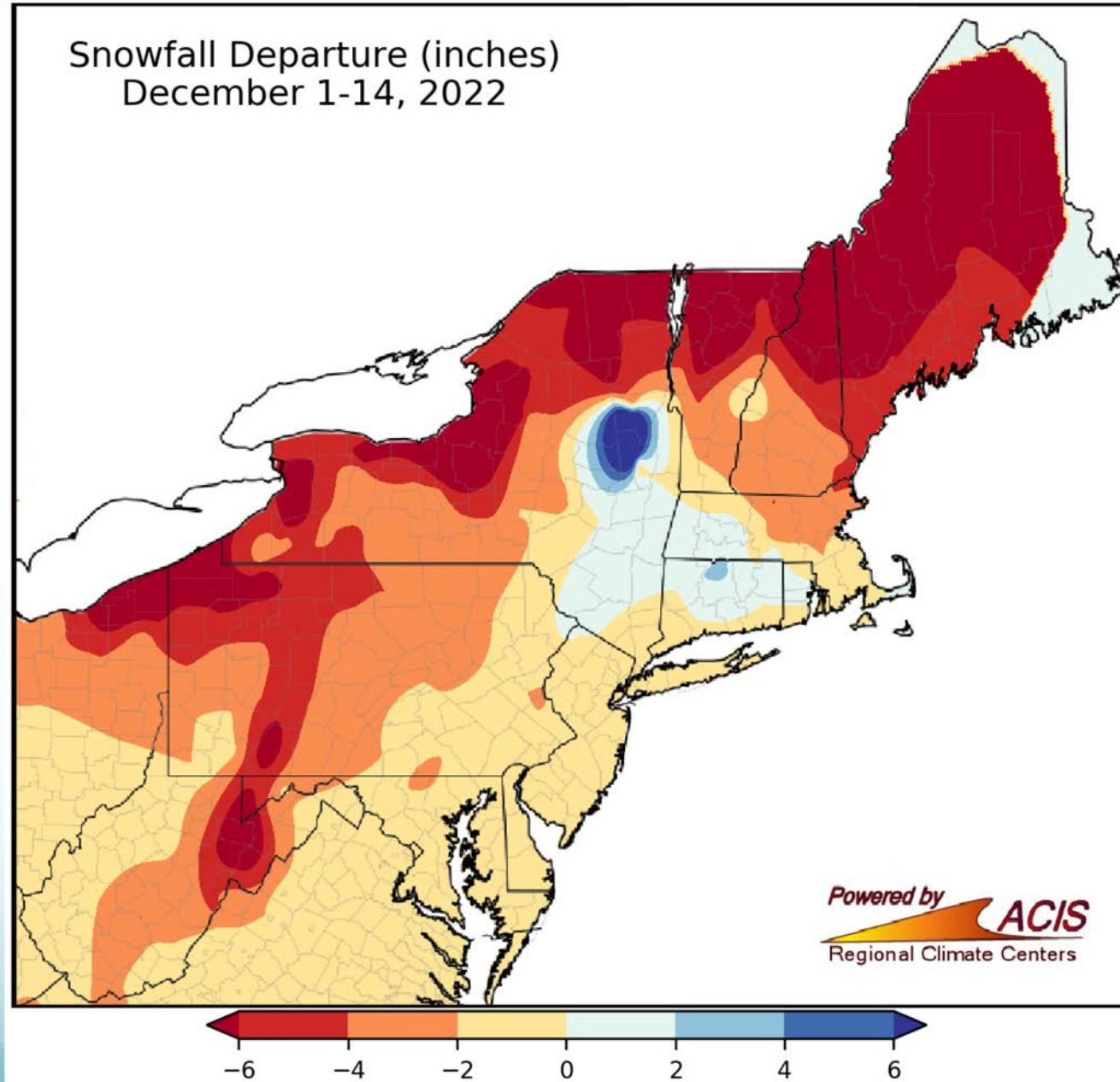
December Precipitation



From 25% of normal to more than 200% of normal



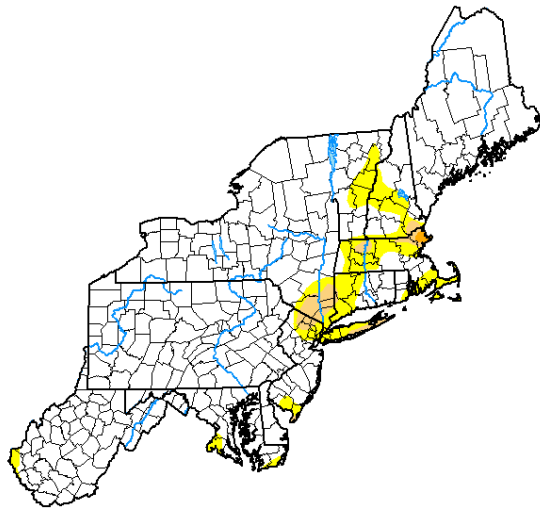
December Snowfall



From more than 6" below normal to more than 6" above normal

Drought Monitor

U.S. Drought Monitor Northeast

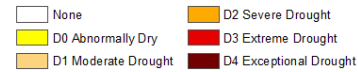


November 29, 2022
(Released Thursday, Dec. 1, 2022)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	89.43	8.52	1.93	0.13	0.00	0.00
Last Week 11-22-2022	89.68	8.34	1.85	0.13	0.00	0.00
3 Months Ago 08-30-2022	40.91	35.33	12.75	9.02	1.98	0.00
Start of Calendar Year 01-04-2022	84.91	12.92	1.32	0.85	0.00	0.00
Start of Water Year 09-27-2021	69.23	17.83	9.11	3.70	0.14	0.00
One Year Ago 11-30-2021	90.30	7.66	1.19	0.85	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

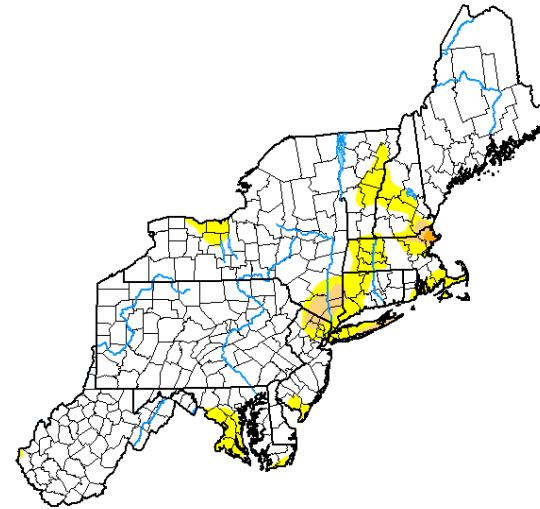
Author:

David Simeral
Western Regional Climate Center



droughtmonitor.unl.edu

U.S. Drought Monitor Northeast



December 13, 2022
(Released Thursday, Dec. 15, 2022)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	88.20	9.94	1.72	0.13	0.00	0.00
Last Week 12-06-2022	89.03	8.94	1.89	0.13	0.00	0.00
3 Months Ago 09-13-2022	49.45	30.47	11.83	7.76	0.49	0.00
Start of Calendar Year 01-04-2022	84.91	12.92	1.32	0.85	0.00	0.00
Start of Water Year 09-27-2021	69.23	17.83	9.11	3.70	0.14	0.00
One Year Ago 12-14-2021	82.68	15.28	1.19	0.85	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti
National Drought Mitigation Center



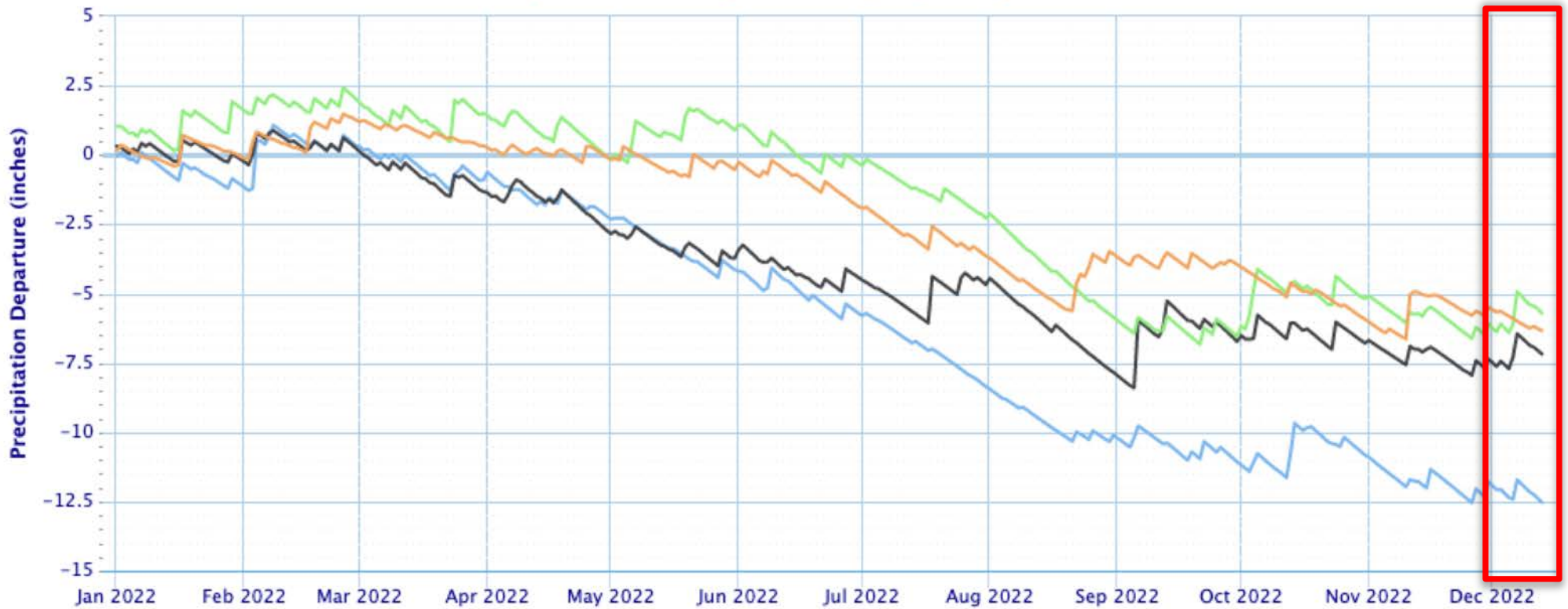
droughtmonitor.unl.edu



Precipitation

Accumulated Precipitation Departure from Normal

Green/black diamonds represent subsequent/missing values



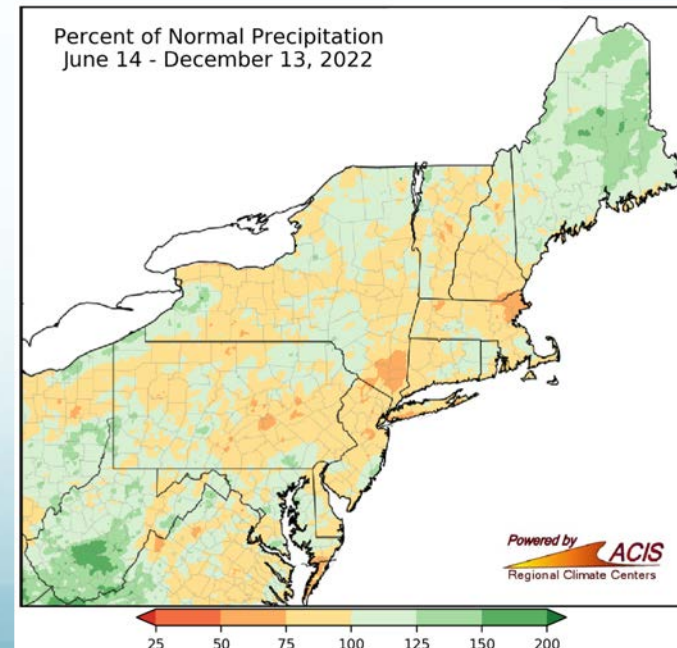
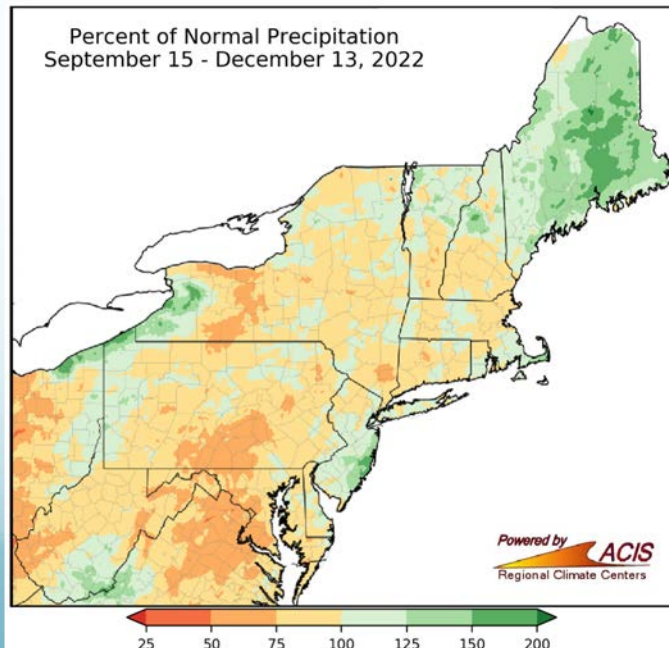
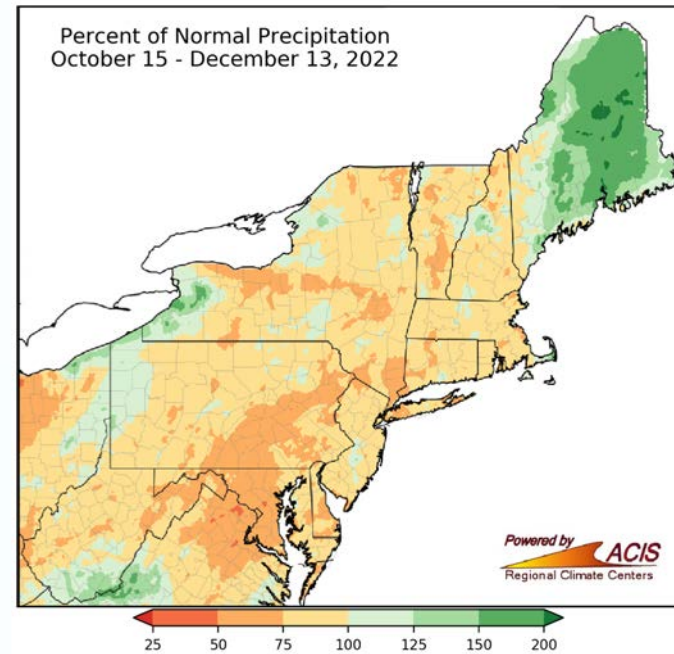
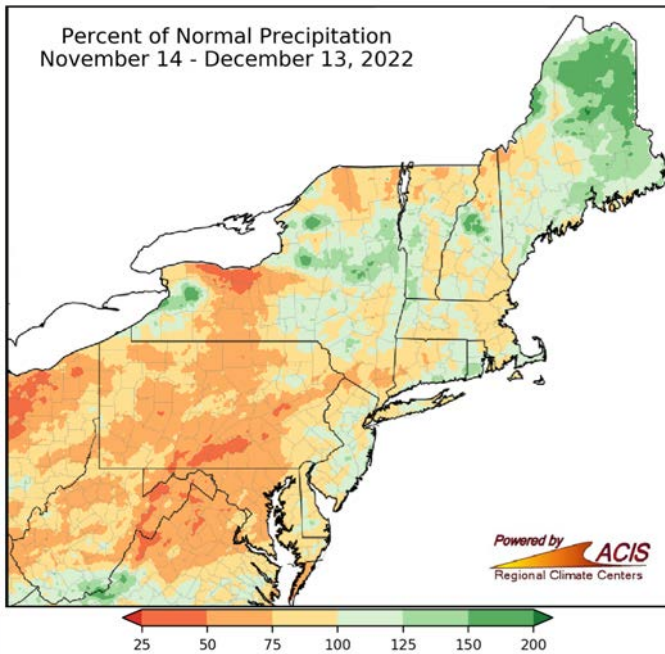
(Click to hide/show lines)

— Boston Area, MA (ThreadEx):Precip Dprt — Bridgeport Area, CT (ThreadEx):Precip Dprt — Islip Area, NY (ThreadEx):Precip Dprt
— Rochester Area, NY (ThreadEx):Precip Dprt

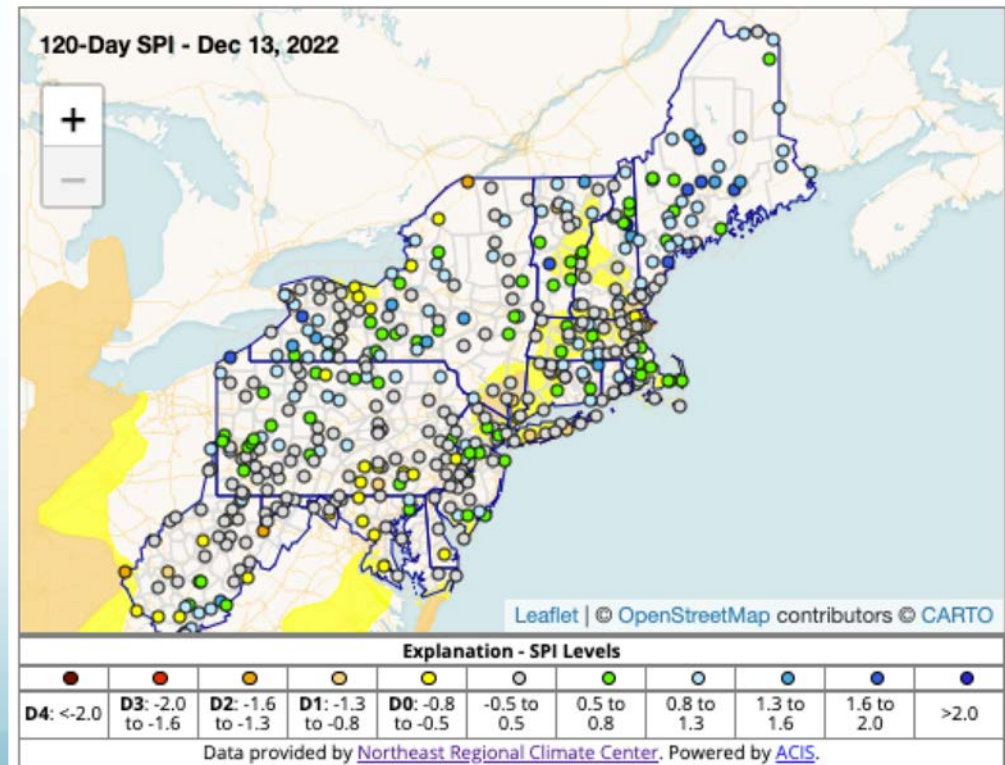
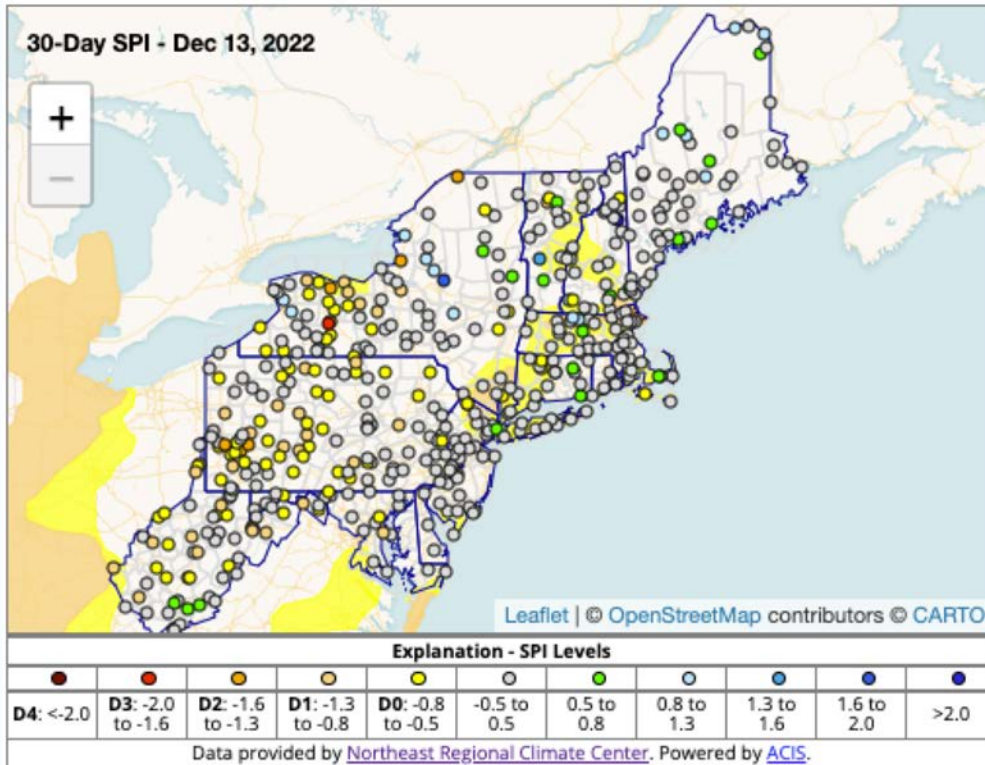
Powered by ACIS



Precipitation

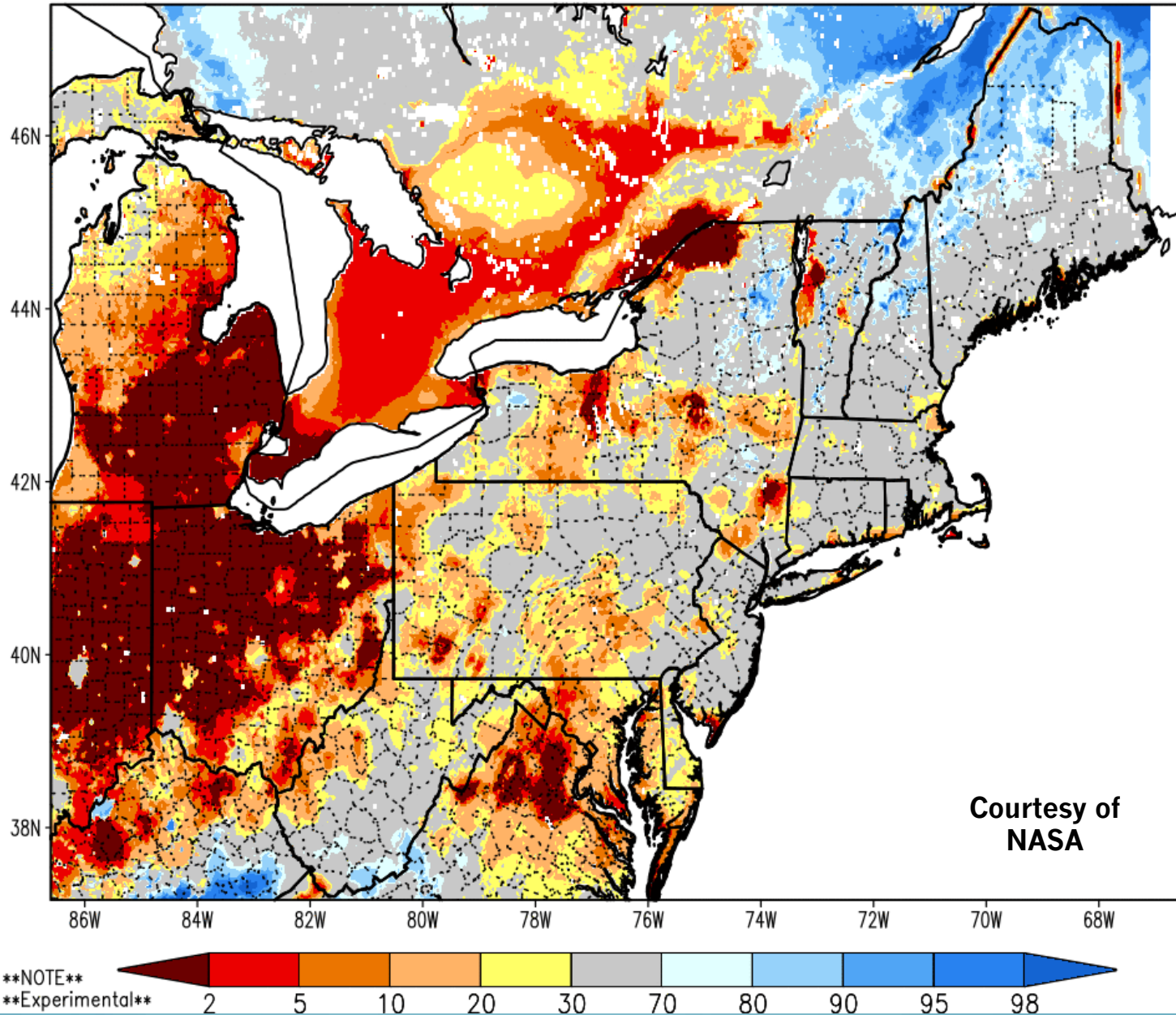


Standardized Precipitation Index

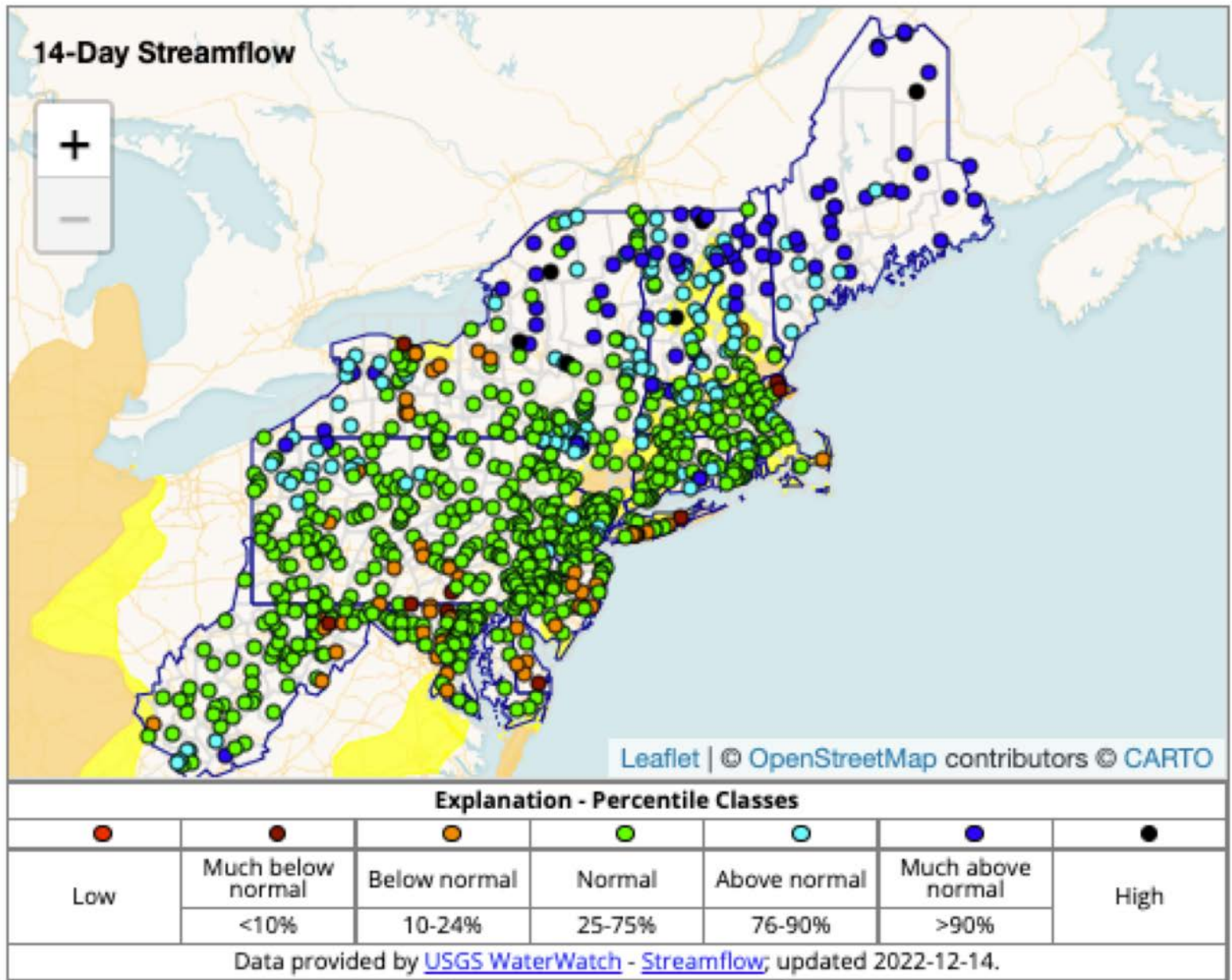


Soil Moisture

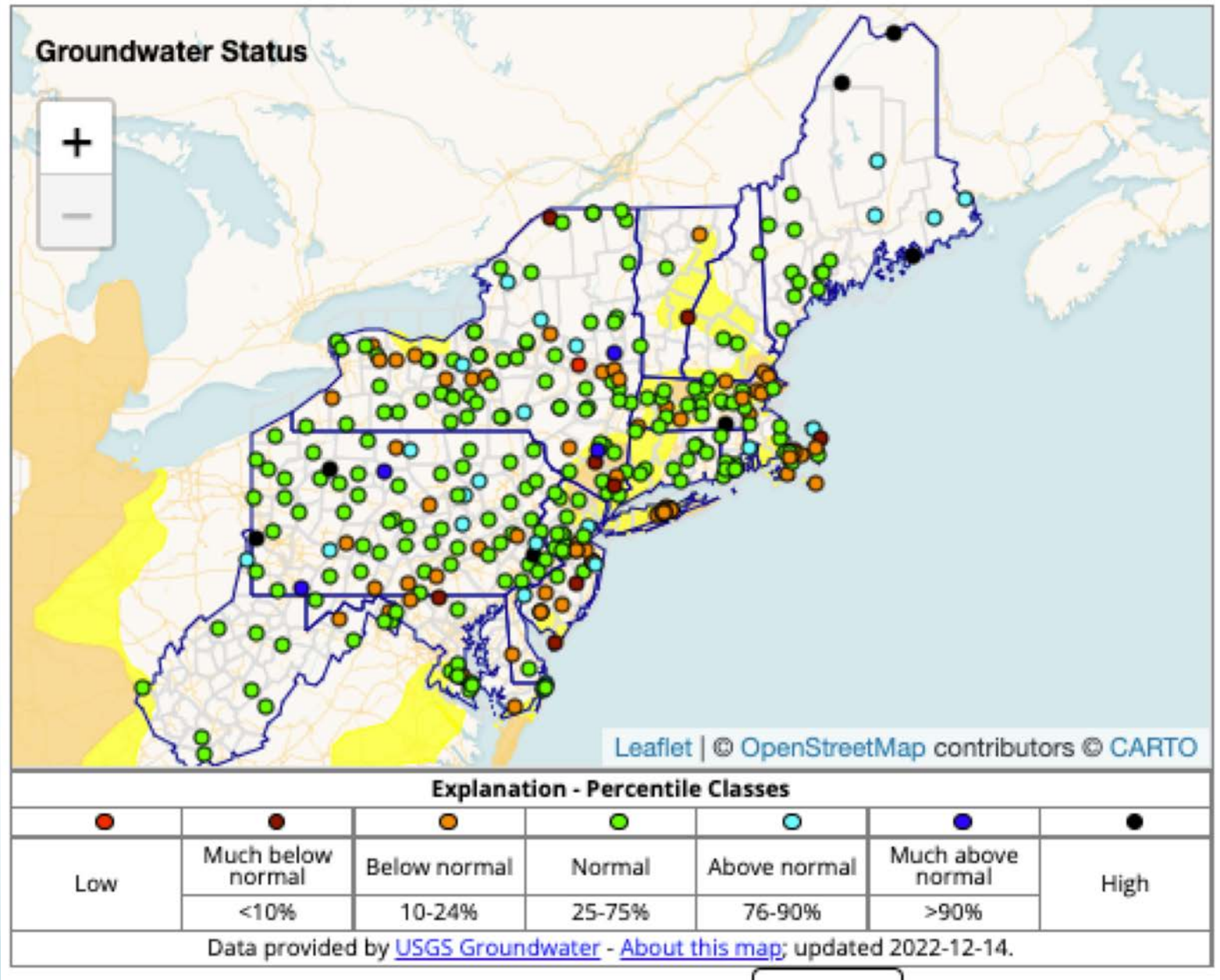
SPoRT-LIS 0-100 cm Soil Moisture percentile valid 15 Dec 2022



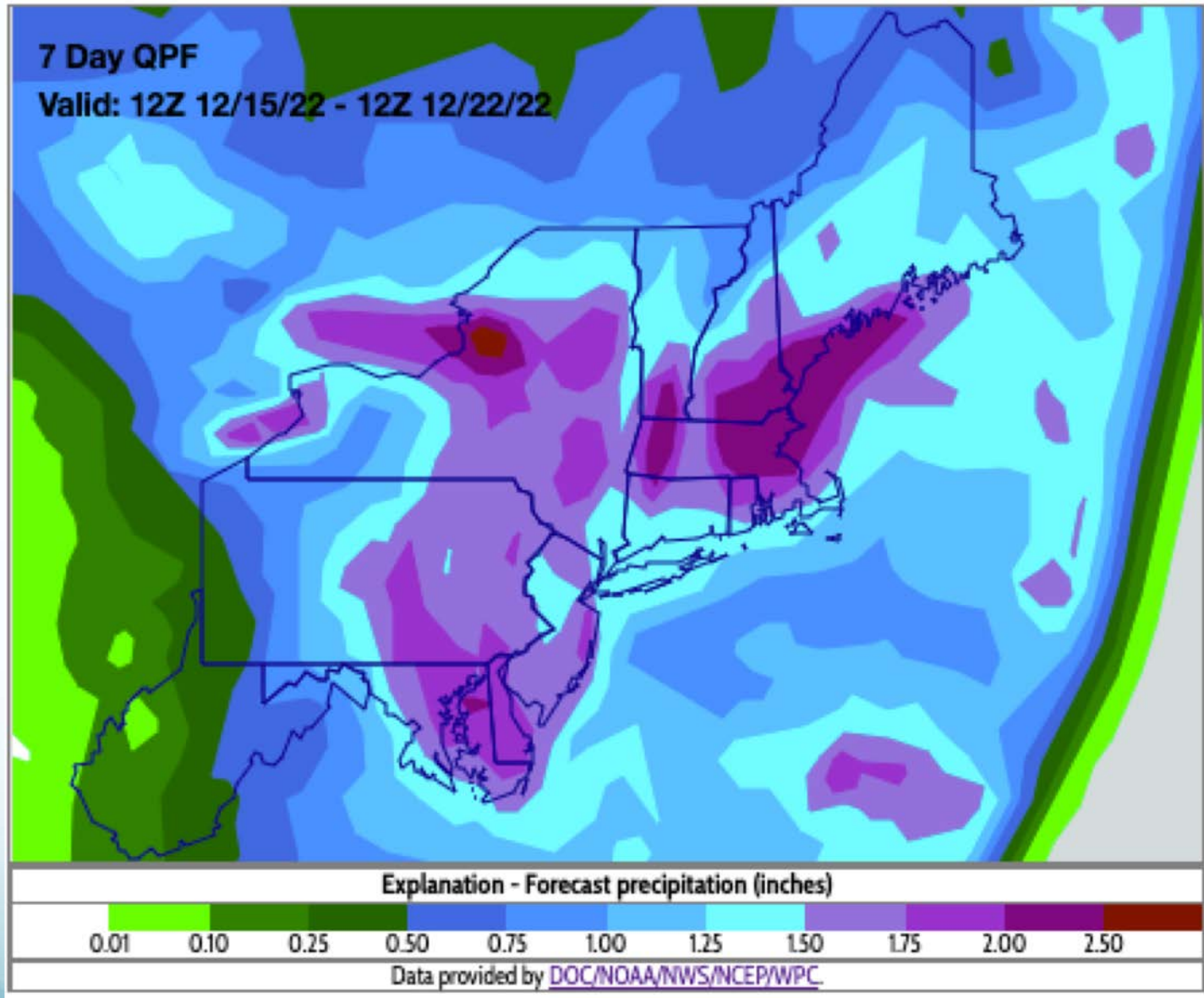
Streamflow



Groundwater



Precipitation Forecast



Storm Forecast



Key Messages for Dec 9-17 Winter Storm

Updated Dec 15, 2022
3:00 AM CST

Major winter storm continues across the Plains/Midwest and arrives in the Northeast

- Blizzard conditions will continue today for portions of the Northern Plains and Minnesota Arrowhead, where 1-2"/hr snow rates and winds gusting 45-60 mph create near zero visibility and snow covered roads. Expect difficult to impossible travel, scattered power outages, and harsh livestock conditions.
- Heavy snow and gusty winds will also push across the today. Blowing and drifting snow will create difficult travel due to near zero visibility and snow-covered roads.
- Farther east, moisture out ahead of this storm system is streaming north into the Mid-Atlantic this morning, before reaching the interior Northeast Thursday night and through Friday.
- A wintry mix, including sleet and freezing rain is expected for parts of the Central Appalachians and northern Mid-Atlantic. Ice accretions may reach 0.25" to 0.50" with locally higher totals possible, causing dangerous travel conditions, tree damage, and scattered power outages.
- Heavy snow accumulations will occur across the interior Northeast, first by this initial wave of moisture today and tonight, then from a developing coastal storm on Friday. Expect significant travel disruptions and impacts to infrastructure for Friday and Saturday.

Forecast Snowfall

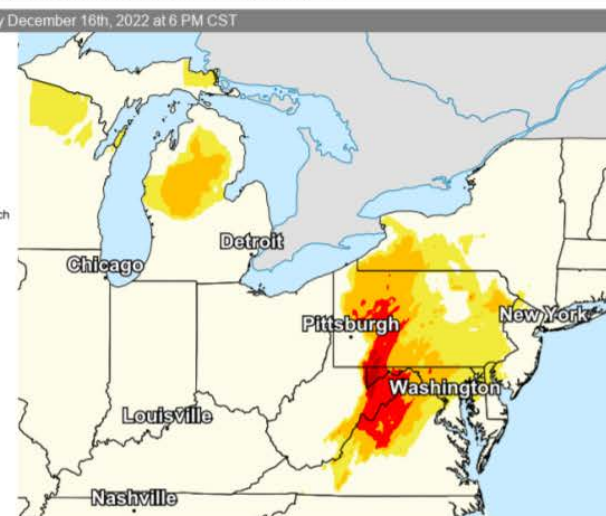
Valid Ending Saturday December 17th, 2022 at 6 PM CST



Graphic Created
December 15th, 2022
2:49 AM CST

Ice Accumulation Forecast

Valid Ending Friday December 16th, 2022 at 6 PM CST



Graphic Created
December 15th, 2022
2:51 AM CST



Outlook



Bitterly Cold Temperatures for Much of the Lower 48 States Heading into the Holidays, with Increasing Risk for a Winter Storm in the East

Effective December 22 - 28, 2022

Issued December 12, 2022
Updated December 14, 2022

KEY MESSAGES

Very cold Arctic air masses will envelop much of the nation during the week 2 period (a), including the busy holiday travel season.

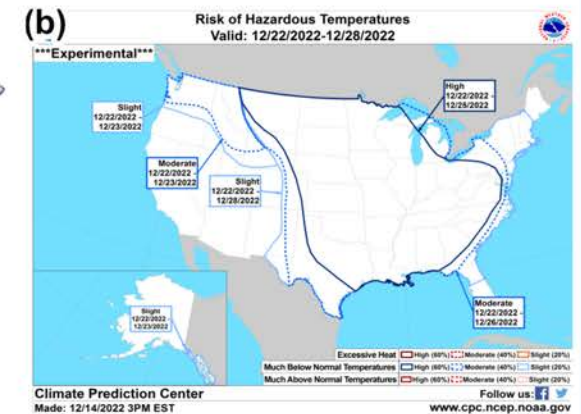
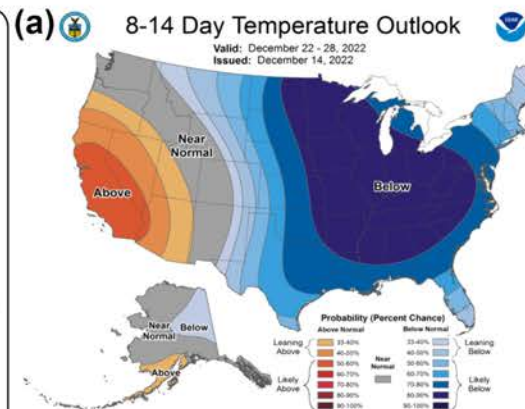
Temperatures in the negative teens are possible in the Northern Rockies, Northern Plains, and Upper Midwest, with sub-zero temperatures reaching as far south as the Central Plains (b).

The Great Lakes, Ohio Valley, Mid-Atlantic, and Northeast are favored to have temperatures reach the single digits and teens. Widespread below freezing temperatures are also expected throughout the Southeast and Southern Plains, including southern Texas and much of the Gulf Coast.

A potentially impactful winter storm may occur for parts of the eastern Great Lakes, Mid-Atlantic, and Northeast leading up to and including Christmas Eve, near the leading edge of these Arctic air masses (c).

Timing: Cold air outbreaks are expected to lead up to* and continue through December 22 - 28, 2022. The cold is expected to move southward then eastward as the week 2 period progresses, with the winter storm potentially occurring December 22 - 24, 2022.

* For short-term forecasts (prior to December 22), visit www.wpc.ncep.noaa.gov and weather.gov.



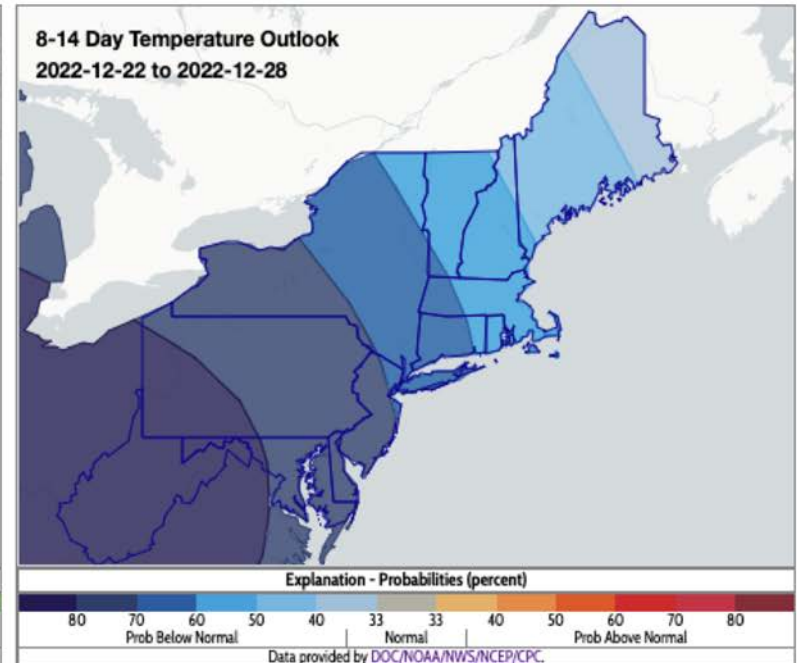
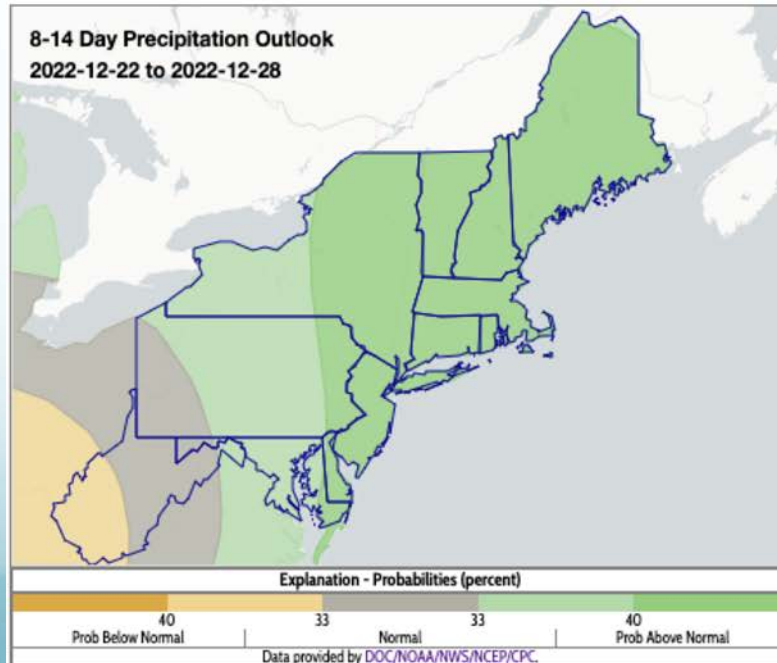
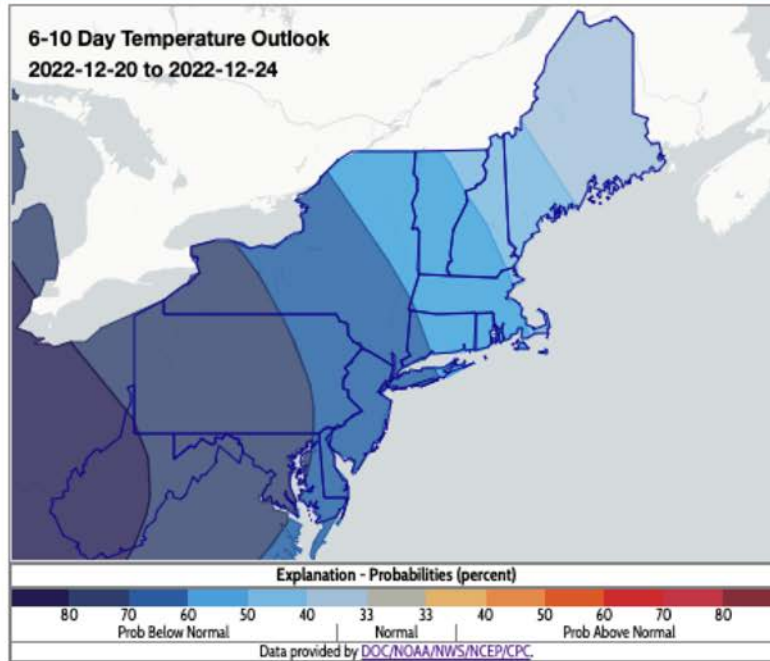
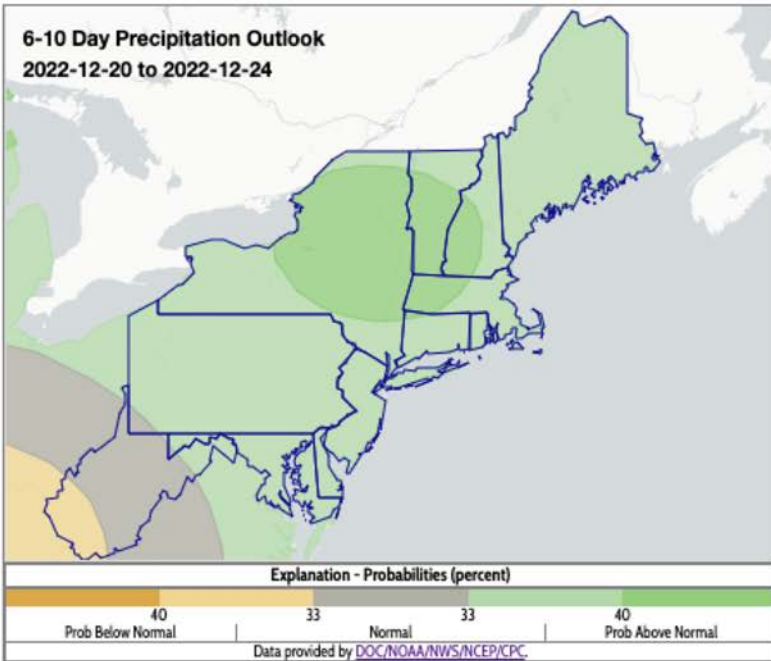
National Oceanic and Atmospheric Administration
U.S. Department of Commerce

Climate Prediction Center
www.cpc.ncep.noaa.gov

***Key messages are subject to change due to changes in forecast information and tools.



Short-term Outlooks



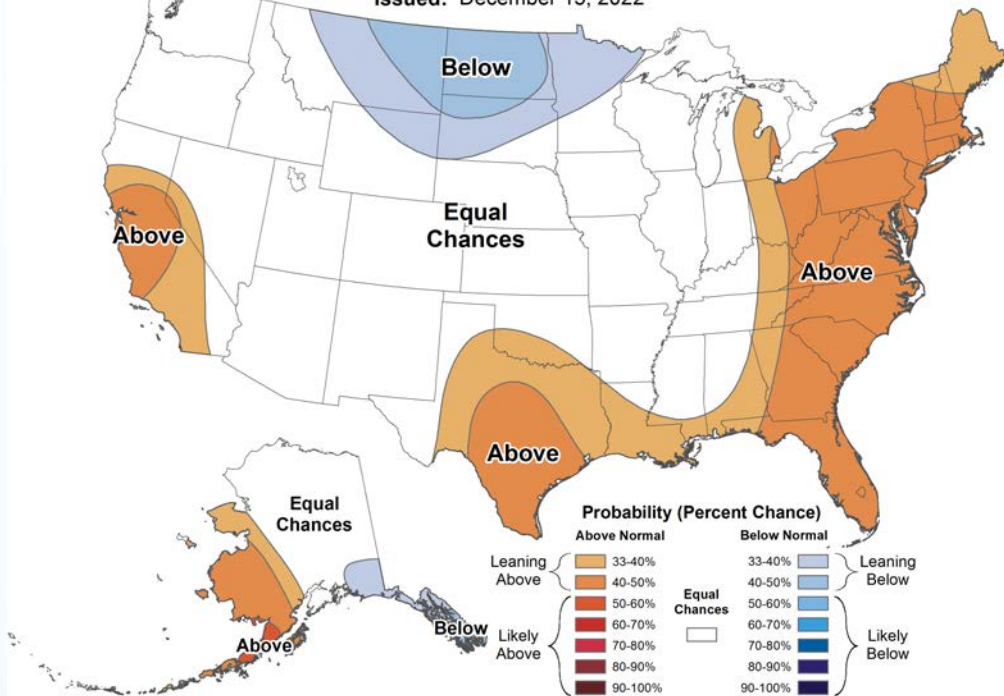
Monthly Outlooks



Monthly Temperature Outlook



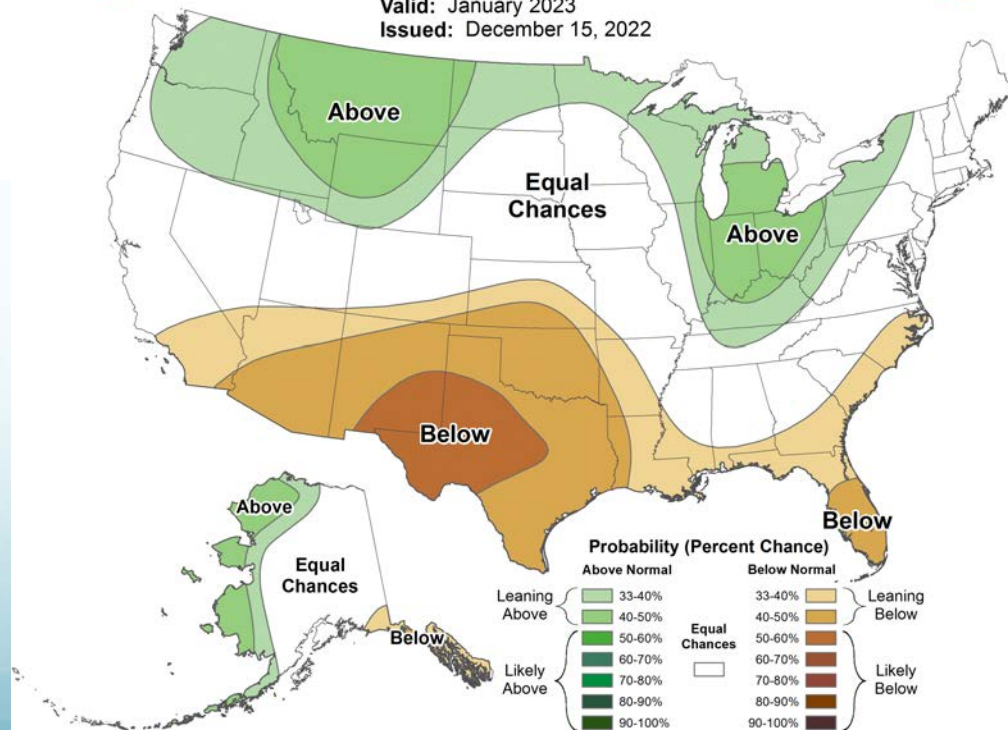
Valid: January 2023
 Issued: December 15, 2022



Monthly Precipitation Outlook



Valid: January 2023
 Issued: December 15, 2022



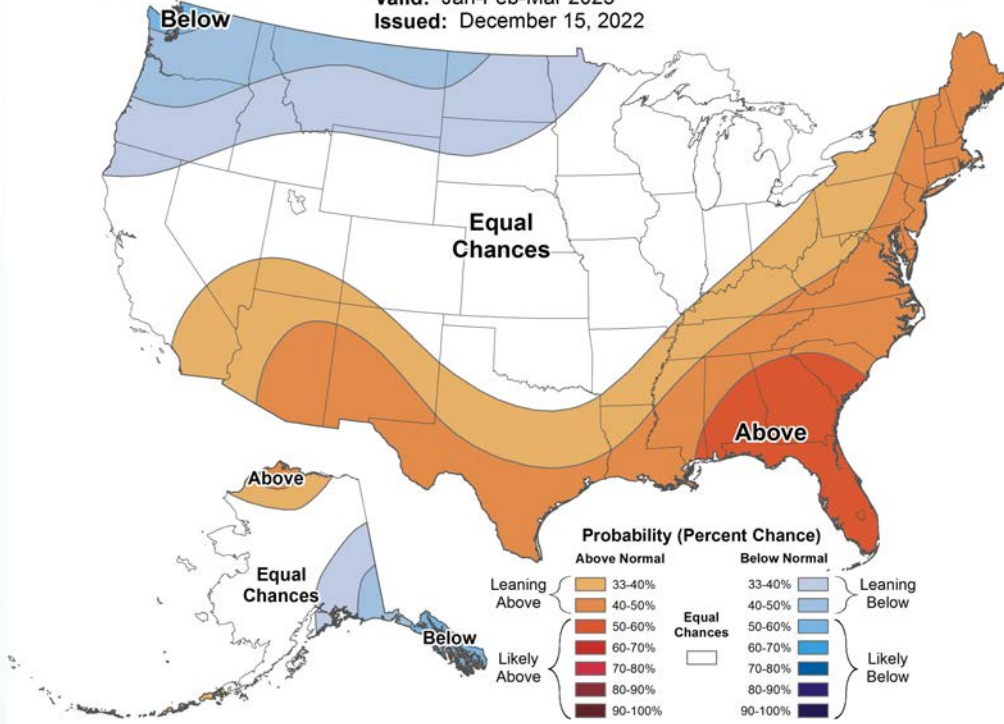
Seasonal Outlooks



Seasonal Temperature Outlook



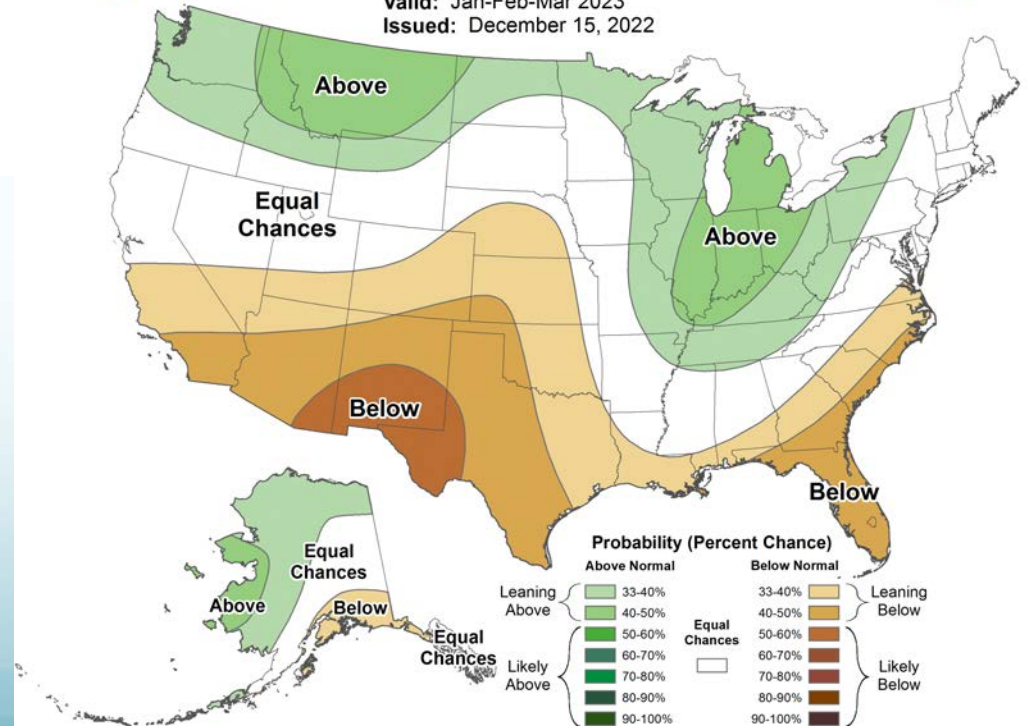
Valid: Jan-Feb-Mar 2023
 Issued: December 15, 2022



Seasonal Precipitation Outlook



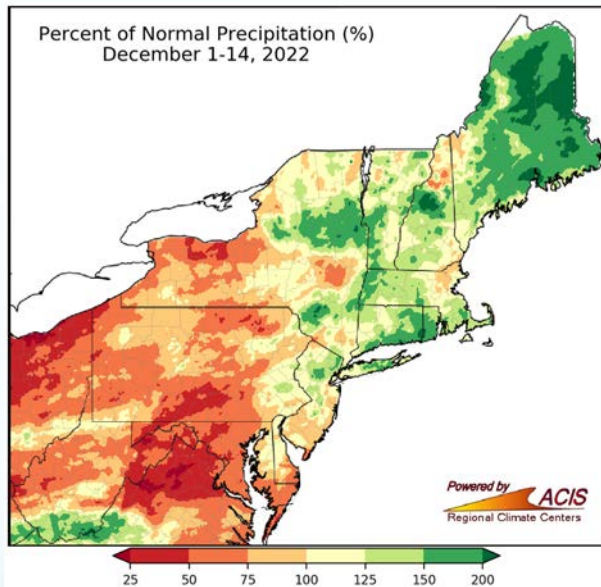
Valid: Jan-Feb-Mar 2023
 Issued: December 15, 2022



Summary

December-to-date conditions:

- Near- to above-normal temperatures so far
- Below-normal precipitation interior areas; above-normal precipitation for New England, eastern NY, and some coastal areas



Drought:

- Abnormal dryness introduced/expanded in some drier-than-normal interior areas
- Drought and dryness contracted slightly in some wetter coastal areas

Outlooks:

- Next few days: Storm with heavy precipitation
- Short-term/rest of Dec: near- or above-normal precipitation and below-normal temperatures favored; another storm?
- January/Jan-Mar: above-normal temperatures favored for all; above-normal precipitation favored for interior areas and



Contact Information

- nrcc@cornell.edu

Upcoming Webinars

- Tuesday, January 31 at 9:30am EST
 - Climate Mapping for Resilience and Adaptation Tool



www.nrcc.cornell.edu