

August Conditions & Northeast DEWS Discussion

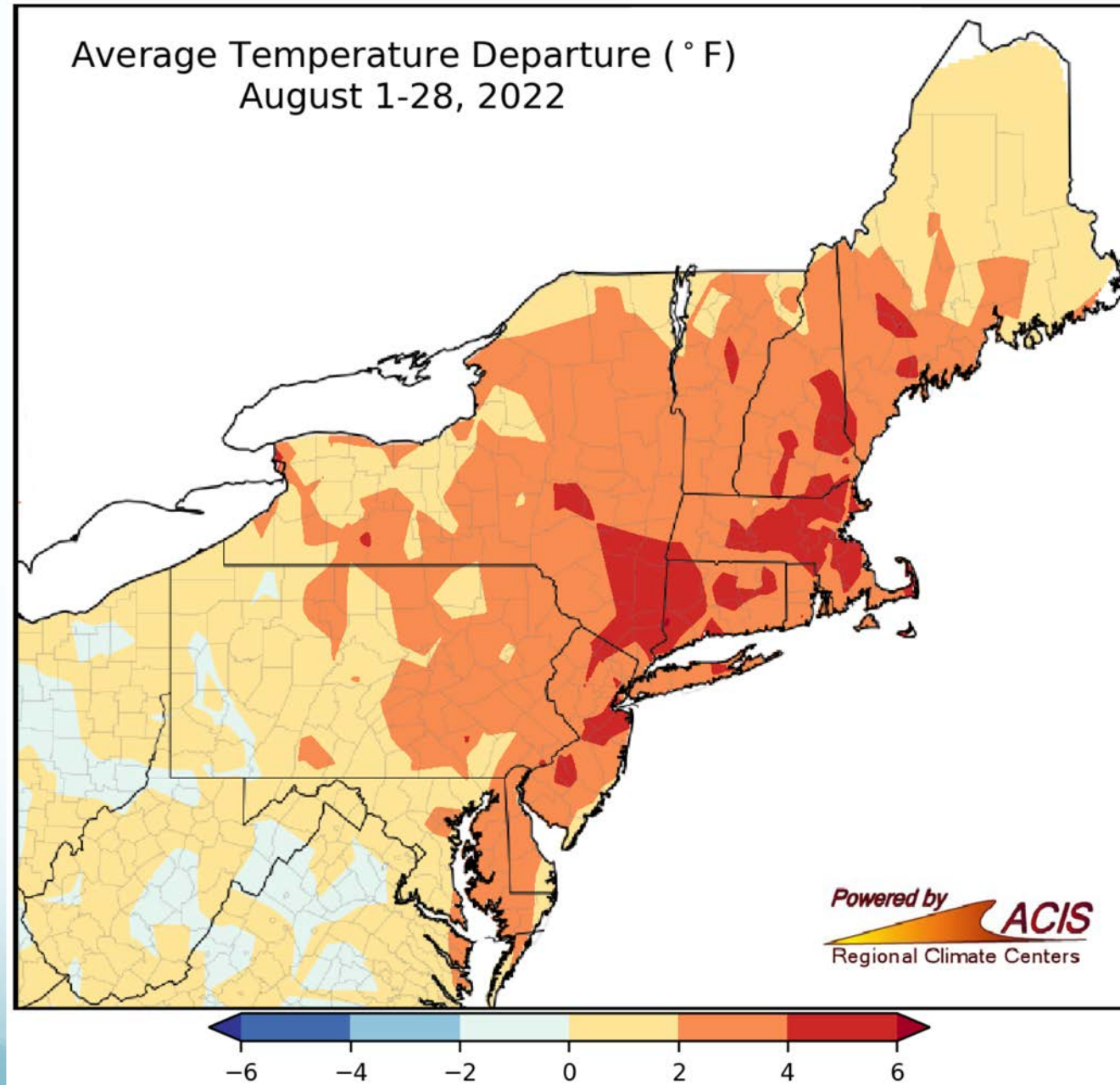
By: Jessica Spaccio, Climatologist
Northeast Regional Climate Center



Northeast Regional
Climate Center



August Temperatures



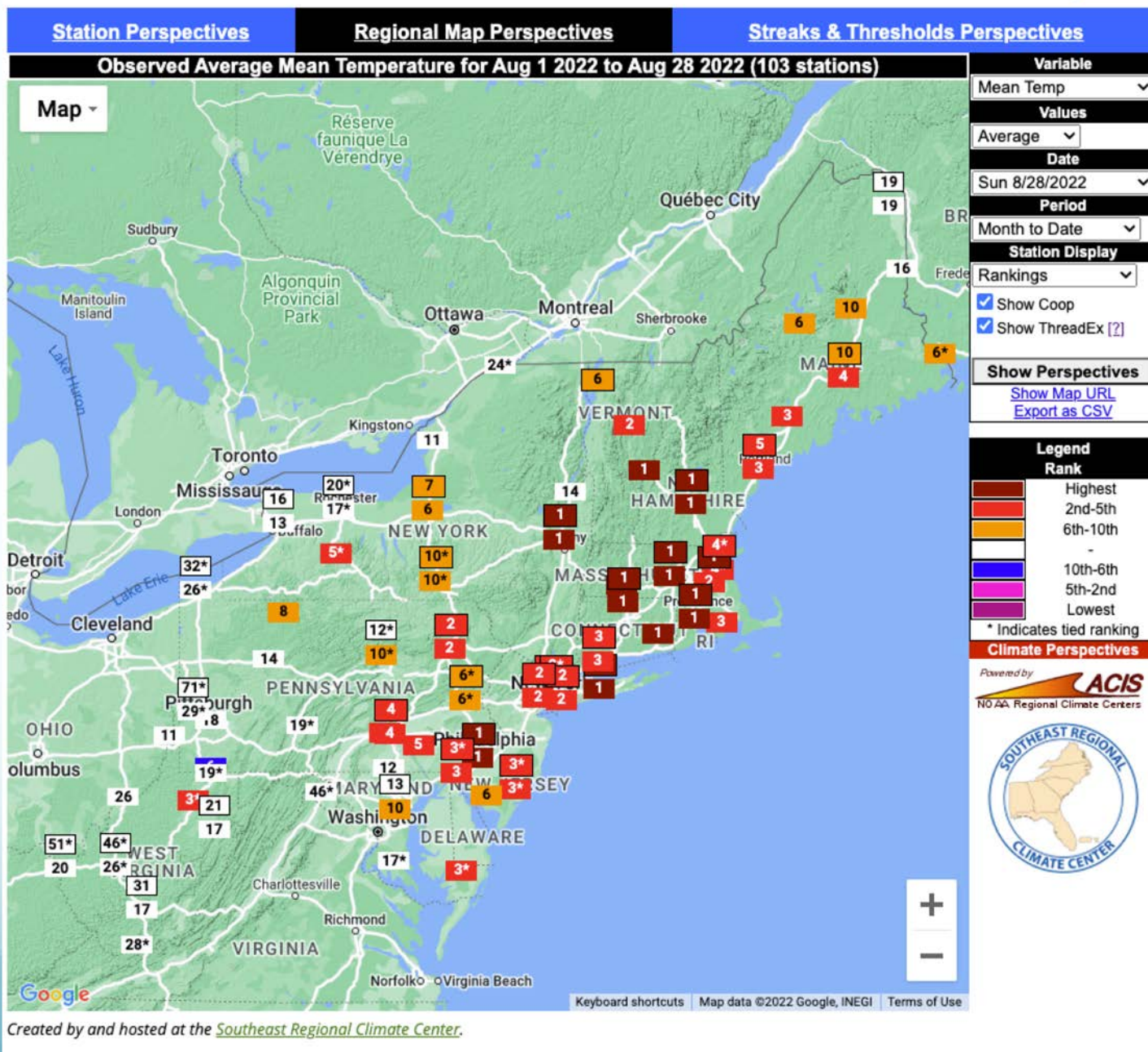
From 2°F below normal to 6°F above normal



August Temperatures

Southeast RCC Climate Perspectives

Expand



August Temperatures

Consecutive days w/ a high $\geq 95^{\circ}\text{F}$

Number of Consecutive Days Max Temperature ≥ 95 for Boston Area, MA (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Run Length	Dates
1	7	1944-08-11 through 1944-08-17
2	6	2022-08-04 through 2022-08-09
3	5	1911-07-02 through 1911-07-06
4	4	1984-06-08 through 1984-06-11
-	4	1953-08-28 through 1953-08-31
-	4	1949-07-27 through 1949-07-30
-	4	1948-08-25 through 1948-08-28
-	4	1925-06-03 through 1925-06-06
-	4	1917-07-30 through 1917-08-02
-	4	1882-07-24 through 1882-07-27
Period of record: 1872-03-01 to 2022-08-21		

Number of Consecutive Days Max Temperature ≥ 95 for Providence Area, RI (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Run Length	Dates
1	7	1944-08-11 through 1944-08-17
2	6	2022-08-04 through 2022-08-09
3	5	1991-07-17 through 1991-07-21
-	5	1977-07-17 through 1977-07-21
5	4	2002-07-29 through 2002-08-01
-	4	1993-07-07 through 1993-07-10
7	3	2022-07-22 through 2022-07-24
-	3	2020-07-26 through 2020-07-28
-	3	2013-07-18 through 2013-07-20
-	3	2006-08-01 through 2006-08-03
Last value also occurred in one or more previous years.		
Period of record: 1904-11-01 to 2022-08-21		

Total number of days w/ a high $\geq 95^{\circ}\text{F}$

Time Series Summary for Boston Area, MA (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Year-Month	Number of Days Max Temperature ≥ 95	Missing Count
1	1944-08	8	0
-	1911-07	8	0
3	1949-07	7	0
4	2022-08	6	3
-	1949-08	6	0

Time Series Summary for Providence Area, RI (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Year-Month	Number of Days Max Temperature ≥ 95	Missing Count
1	1944-08	9	0
2	2002-07	7	0
3	2022-08	6	3
-	1991-07	6	0



August Temperatures

Time Series Summary for Newark Area, NJ (ThreadEx) - Month of Aug

Click column heading to sort ascending, click again to sort descending.

Rank	Year	Number of Days Max Temperature ≥ 90	Missing Count
1	2022	17	3
-	1988	17	0
3	1959	15	0

Total number of days in Aug. w/ a high $\geq 90^{\circ}\text{F}$

Time Series Summary for Philadelphia Area, PA (ThreadEx) - Month of Aug

Click column heading to sort ascending, click again to sort descending.

Rank	Year	Number of Days Max Temperature ≥ 90	Missing Count
1	2022	17	3
-	2016	17	0
-	1995	17	0
-	1980	17	0
5	1988	16	0

Warm minimum temperatures

Maximum 1-Day Mean Min Temperature for Providence Area, RI (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date
1	80.0	1925-06-06
2	78.0	2022-08-08
-	78.0	2019-07-21
-	78.0	2002-07-03
-	78.0	1999-07-05
-	78.0	1978-07-23
-	78.0	1933-08-02
-	78.0	1911-07-11



Maximum 1-Day Mean Min Temperature for PORTLAND JETPORT, ME

Click column heading to sort ascending, click again to sort descending.

Rank	Value	Ending Date
1	74.0	2022-08-07
-	74.0	2006-08-02
-	74.0	1988-08-05
4	73.0	2022-08-05
-	73.0	1975-08-02
-	73.0	1969-08-17

August Rainfall

Last Night's Rain & Flooding

4.44"

Total Rainfall at Yeager Airport
5:30pm Sun – 5:00am Mon

3.54"

Calendar Day Total for
Monday

1.66"

Previous Record – 8/15/1950



Flooding & Aftermath in Smithers, WV. Credit Fayette Cty Sheriff's Office



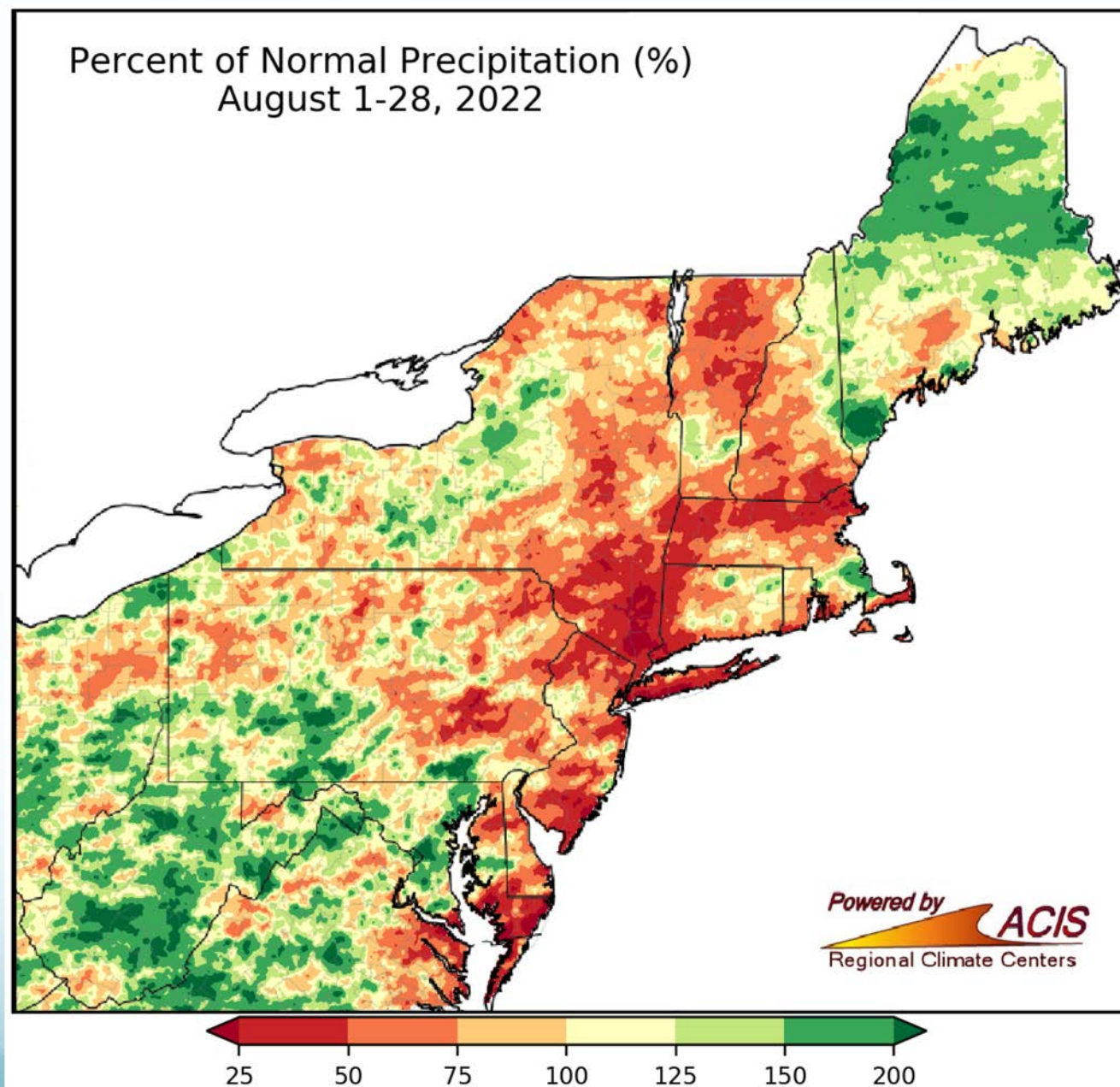
NWS Charleston, WV



[Weather.gov/rlx](https://www.weather.gov/rlx) 8/15/2022 7:50 pm



August Precipitation



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

Drought Monitor

U.S. Drought Monitor Northeast

July 26, 2022
(Released Thursday, Jul. 28, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	50.54	28.39	18.28	2.80	0.00	0.00
Last Week 07-19-2022	52.72	24.86	21.21	1.21	0.00	0.00
3 Months Ago 04-26-2022	81.37	17.40	1.24	0.00	0.00	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 09-28-2021	90.30	6.56	2.35	0.80	0.00	0.00
One Year Ago 07-27-2021	77.06	14.26	7.31	1.38	0.00	0.00

Intensity

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

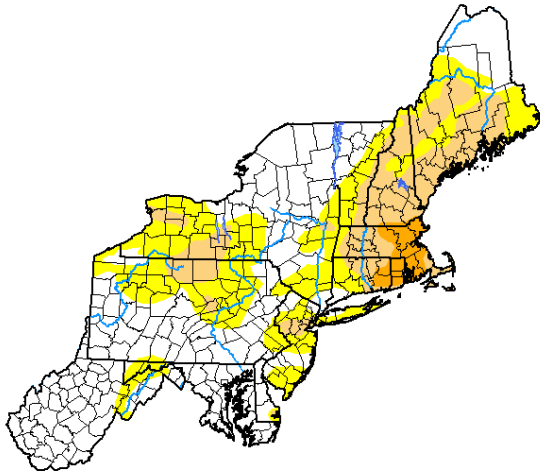
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author

Curtis Riganti
National Drought Mitigation Center



droughtmonitor.unl.edu



U.S. Drought Monitor Northeast

August 23, 2022
(Released Thursday, Aug. 25, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	49.73	27.69	12.38	7.71	2.48	0.00
Last Week 08-16-2022	49.35	28.82	12.13	7.22	2.48	0.00
3 Months Ago 05-24-2022	84.88	12.88	2.24	0.00	0.00	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 09-28-2021	90.30	6.56	2.35	0.80	0.00	0.00
One Year Ago 08-24-2021	77.36	12.05	9.05	1.54	0.00	0.00

Intensity

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

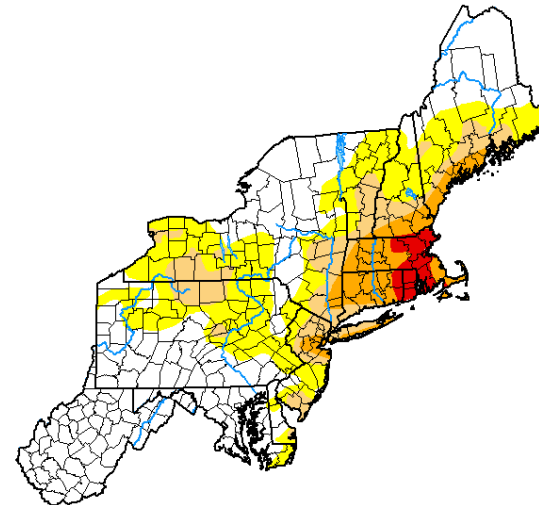
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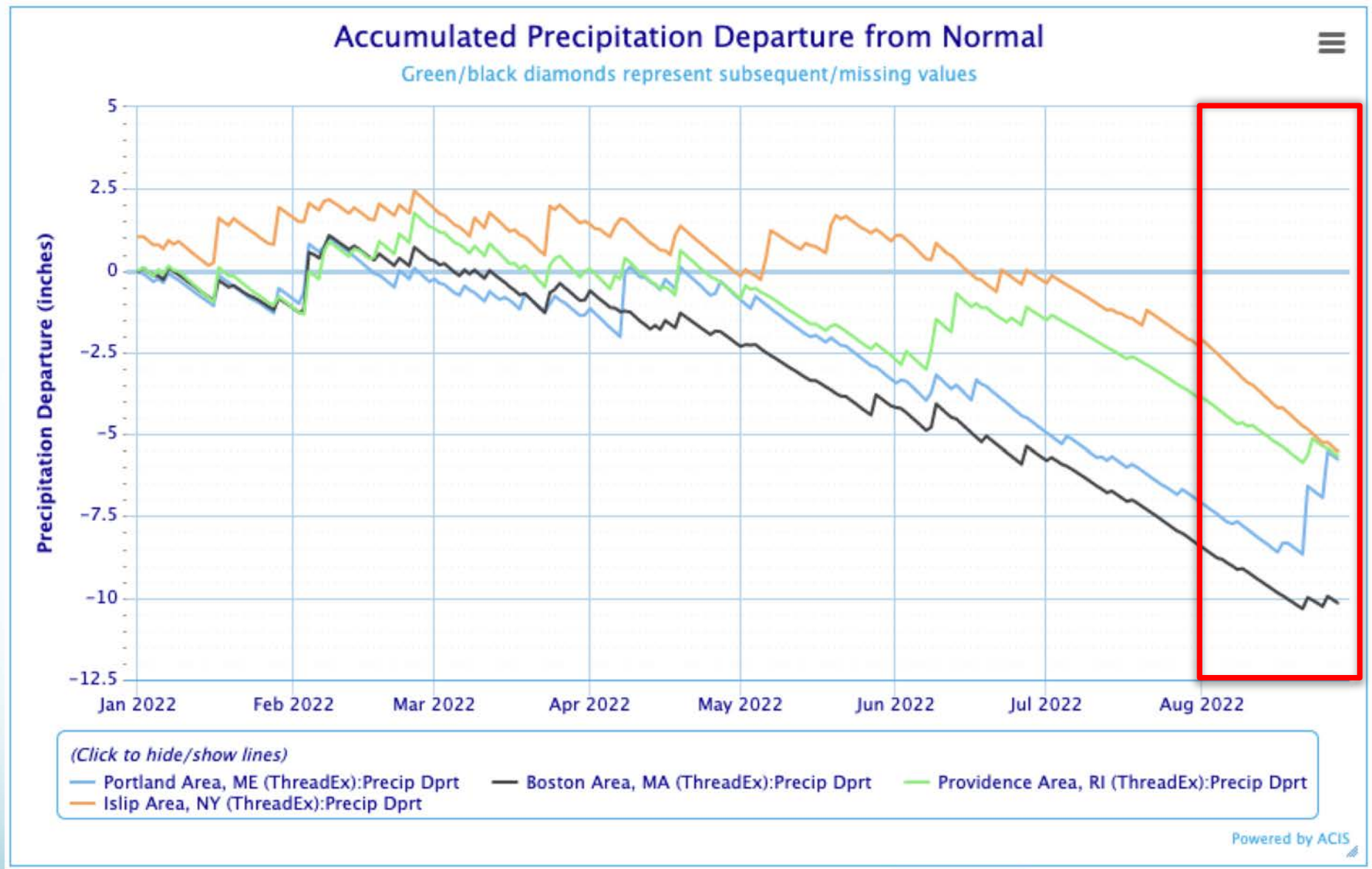
Deborah Bathke
National Drought Mitigation Center



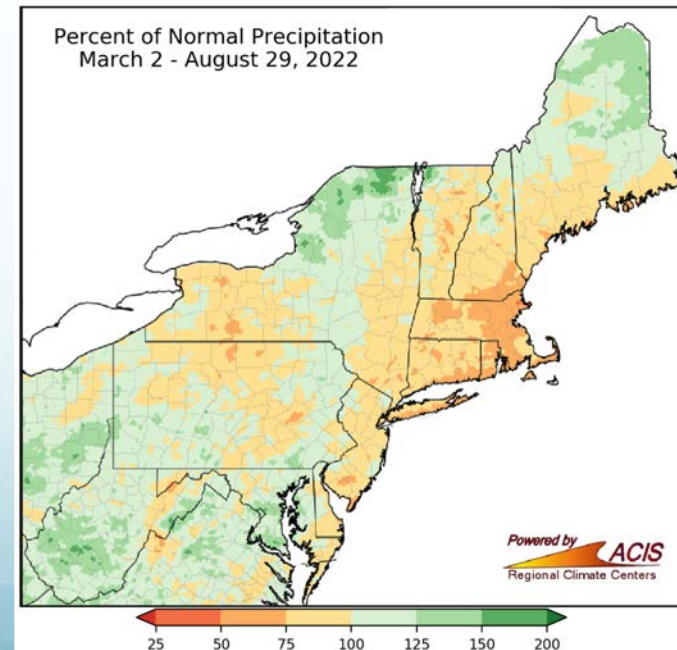
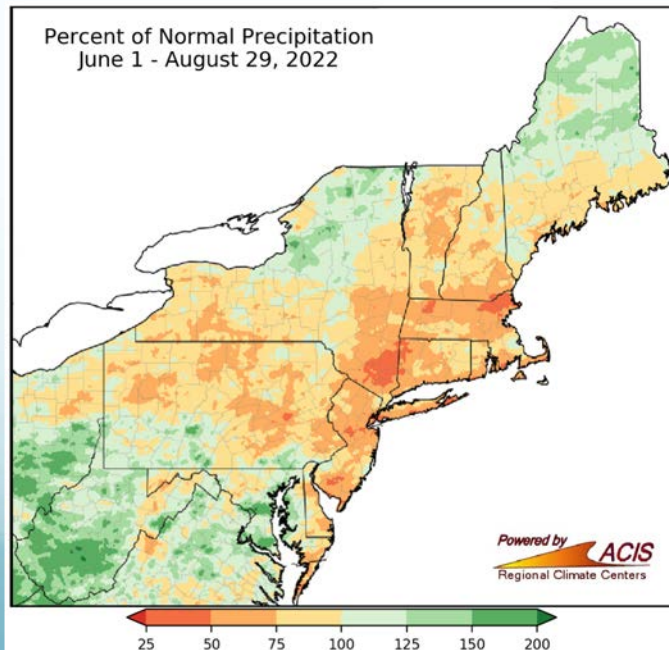
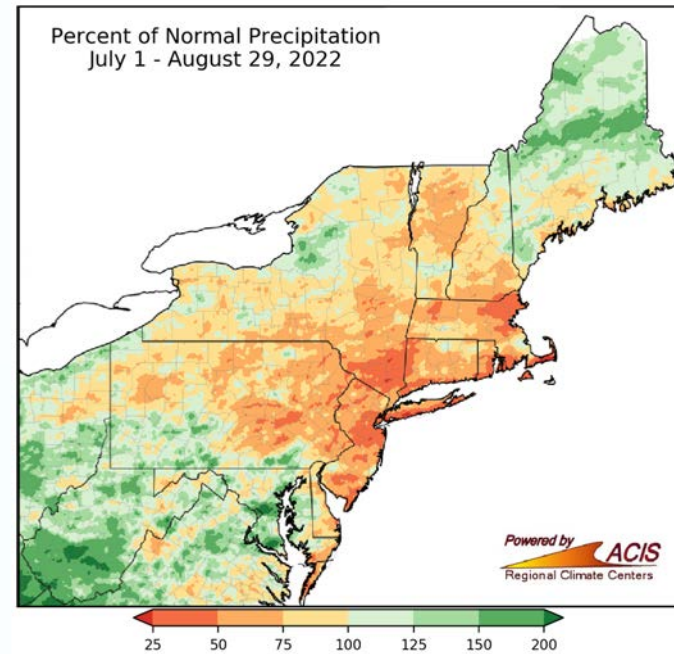
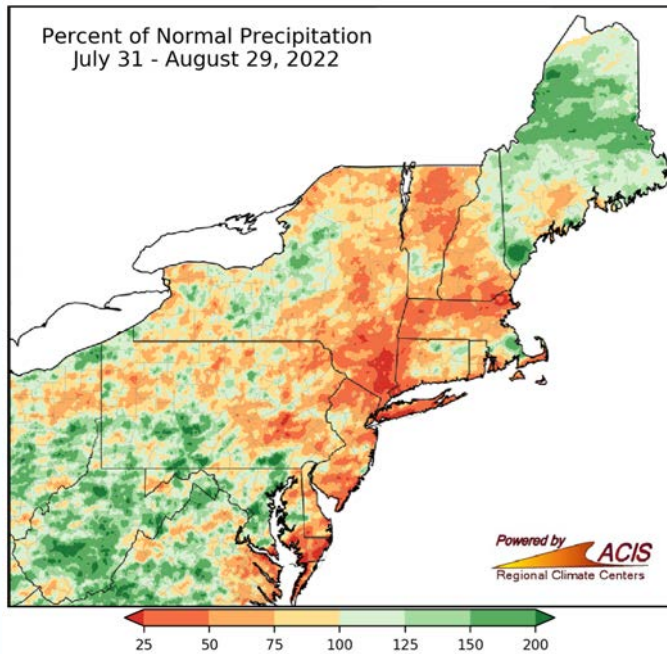
droughtmonitor.unl.edu



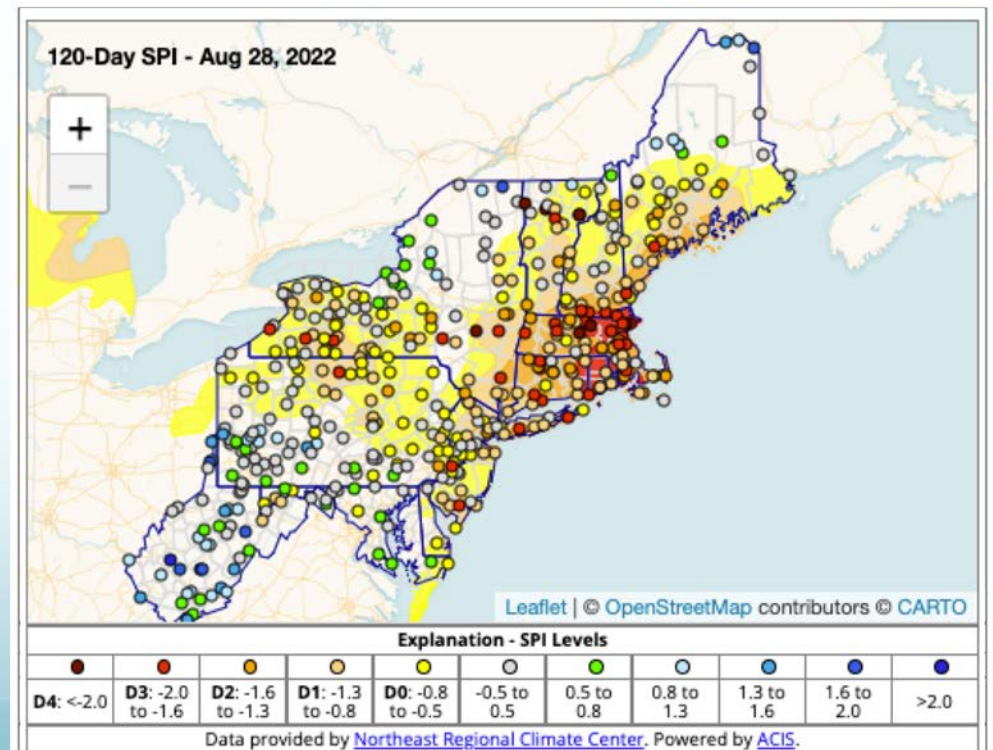
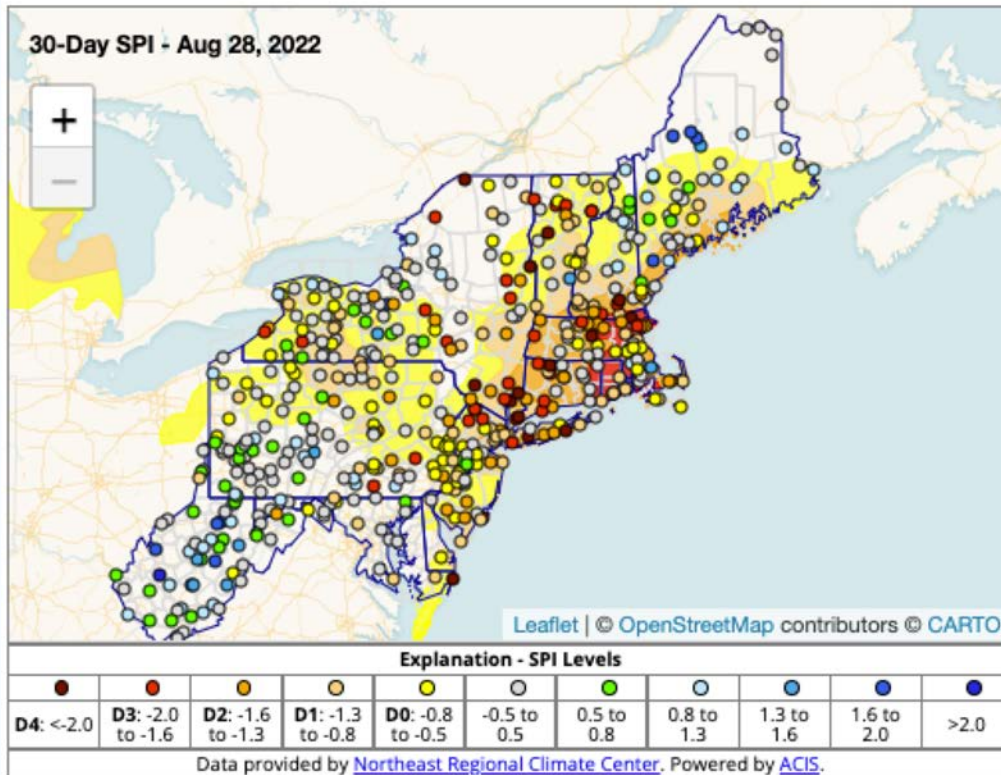
Precipitation



Precipitation

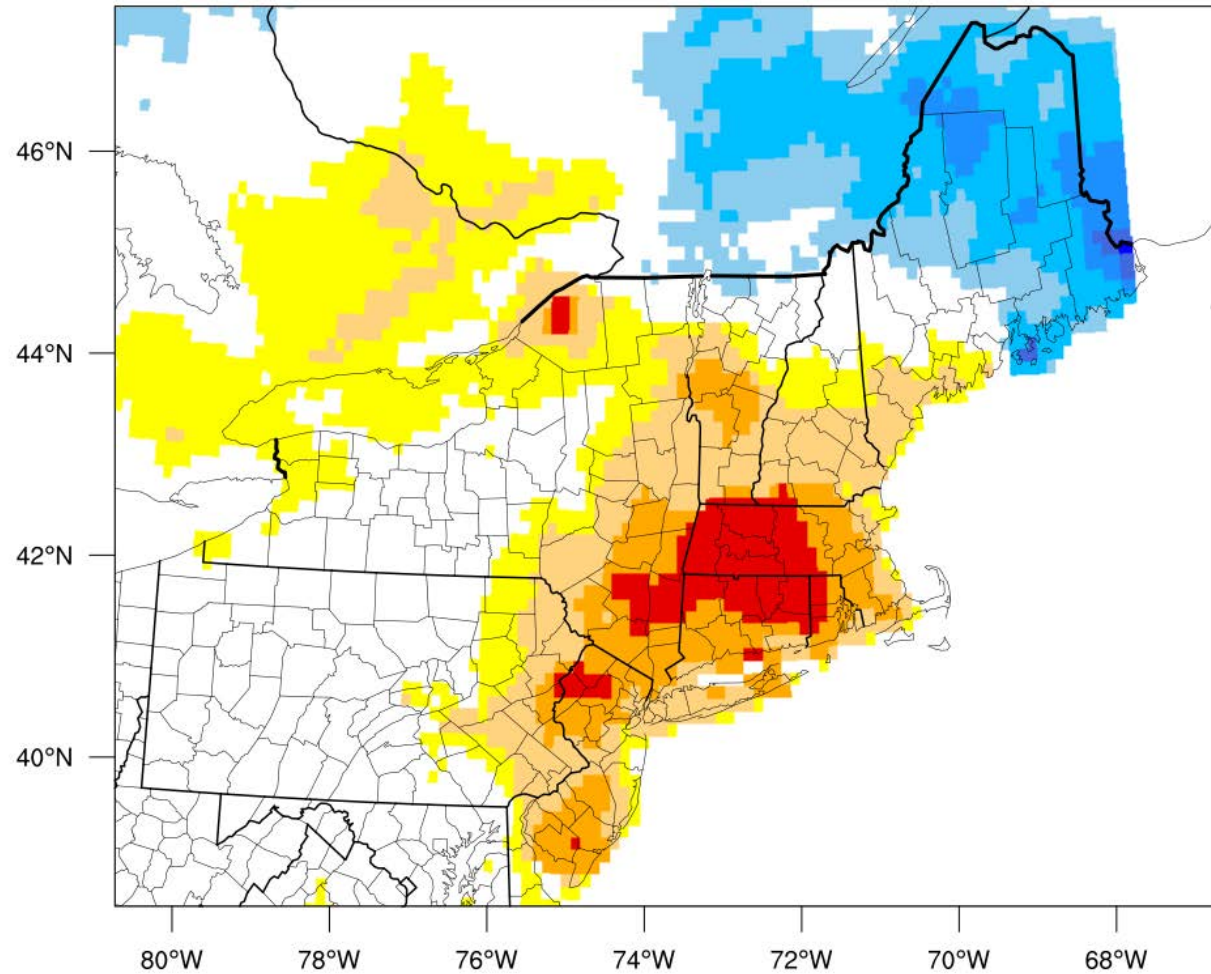


Standardized Precipitation Index



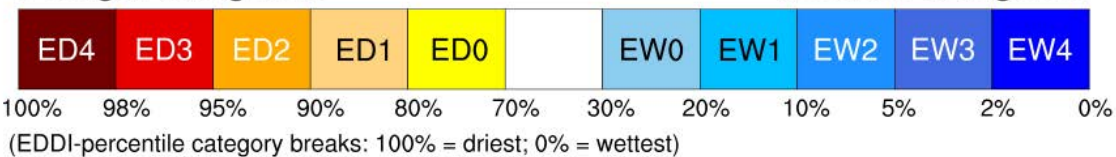
Evap. Demand Drought Index

3-week EDDI categories for August 24, 2022



Drought categories

Wetness categories

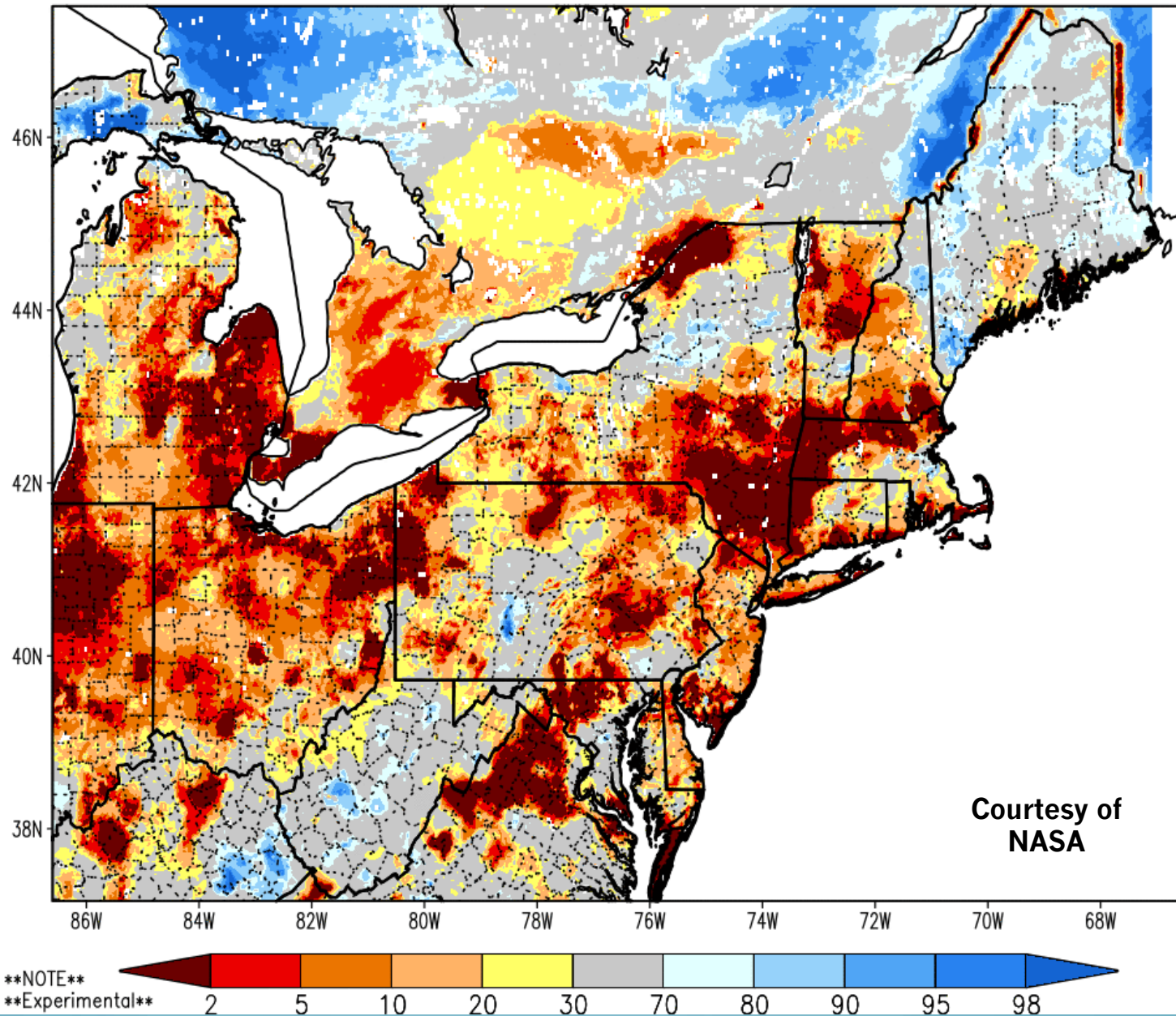


Generated by NOAA/ESRL/Physical Sciences Laboratory

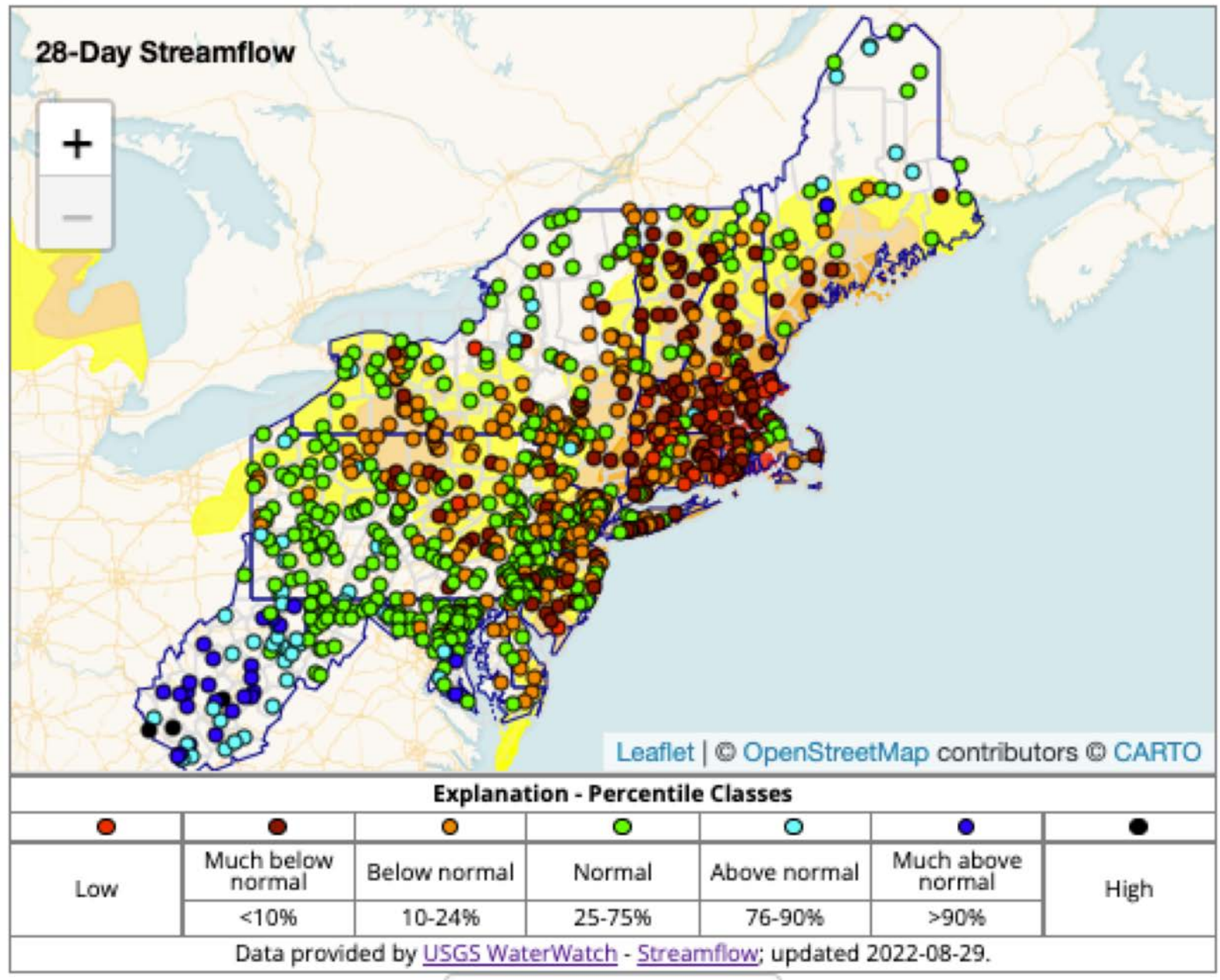


Soil Moisture

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 29 Aug 2022



Streamflow



Drought Impacts



Connecticut River Valley region Nashawannuck Brook, Northampton



Courtesy of Maine Forest Rangers

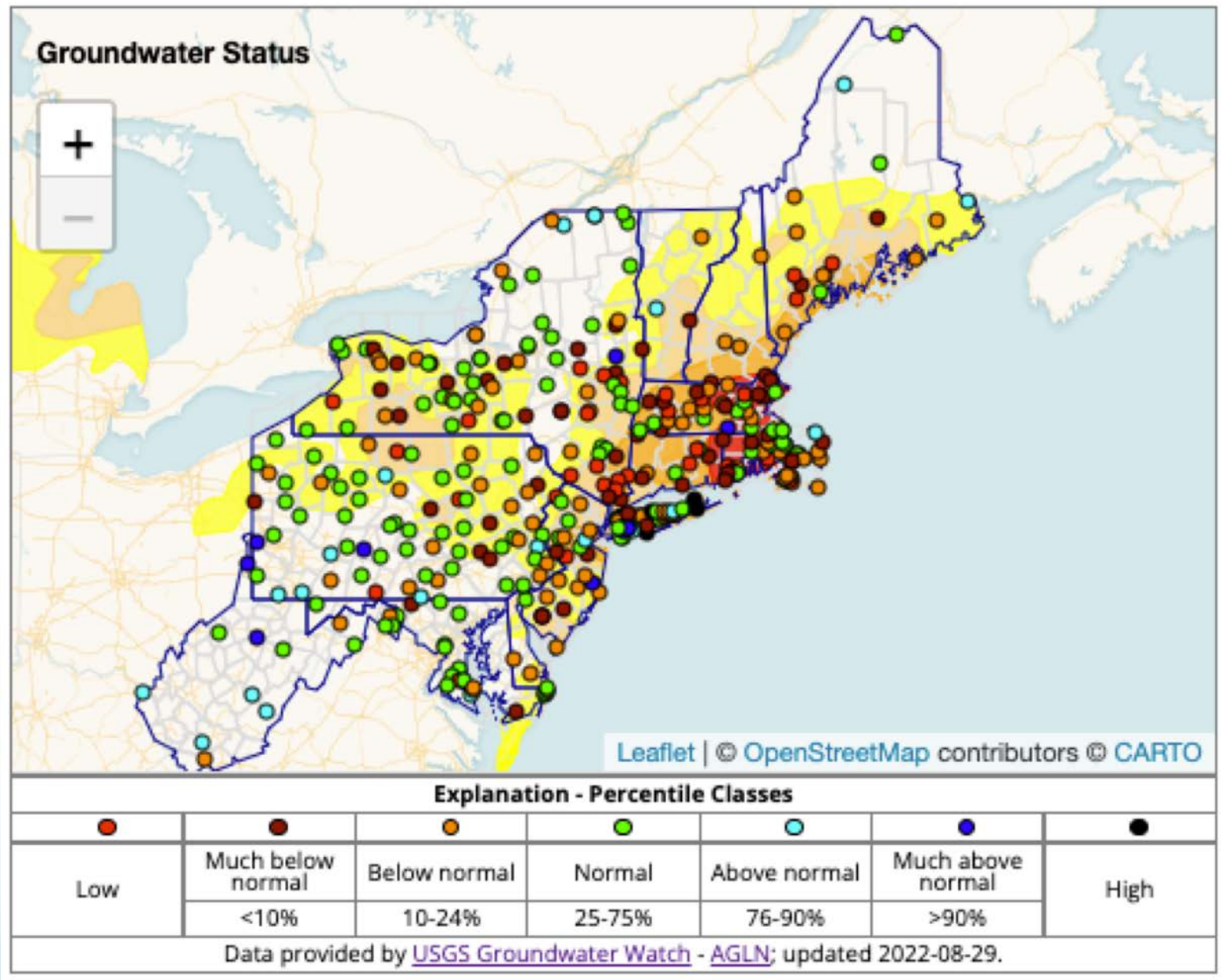


August 18, 2022

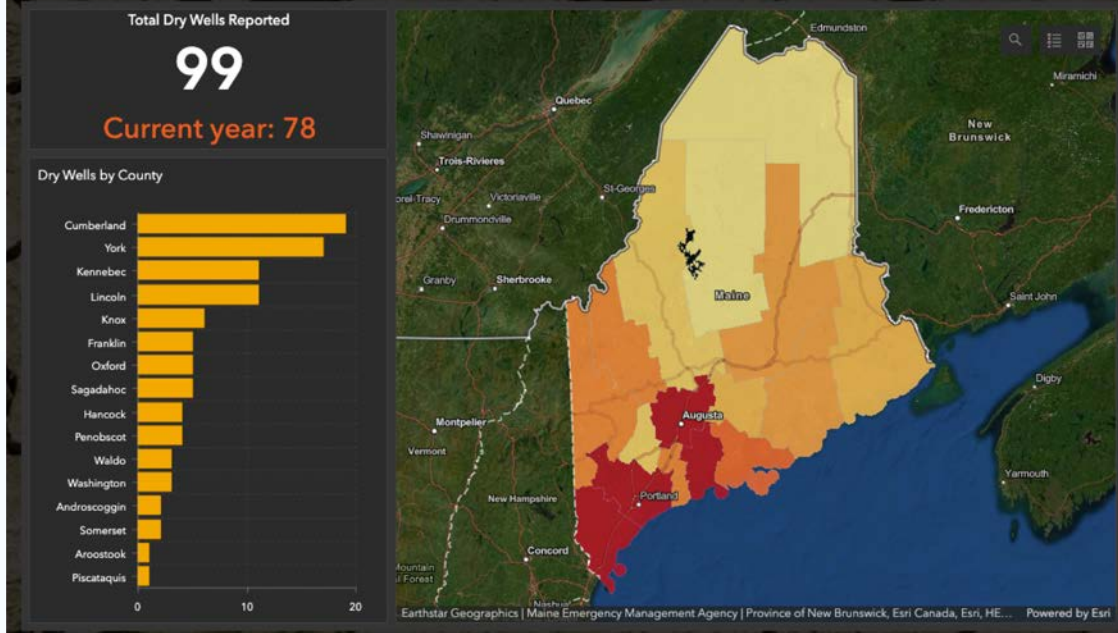
Courtesy of Kate Bentsen – MA
DER, MA DFG, and MA Drought
Management Task Force



Groundwater



Dry wells reported: 2021-2022



<https://maine-dry-well-survey-maine.hub.arcgis.com/>



Drought Impacts

Reported Water Use Restrictions

Last Update: 8/25/2022

Legend

County Boundary

Town Boundary

Drought Condition

Abnormally Dry

Moderate Drought

Severe Drought

Extreme Drought

Municipality Status

Voluntary Restriction

Mandatory Restriction

Water System Status

Voluntary Restriction

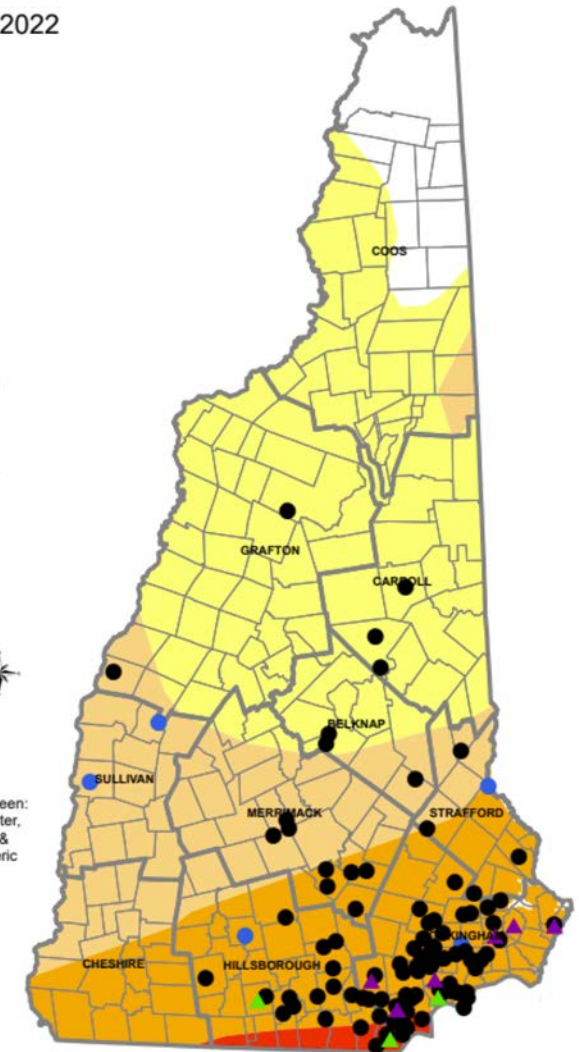
Mandatory Restriction



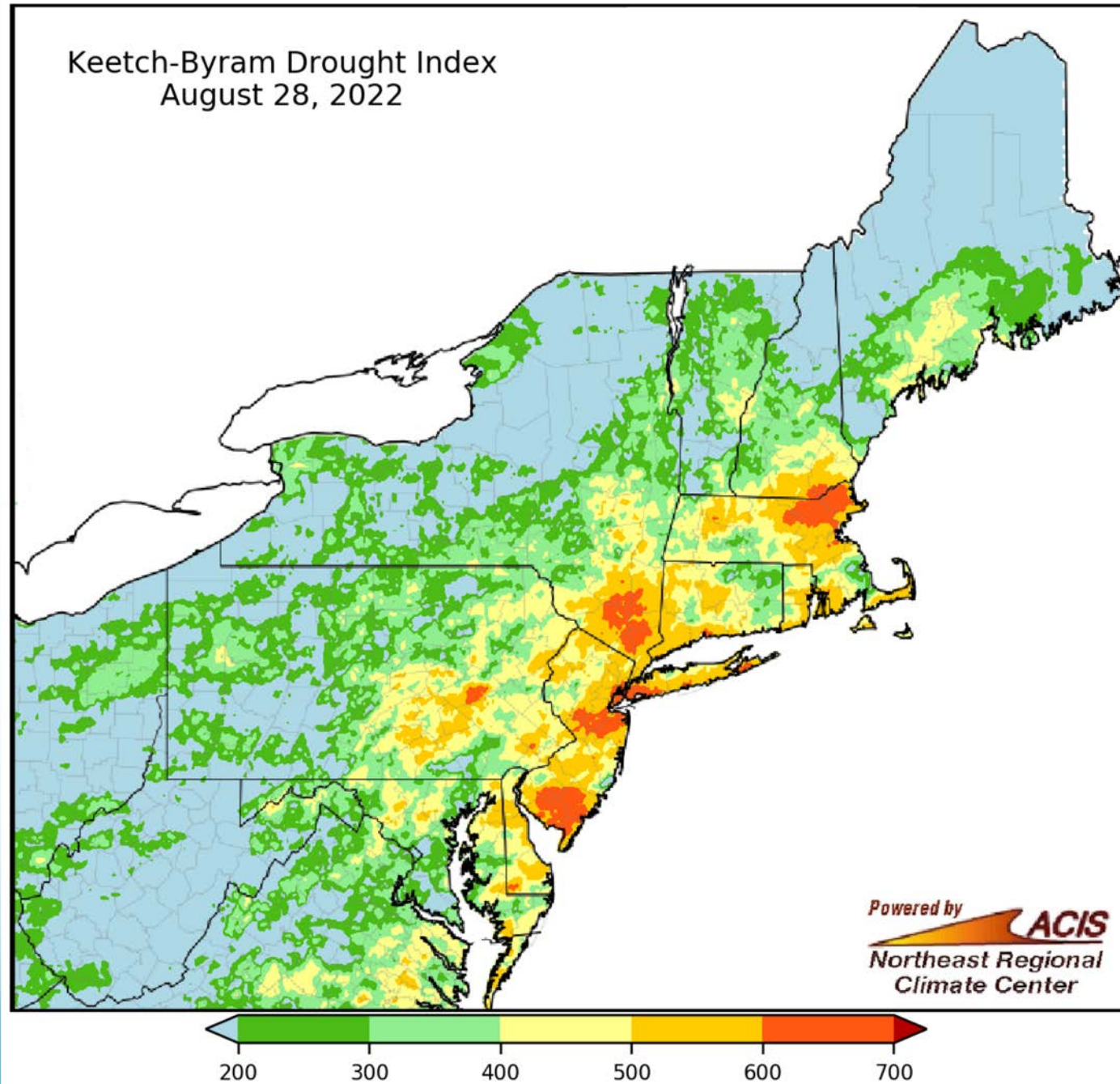
0 5 10 20 Miles

Drought conditions based on United States Drought Monitor <https://droughtmonitor.unl.edu/>
Produced by a partnership between: National Drought Mitigation Center, U.S. Department of Agriculture, & National Oceanic and Atmospheric Administration

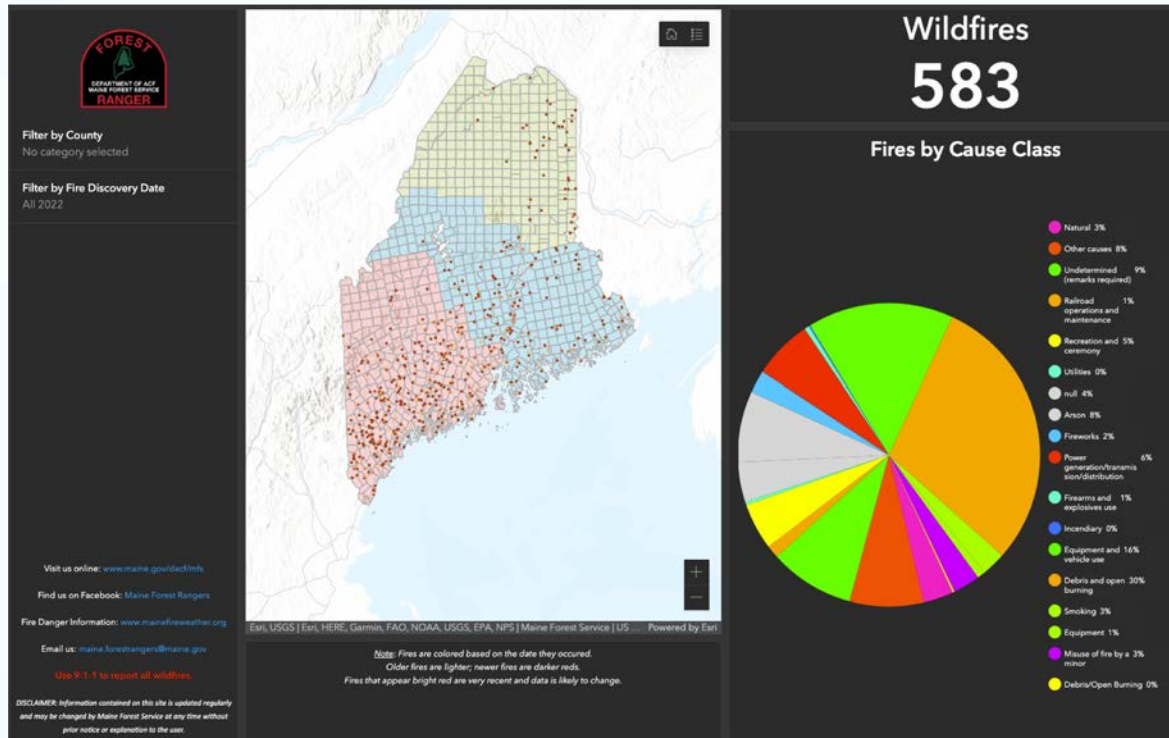
Disclaimer: The status of water use restrictions is based on information submitted to the New Hampshire Department of Environmental Services and may not be comprehensive.



Wildfire Risk



Drought Impacts



MASSACHUSETTS WILDFIRE OCCURRENCE MAP August to Date



Courtesy of Dave Celino – MA
Chief Forest Fire Warden



Drought Impacts

LOCAL

Why apples may be smaller this season: Understanding the root of the problem



Linda Borg

The Providence Journal

Published 5:59 p.m. ET Aug. 5, 2022

news12
NEW JERSEY

72°

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NEWS

WEATHER

INVESTIGATIVE

CORONAVIRUS

CRIME

THE REAL DEAL

Valley



Hudson Valley farmers report crop damage during severe drought conditions

Aug 12, 2022, 5:50pm • Updated on Aug 12, 2022

By: Blaise Gomez

Drought continues to impact N.H. farms, forests and water supply

New Hampshire Public Radio | By Mara Hoplamazian

Published August 9, 2022 at 5:04 PM EDT



Western Massachusetts urban, rural farmers feeling effects of severe drought

Connecticut Public Radio | By Jill Kaufman

Published August 25, 2022 at 3:00 PM EDT



Drought is hitting farmers' pocketbooks, Connecticut agriculture chief says

Connecticut Public Radio | By Jennifer Ahrens

Published August 16, 2022 at 2:23 PM EDT



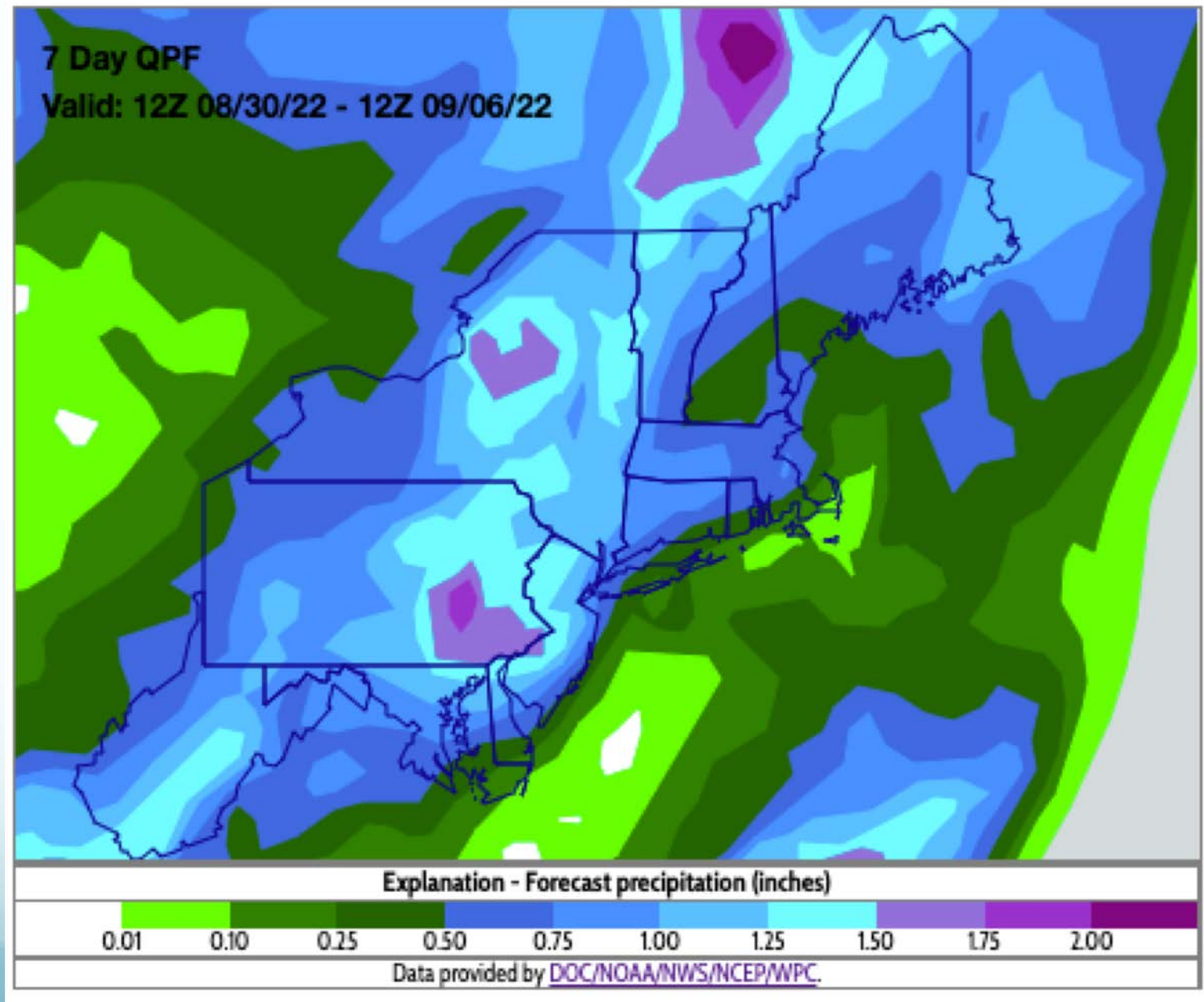
Northeastern Farmers Face New Challenges With Severe Drought

The impacts of climate change have been felt throughout the Northeastern U.S. with rising sea levels, heavy precipitation and storm surges causing flooding and coastal erosion.

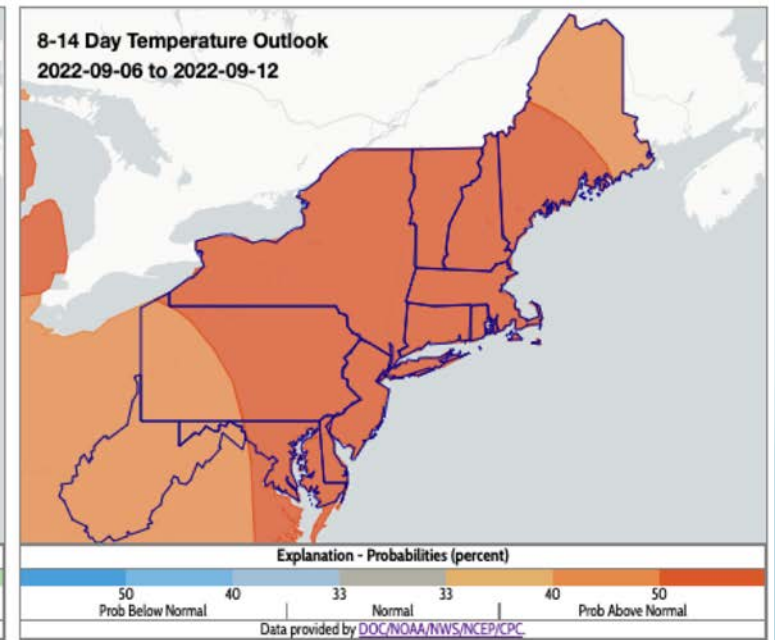
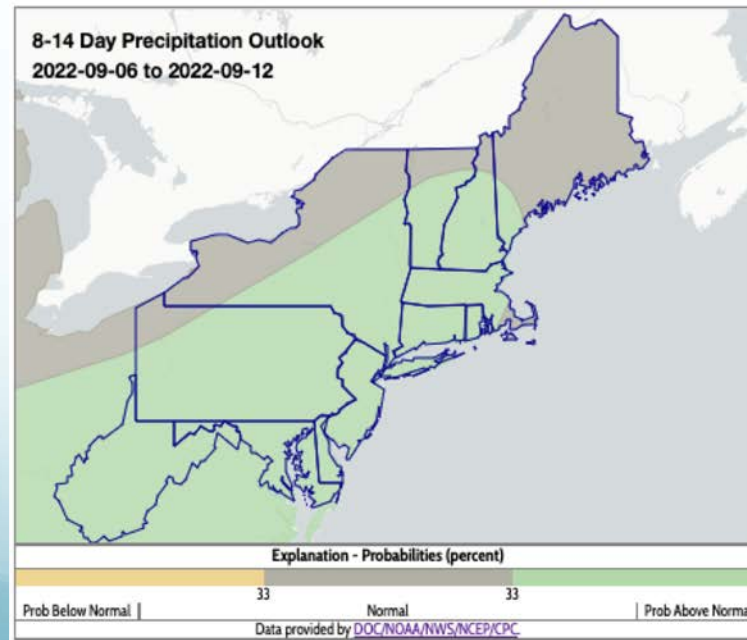
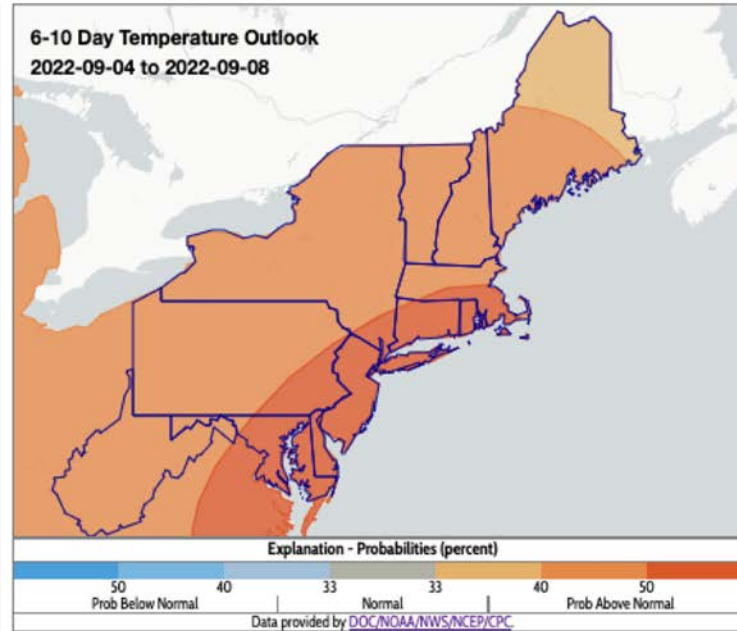
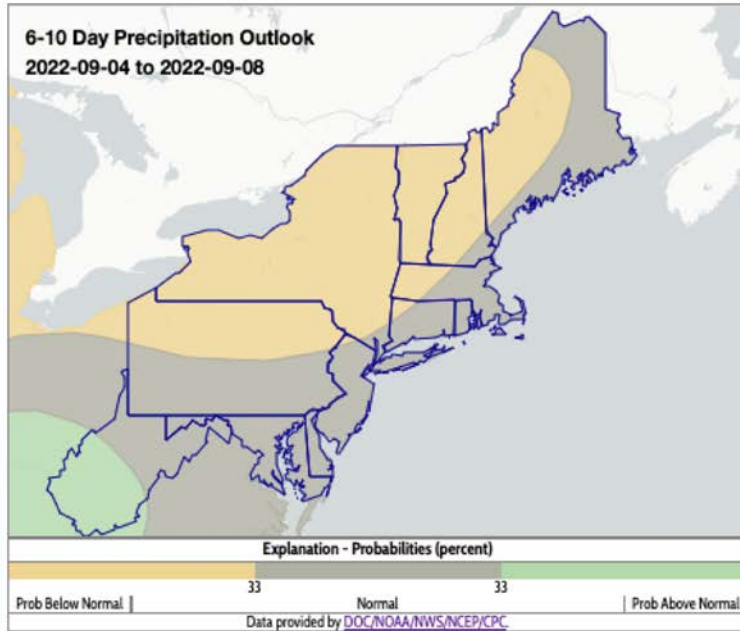
By Associated Press | Aug. 15, 2022, at 12:15 a.m.



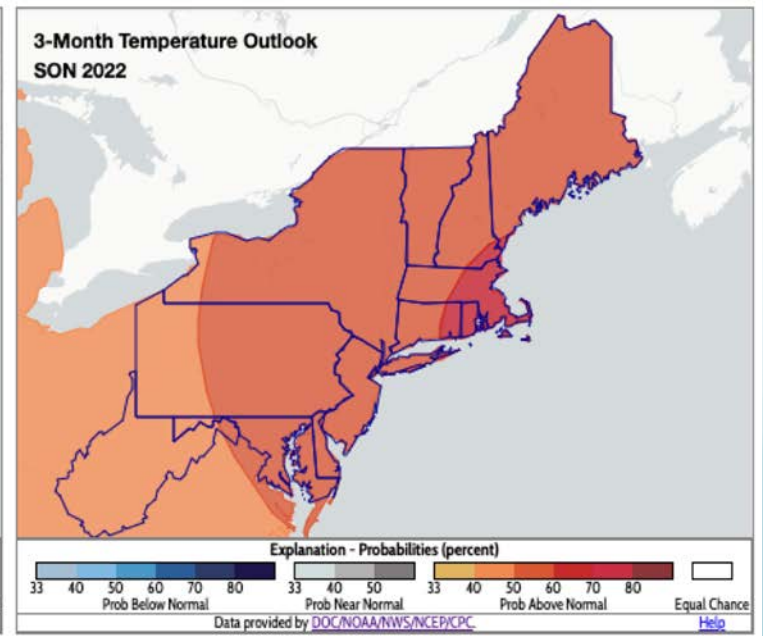
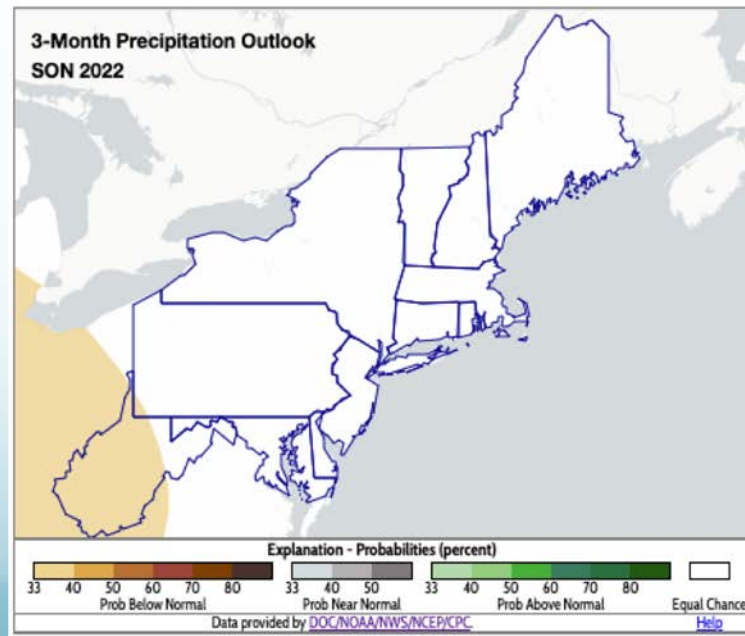
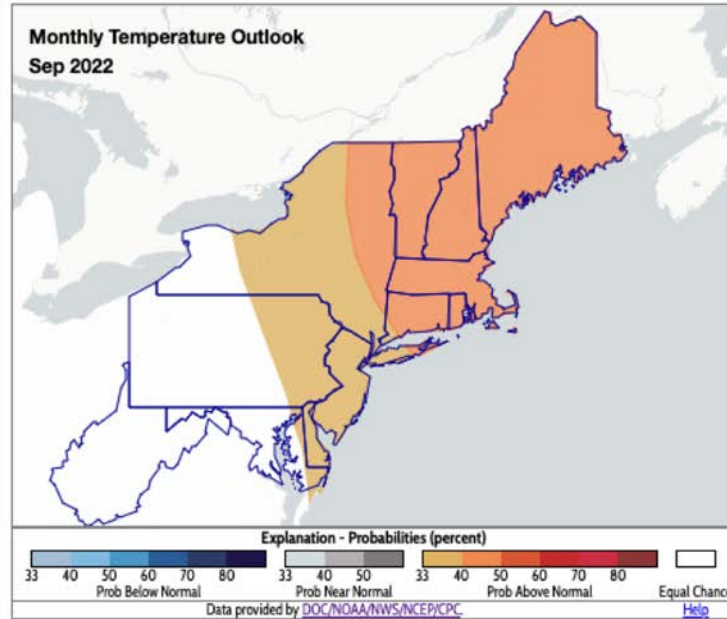
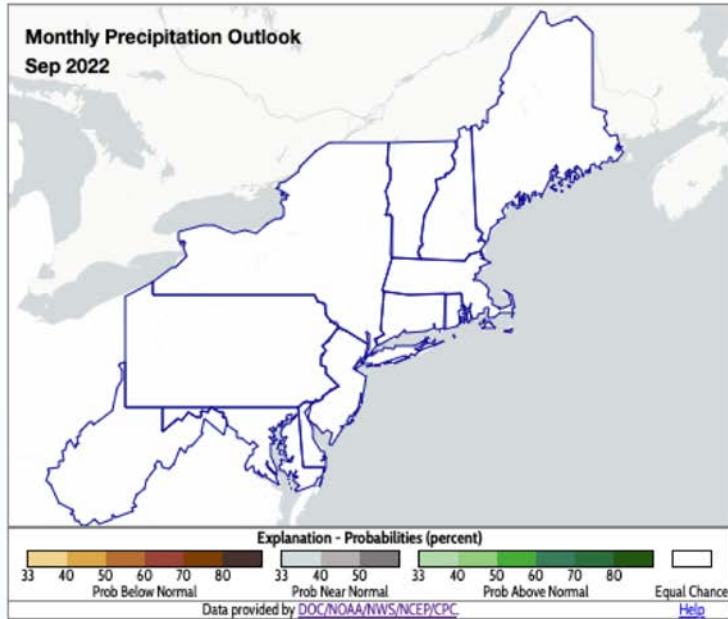
Precipitation Forecast



Short-term Outlooks



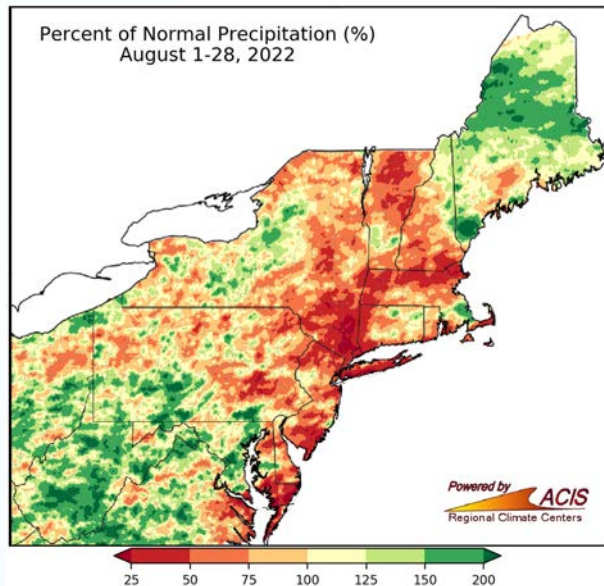
Monthly & 3-Month Outlooks



Summary

August-to-date conditions:

- Above-normal temperatures
- Highly variable precipitation – drought in New England; flash flooding in WV



Drought:

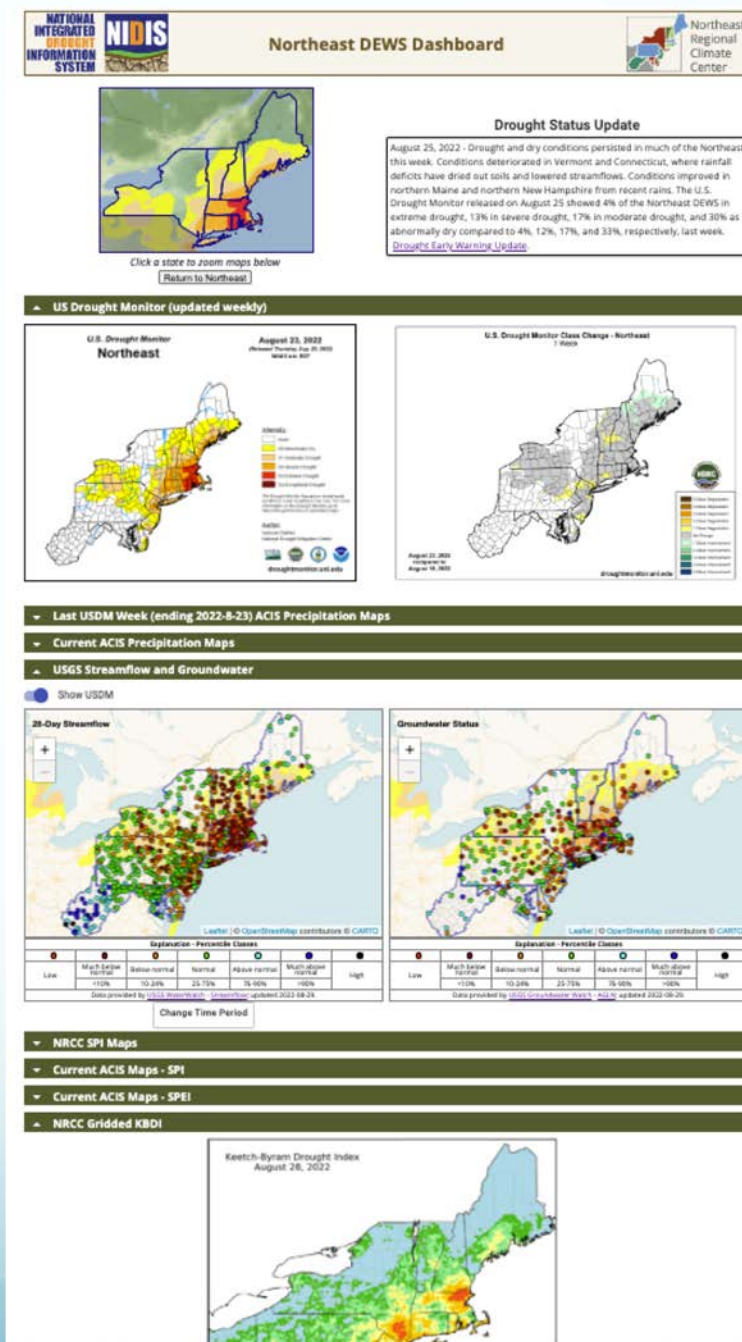
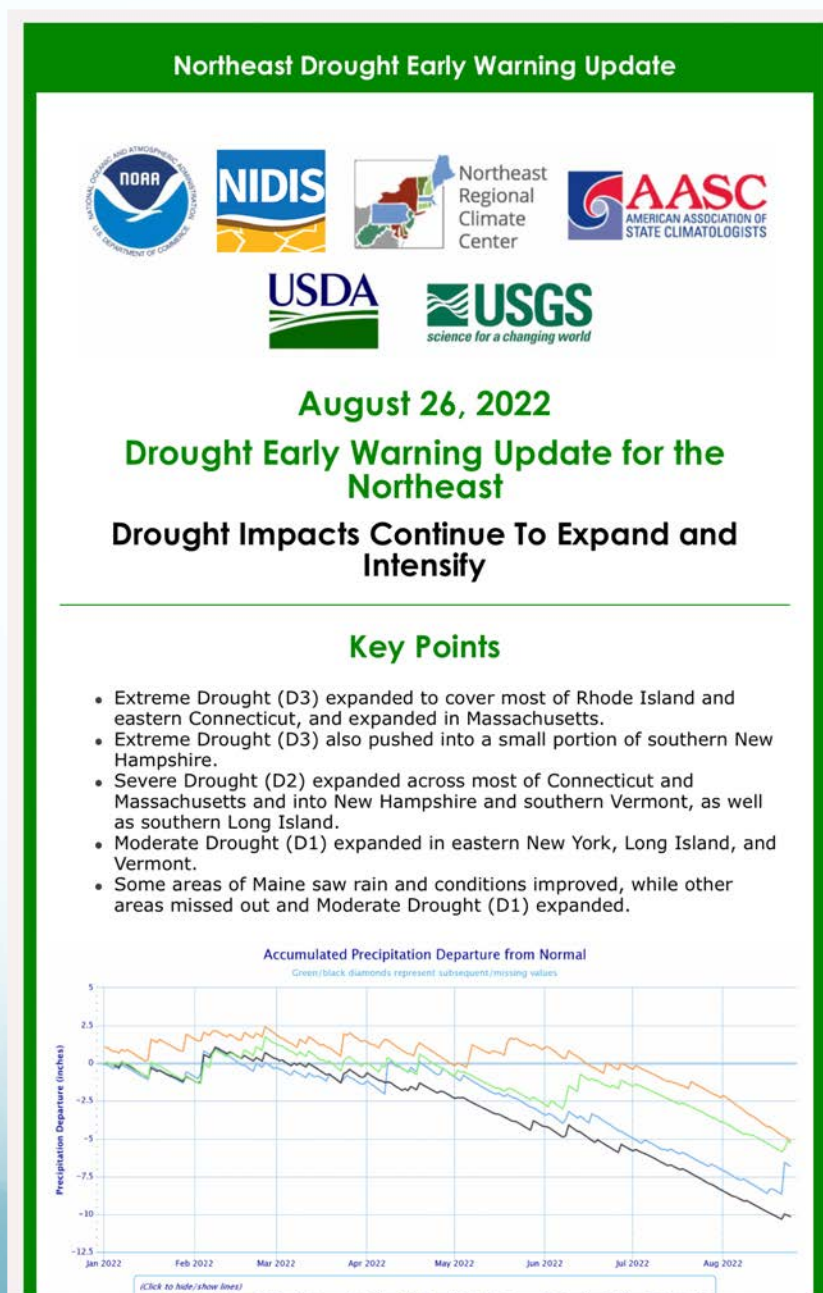
- Drought/dryness expanded and intensified in New England, NY, and NJ due to factors such as below-normal rainfall, record low streamflow, low soil moisture, and water and ag impacts

Outlooks:

- Short-term outlooks: below- or near-normal precipitation and above-normal temperatures; drought likely to persist and possibly intensify?
- September and September-November: equal chances of below-, near-, or above-normal precipitation for all except WV which could be drier for fall; generally above-normal temperatures are favored particularly for eastern half of region



Drought Resources



<https://nedews.nrcc.cornell.edu/>

Contact Information

- nrcc@cornell.edu

Upcoming Webinars

- Thursday, September 29 at 9:30am EDT
 - Seasonal Bird Migration
- Thursday, October 27 at 9:30am EDT
 - TBD
- Tuesday, November 29 at 9:30am EST
 - ENSO Update and Winter Outlook



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