

July Review & Northeast DEWS Discussion

By: Samantha Borisoff, Climatologist
Northeast Regional Climate Center



Northeast Regional
Climate Center



July Heat

Time Series Summary for Baltimore Area, MD (ThreadEx)

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

Rank	Year-Month	Number of Days Max Temperature ≥ 100	Missing Count
1	2024-07	5	3
-	2010-07	5	0
3	2012-07	4	0

Number of Consecutive Days Max Temperature ≥ 100 for Baltimore Area, MD (ThreadEx)

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

Rank	Run Length	Missing Days	Dates
1	4	0	2024-07-14 through 2024-07-17
-	4	0	1930-07-19 through 1930-07-22
3	3	0	2011-07-21 through 2011-07-23

Maximum 1-Day Mean Max Temperature for Washington Area, DC (ThreadEx)

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

Rank	Value	Ending Date
1	106.0	1930-07-20
-	106.0	1918-08-06
3	105.0	2012-07-07
-	105.0	1997-08-17
-	105.0	1936-07-10
6	104.0	2024-07-16



Time Series Summary for Middletown-Harrisburg Area, PA (ThreadEx)

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

Rank	Year-Month	Number of Days Min Temperature ≥ 75	Missing Count
1	2024-07	8	3
2	2011-07	6	0
-	1999-07	6	0
4	2022-07	5	0

Number of Consecutive Days Min Temperature ≥ 75 for Washington Area, DC (ThreadEx)

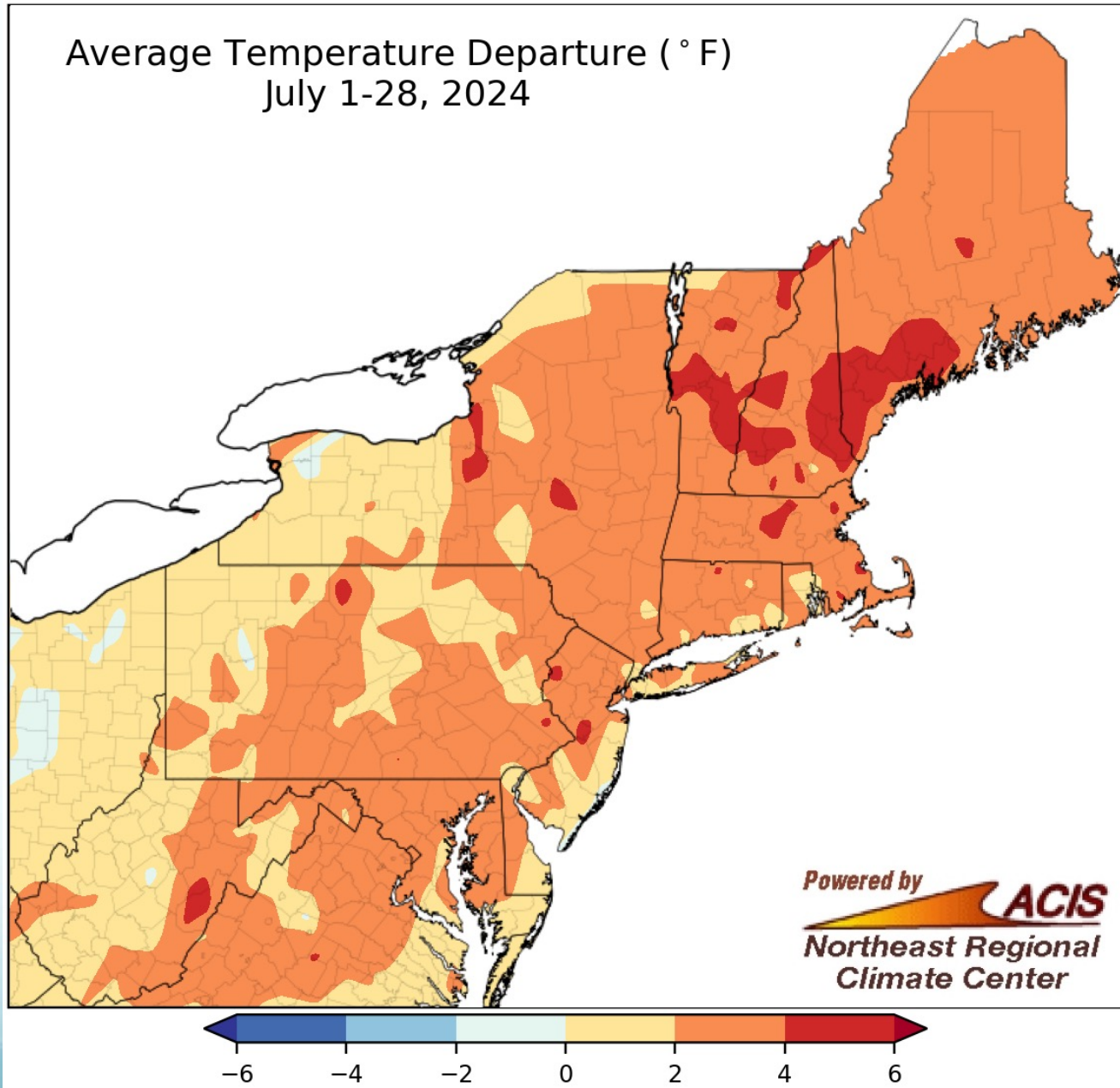
Click column heading to sort ascending, click again to sort descending.

Rank	Run Length	Missing Days	Dates
1	18	0	1980-07-26 through 1980-08-12
2	15	0	2024-07-05 through 2024-07-19
3	14	0	2011-07-19 through 2011-08-01

Station	July Date	Low Temp (°F)	July Rank (hottest)	All-time Rank (hottest)
Albany, NY	9	76	6	9
Albany, NY	10	76	6	9
Allentown, PA	6	77	3	3
Baltimore, MD	6	81	7	
Beckley, WV	4	71	10	
Concord, NH	6	74	8	9
Concord, NH	11	75	5	5
Dulles Airport, VA	6	76	7	
Dulles Airport, VA	9	76	7	
Dulles Airport, VA	10	77	3	6
Hartford, CT	6	76	8	
Hartford, CT	9	76	8	
Hartford, CT	11	76	8	
Washington, D.C.	6	81	10	
Washington, D.C.	10	81	10	
Wilmington, DE	6	80	6	8

July Temperatures

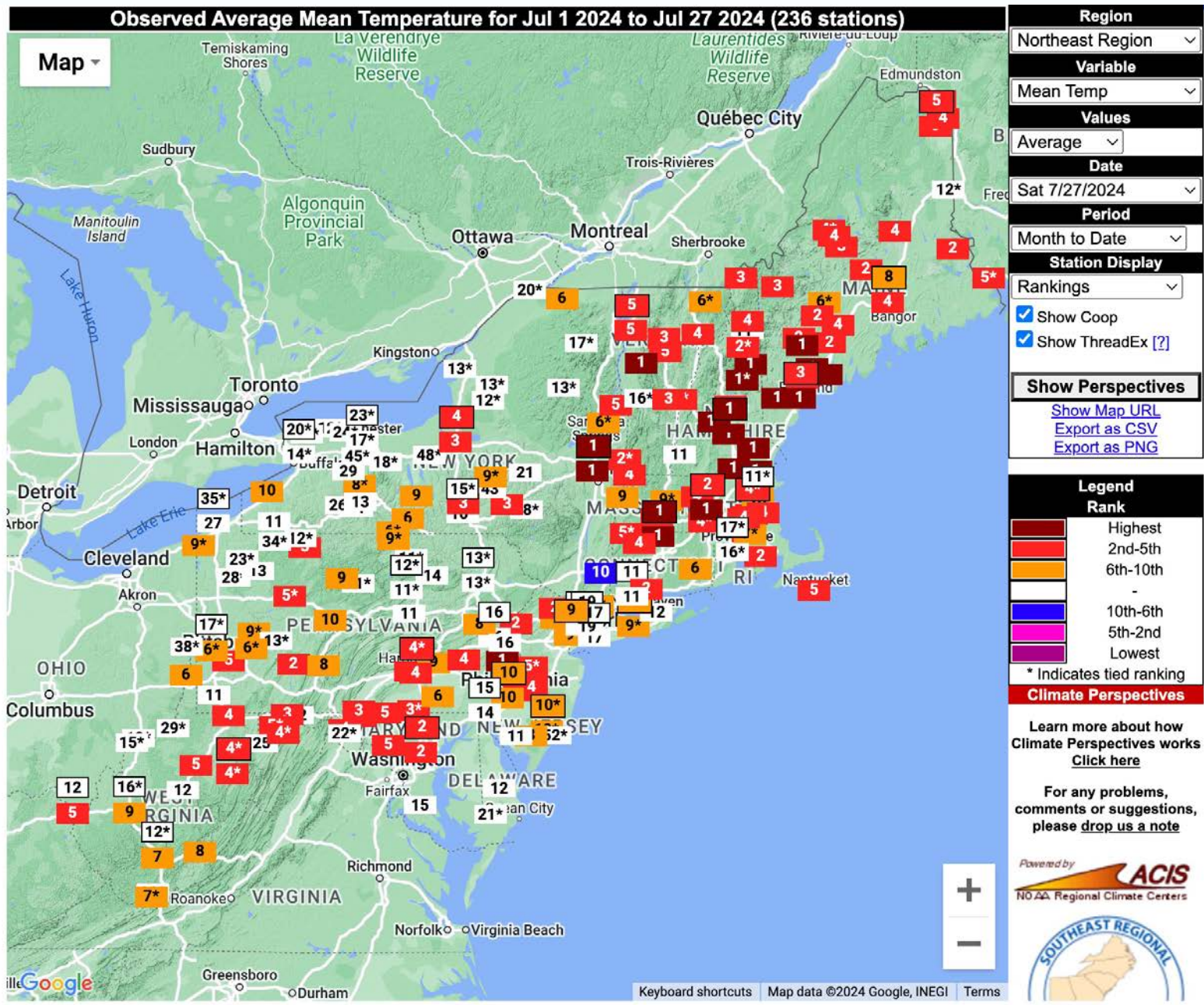
Average Temperature Departure (° F)
July 1-28, 2024



From near normal to 6°F above normal



July Temperatures



Created by and hosted at the [Southeast Regional Climate Center](#).

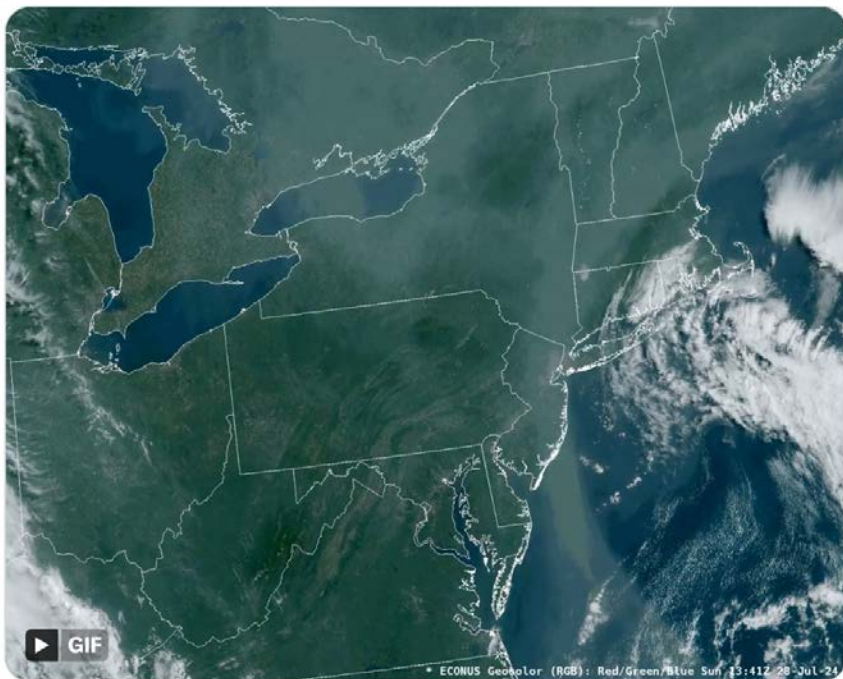
July Wildfire Smoke



NWS State College @NWSStateCollege · Jul 28

Sunny skies across central Pennsylvania this morning with clouds to the west and east of the area, expect generally clear skies to continue overnight into Monday.

Clouds will be on the increase Monday, with some potential for a late PM shower/storm across the Laurels. #PAwx



NWS Albany @NWSAlbany

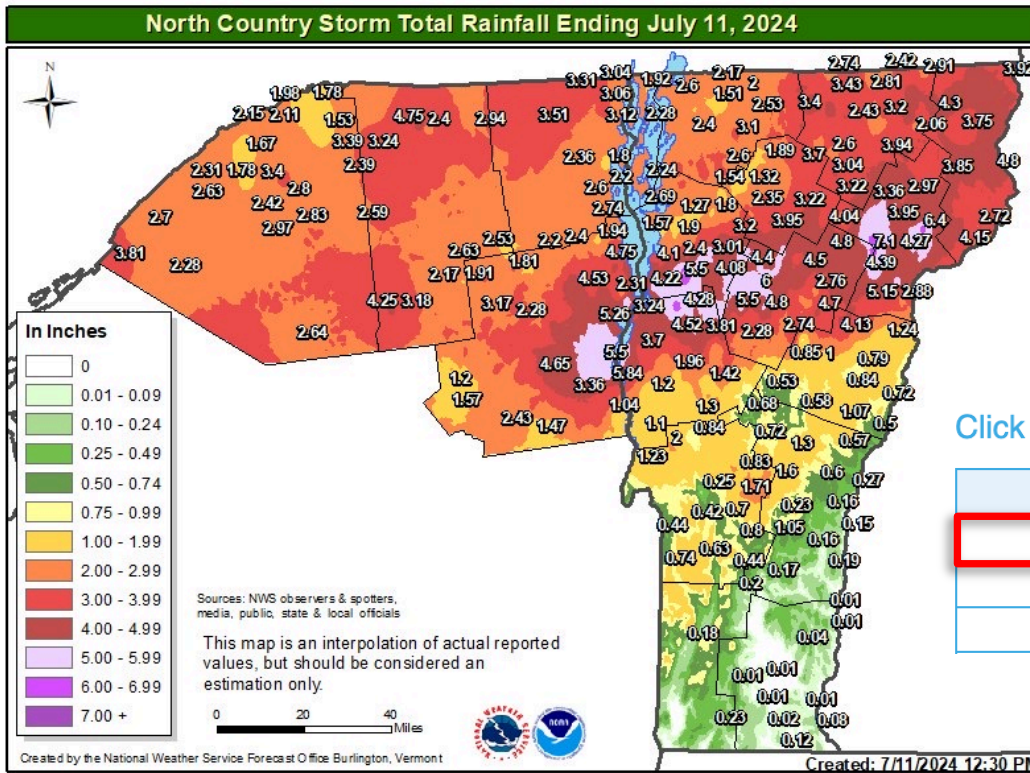
Smoke aloft from wildfires across the western US led to a reddish color to the sun as it set across the region this evening.



8:18 PM · Jul 27, 2024 · 4,305 Views



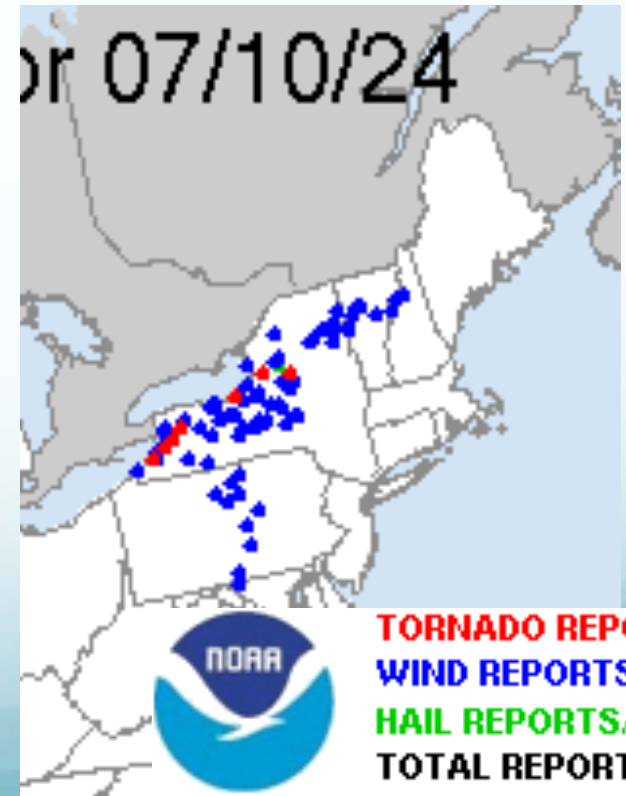
Beryl Remnants



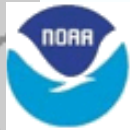
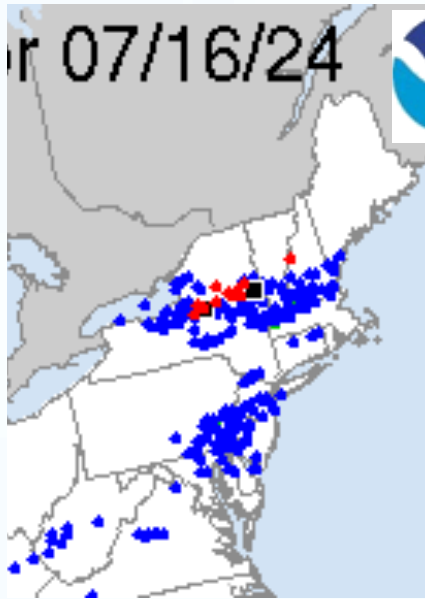
Maximum 1-Day Total Precipitation for LOWVILLE, NY

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

Rank	Value	Ending Date
1	6.02	2024-07-11
2	4.78	2001-09-25
3	4.38	1893-08-29



TORNADO REPORTS.
WIND REPORTS/HI....
HAIL REPORTS/LG....
TOTAL REPORTS.....



TORNADO REPORTS.
WIND REPORTS/HI.....
HAIL REPORTS/LG.....
TOTAL REPORTS.....

July Severe



NWS Issued for Counties/Zones for State of New York

Tornado Warning (TO.W) Issued by Year, Month

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1986						3	1	1					5
1988							1						1
1990						1	1		3	1			6
1992				8			7						15
1994						6	2	3					11
1996				1	7	1	1	1					11
1998					41	18	4	4	12				79
2000					7			2					9
2002				3	5	5	1				2		16
2004				1	18	2	5						26
2006				1	1	1	4	5			1		13
2008					1	6	1	6	2	2			16
2010						13	12	7					32
2012					25	6	6	10	3		5		55
2014				2	14	1	6	6	9				38
2016					2	1	16	8	1	1			25
2018					1	2	3	6	11	2	3		26
2020				3	13	1	1	5	3				26
2022				1	6	3	7	5	2	5	3		33
2024				2	3	3	1	9	1	1	6		29
2024						5	57	13					75

Top 10 Dates

- America/Chicago
- 2024-07-10 42
- 1998-05-31 41
- 2011-04-28 18
- 1998-06-02 16
- 2017-08-22 11
- 2004-05-22 11
- 2024-07-16 10
- 2023-08-07 9
- 2018-05-15 9
- 1990-08-28 8

Preliminary, unofficial data!

Generated at 29 Jul 2024 9:39 AM CDT in 1.97s

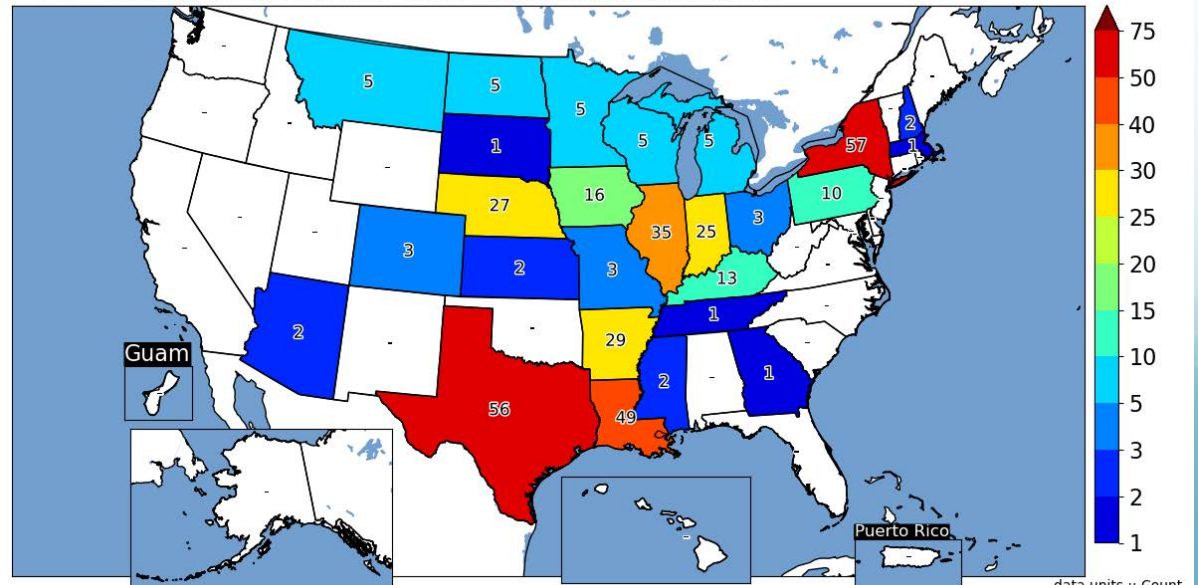
IEM Autoplot App #171



Tornado Warning Event Count by State

Issued between 01 Jul 2024 00:00 - 18 Jul 2024 23:59 UTC, based on VTEC: TO.W

Preliminary, unofficial data!



Generated at 18 Jul 2024 1:09 PM CDT in 3.68s

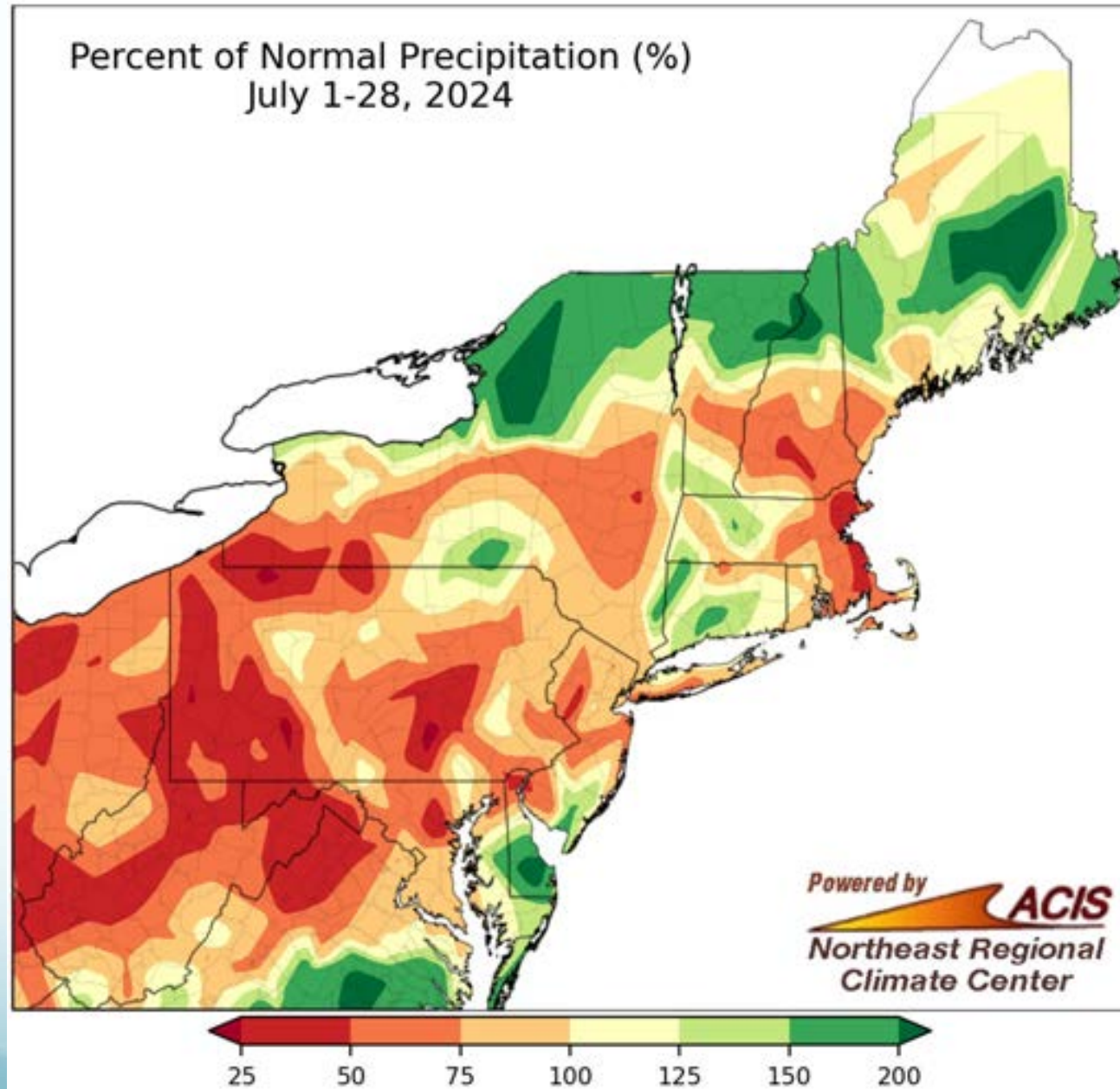
data units :: Count
 IEM Autoplot App #109



Image courtesy of NWS BGM



July Precipitation

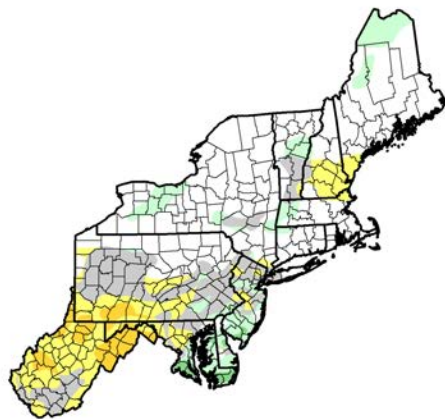


From 25% of normal to more than 200% of normal



Drought Monitor

U.S. Drought Monitor Class Change - Northeast Climate Region 4 Week



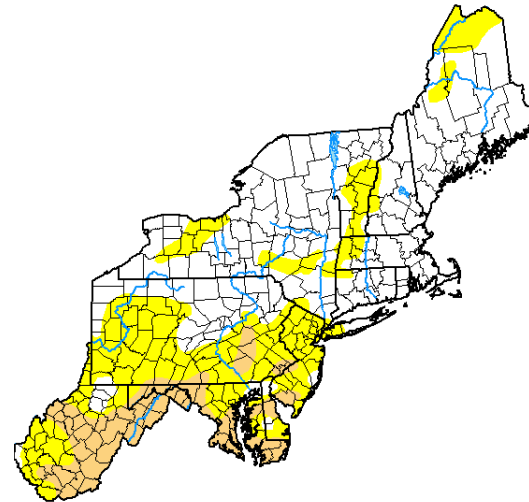
July 23, 2024
compared to
June 25, 2024

droughtmonitor.unl.edu



U.S. Drought Monitor Northeast

June 25, 2024
(Released Thursday, Jun. 27, 2024)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	56.71	30.97	12.31	0.00	0.00	0.00
Last Week 06-18-2024	69.45	29.68	0.87	0.00	0.00	0.00
3 Months Ago 03-26-2024	97.54	1.98	0.49	0.00	0.00	0.00
Start of Calendar Year 01-02-2024	87.20	10.30	1.83	0.67	0.00	0.00
Start of Water Year 09-25-2023	88.48	10.08	1.36	0.08	0.00	0.00
One Year Ago 06-27-2023	34.94	39.89	23.80	1.37	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:

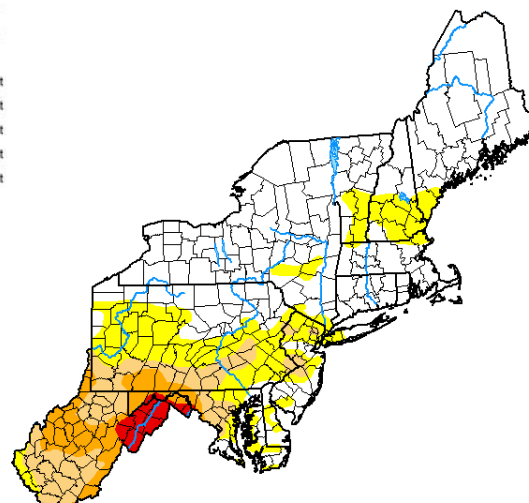
Adam Hartman
NOAA/NWS/NCEP/CPCC



droughtmonitor.unl.edu

U.S. Drought Monitor Northeast

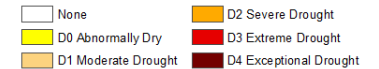
July 23, 2024
(Released Thursday, Jul. 25, 2024)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
Current	61.71	19.55	10.44	6.26	2.03	0.00
Last Week 07-16-2024	61.64	18.98	10.31	7.33	1.73	0.00
3 Months Ago 04-23-2024	98.11	1.89	0.00	0.00	0.00	0.00
Start of Calendar Year 01-02-2024	87.20	10.30	1.83	0.67	0.00	0.00
Start of Water Year 09-26-2023	88.48	10.08	1.36	0.08	0.00	0.00
One Year Ago 07-25-2023	78.89	15.43	5.27	0.40	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>

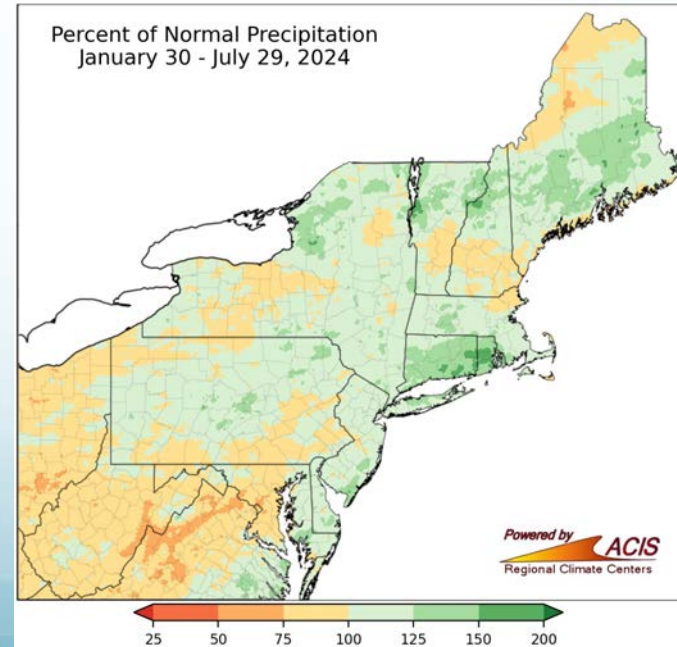
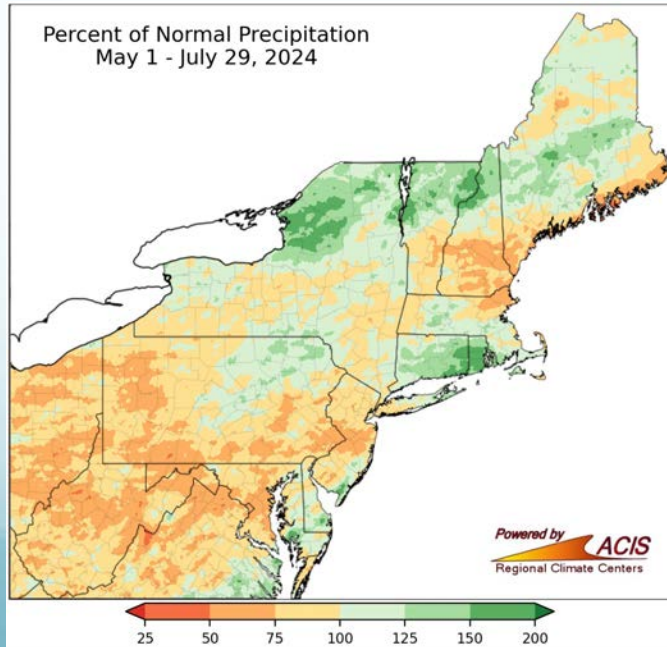
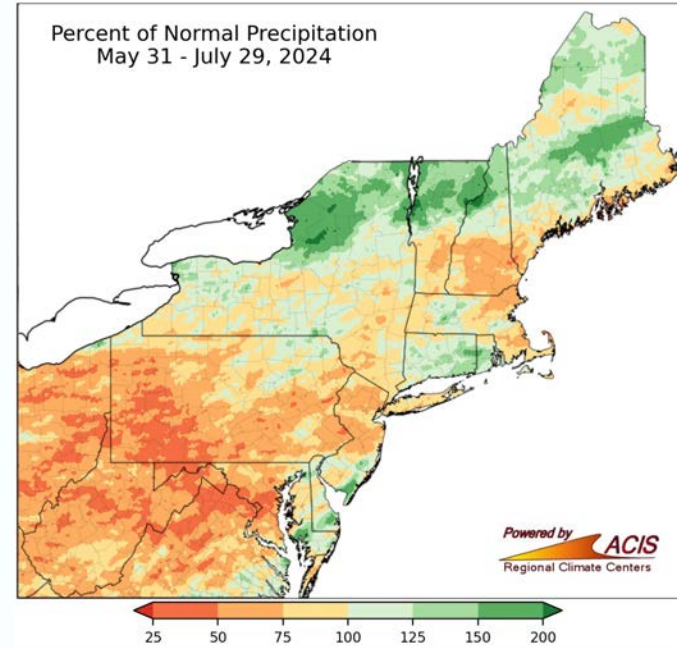
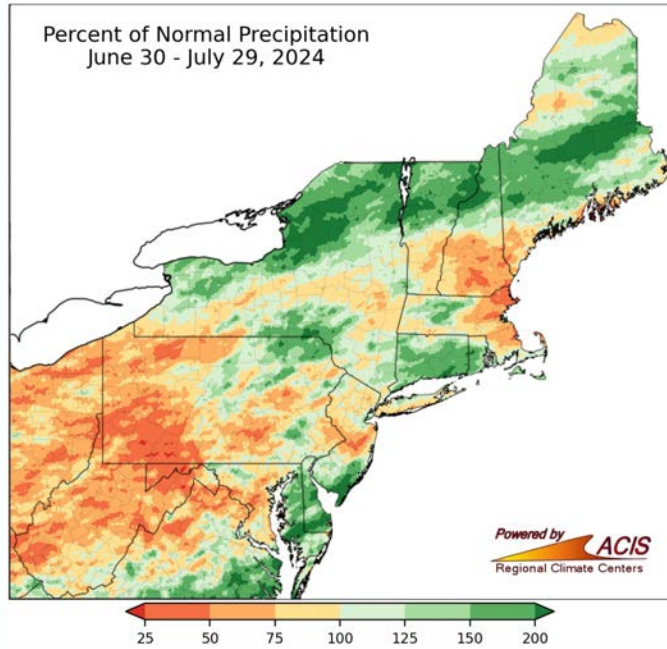
Author:

Rocky Bilotta
NCEI/NOAA

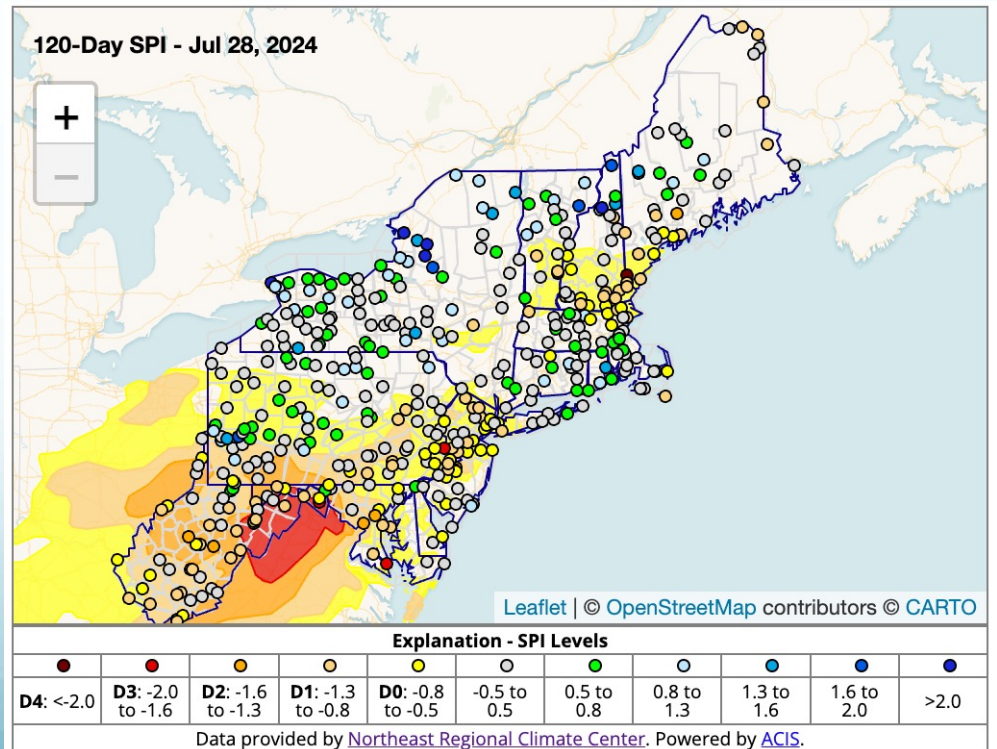
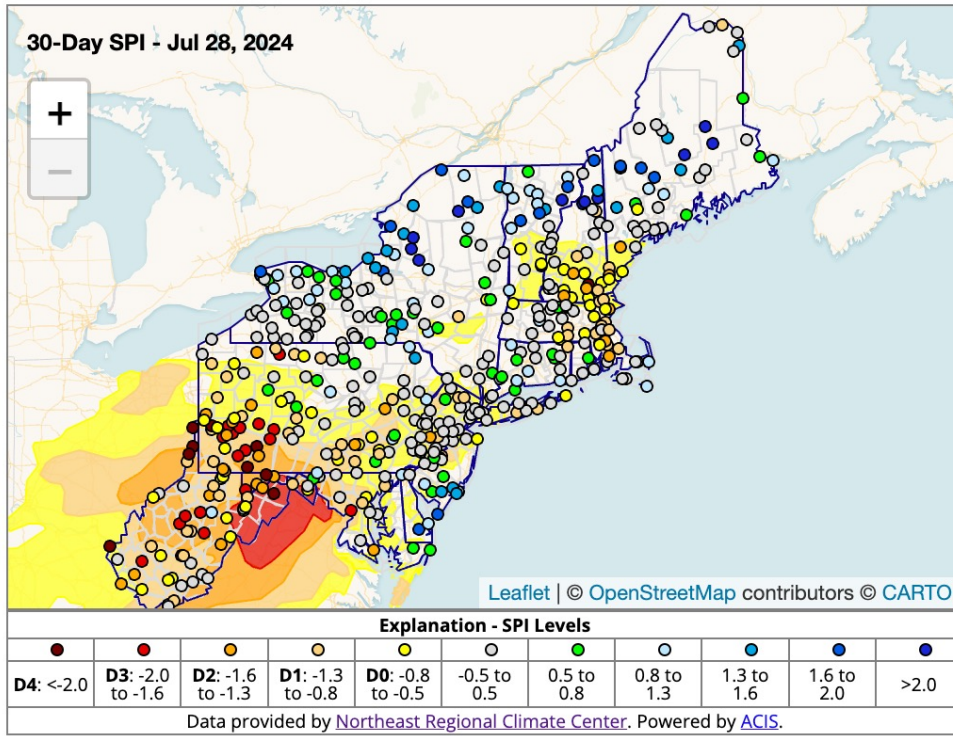


droughtmonitor.unl.edu

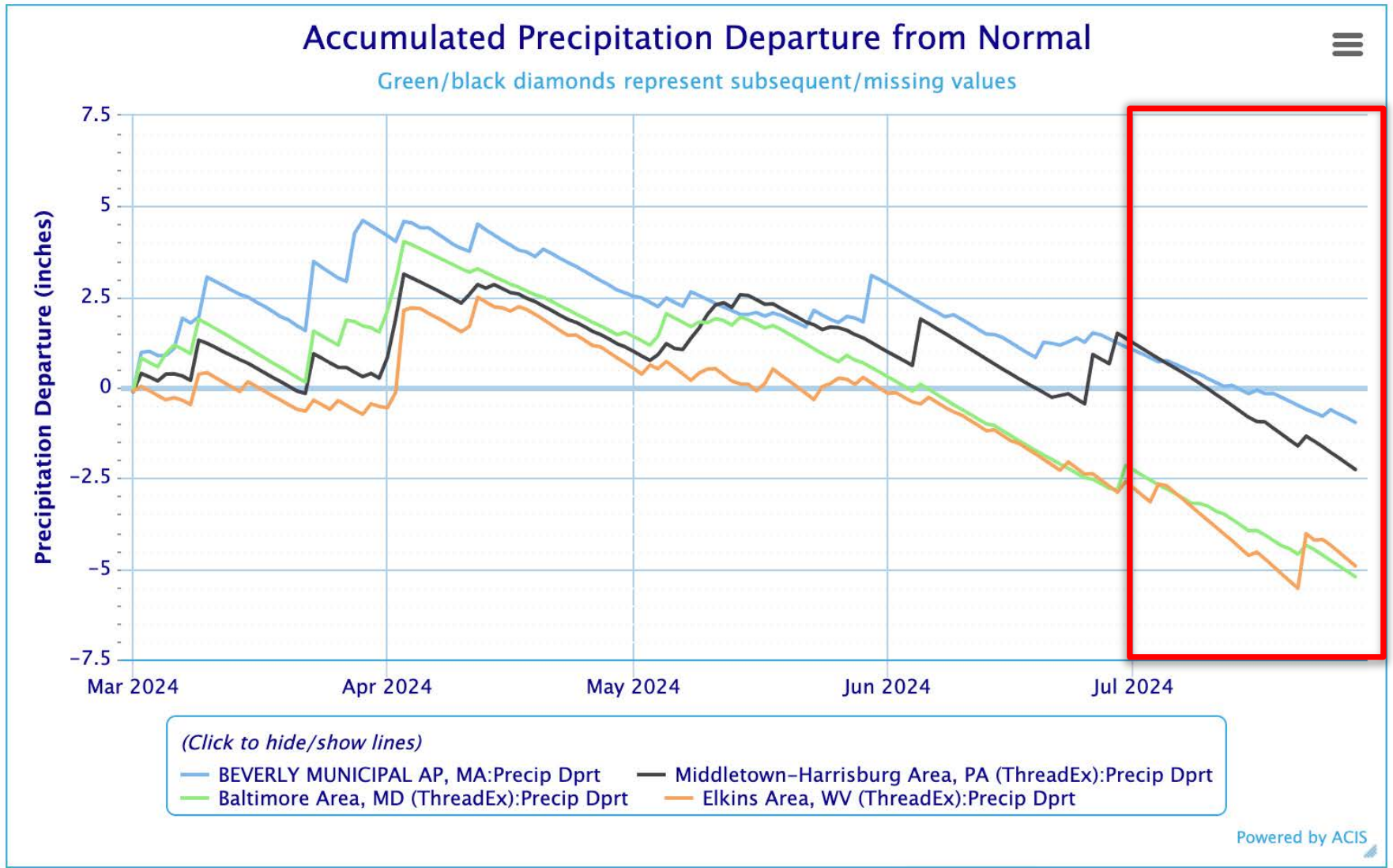
Precipitation



Standardized Precipitation Index

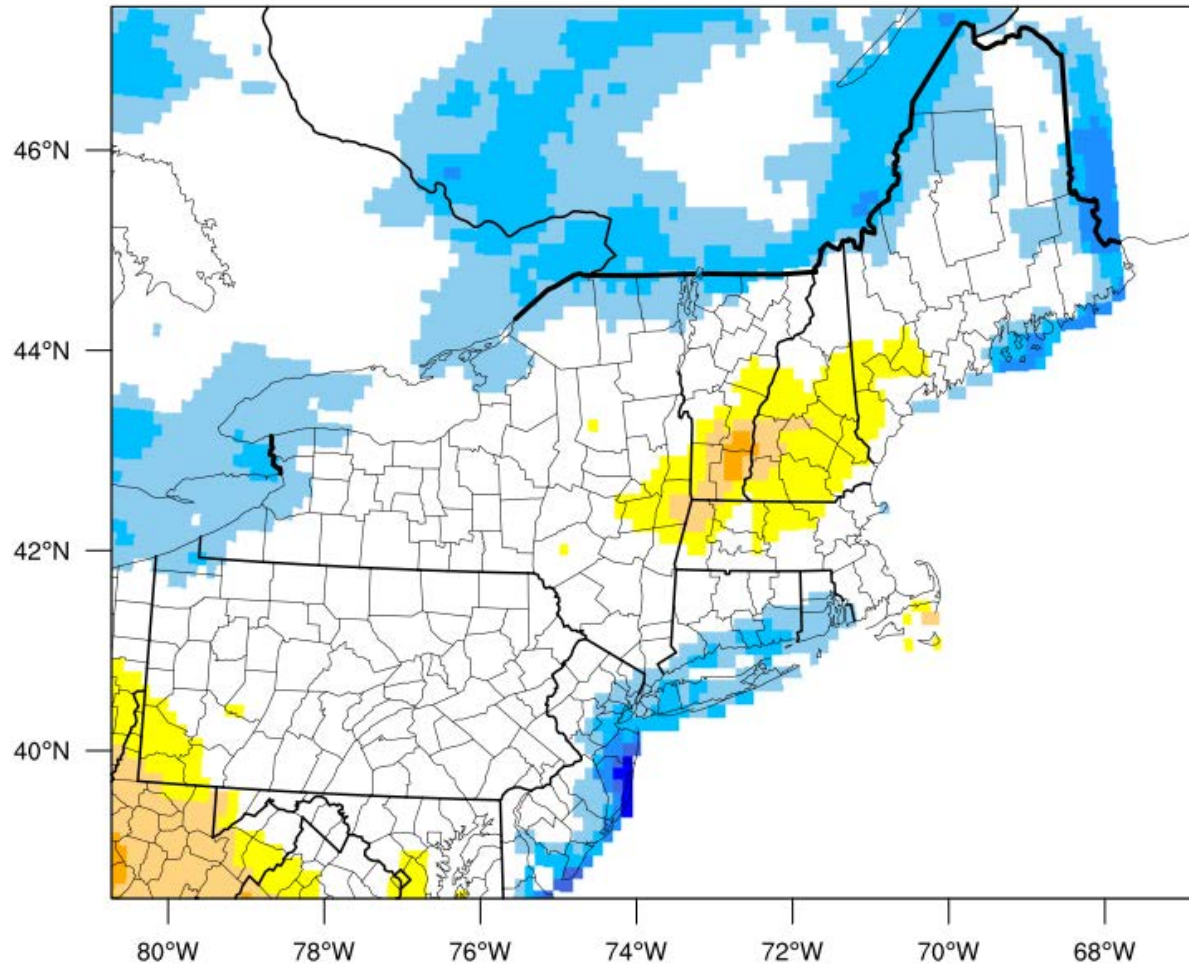


Precipitation



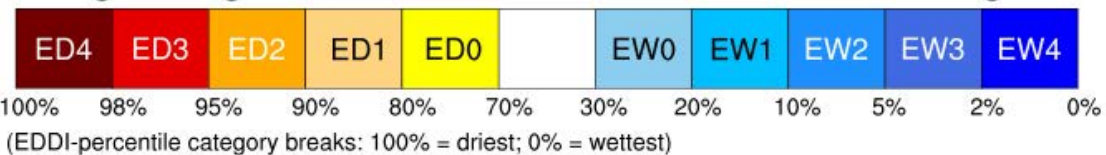
Evap. Demand Drought Index

3-week EDDI categories for July 24, 2024



Drought categories

Wetness categories

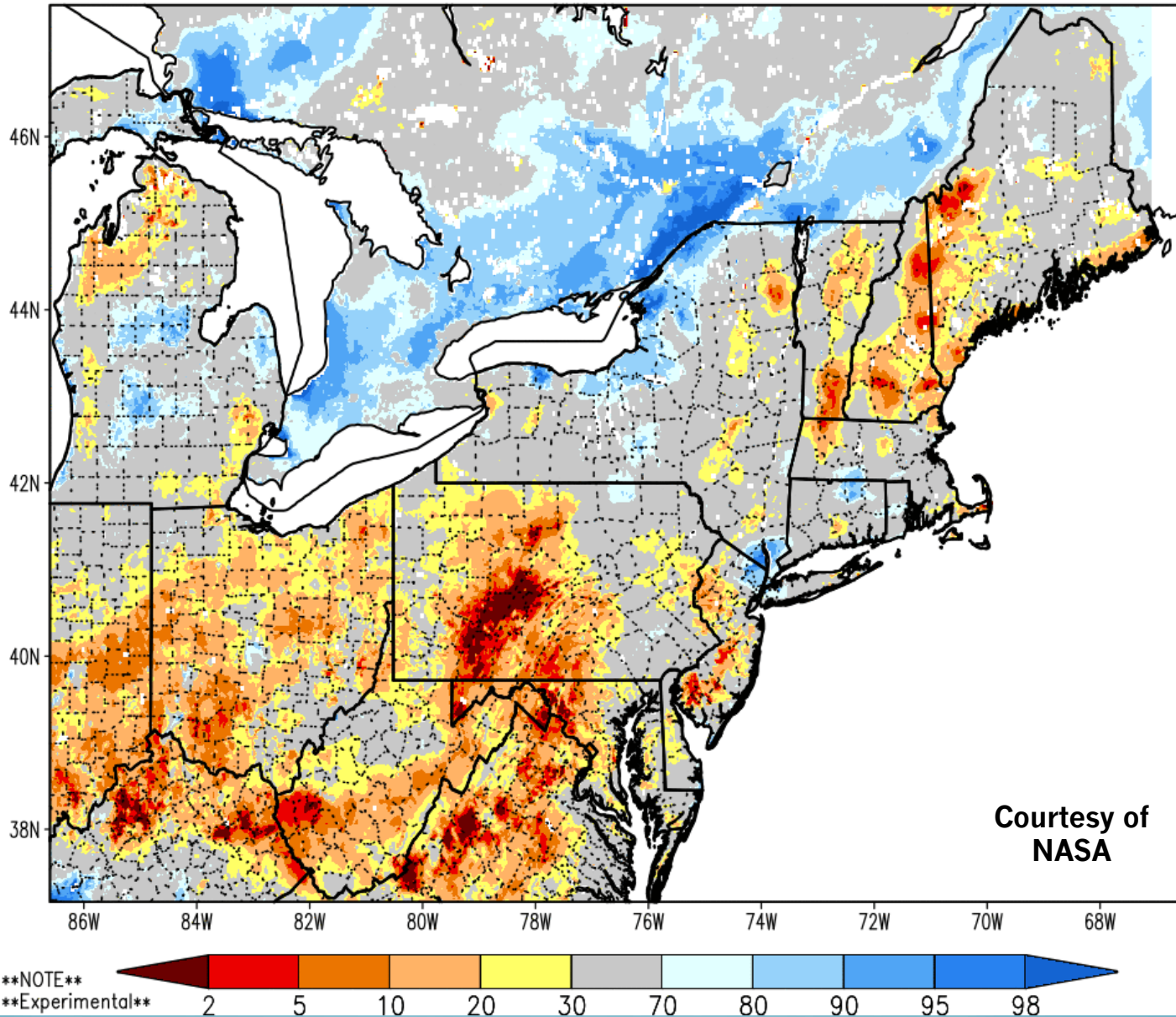


Generated by NOAA/ESRL/Physical Sciences Laboratory

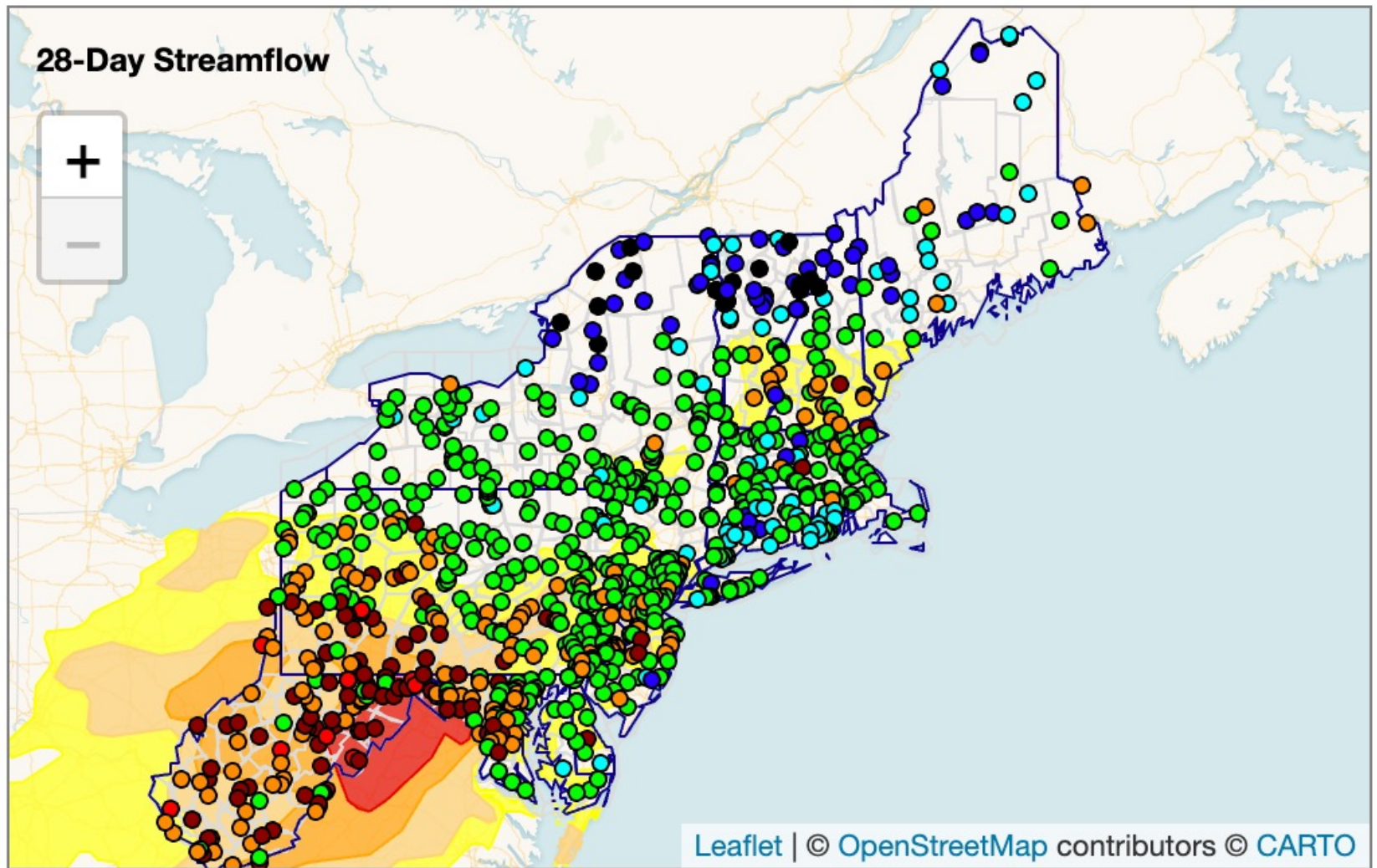


Soil Moisture

SPoRT-LIS 0-100 cm Soil Moisture percentile valid 30 Jul 2024



Streamflow



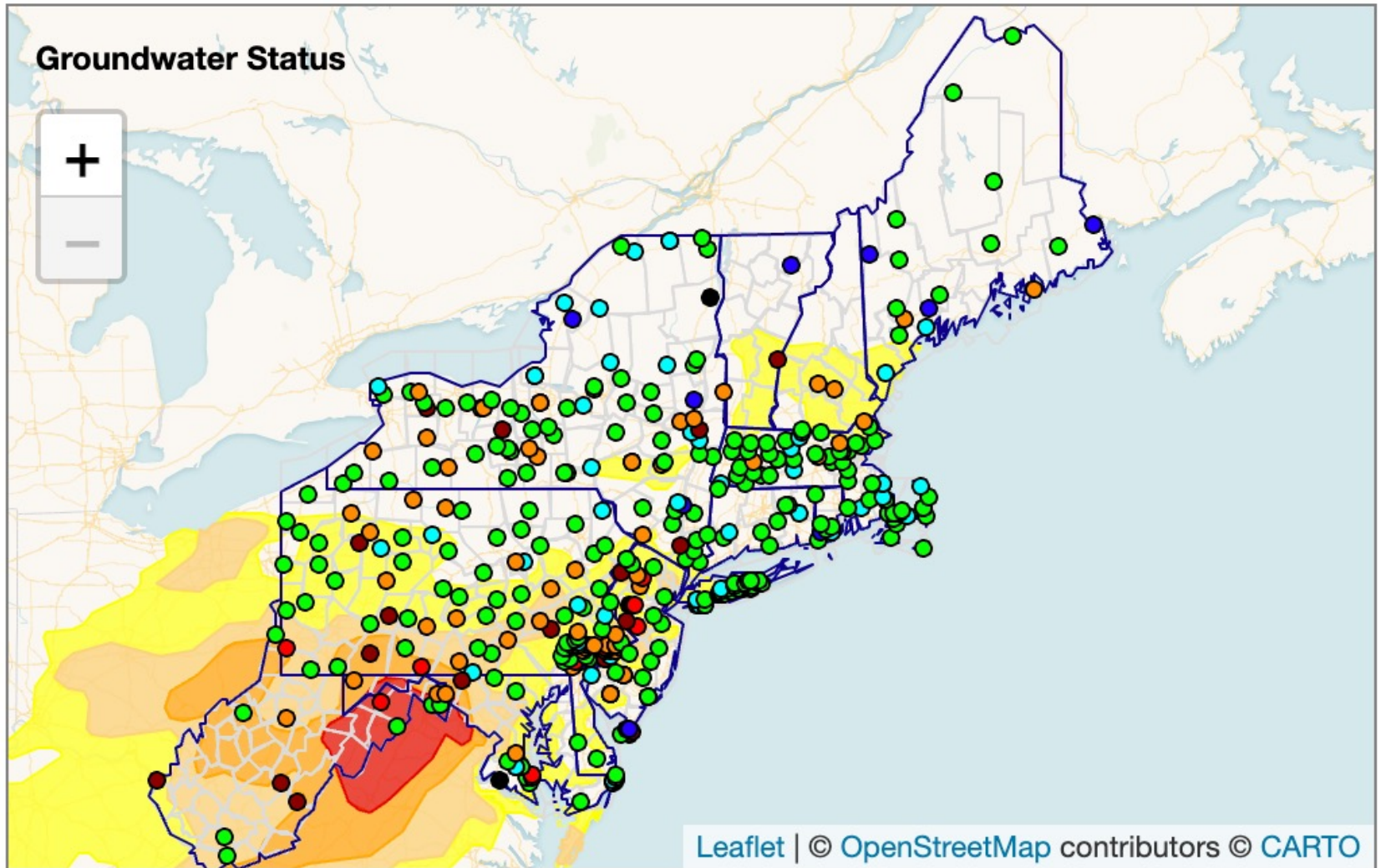
Explanation - Percentile Classes

Low	Much below normal	Below normal	Normal	Above normal	Much above normal	High	
	<10%	10-24%	25-75%	76-90%	>90%		

Data provided by [USGS WaterWatch - Streamflow](#); updated 2024-07-29.



Groundwater



Explanation - Percentile Classes

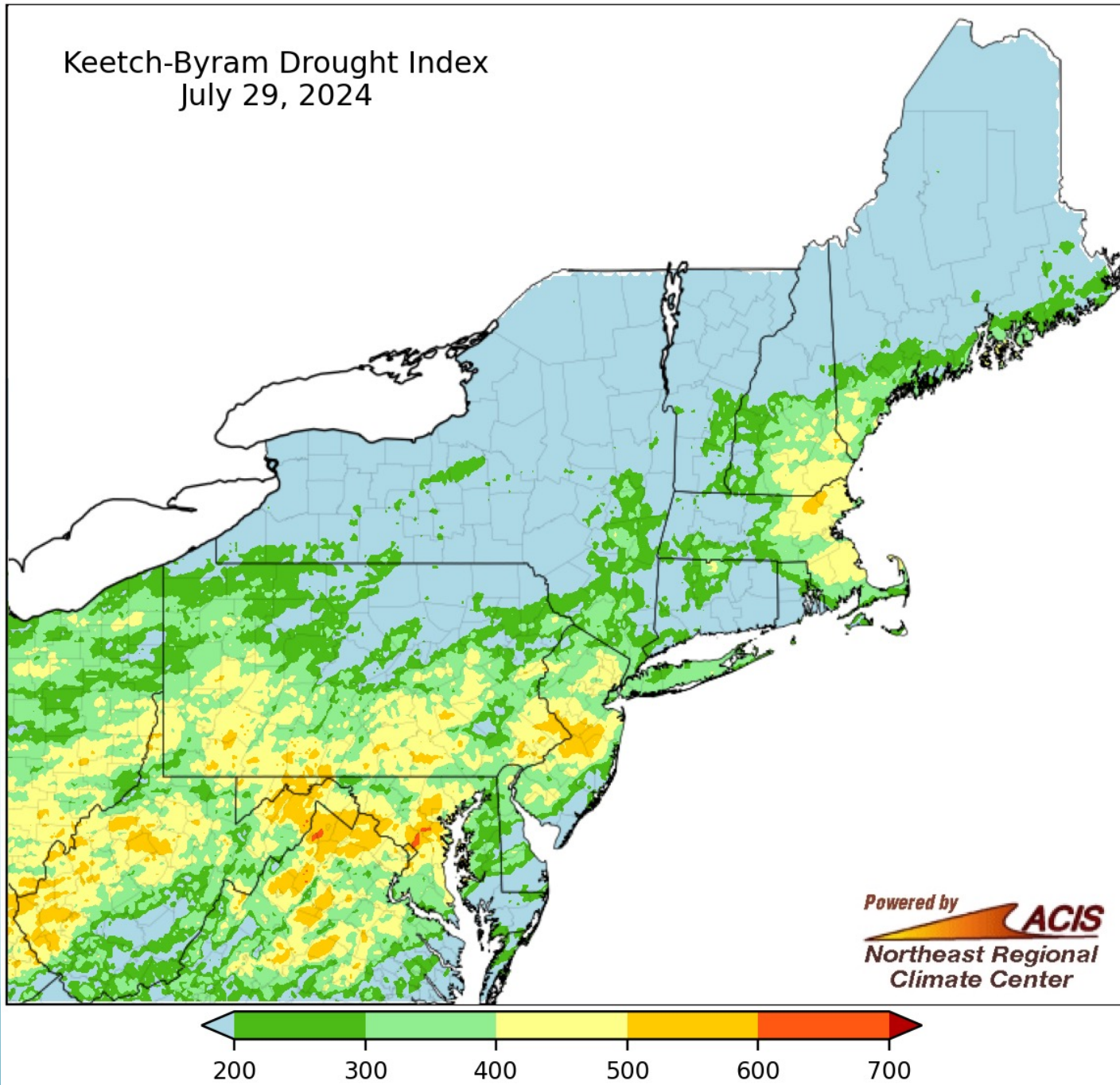
Low	Much below normal	Below normal	Normal	Above normal	Much above normal	High	
	<10%	10-24%	25-75%	76-90%	>90%		

Data provided by [USGS Groundwater](#) - [About this map](#); updated 2024-07-29.



Wildfire Risk

Keetch-Byram Drought Index
July 29, 2024





Courtesy of K. Hensell

Drought Impacts

NEWS

Eastern Panhandle farmers trying to water where they can

By [MetroNews Staff](#)
July 18, 2024 - 4:19 pm

Peabody To Impose Water Restrictions Starting Wednesday

Residents are asked to limit consumption outdoors to three days a week early in the morning or the evening depending on their address.



Scott Souza, Patch Staff

Posted Tue, Jul 16, 2024 at 4:38 pm ET

LOCAL NEWS

Another Midstate township issues burn ban amid dry weather

by: [Kaylee Lindenmuth](#)
Posted: Jul 13, 2024 / 06:15 PM EDT
Updated: Jul 13, 2024 / 06:15 PM EDT

SHARE    

YORK COUNTY, Pa. (WHTM) — A York County township is issuing a burn ban.

Conewago Township placed the ban in effect immediately and until further notice.



Summary of Impacts

Links: See/submit [Condition Monitoring Observer Reports \(CMOR\)](#) and view the [Drought Impacts Reporter](#)

Hydrologic Impacts

- River stream flows and subsurface water levels are running at near record low levels
- The Interstate Commission on the Potomac River Basin continues to monitor Potomac River streamflow levels as discharge values have dropped below 1200 CFS
- Multiple reports received of dry well levels throughout the Shenandoah River Valley, along the Blue Ridge Mountains and up along the Potomac Highlands

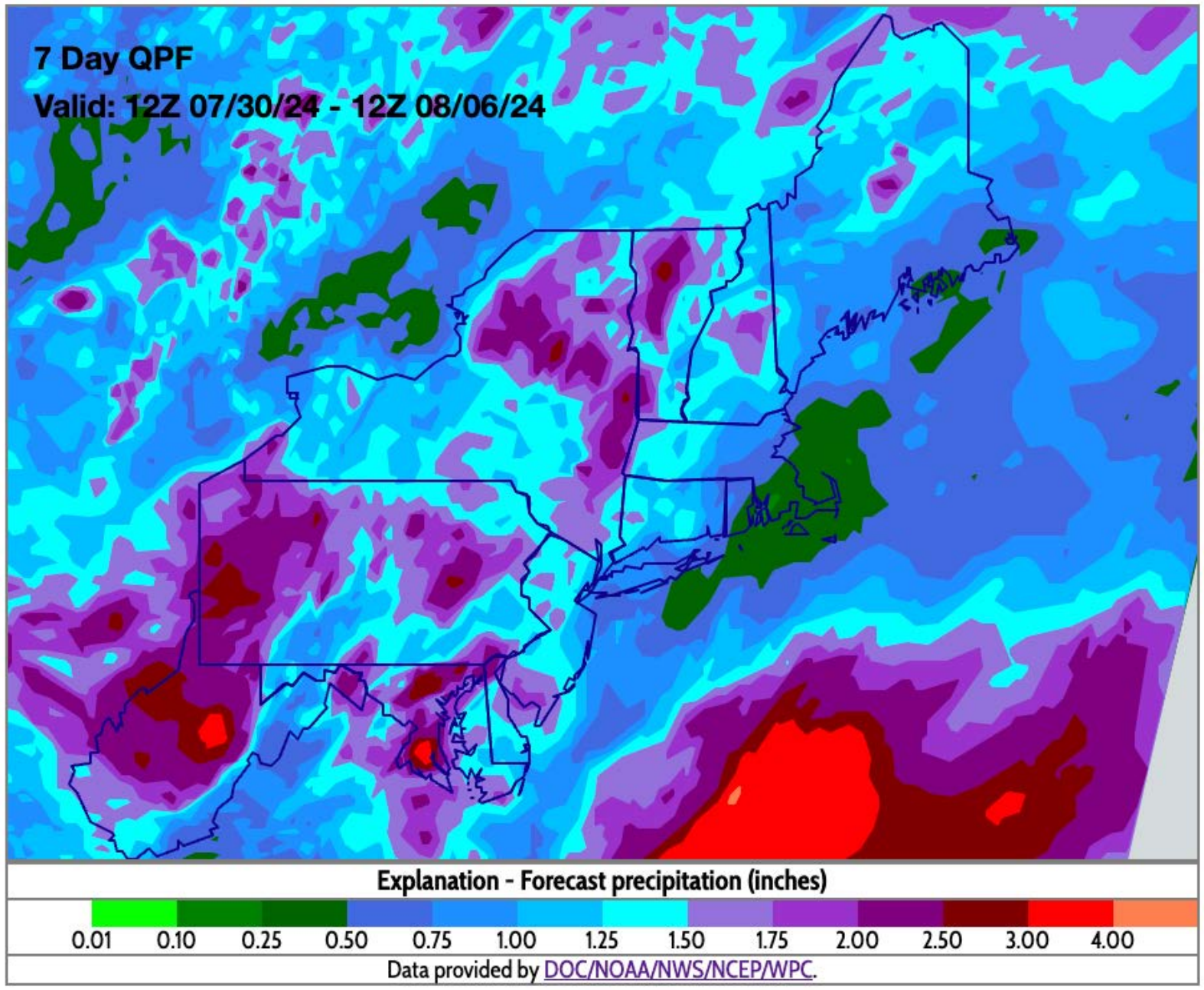
Agricultural Impacts

- Farmers have reported stunted growth of crops and crop stress due to lack of precipitation and high temperatures. Crop losses of up to 20 percent have been reported by Ag Extension reports across the Shenandoah Valley

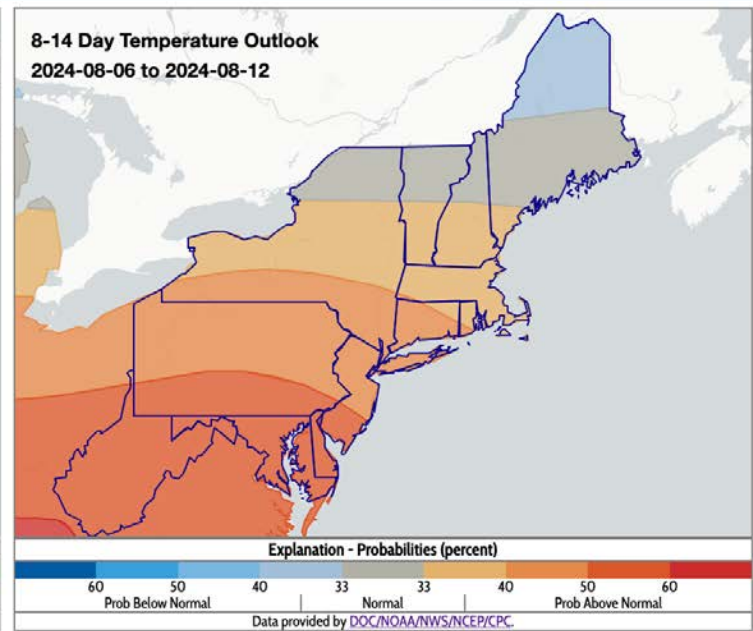
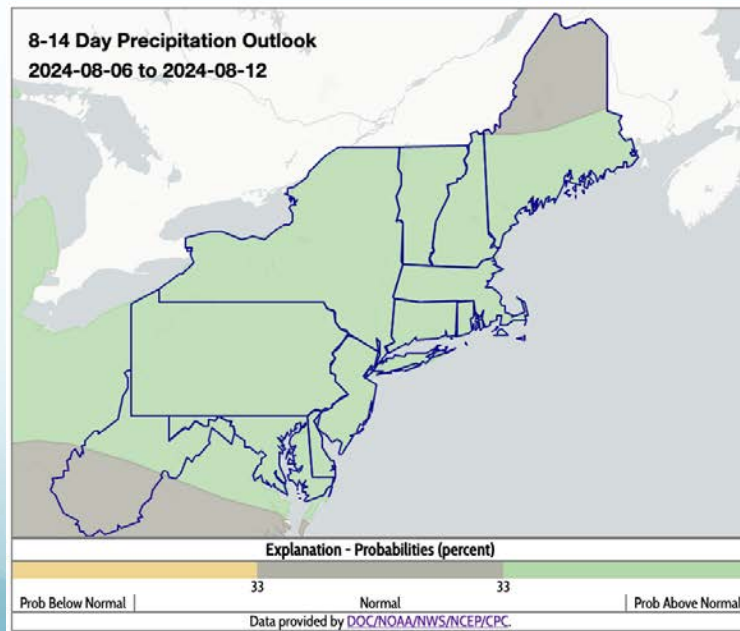
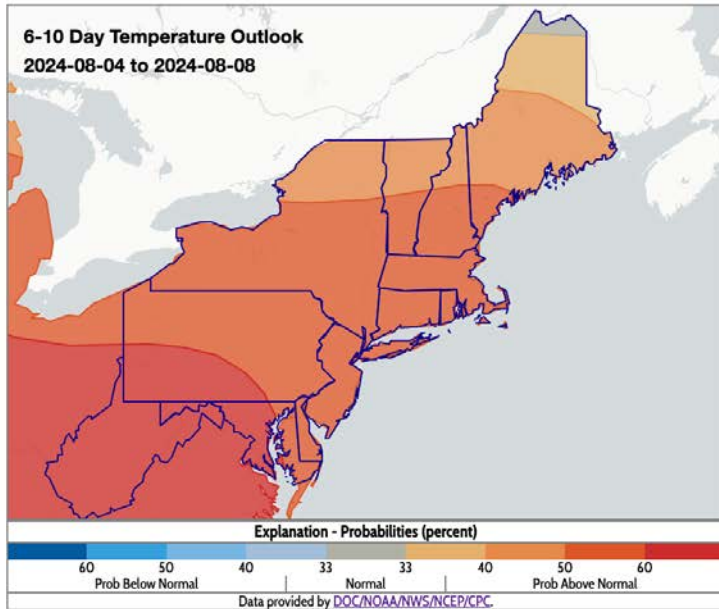
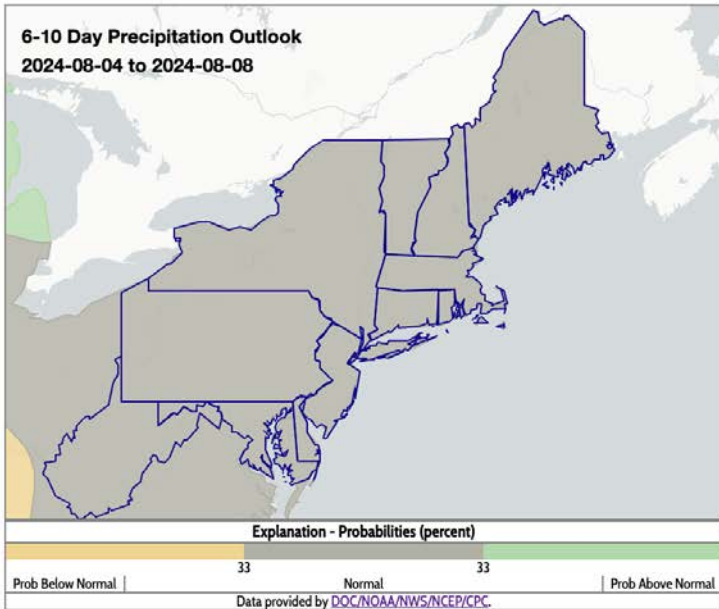
Mitigation Actions

- Fauquier County, VA has instituted mandatory water conservation efforts
- The State of Virginia has a Drought Warning in effect for all of our counties in Virginia
- The State of Maryland has issued a Drought Watch for parts of western Maryland

Precipitation Forecast



Short-term Outlooks

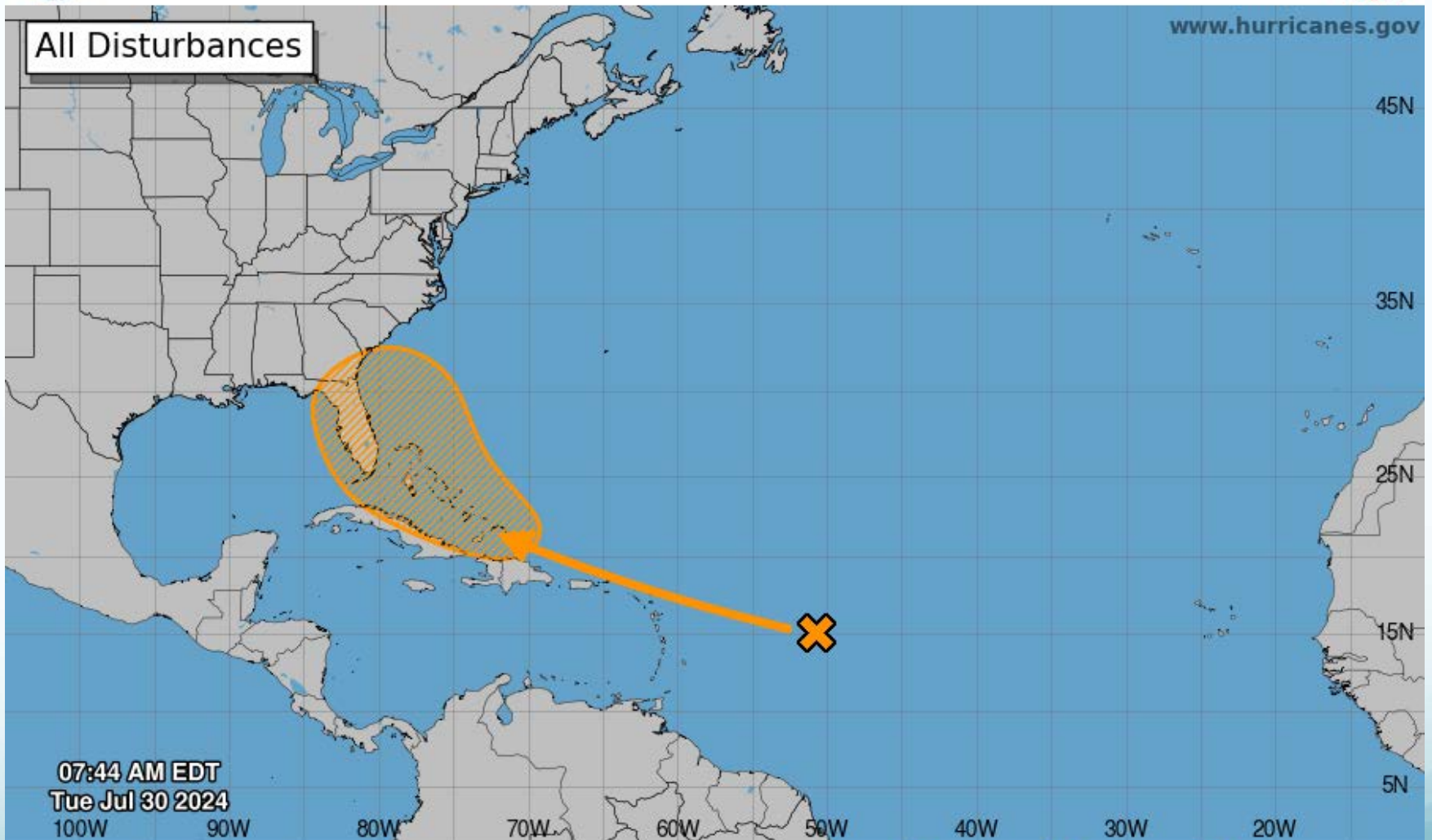


Tropical Outlook



Seven-Day Graphical Tropical Weather Outlook

National Hurricane Center Miami, Florida



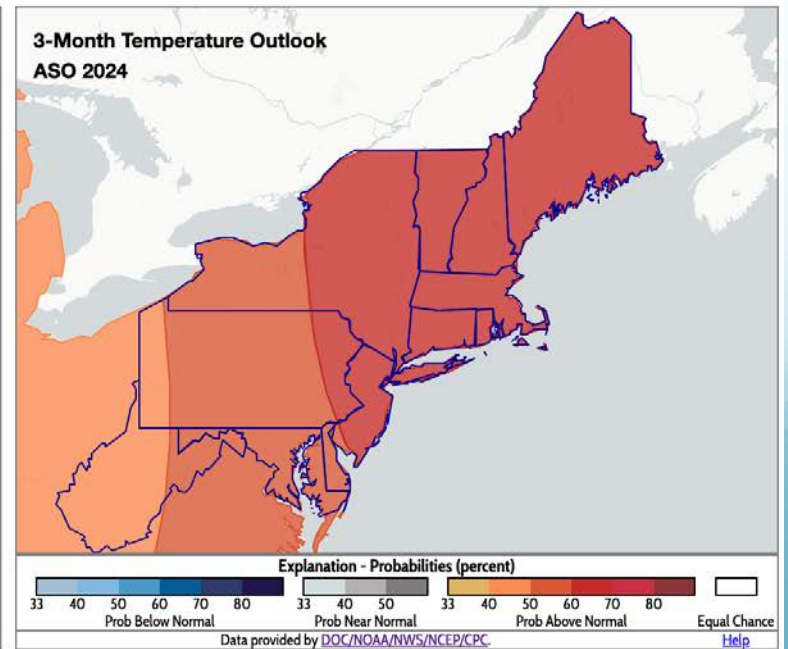
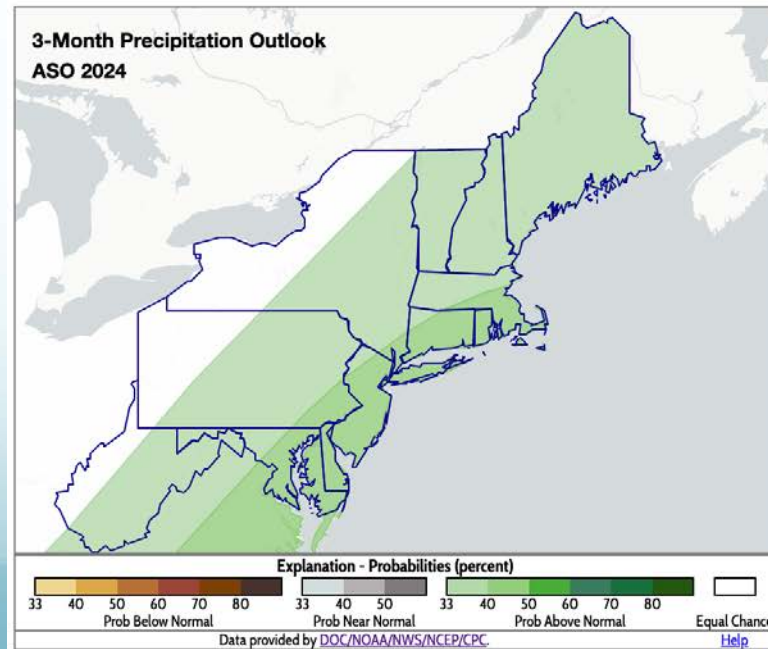
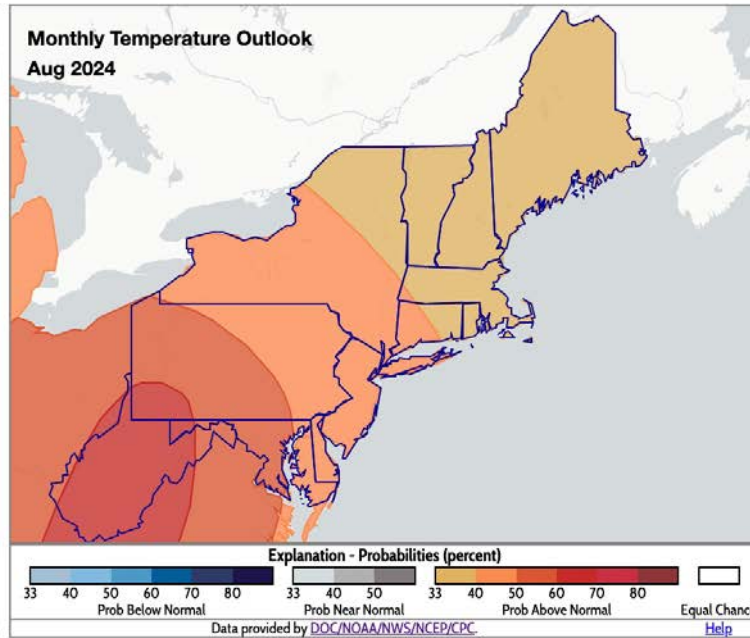
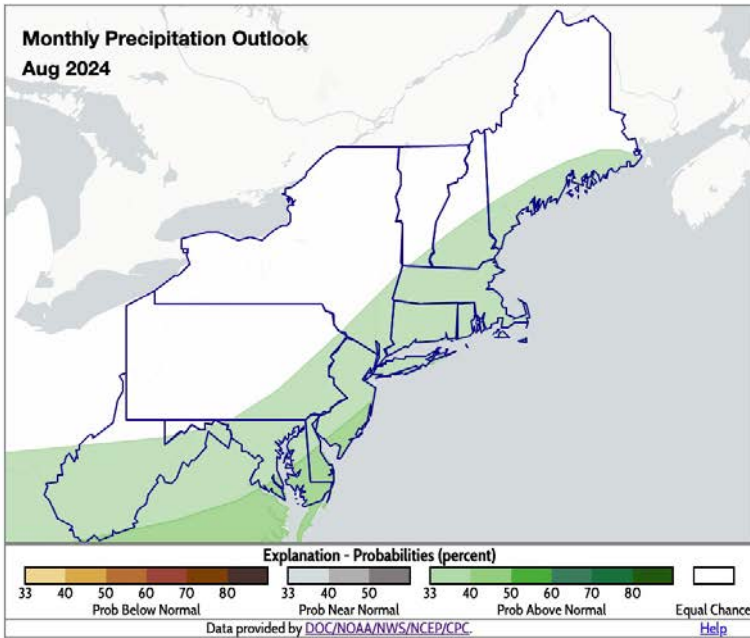
Current Disturbances and Seven-Day Cyclone Formation Chance: < 40% 40-60% > 60%

Tropical or Sub-Tropical Cyclone: Depression Storm Hurricane

Post-Tropical Cyclone or Remnants



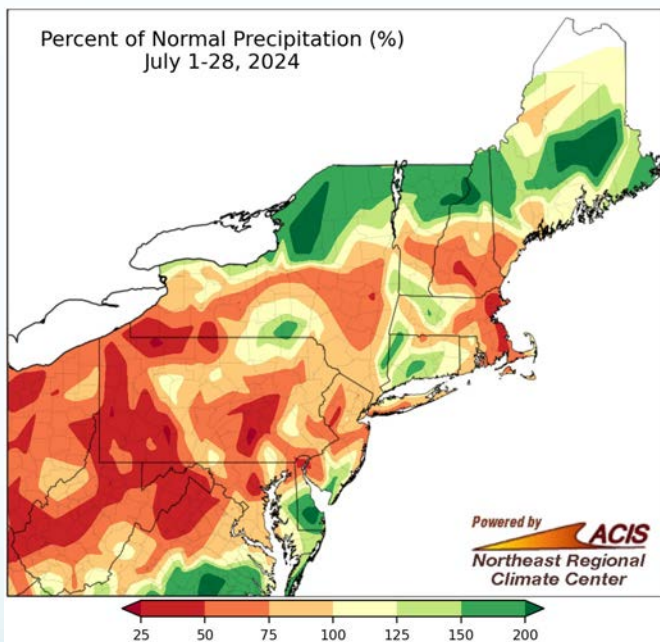
Monthly & 3-Month Outlooks



Summary

July-to-date conditions:

- Above-normal temperatures, with record or near-record heat first half of month
- Much below-normal rainfall for some, locally heavy rainfall for others



Drought:

- Drought and abnormal dryness expanded in parts of the Mid-Atlantic with extreme drought in Maryland and West Virginia for the first time since September 2010
 - Impacts on waterways, crops, fire risk, etc.
- Some improvement in other areas such as region's southeastern corner, northern Maine, and western New York

Outlooks:

- Short-term: near- or above-normal precipitation and temperatures favored
- August and Aug-Oct: above-normal precipitation for areas close to the coast and southern spots; above-normal temperatures for all
- Keeping an eye on the tropics!



Contact Information

- nrcc@cornell.edu
- NEW - NRCC newsletter!

Upcoming Webinars

- Thursday, August 29 at 9:30am EDT
 - Hurricane outlook and season update
- Thursday, September 26 at 9:30am EDT
 - NRCC projects
- Thursday, October 31 at 9:30am EDT
 - TBD



www.nrcc.cornell.edu