

# July Review & Northeast DEWS Discussion

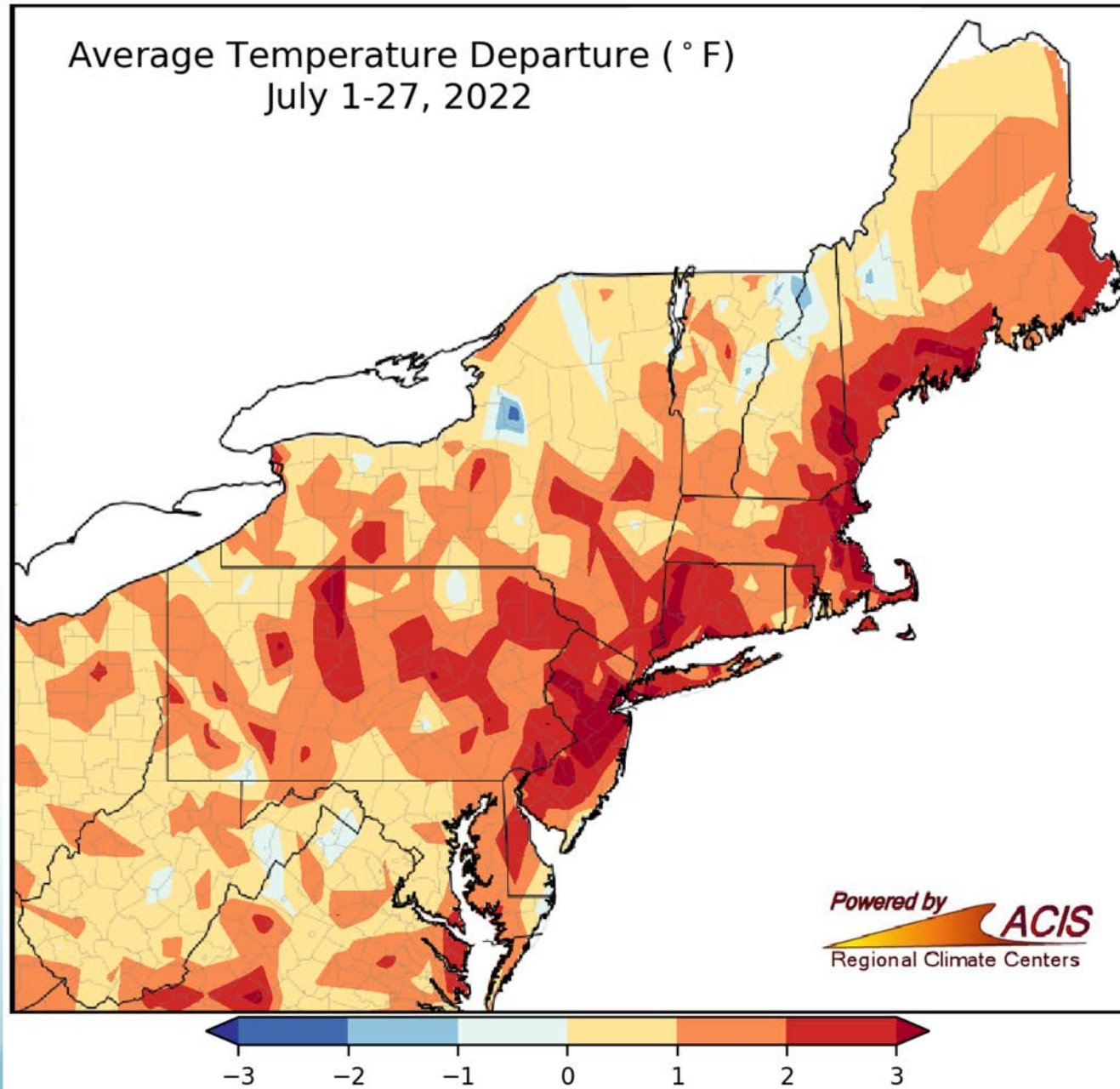
By: Samantha Borisoff, Climatologist  
Northeast Regional Climate Center



Northeast Regional  
Climate Center



# July Temperatures



From near normal to more than 3°F above normal

# July Temperatures

## Number of Consecutive Days Max Temperature $\geq 100$ for Newark Area, NJ (ThreadEx)

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

Rank	Run Length	Dates
1	5	2022-07-20 through 2022-07-24
2	4	2010-07-04 through 2010-07-07
-	4	1993-07-07 through 1993-07-10
-	4	1953-08-28 through 1953-08-31
5	3	2011-07-21 through 2011-07-23
Last value also occurred in one or more previous years.		
Period of record: 1931-01-01 to 2022-07-27		

## Number of Consecutive Days Max Temperature $\geq 95$ for New York-LGA Area, NY (ThreadEx)

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

Rank	Run Length	Dates
1	6	1953-08-28 through 1953-09-02
2	5	2022-07-20 through 2022-07-24
-	5	2020-07-18 through 2020-07-22
-	5	1991-07-17 through 1991-07-21
-	5	1948-08-25 through 1948-08-29
Period of record: 1939-10-07 to 2022-07-27		

## Number of Consecutive Days Min Temperature $\geq 75$ for Philadelphia Area, PA (ThreadEx)

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

Rank	Run Length	Ending Date
1	10	2022-07-27
2	9	1995-07-30
3	8	2016-08-17
-	8	1993-07-14
5	7	1991-07-25
Period of record: 1872-03-05 to 2022-07-27		

## Number of Consecutive Days Min Temperature $\geq 75$ for New York-Kennedy Airport Area, NY (ThreadEx)

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

Rank	Run Length	Ending Date
1	7	2022-07-25
-	7	2016-08-17
-	7	2013-07-21
-	7	1988-08-16
-	7	1981-07-13
Period of record: 1948-07-17 to 2022-07-27		

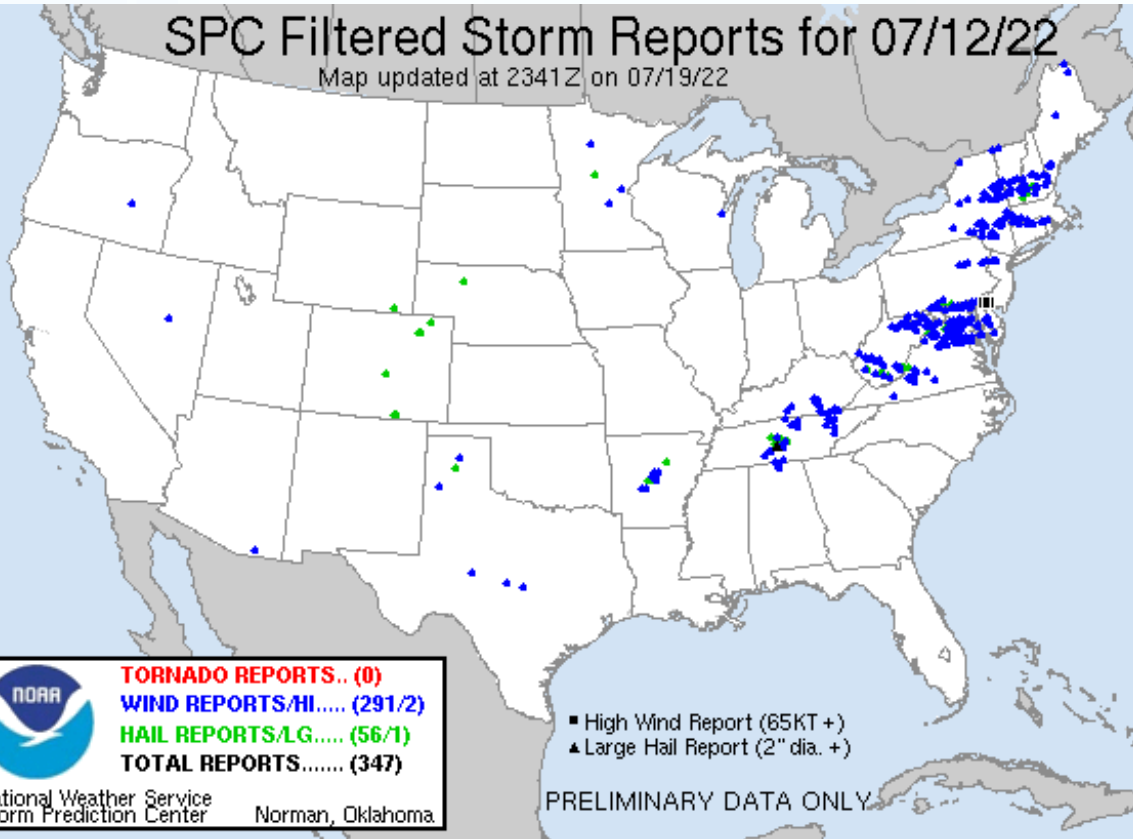




# July Severe Weather

SPC Filtered Storm Reports for 07/12/22

Map updated at 2341Z on 07/19/22

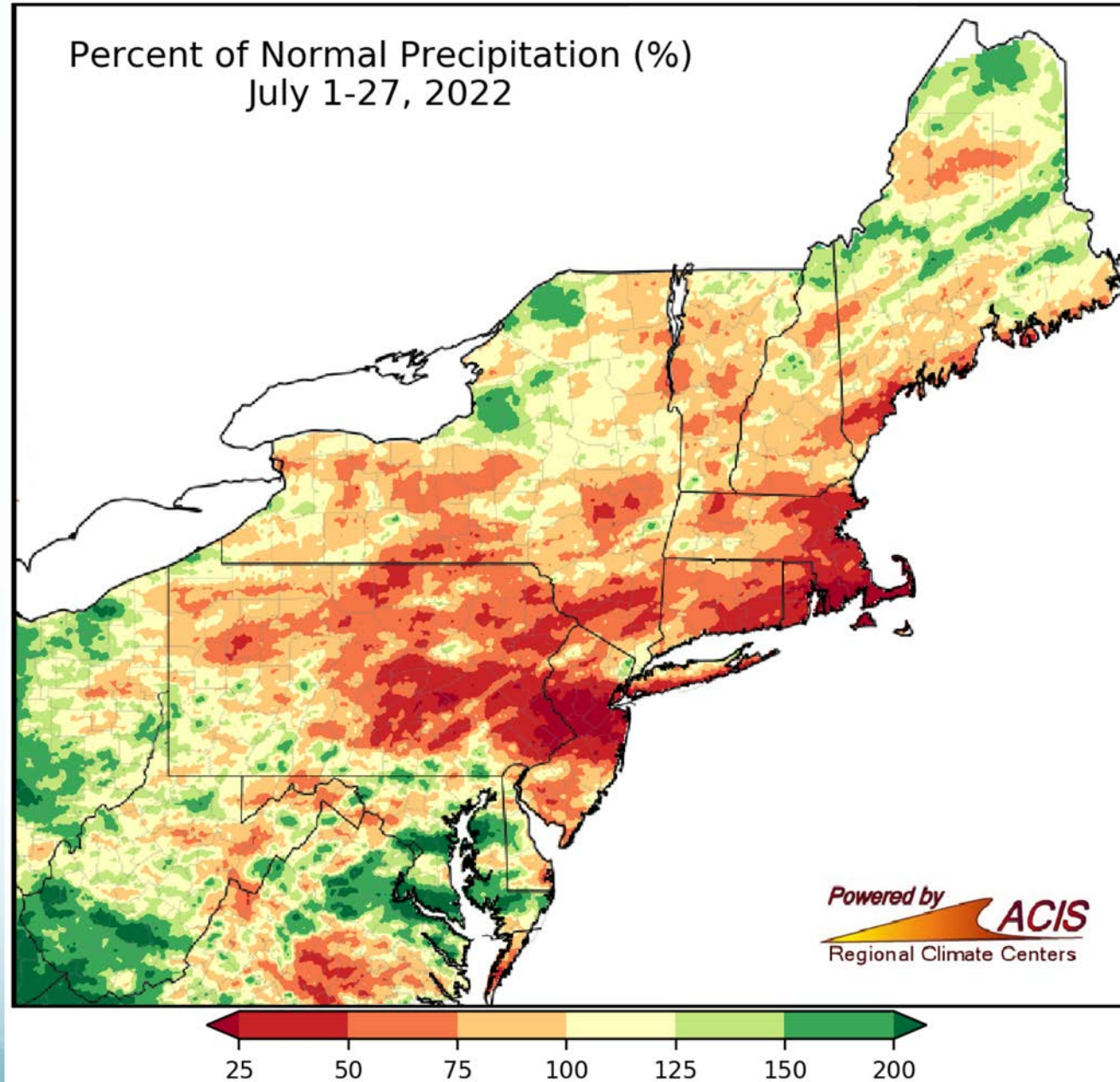








# July Precipitation



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

# Drought Monitor

## U.S. Drought Monitor Northeast

**June 28, 2022**

(Released Thursday, Jun. 30, 2022)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0	D1	D2	D3	D4
<b>Current</b>	70.69	21.85	7.46	0.00	0.00	0.00
<b>Last Week</b> 06-21-2022	82.62	15.00	2.38	0.00	0.00	0.00
<b>3 Months Ago</b> 03-29-2022	71.90	24.96	2.46	0.67	0.00	0.00
<b>Start of Calendar Year</b> 01-04-2022	84.91	12.92	1.32	0.85	0.00	0.00
<b>Start of Water Year</b> 09-28-2021	90.30	6.56	2.35	0.80	0.00	0.00
<b>One Year Ago</b> 06-29-2021	58.59	21.37	16.53	3.51	0.00	0.00

Intensity:

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

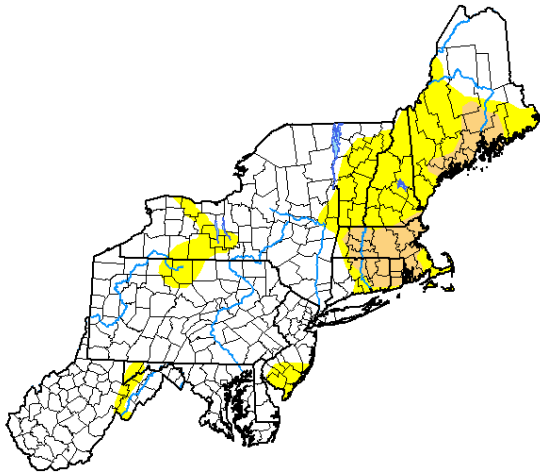
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

Curtis Riganti  
National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



## 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
<b>Current</b>	50.54	28.39	18.28	2.80	0.00	0.00
<b>Last Week</b> 07-19-2022	52.72	24.86	21.21	1.21	0.00	0.00
<b>3 Months Ago</b> 04-26-2022	81.37	17.40	1.24	0.00	0.00	0.00
<b>Start of Calendar Year</b> 01-04-2022	84.91	12.92	1.32	0.85	0.00	0.00
<b>Start of Water Year</b> 09-28-2021	90.30	6.56	2.35	0.80	0.00	0.00
<b>One Year Ago</b> 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

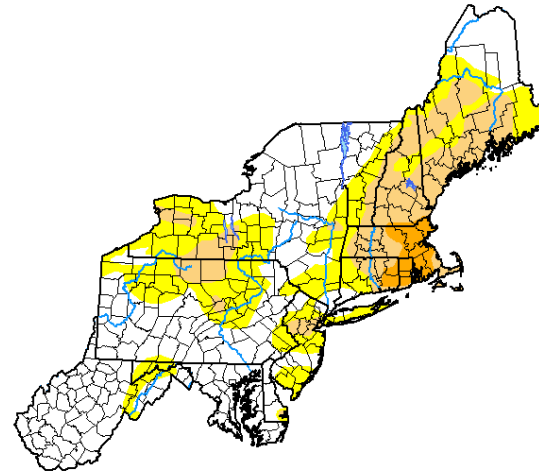
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Author:

Curtis Riganti  
National Drought Mitigation Center



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# Precipitation

## Accumulated Precipitation Departure from Normal

Green/black diamonds represent subsequent/missing values



(Click to hide/show lines)

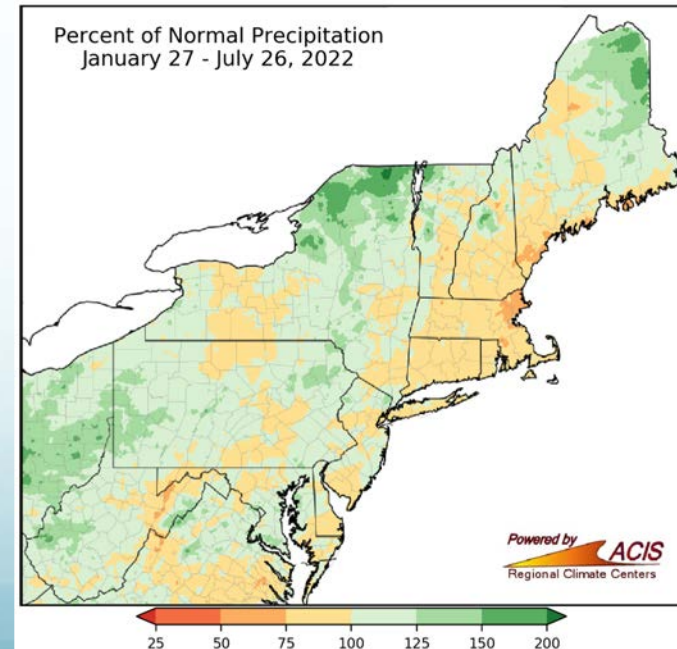
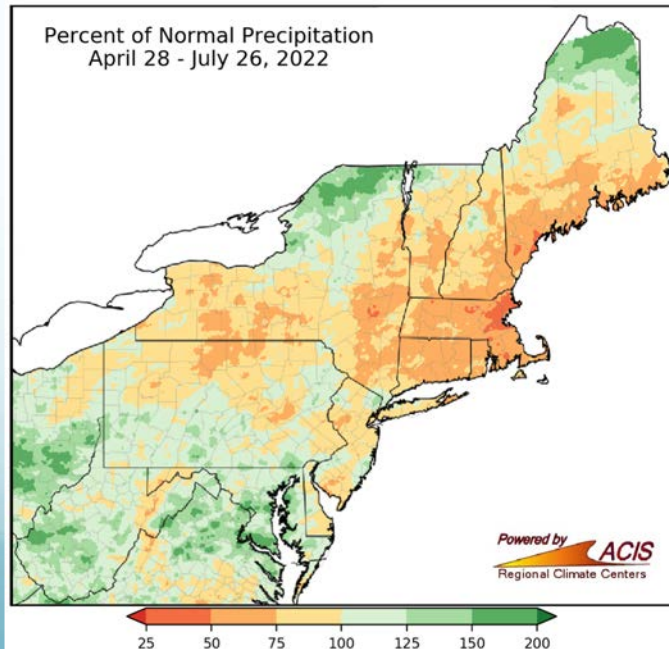
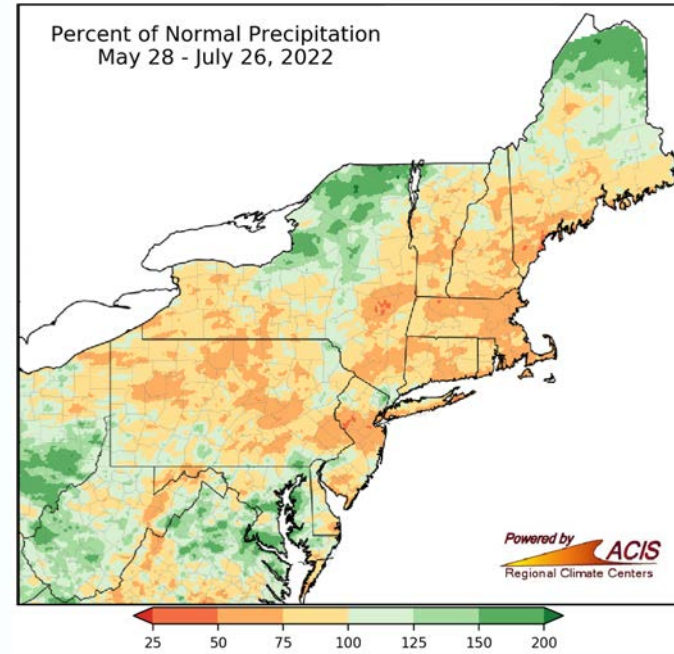
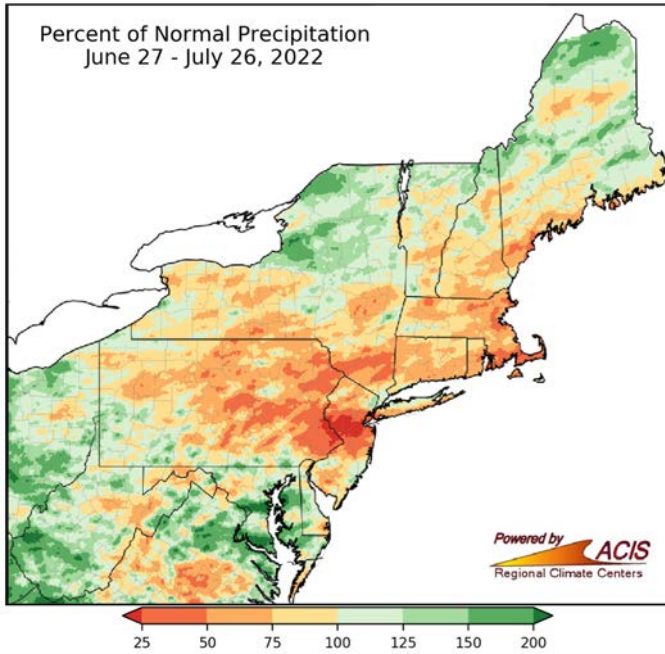
— Portland Area, ME (ThreadEx):Precip Dprt — Boston Area, MA (ThreadEx):Precip Dprt — Providence Area, RI (ThreadEx):Precip Dprt  
— Rochester Area, NY (ThreadEx):Precip Dprt

Powered by ACIS

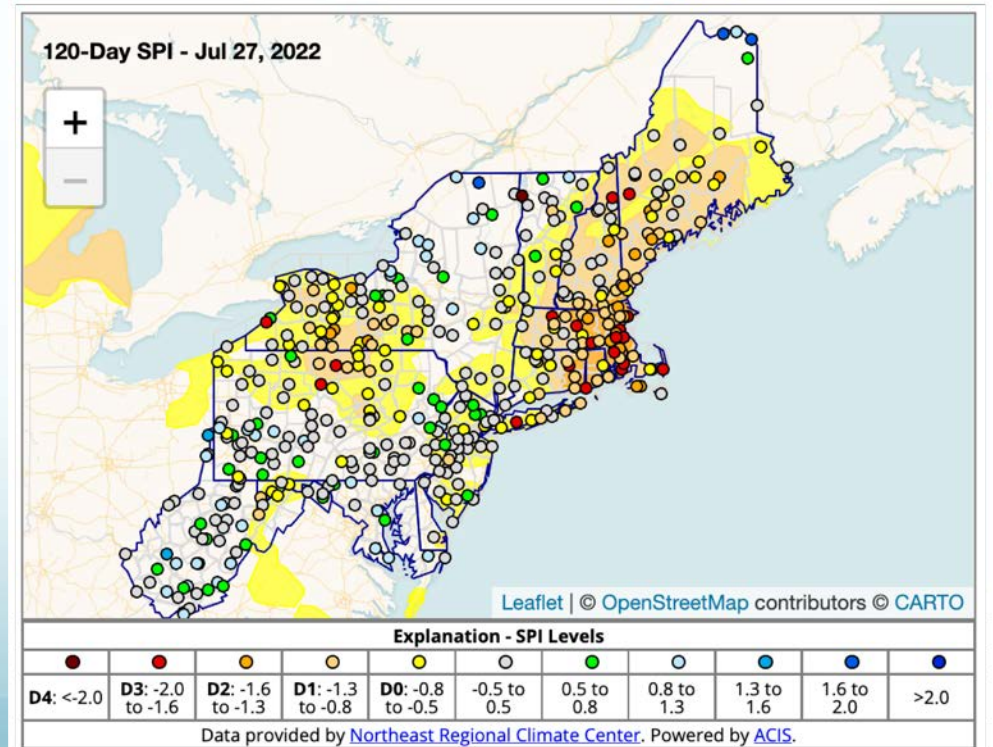
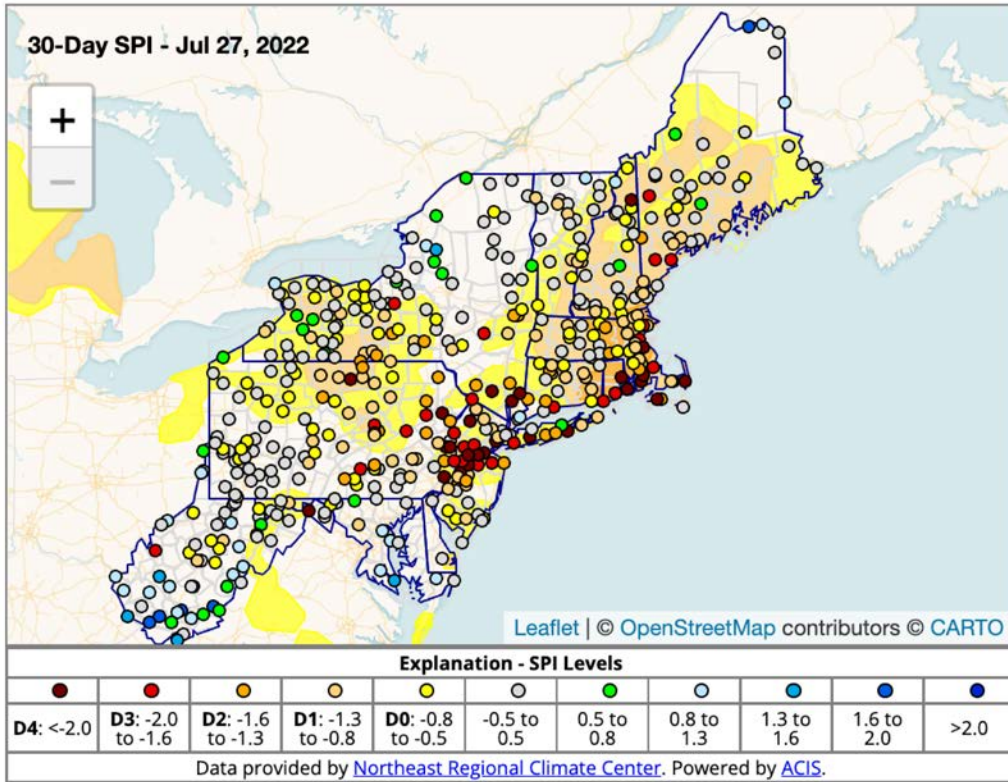




# Precipitation



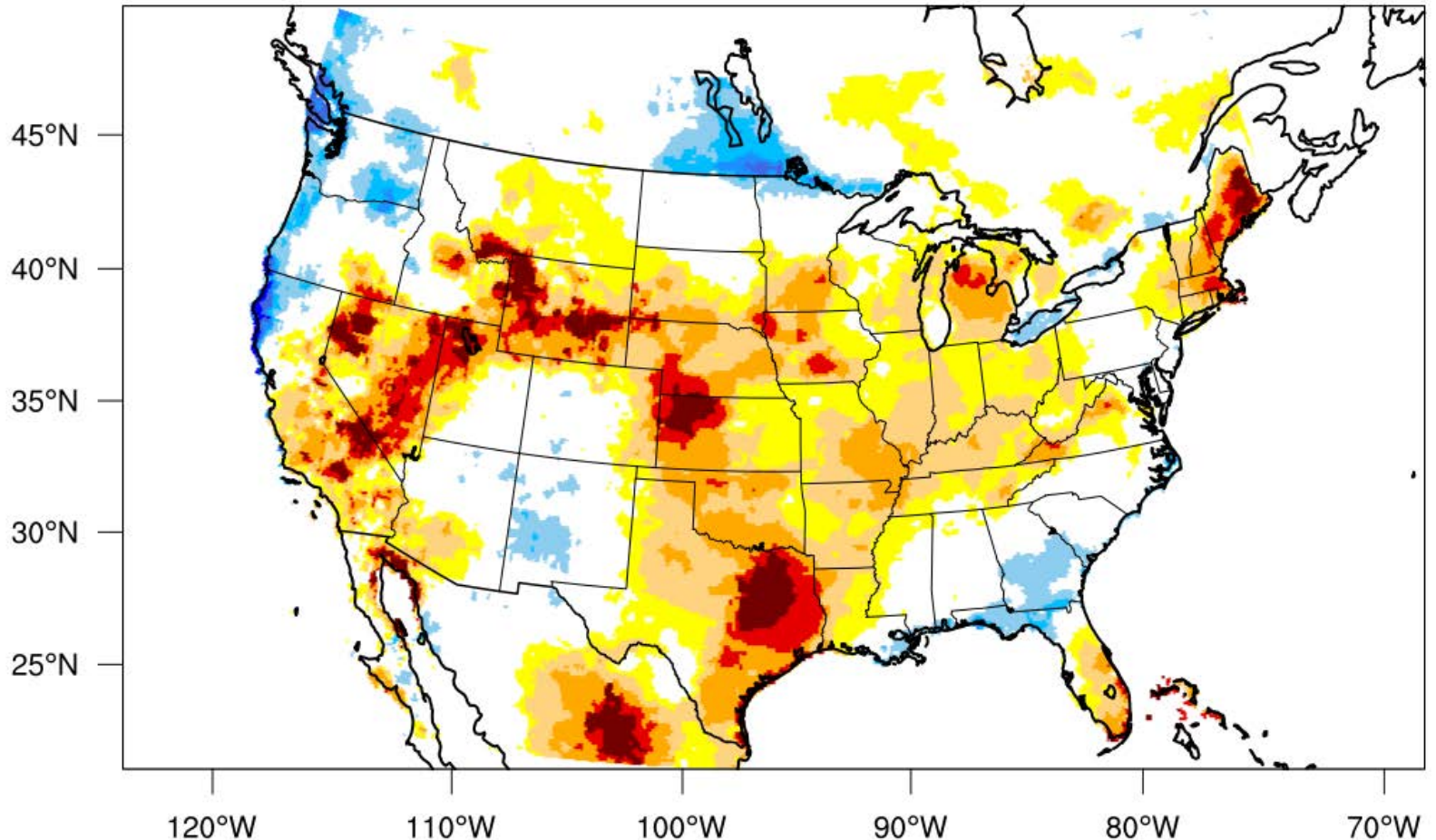
# Standardized Precipitation Index





# Evap. Demand Drought Index

3-week EDDI categories for July 23, 2022



Drought categories



100% 98% 95% 90% 80% 70%

Wetness categories



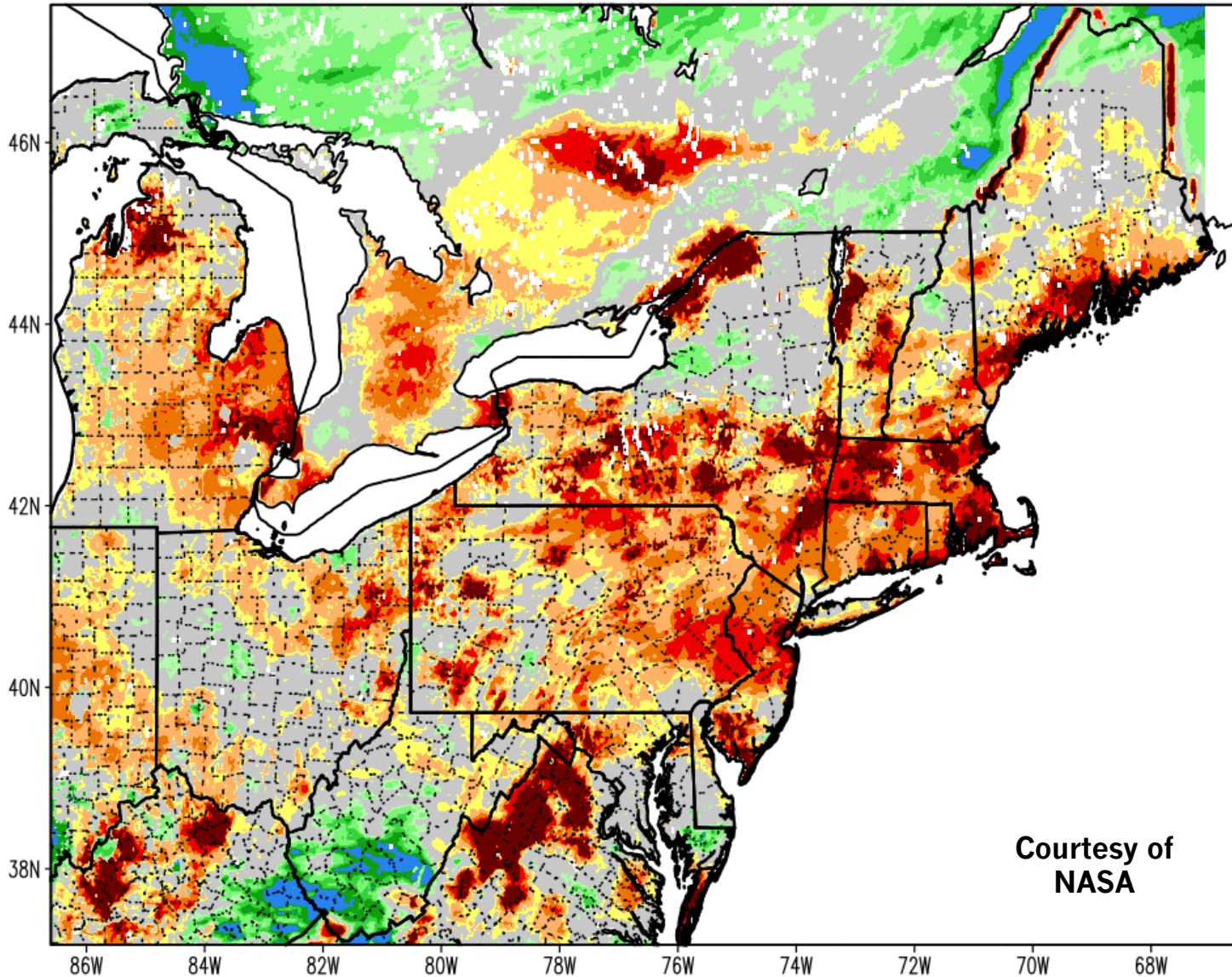
30% 20% 10% 5% 2% 0%

(EDDI-percentile category breaks: 100% = driest; 0% = wettest)



# Soil Moisture

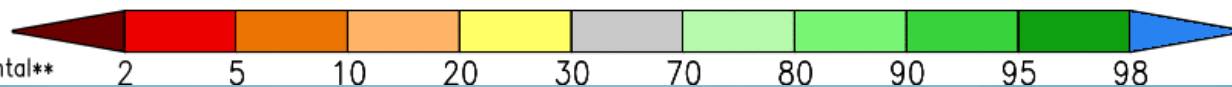
SPoRT-LIS 0-100 cm Soil Moisture percentile valid 28 Jul 2022



Courtesy of  
NASA

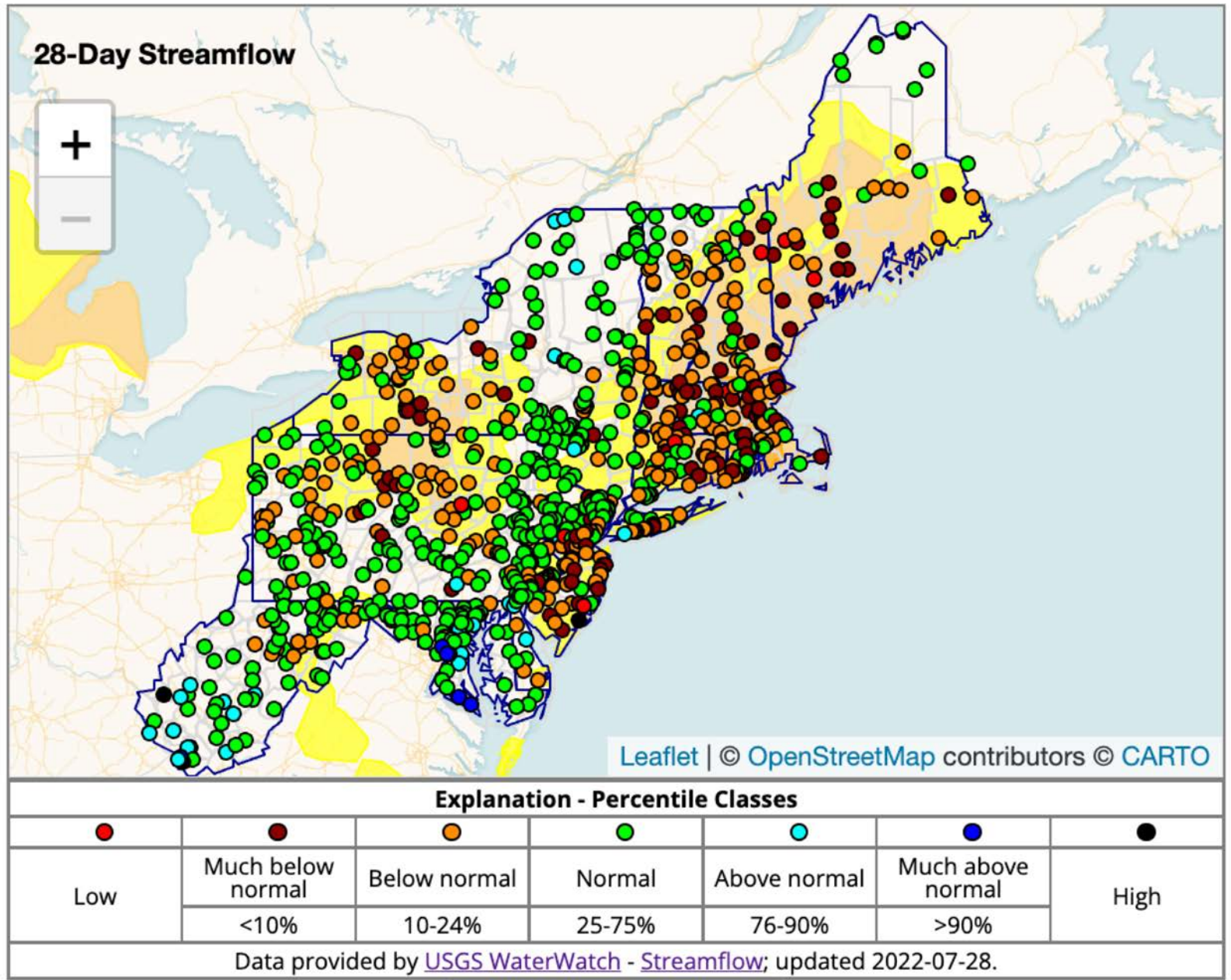


**\*\*NOTE\*\***  
**\*\*Experimental\*\***





# Streamflow





# Drought Impacts

## Known Water Use Restrictions

Last Update: 7/25/2022



### Legend

-  County Boundary
-  Town Boundary

### Drought Condition

-  Abnormally Dry
-  Moderate Drought
-  Severe Drought
-  Extreme Drought

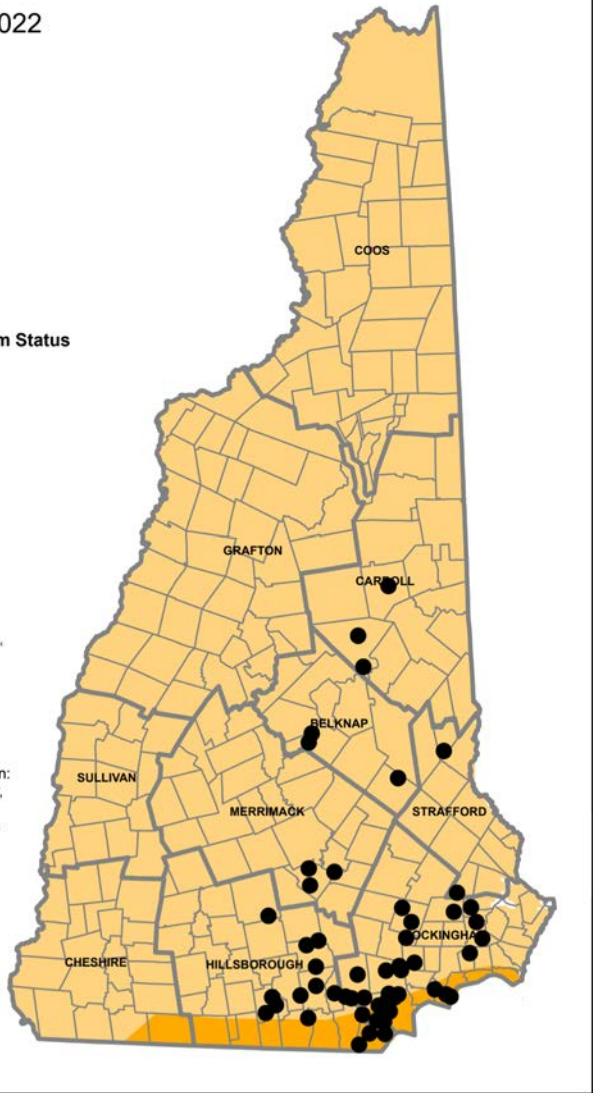
### Municipality or Water System Status

-  Voluntary Restriction
-  Mandatory Restriction

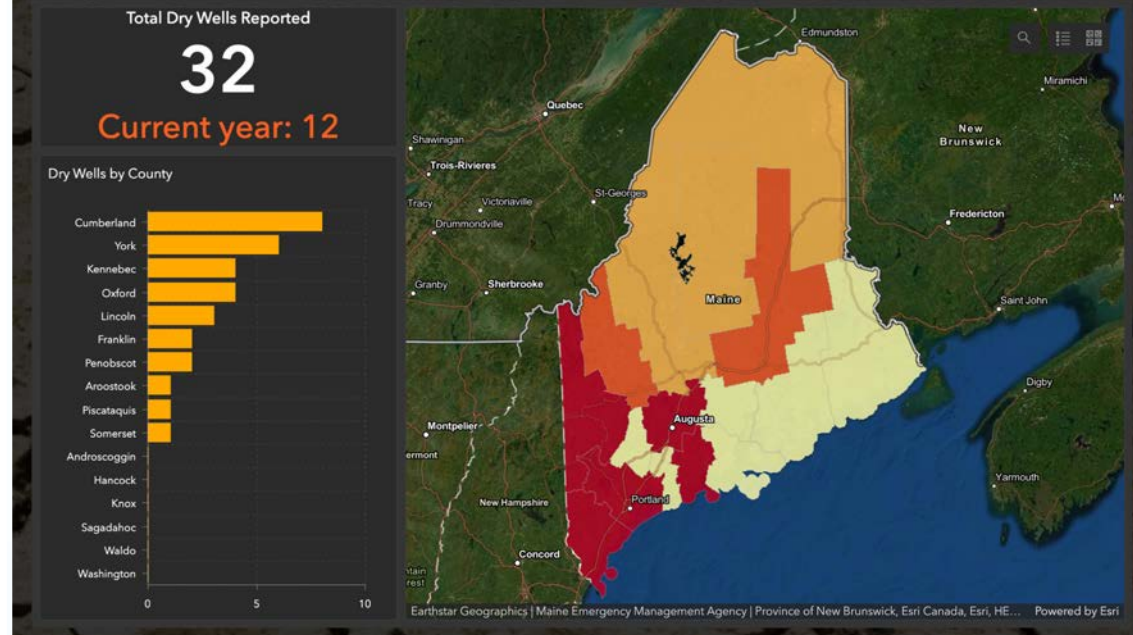


Drought conditions based on United States Drought Monitor <https://droughtmonitor.unl.edu/>  
Produced by a partnership between: National Drought Mitigation Center, U.S. Department of Agriculture, & National Oceanic and Atmospheric Administration

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.



## Dry wells reported: 2021-2022



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



<https://anrmaps.vermont.gov/websites/droughtreporter/>



# Drought Impacts

The Providence Journal

LOCAL

## 'This field will not bounce back:' Drought has Rhode Island farmers praying for rain



Linda Borg  
The Providence Journal

Published 1:24 p.m. ET July 22, 2022

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LOCAL NEWS

## Rain did fall, but much more is needed for Maine farmers

Farmers like Bob Spear of Spear Farms are turning to drip irrigation to replace natural rain during Maine's lengthy drought.

CBS PITTSBURGH

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LOCAL NEWS

## Rising costs and dry weather making thin profit margin for farmers

CBS NEWS  
PITTSBURGH

BY ROSS GUIDOTTI  
JULY 15, 2022 / 5:31 PM / CBS PITTSBURGH



(Emily Kenny/Spectrum News 1)

AGRICULTURE

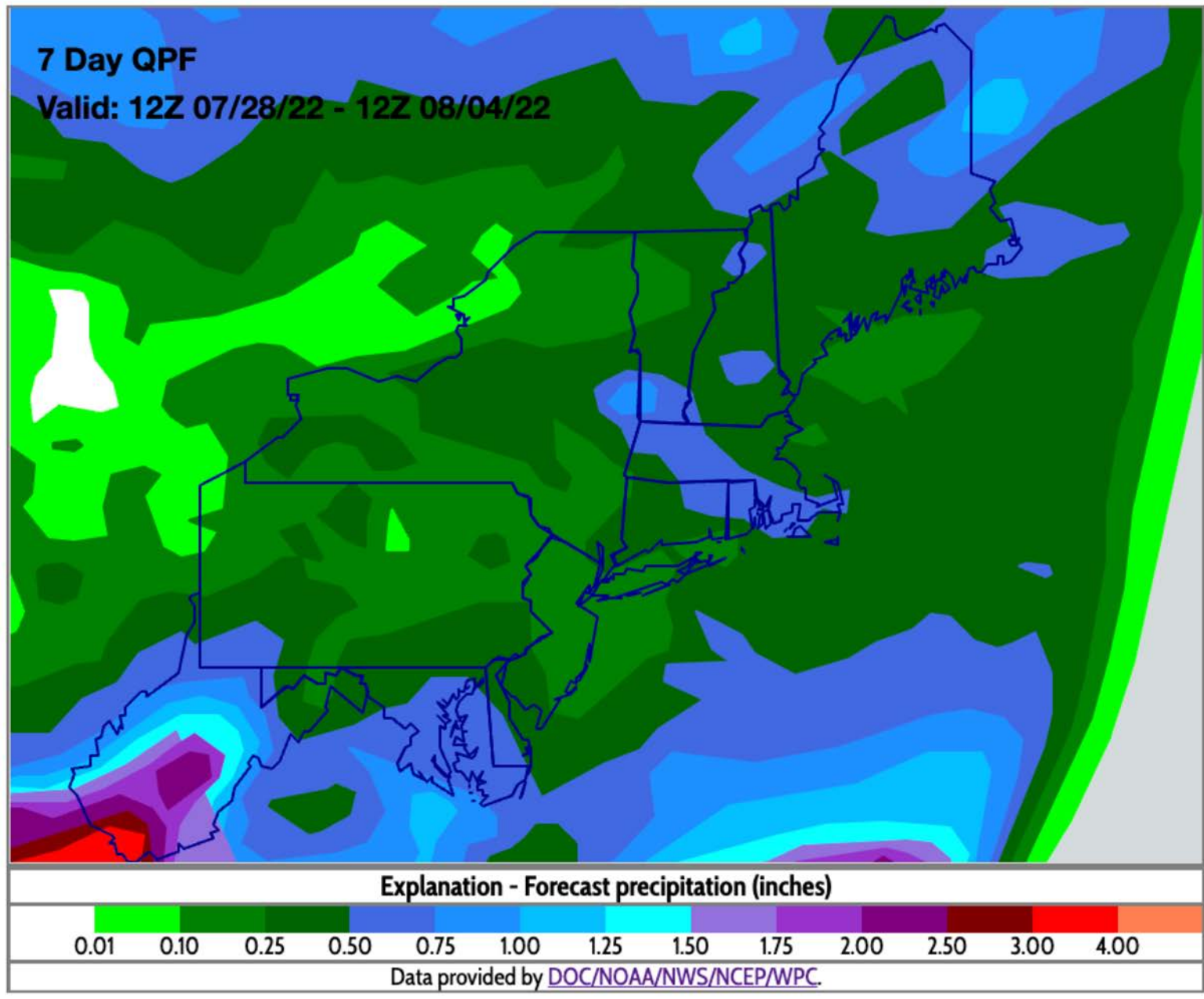
## Abnormally dry conditions in Cortland County impact local dairy farmer



BY EMILY KENNY | CORTLAND  
PUBLISHED 12:24 PM ET JUL. 21, 2022

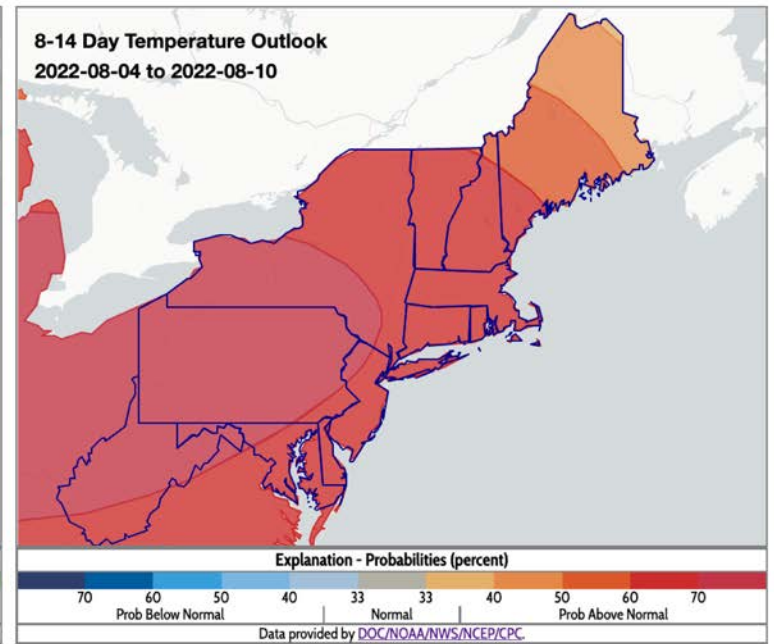
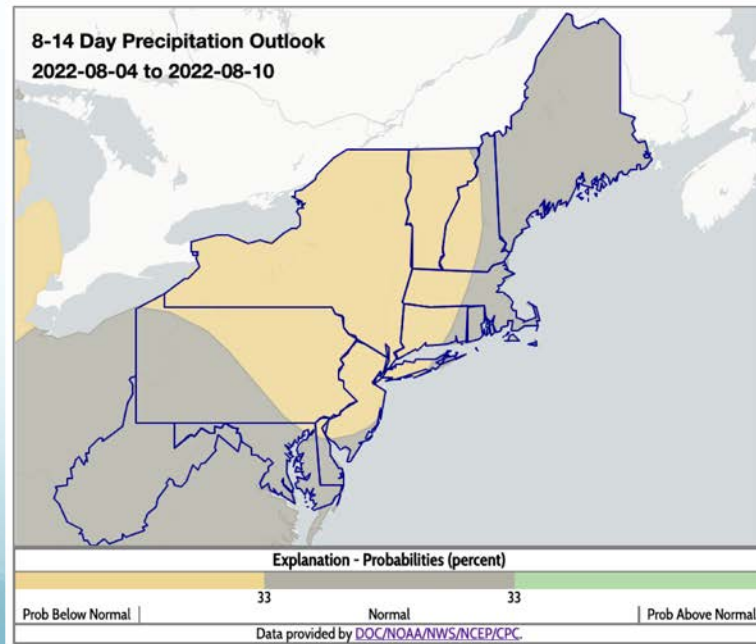
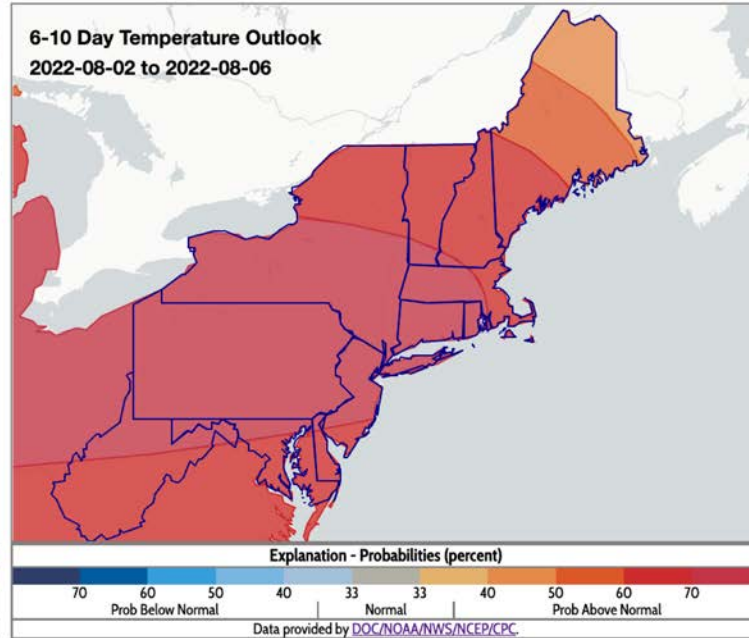
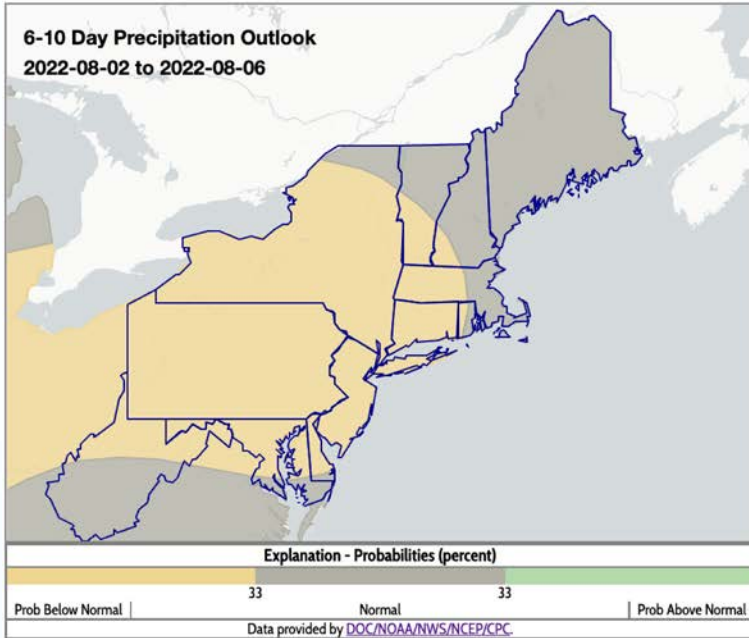


# Precipitation Forecast

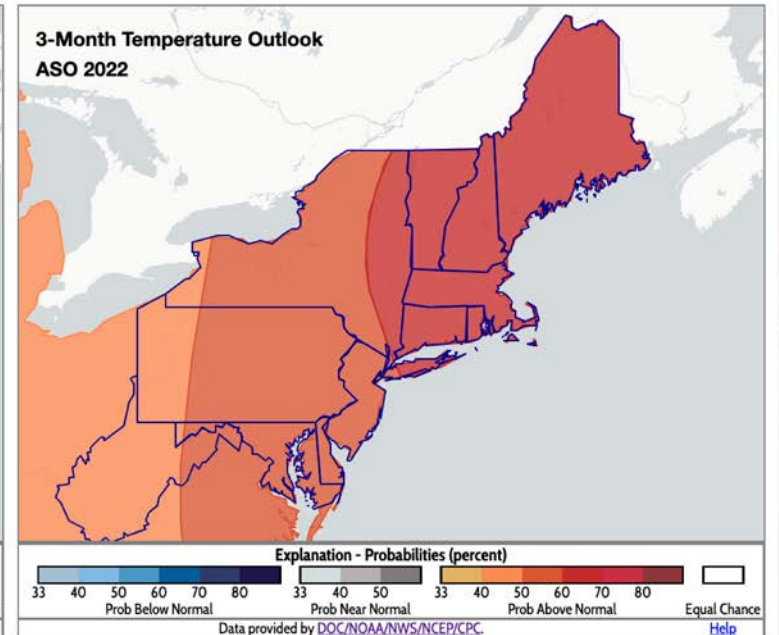
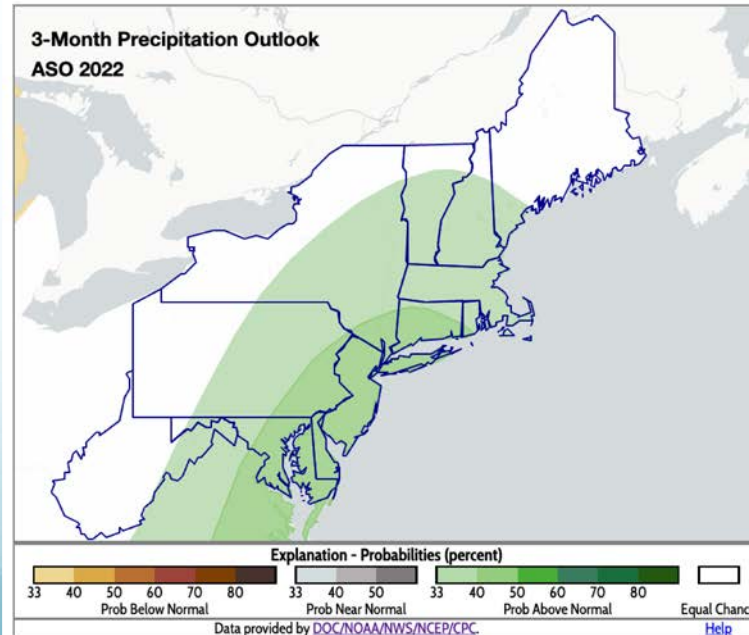
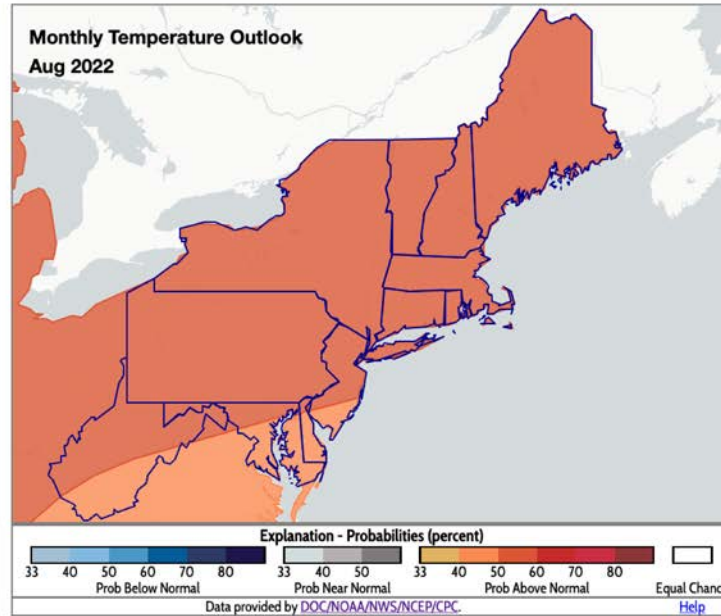
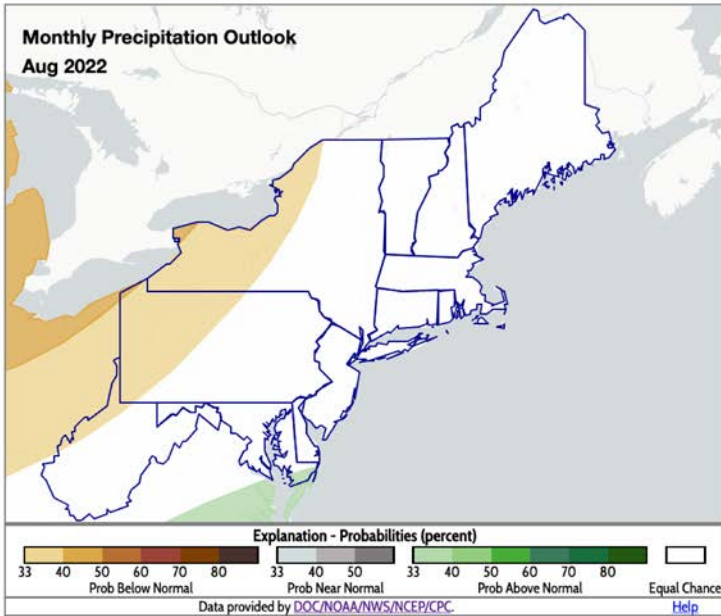




# Short-term Outlooks



# Monthly & 3-Month Outlooks

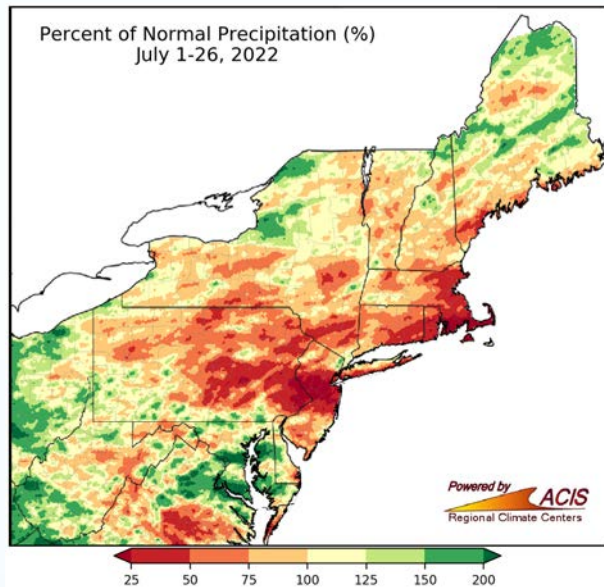




# Summary

## July-to-date conditions:

- Above-normal temperatures
- Many areas saw below or near normal precipitation but localized heavy rainfall



## Drought:

- Drought/dryness expanded and intensified, especially in New England, due to factors such as below-normal rainfall, below-normal 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?
- August and August-October: below-normal rainfall in August for interior areas; above-normal rainfall for Aug-Oct for about half the region closer to the coast; above-normal temperatures for all



# Drought Resources

## Northeast Drought Early Warning Update



July 15, 2022

### Drought Early Warning Update for the Northeast

**Drought Intensifies and Expands as Streamflow Declines and Crops are Stressed**

#### Key Points

- Severe Drought (D2) developed in northeastern Massachusetts and a small portion of southern New Hampshire
- Moderate Drought (D1) expanded in coverage across most of New England and emerged in western New York
- Abnormally Dry conditions (D0) expanded significantly to include most of New England and western and central New York
- Abnormally Dry conditions (D0) also expanded in southeastern New York state - including New York City

#### Accumulated Precipitation Departure from Normal

Green/black diamonds represent subsequent/missing values



Northeast DEWS Dashboard

Click a state to zoom maps below

#### Drought Status Update

July 21, 2022 - There was a mix of deterioration and improvement this week. Severe and moderate drought expanded in eastern Massachusetts, while moderate drought was introduced in central/western New York and abnormal dryness expanded in central New York. The deterioration was due to factors such as below-normal precipitation, reduced streamflow and groundwater levels, and declining soil moisture. However, heavy rainfall allowed moderate drought to shrink in small portions of Maine and eastern Vermont and pockets of abnormal dryness to ease in northern Vermont, southwestern Connecticut, and southeastern New York. The U.S. Drought Monitor released on July 21 showed 2% of the Northeast DEWS in severe drought, 35% in moderate drought, and 27% as abnormally dry compared to 2%, 35%, and 29%, respectively, last week.

#### US Drought Monitor (updated weekly)

July 19, 2022  
 Released Tuesday, Jul 19, 2022  
 12:00 AM EDT

U.S. Drought Monitor Class Change - Northeast DEWS  
 1 Week

#### Last USDM Week (ending 2022-7-19) ACIS Precipitation Maps

#### Current ACIS Precipitation Maps

Total Precipitation (inches)  
 July 20-26, 2022

ACS  
 Regional Climate Center

#### USGS Streamflow and Groundwater

Show USDM

7-Day Streamflow

Groundwater Status

Experiment - Percentile Classes		Experiment - Percentile Classes	
Low	High	Low	High
Multi-Metric	Multi-Metric	Multi-Metric	Multi-Metric
<10%	75-90%	<10%	75-90%
10-24%	25-74%	10-24%	25-74%
25-49%	50-74%	25-49%	50-74%
50-74%	75-90%	50-74%	75-90%
>90%	>90%	>90%	>90%

Data provided by USGS Hydrology - Streamflow - updated 2022-07-26

- ▼ NRCC SPI Maps
- ▼ Current ACIS Maps - SPI
- ▼ Current ACIS Maps - SPEI
- ▼ NRCC Gridded KBDI
- ▼ Experimental NWM Soil Moisture Maps
- ▼ Experimental NWM Streamflow Maps
- ▼ Evaporative Demand Drought Index Maps
- ▼ NOAA NCEP Outlooks

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



# Contact Information

- [nrcc@cornell.edu](mailto:nrcc@cornell.edu)

## Upcoming Webinars

- Tuesday, August 30 at 9:30am
  - Atlantic Hurricane Season Update and Outlook
- Thursday, September 29 at 9:30am
  - Seasonal Bird Migration



[www.nrcc.cornell.edu](http://www.nrcc.cornell.edu)