

# July Conditions & Northeast DEWS Discussion

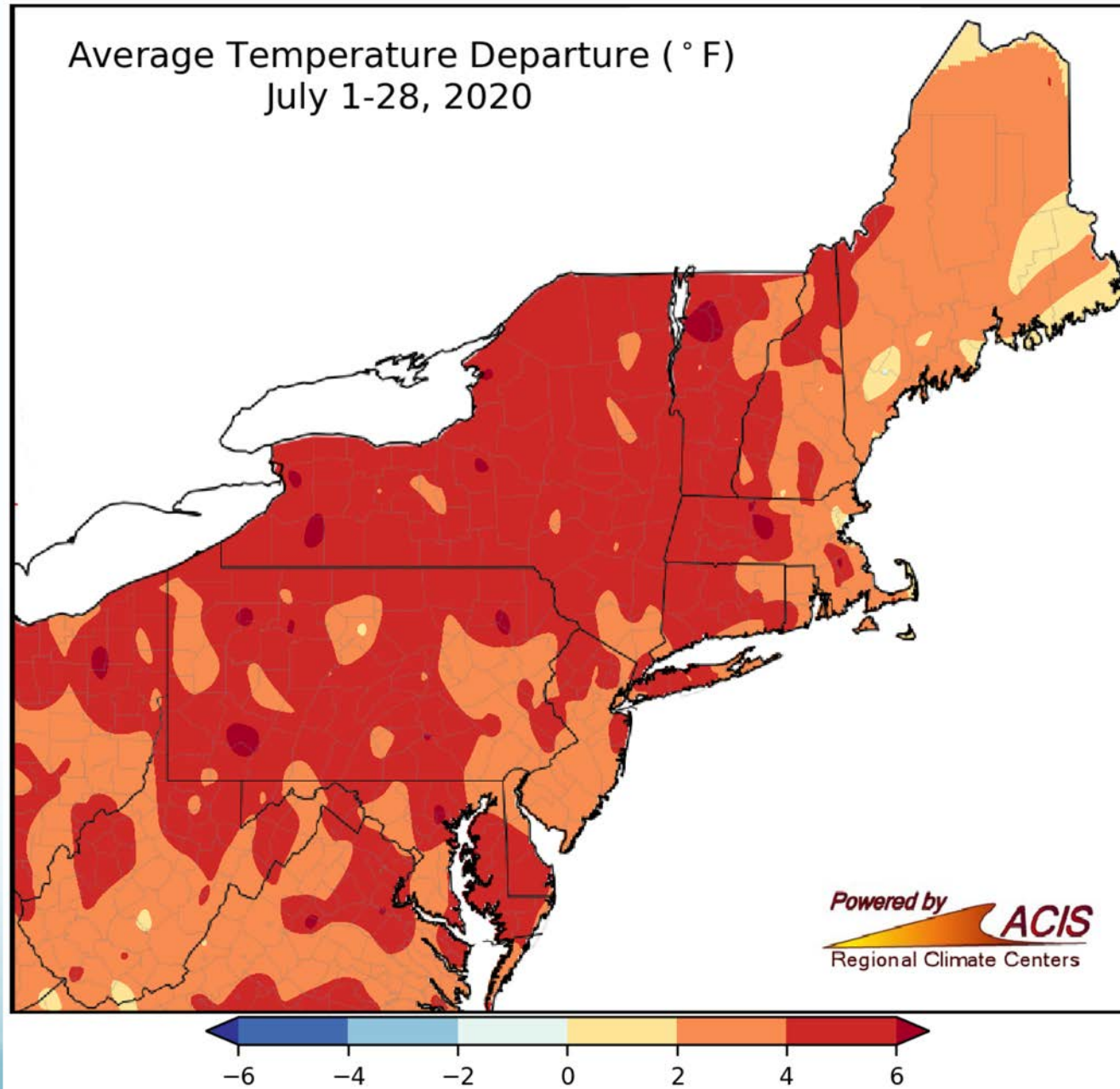
By: Samantha Borisoff, Climatologist  
Northeast Regional Climate Center



Northeast Regional  
Climate Center

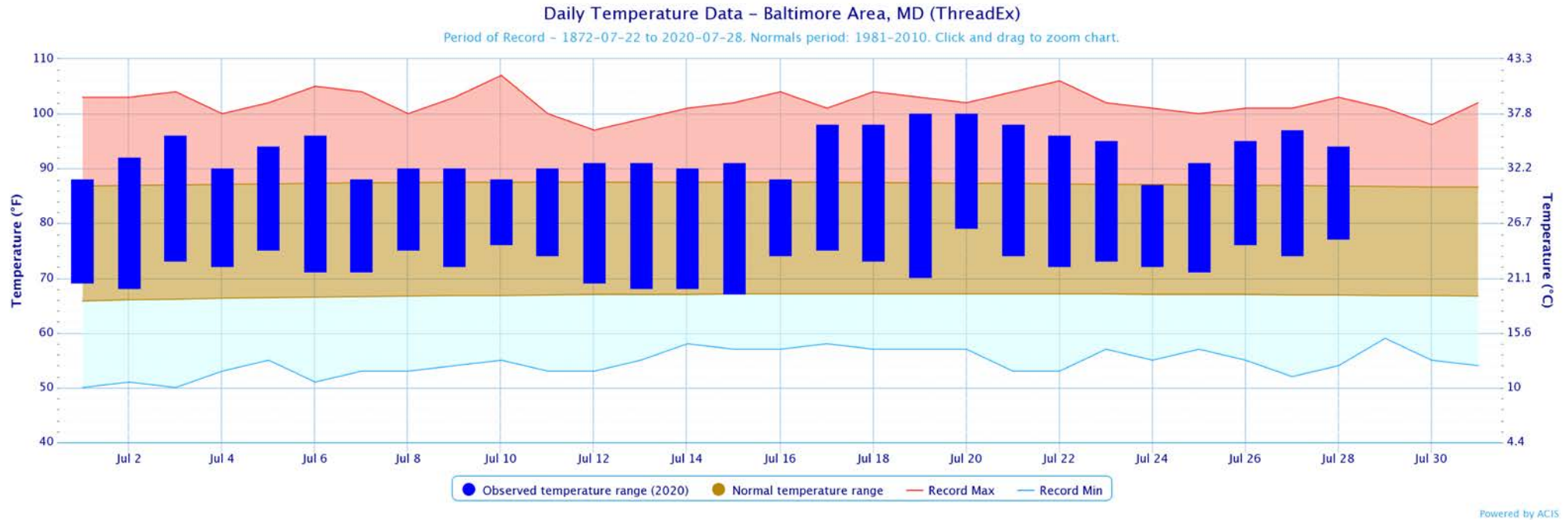


# July Temperatures



From near normal to more than 6°F above normal

# July Temperatures



# July

# Temperatures

## Time Series Summary for Baltimore Area, MD (ThreadEx)

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

Rank	Year-Month	Mean Avg Temperature	Missing Count
1	2020-07	82.7	3
2	2011-07	81.7	0

## Time Series Summary for Syracuse Area, NY (ThreadEx)

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

Rank	Year-Month	Mean Avg Temperature	Missing Count
1	2020-07	77.6	3
2	1955-07	76.6	0
-	1921-07	76.6	0

Likely the all-time hottest month on record for several sites

## Time Series Summary for Washington Area, DC (ThreadEx)

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

Rank	Year-Month	Number of Days Max Temperature $\geq 90$	Missing Count
1	2020-07	27	2
2	2011-07	25	0
3	1993-07	24	0
-	1987-07	24	0

## Time Series Summary for Avoca Area, PA (ThreadEx)

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

Rank	Year-Month	Number of Days Max Temperature $\geq 90$	Missing Count
1	2020-07	16	2
2	2016-07	15	0
3	1955-07	14	0

Washington, D.C. & Scranton – greatest number of days with a high of at least 90°F for any month





## Number of Consecutive Days Max Temperature $\geq$ 90 for Buffalo Area, NY (ThreadEx)

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

Rank	Run Length	Dates
1	8	2020-07-03 through 2020-07-10
2	7	1988-07-04 through 1988-07-10
3	5	1963-06-27 through 1963-07-01
-	5	1947-08-10 through 1947-08-14

## Maximum 1-Day Mean Max Temperature for Buffalo Area, NY (ThreadEx)

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

Rank	Value	Ending Date
1	98.0	2020-07-09
2	97.0	2020-07-10
-	97.0	1995-07-15
-	97.0	1988-07-06

Portland Jetport – hottest low  
temperature on record



# July Temperatures

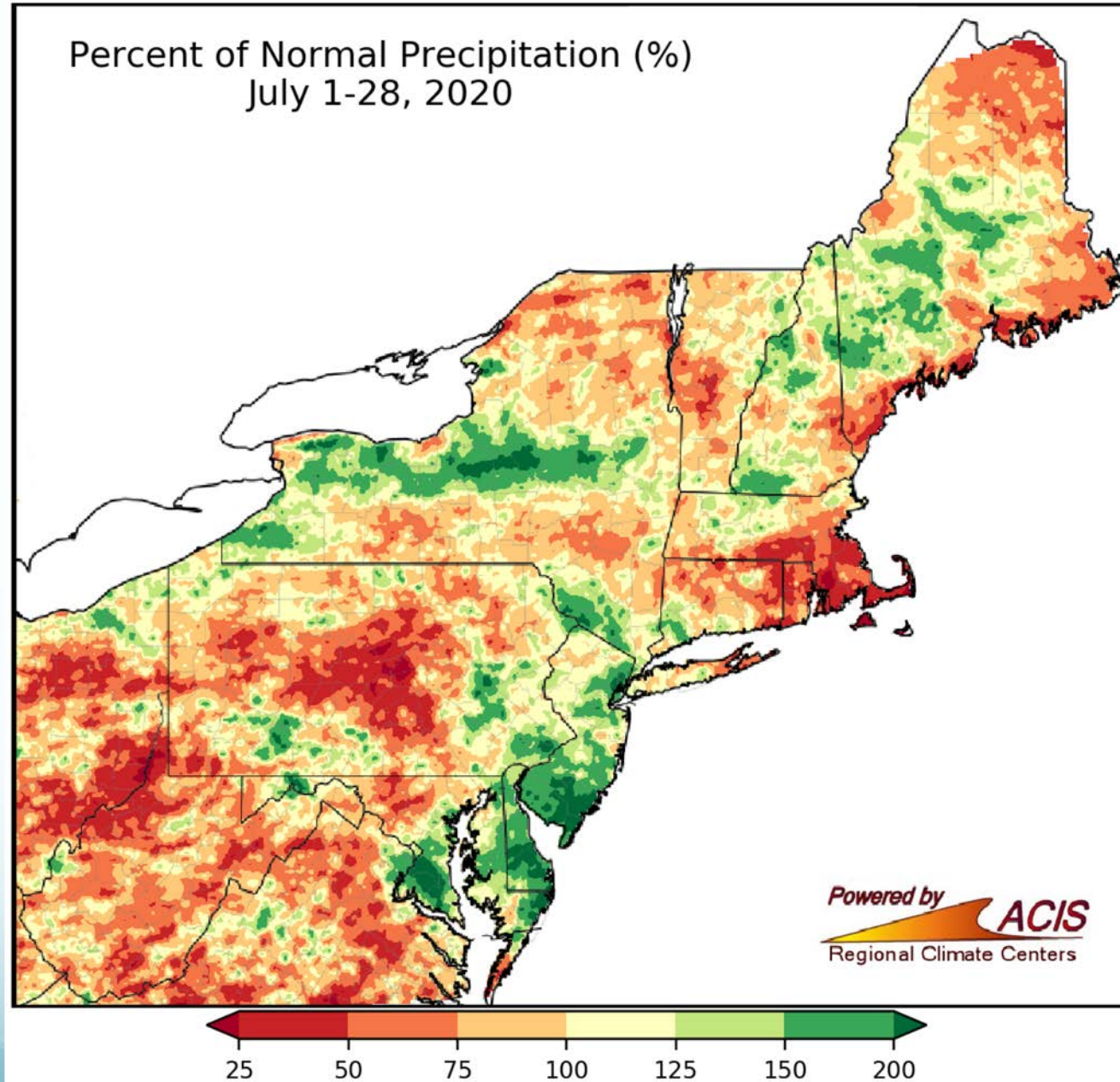
Buffalo – longest streak of days  
with a high of at least 90°F

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

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

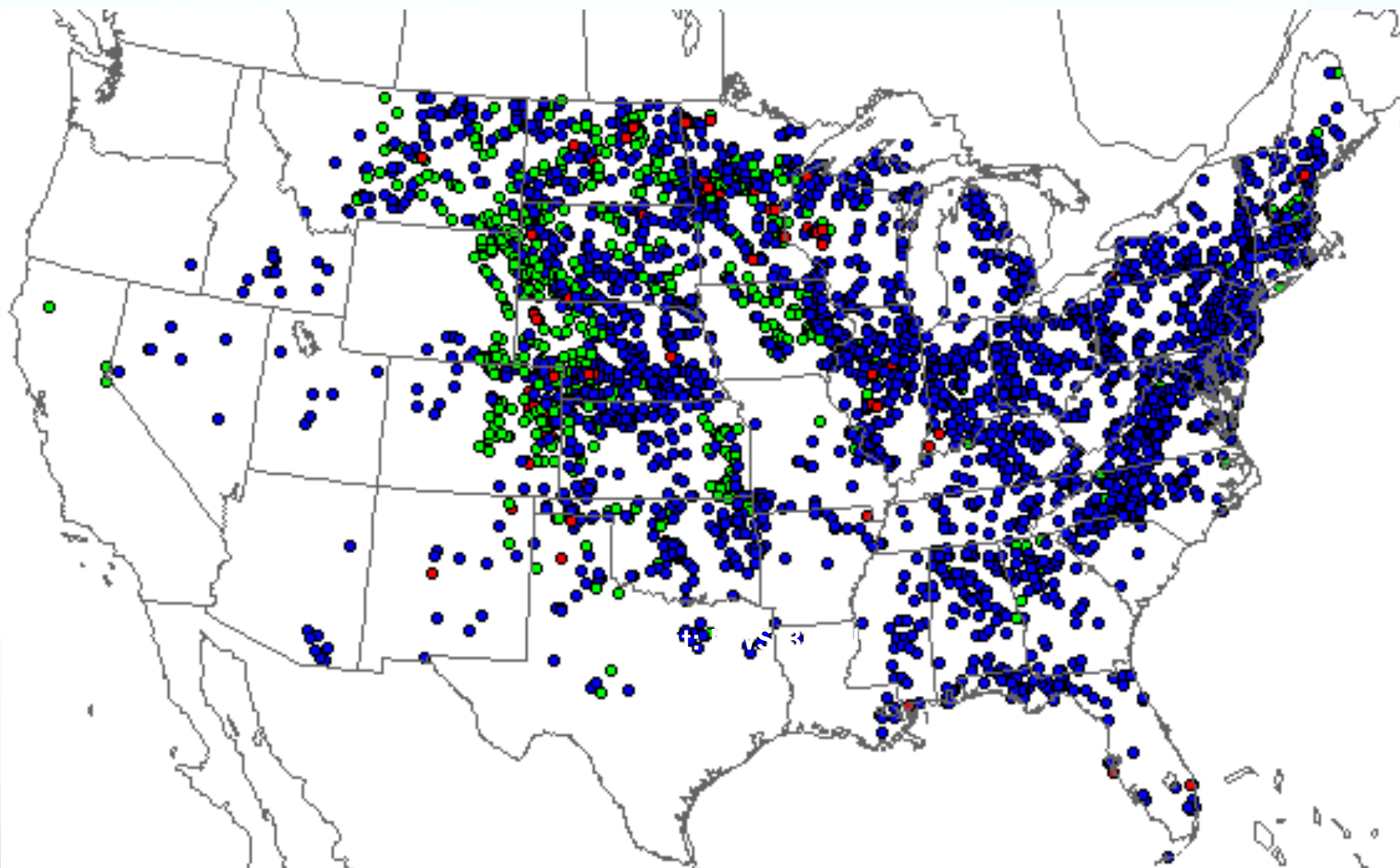
Rank	Value	Ending Date
1	78.0	2020-07-27
2	76.0	2019-07-21
-	76.0	2011-07-22

# July Precipitation



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

# July Severe Weather



**PRELIMINARY SEVERE WEATHER  
REPORT DATABASE (ROUGH LOG)**

NOAA/Storm Prediction Center Norman, Oklahoma

**Severe Weather Reports  
July 01, 2020 - July 24, 2020**

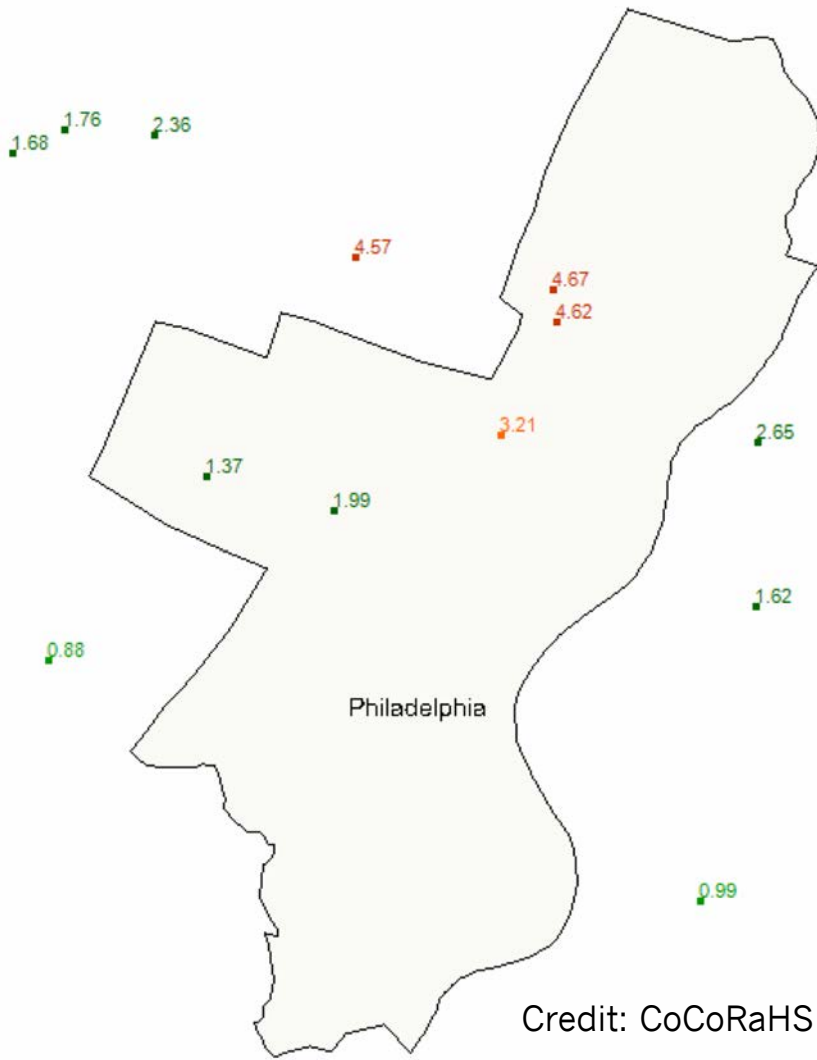
Updated: Friday July 24, 2020 07:47 CT





# July Flash Flooding

Northern suburbs of Philadelphia -  
3-6 inches of rain in 2 hours



Severe flash flooding  
Flash Flood Emergency



## Flash Flood Emergency

Valid Until  
7:00 PM EDT Monday  
July 6, 2020

### Safety Information

- Avoid walking or driving through flood waters!
- Move immediately to higher ground!

### Potential Exposure

- Population: 3,831,332
- Schools: 881
- Hospitals: 74

**! This is a life threatening situation. Seek higher ground now!**

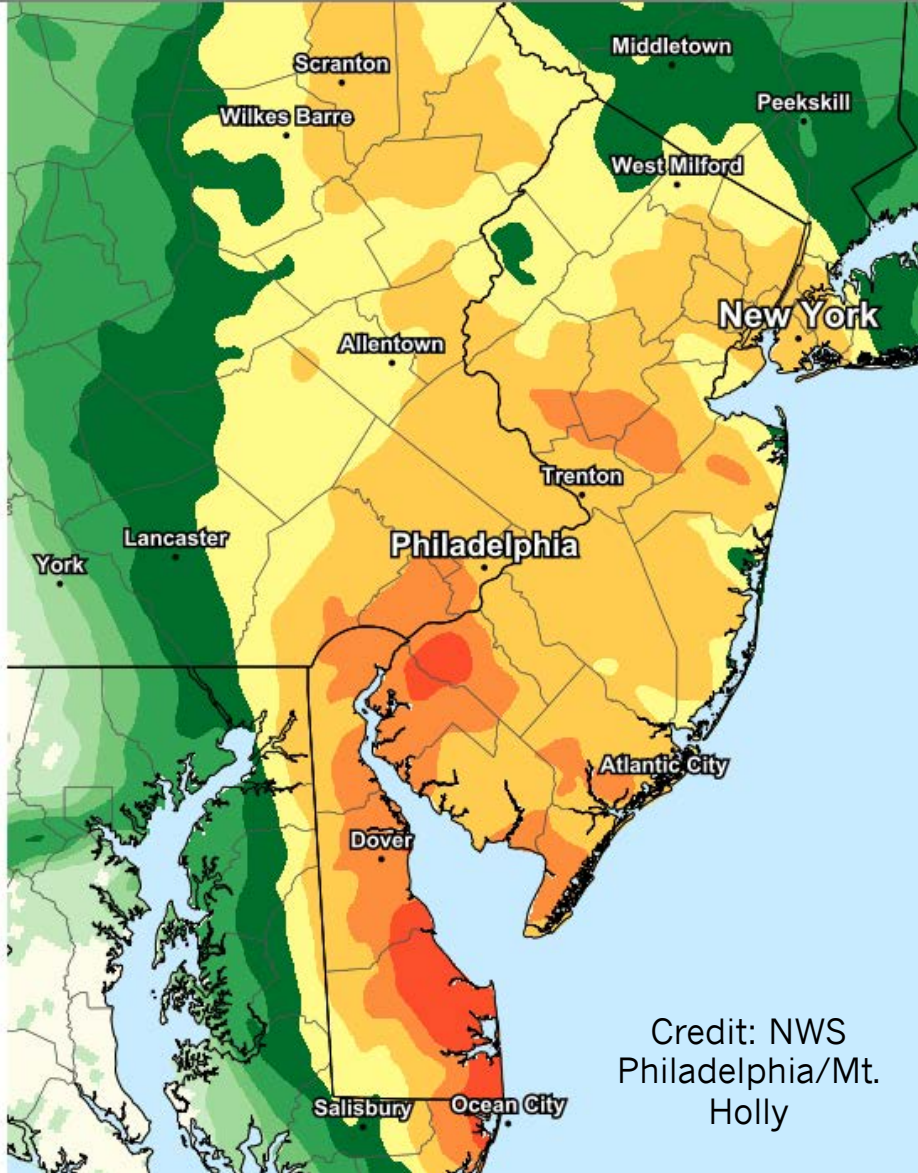
@NWS\_MountHolly





# Observed Precipitation

Valid Ending Saturday July 11th, 2020 at 11 AM EDT



Credit: NWS Philadelphia/Mt. Holly

Graphic Created July 11th, 2020 11:08 AM EDT

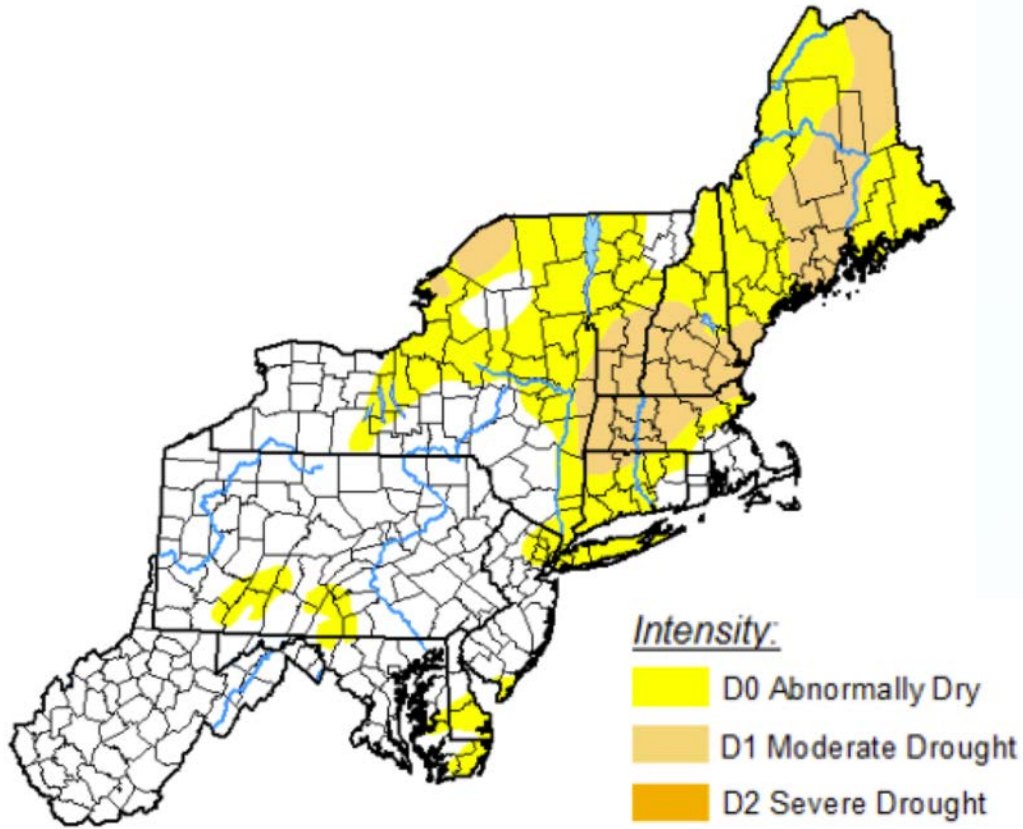


# Tropical Storm Fay

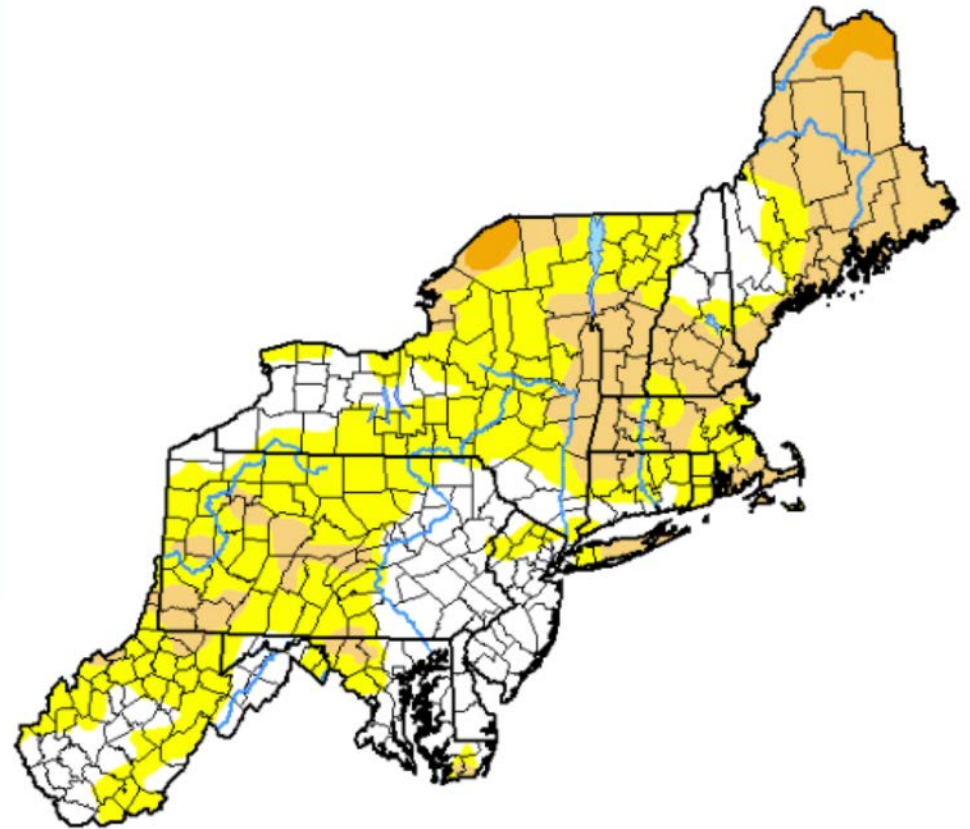
Earliest "F" named storm on record

Greatest rain totals of 3-7 inches

# Drought Monitor



June 30:  
14% of the region was in a  
moderate drought  
31% was abnormally dry



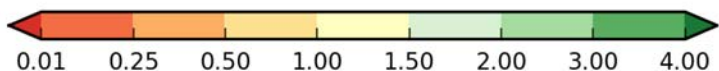
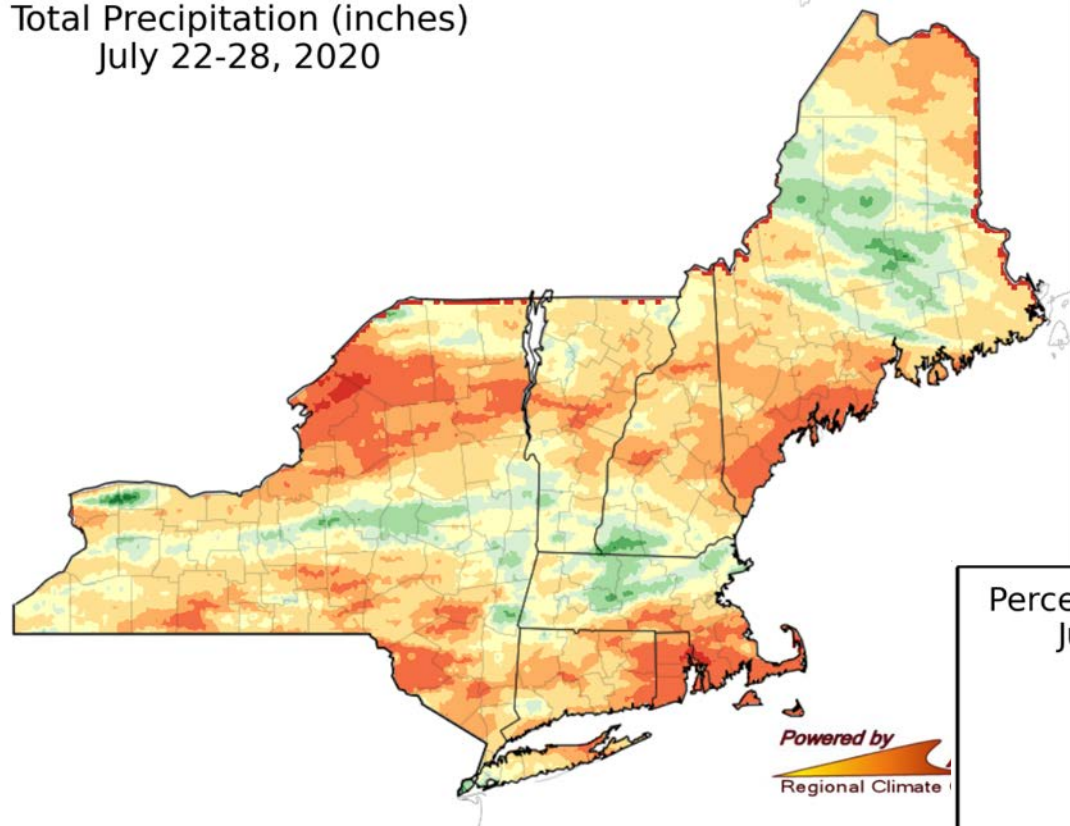
July 28:  
29% of the region was in a  
moderate or severe drought  
42% was abnormally dry



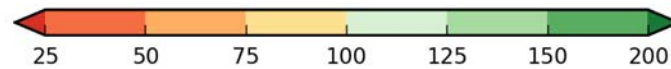
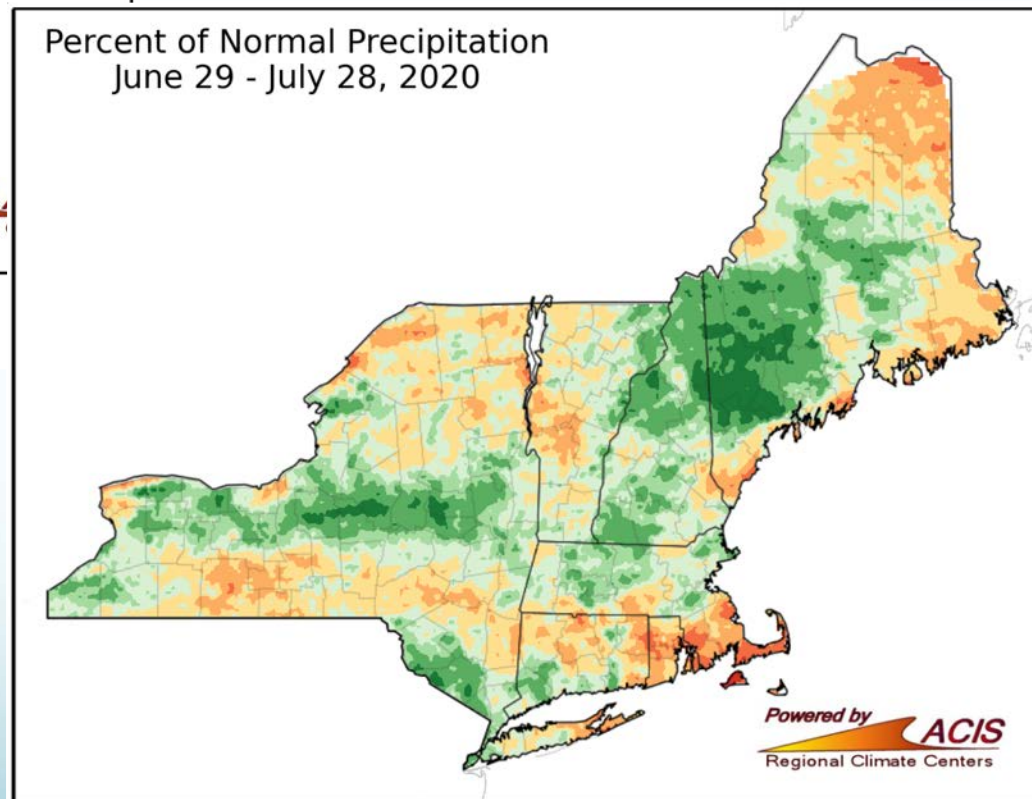


# Precipitation

Total Precipitation (inches)  
July 22-28, 2020



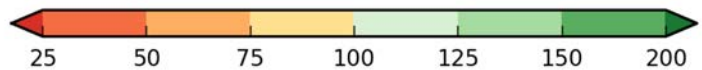
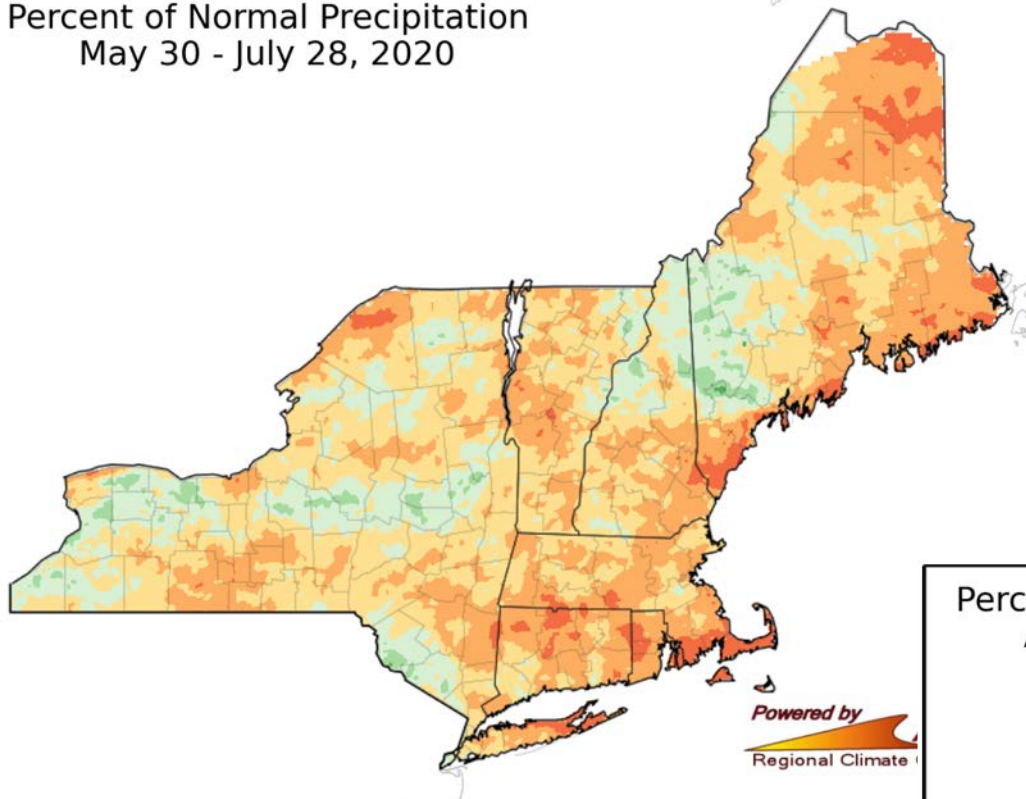
Percent of Normal Precipitation  
June 29 - July 28, 2020



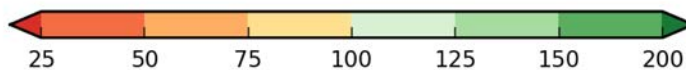
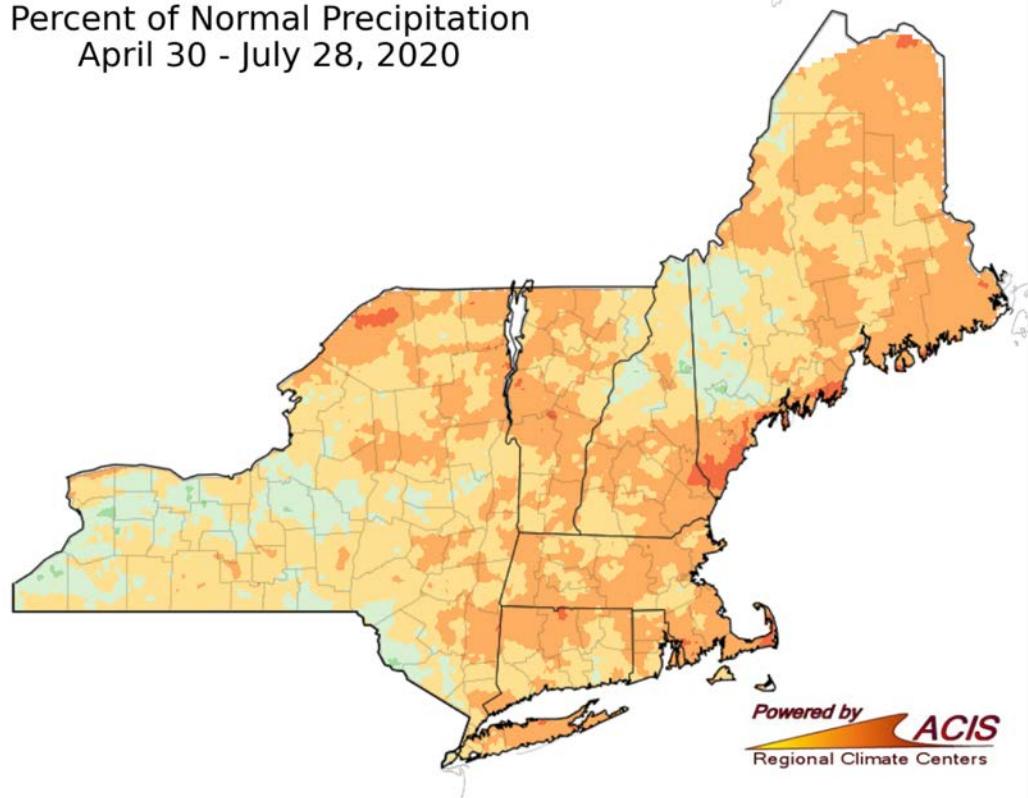


# Precipitation

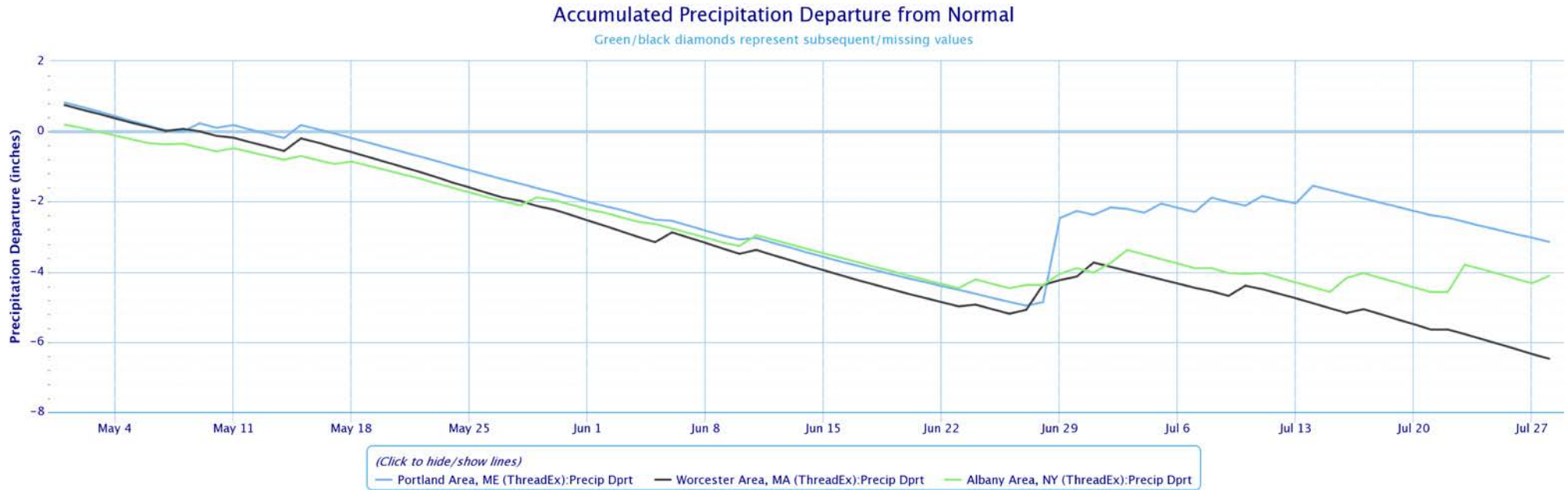
Percent of Normal Precipitation  
May 30 - July 28, 2020



Percent of Normal Precipitation  
April 30 - July 28, 2020



# Precipitation

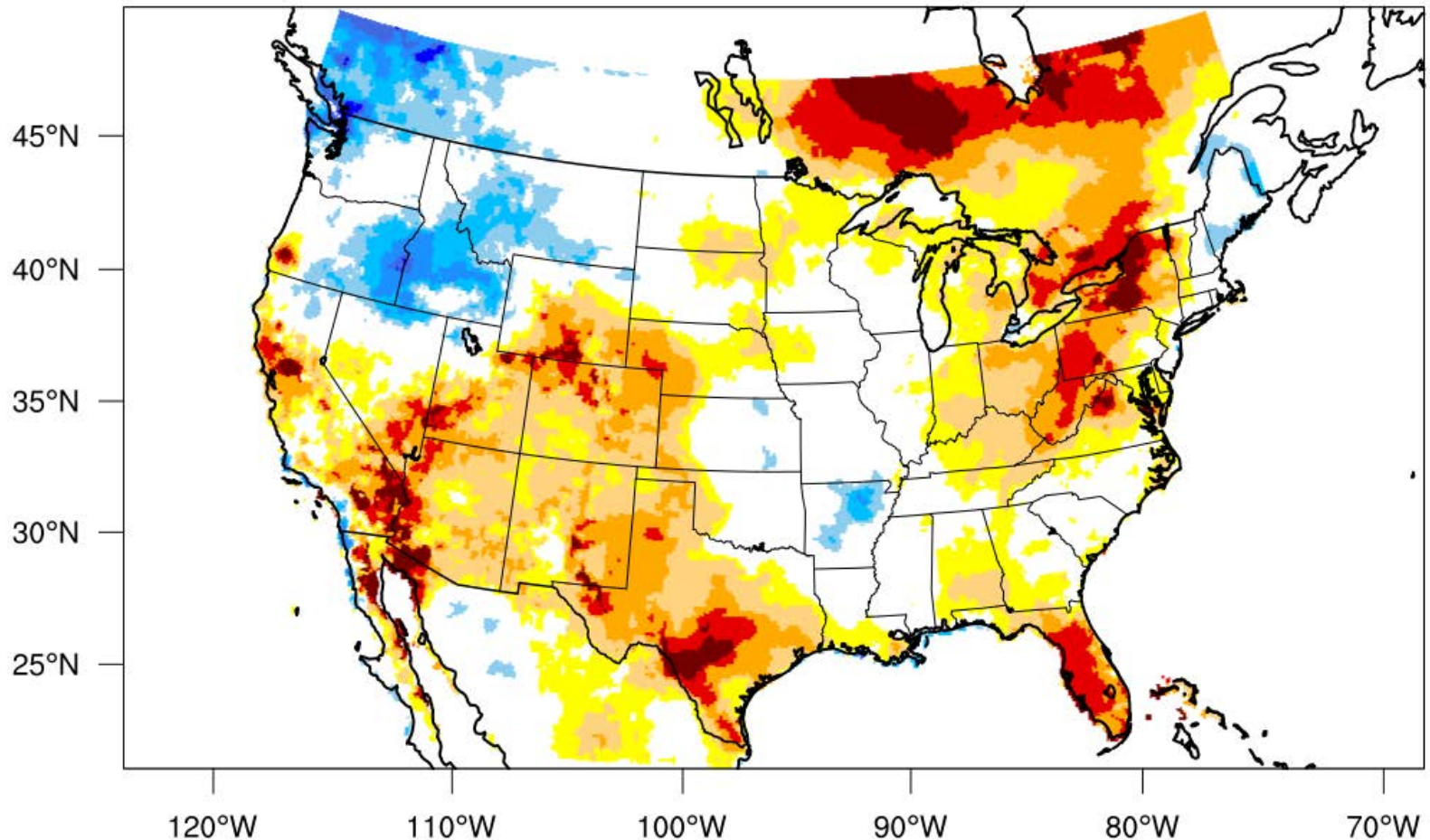


Powered by ACIS



# Evap. Drought Demand Index

1-month EDDI categories for July 25, 2020



Drought categories



Wetness categories



100% 98% 95% 90% 80% 70% 30% 20% 10% 5% 2% 0%

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

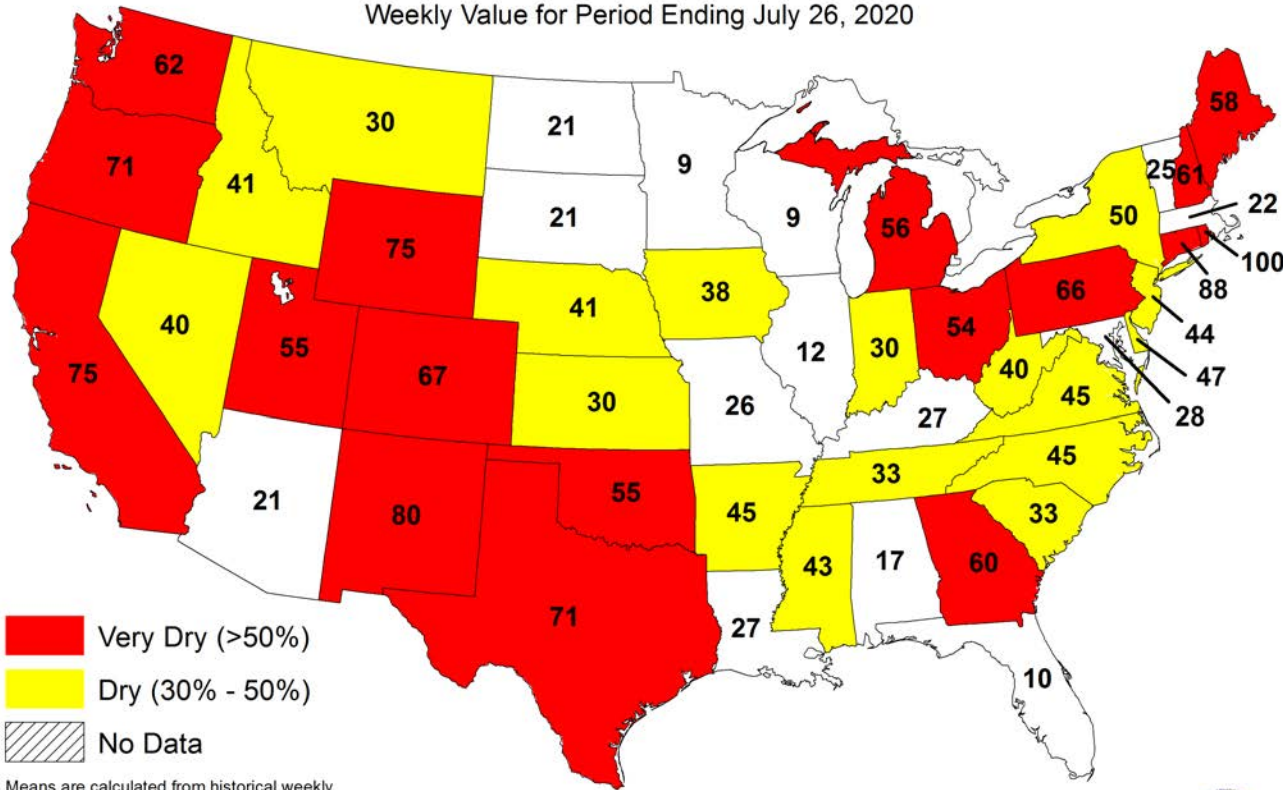


Generated by NOAA/ESRL/Physical Sciences Laboratory



# Soil Moisture

USDA Topsoil Moisture by Short-Very Short Percent of State Area  
Weekly Value for Period Ending July 26, 2020

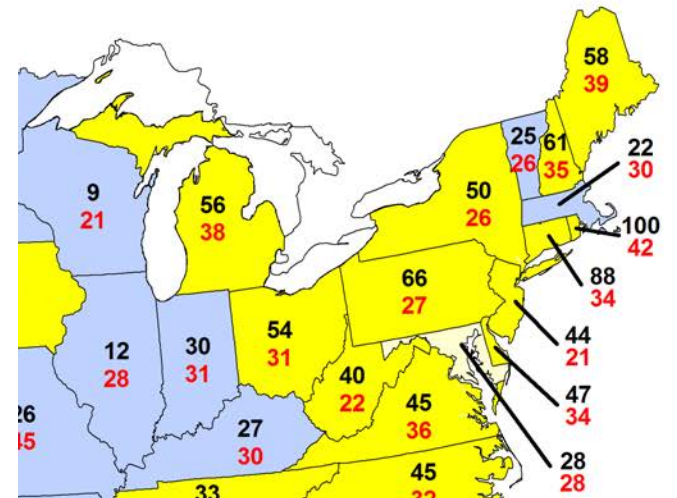


- Very Dry (>50%)
- Dry (30% - 50%)
- No Data

Means are calculated from historical weekly data published by USDA/NASS using the closest date to the equivalent date for this year.

Results are based on the short and very short percentages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.

Short-Very Short mean  
for July 26, 2020



## Current 10-Year Mean

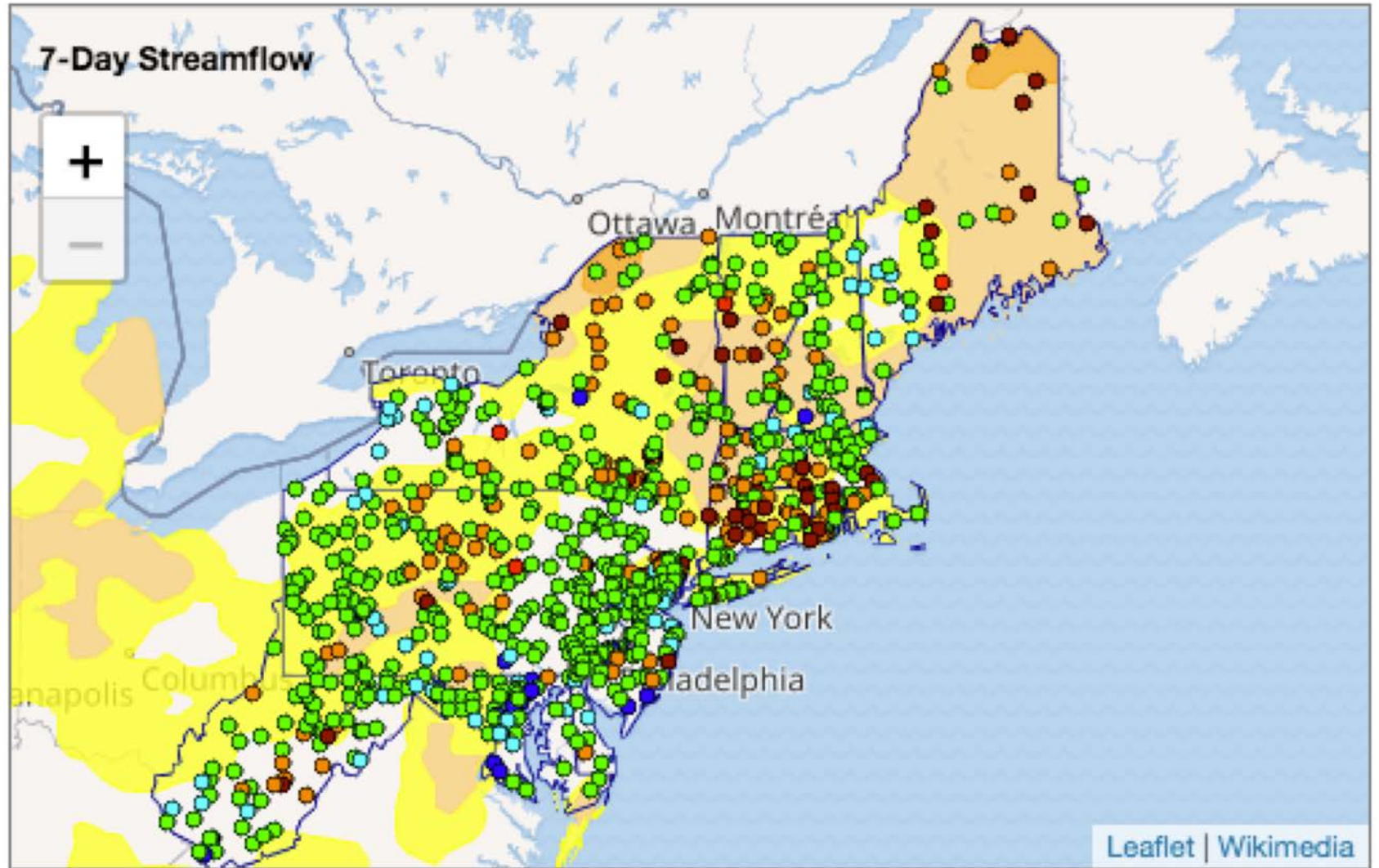
Means are calculated from historical weekly data published by USDA/NASS using the closest date to the equivalent date for this year.

Results are based on the short and very short percentages of topsoil moisture (upper 6 inches) reported by the USDA. Reports are based on subjective observations.

- Drier Than 10-Year Mean
- Wetter Than 10-Year Mean
- Equal to 10-Year Mean
- Insufficient Data



# Streamflow



Explanation - Percentile Classes

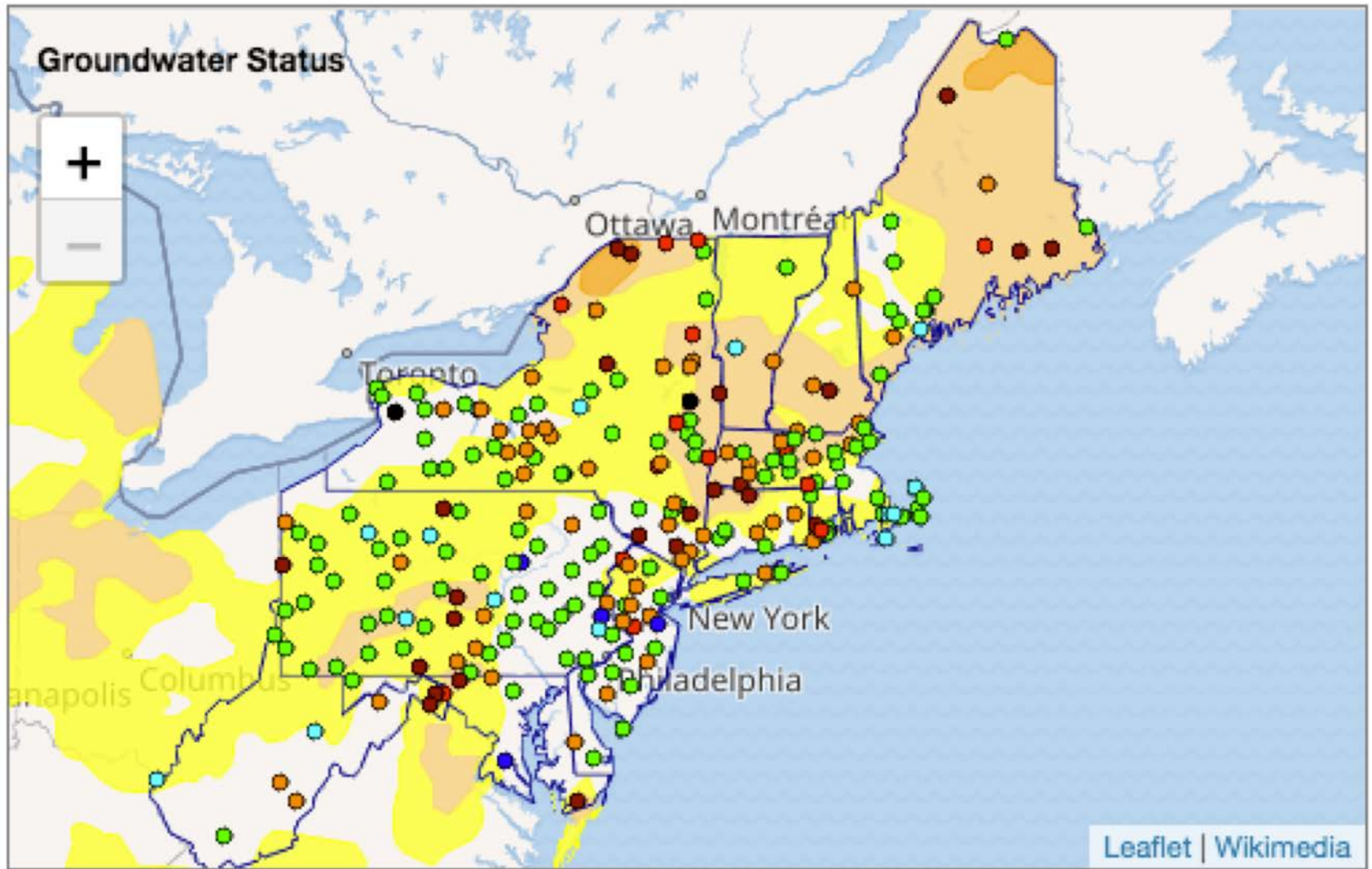
Low	Much below normal	Below normal	Normal	Above normal	Much above normal		High
	<10%	10-24%	25-75%	76-90%	>90%		

Data provided by [USGS WaterWatch - Streamflow](#); updated 2020-07-29.





# 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 Watch - CRN](#); updated 2020-07-29.





# Impacts

On July 2, the water level of Lake Champlain at Burlington, VT, was around 95 feet, more than a foot below normal and a level more typical of mid-to-late August.

In northern, central, and western New York, some crops continued to experience moisture stress, with slow growth of corn, soybeans, and hay. In a few locations, corn is curling and turning blue.

As of June 30, water levels of Aquarion's Greenwich and Bridgeport, CT, reservoirs were at or below their 2016 levels.

Vermont officials reported a record number of calls about black bears in June due in part to dry conditions reducing the bears' food supply.

Some Maine farmers noted that crops such as corn were behind schedule.

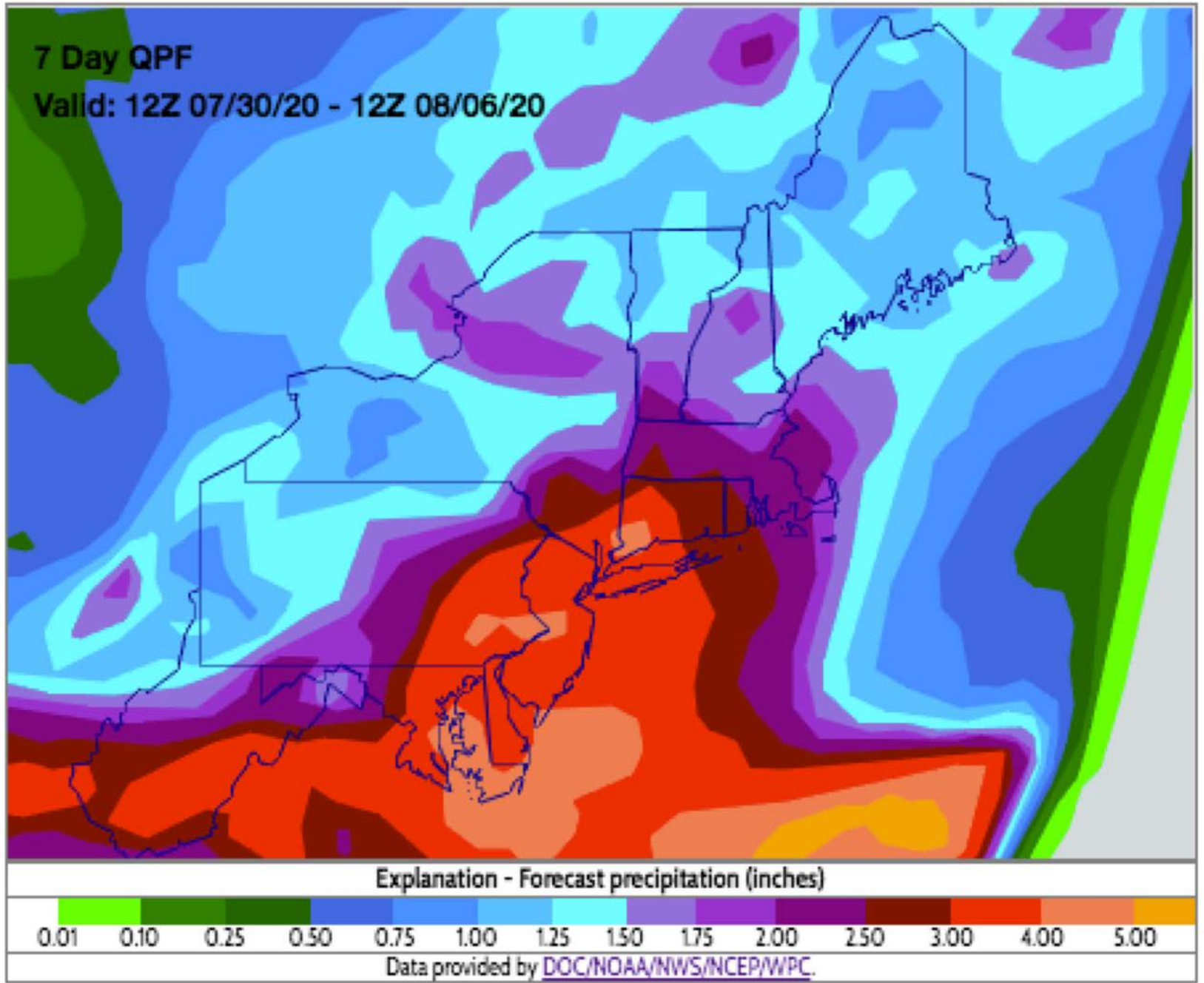
Dry conditions helped the browntail moth caterpillar, which defoliates trees and causes a skin rash, to spread farther into central Maine.

As of July 8, water restrictions were in place for 117 water systems in New Hampshire.

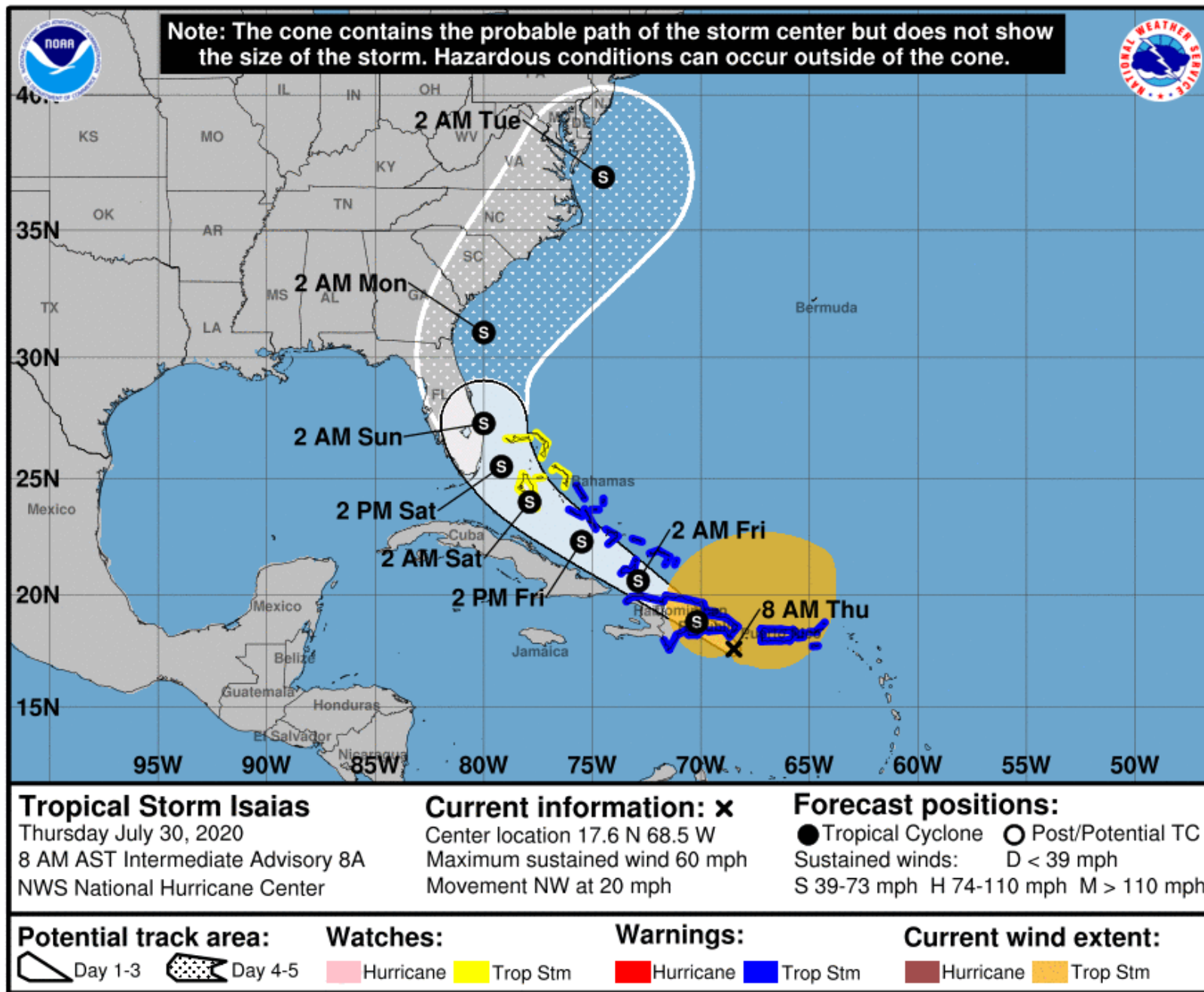
Substantial rainfall over the past week in parts of Massachusetts improved the condition of crops and contributed to fewer wildfires ignited by lightning.



# Precipitation Forecast

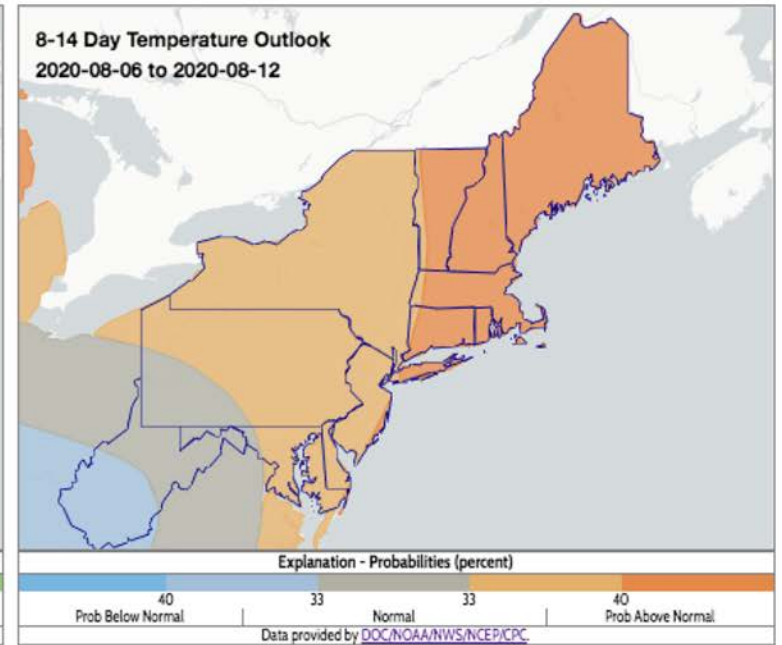
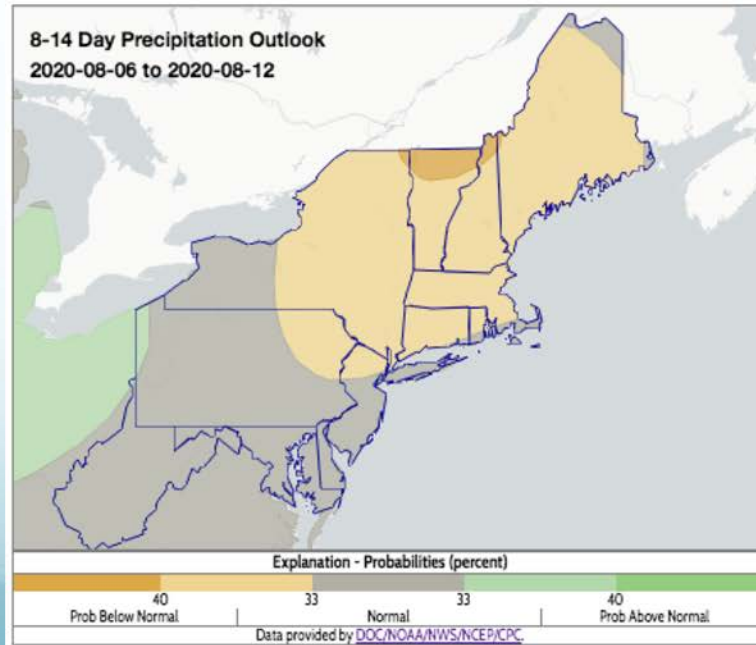
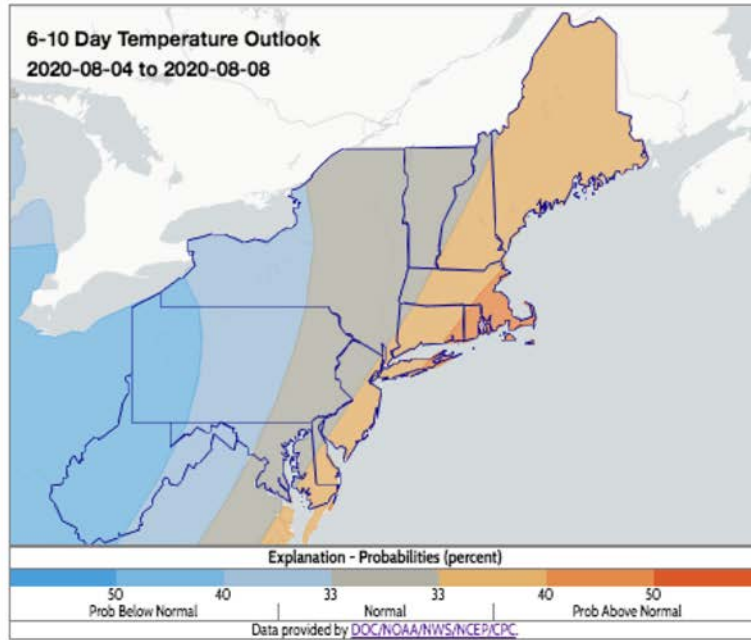
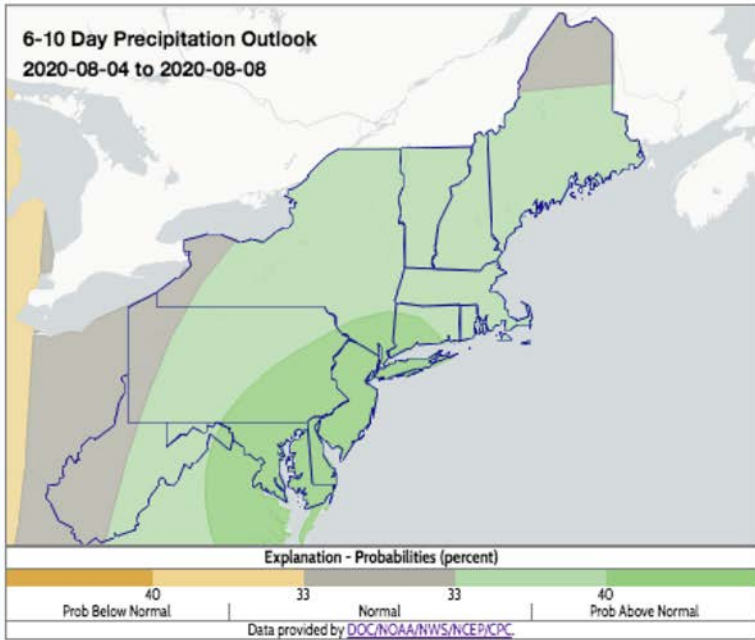


# Precipitation Forecast

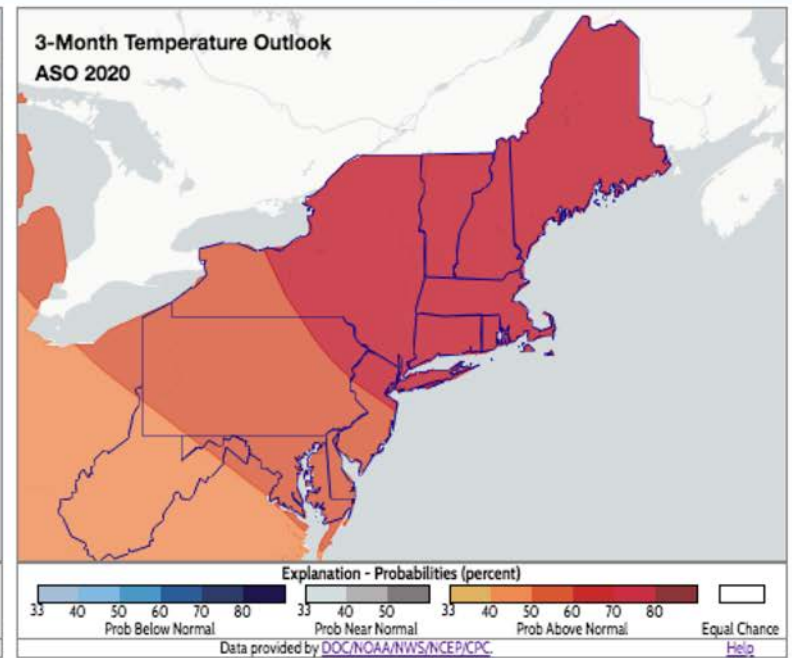
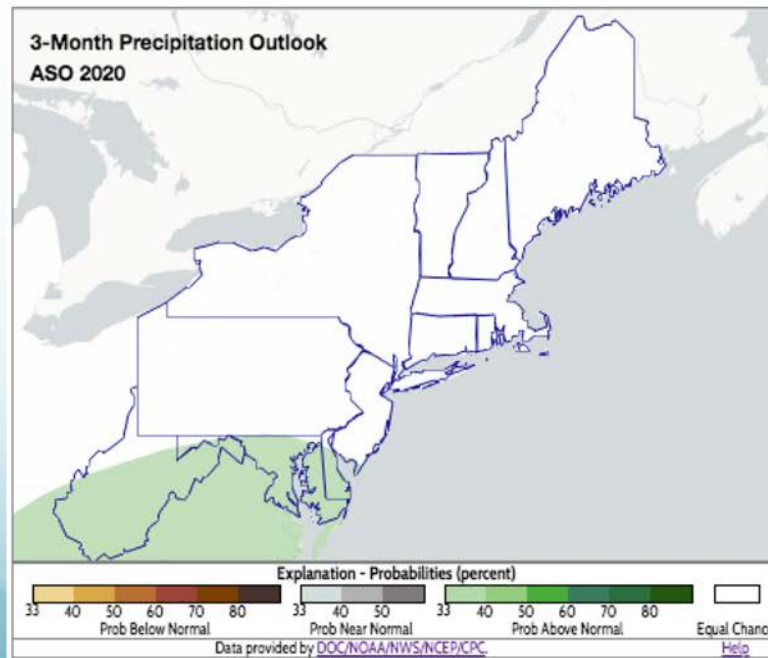
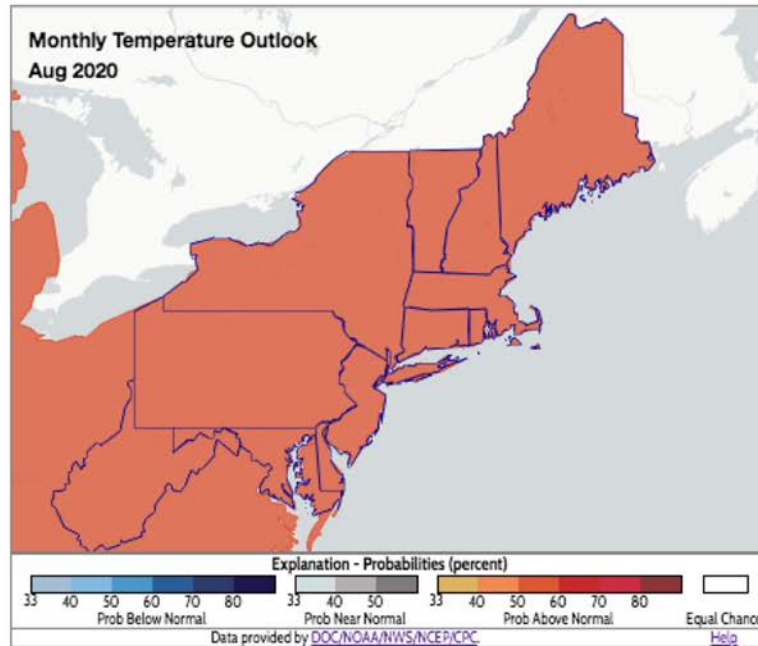
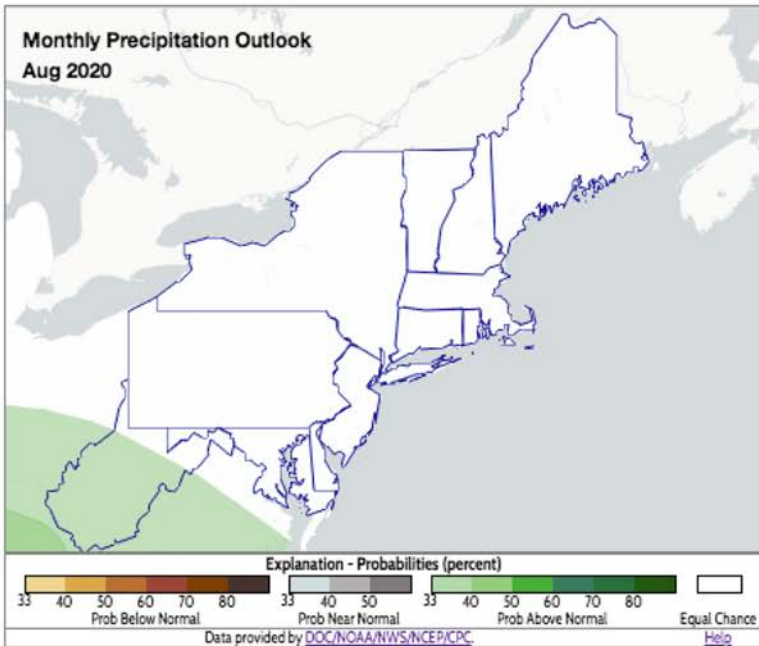




# Short-term Outlooks



# Monthly & 3-Month Outlooks



# Contact Information

- [nrcc@cornell.edu](mailto:nrcc@cornell.edu)
- 607-255-1751

## Upcoming Webinars

- Thursday, August 27 at 9:30am
  - Hurricane Outlook & Season Update
- Tuesday, September 29 at 9:30am
  - earth system models and applications for climate and marine fisheries
- Thursday, October 29 at 9:30am
  - Drought projects



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