

# Delaware River Basin Commission

## Hydrologic Conditions

***Anthony Preucil***

Water Resource Scientist

Water Management Advisory Committee

October 21, 2020

Presented to an advisory committee of the DRBC on October 21, 2020.  
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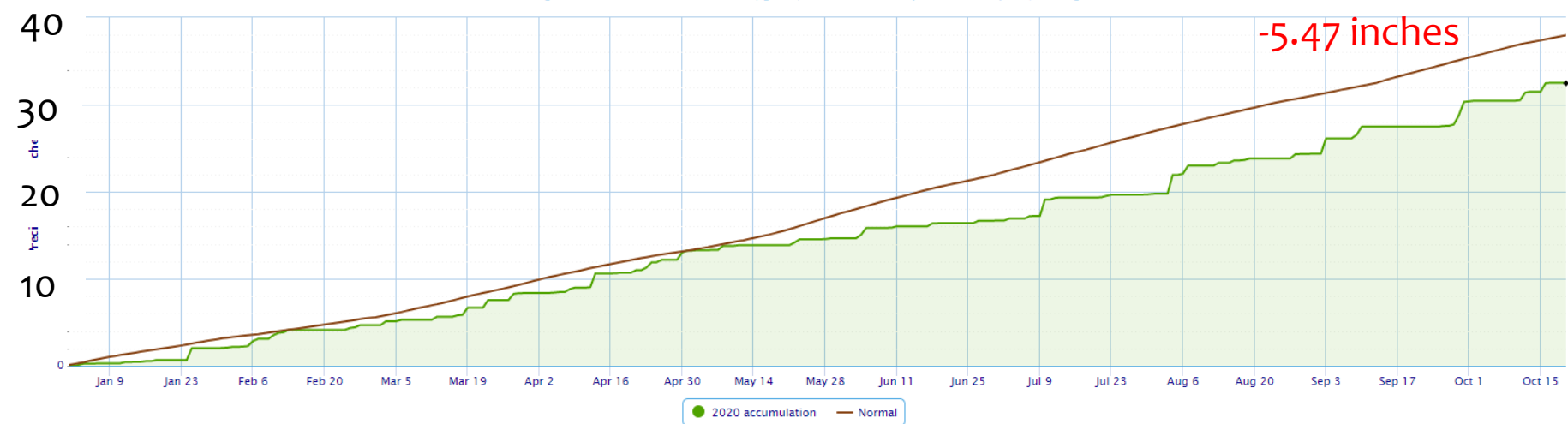
**Delaware River Basin Commission**

DELAWARE • NEW JERSEY  
PENNSYLVANIA • NEW YORK  
UNITED STATES OF AMERICA

# Precipitation – Trenton

Accumulated Precipitation – TRENTON-MERCER AIRPORT, NJ

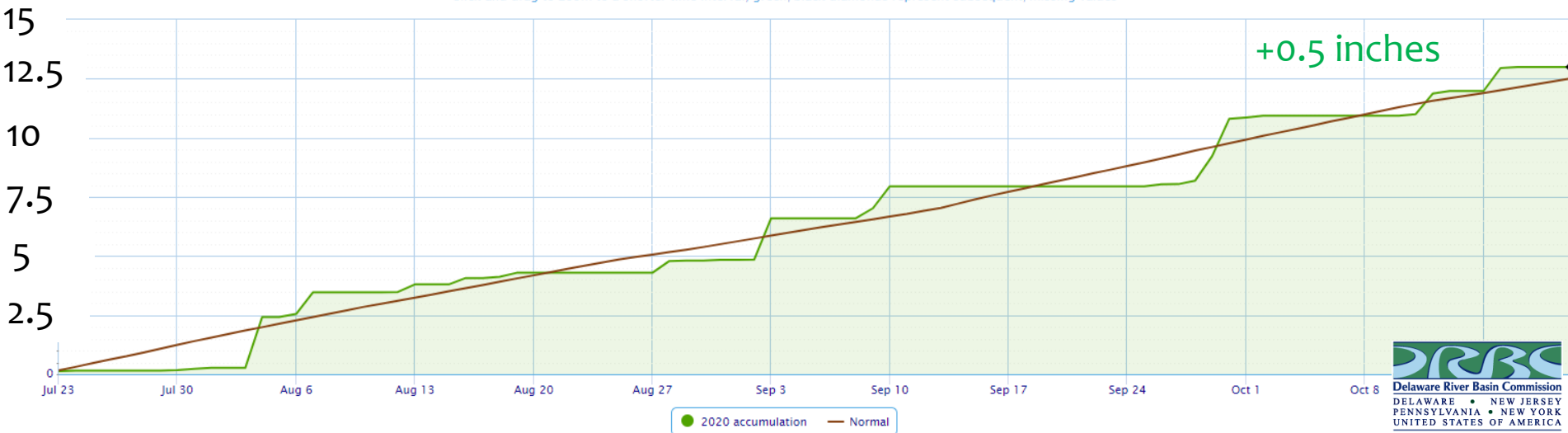
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



**Precipitation Accumulation**  
Left: Year to Date  
Below: Past 90 days

Accumulated Precipitation – TRENTON-MERCER AIRPORT, NJ

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

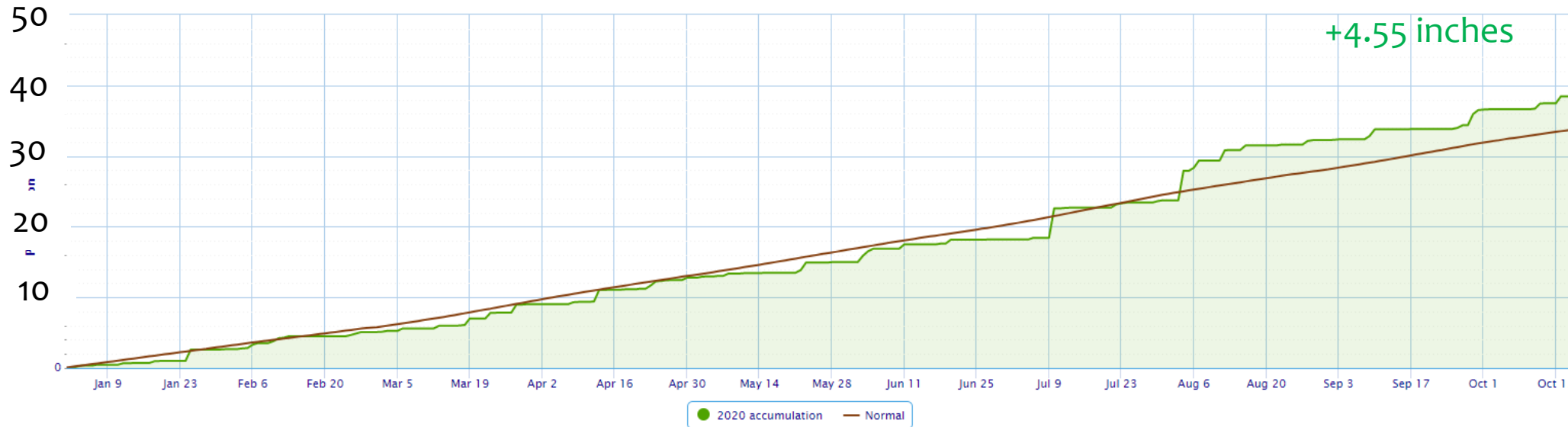


\* Source: ACIS

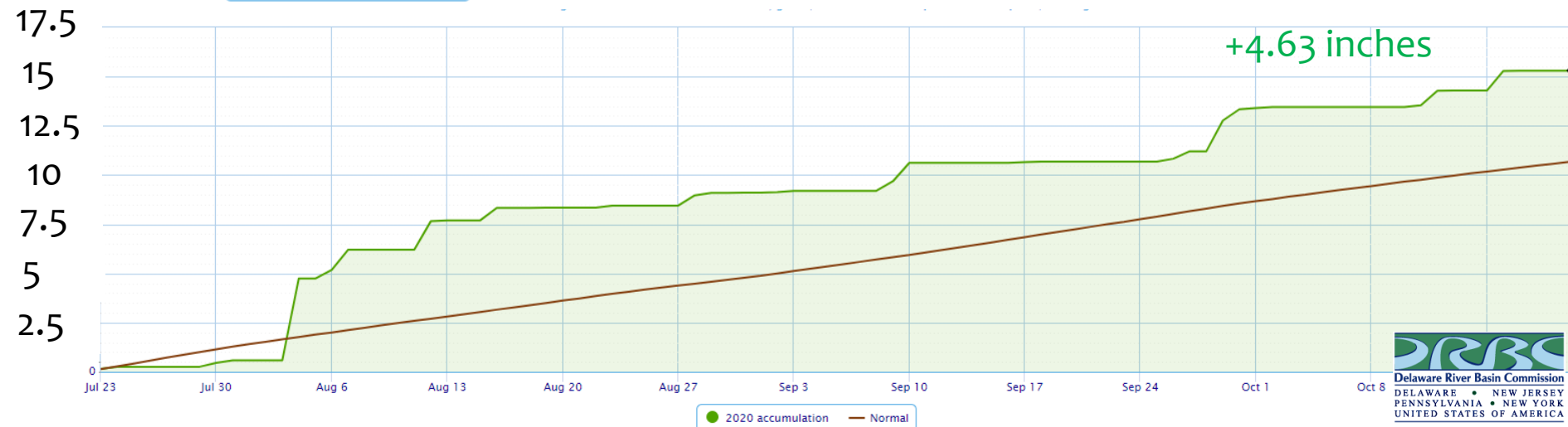
# Precipitation - Philadelphia

Accumulated Precipitation - PHILADELPHIA INTL AP, PA

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



**Precipitation Accumulation**  
Left: Year to Date  
Below: Past 90 days

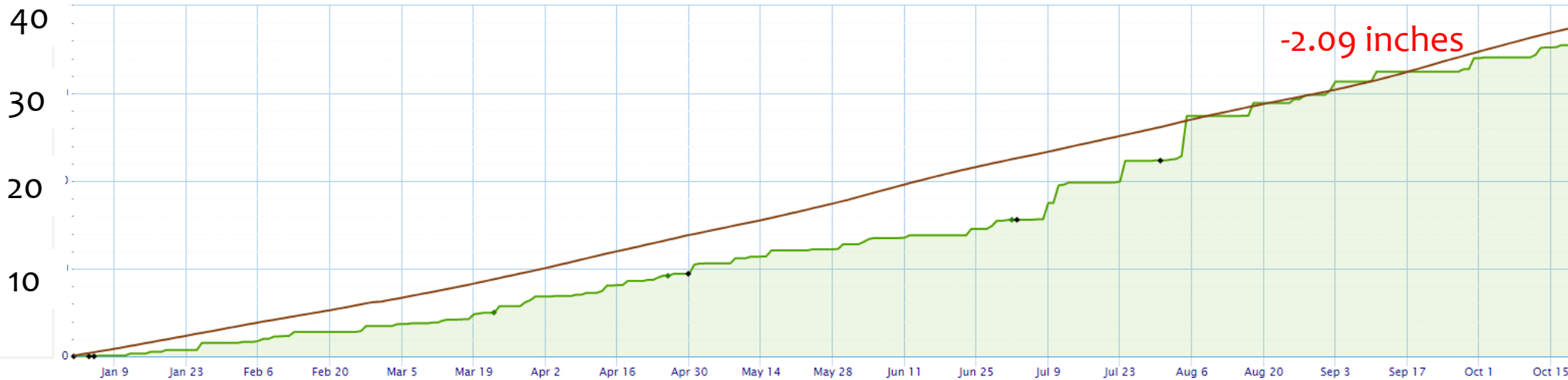


\* Source: ACIS

# Precipitation – Port Jervis

Accumulated Precipitation – PORT JERVIS, NY

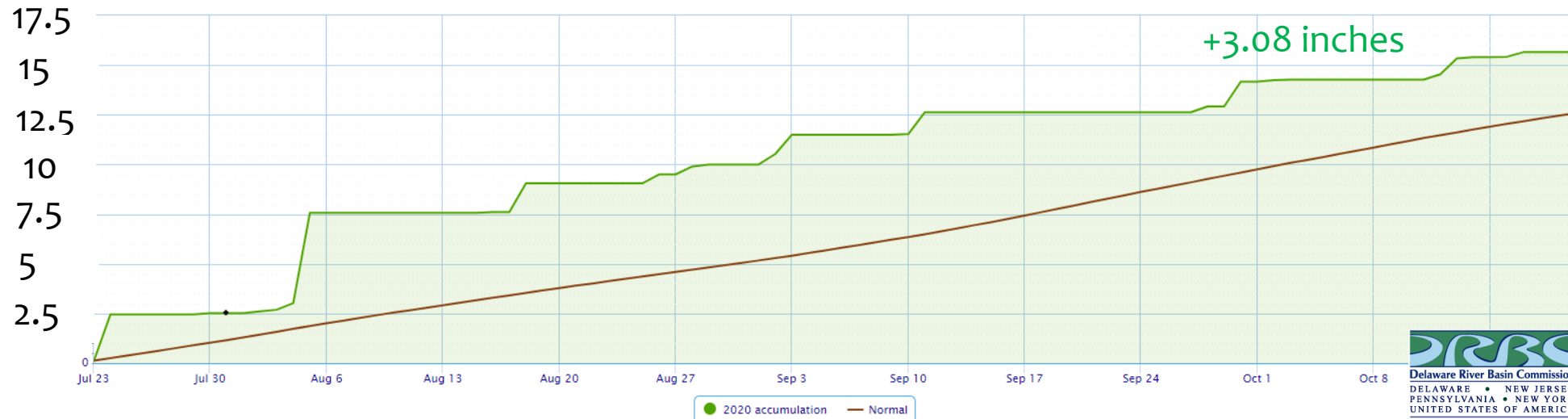
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



**Precipitation Accumulation**  
Left: Year to Date  
Below: Past 90 days

Accumulated Precipitation – PORT JERVIS, NY

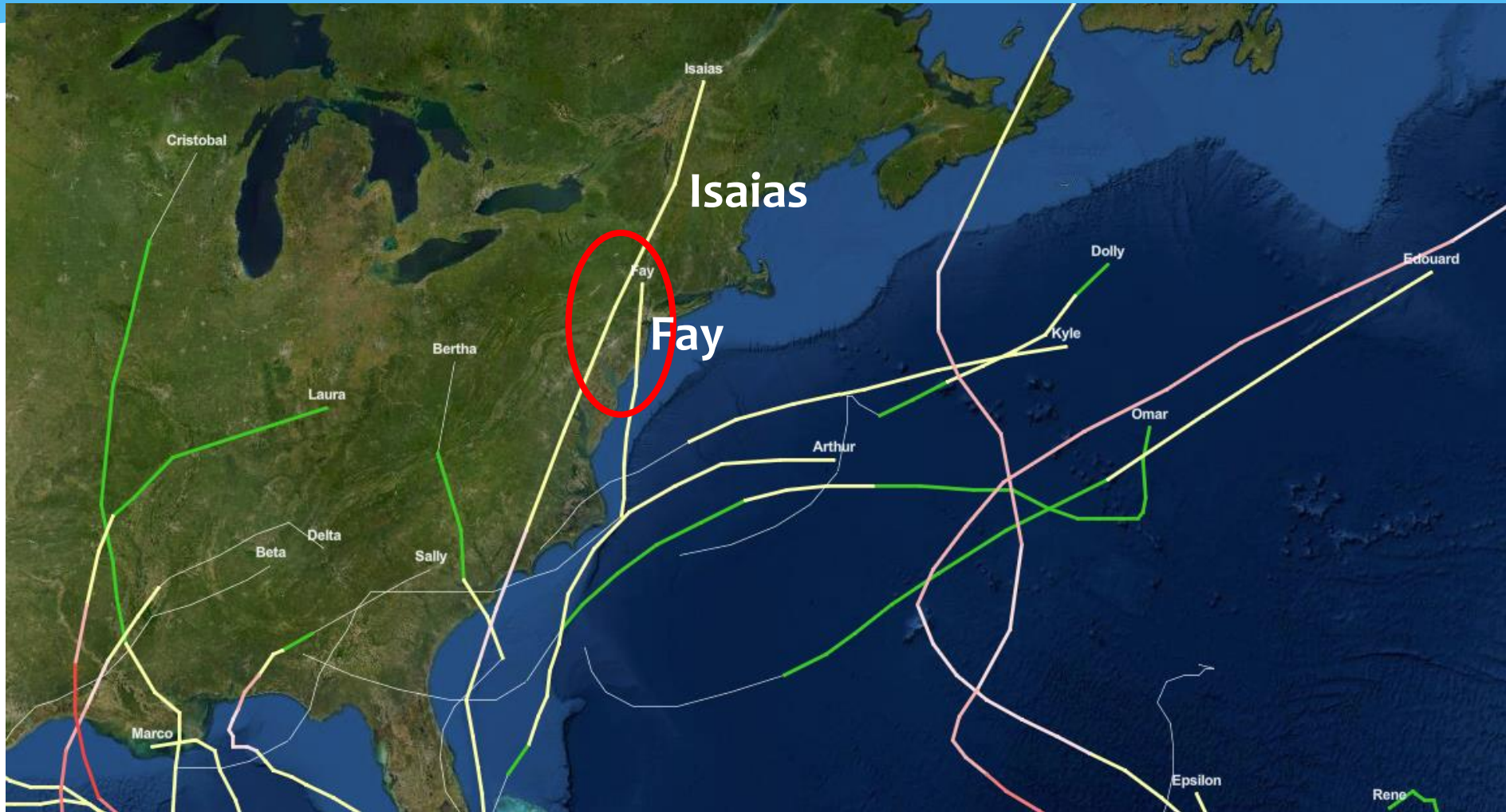
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



\* Source: ACIS



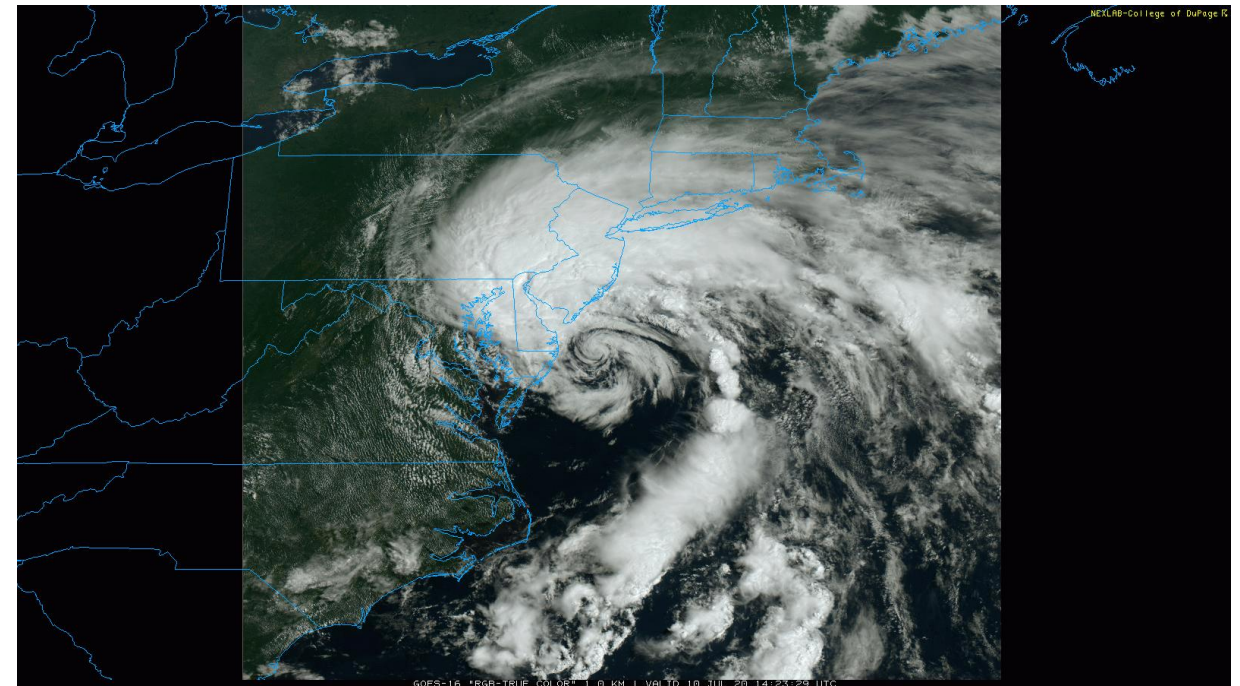
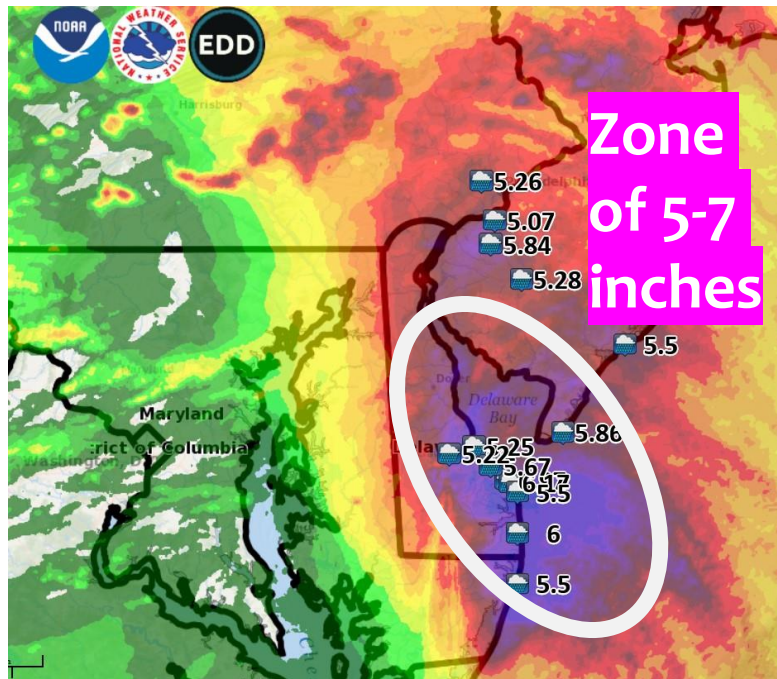
# Tropical Activity in 2020 - DRB



Source: <http://tropicalatlantic.com/>

# Tropical Activity in 2020 - DRB

- \* Fay
- \* First tropical storm to make landfall in NJ since Irene in 2011
- \* Made Landfall on July 10



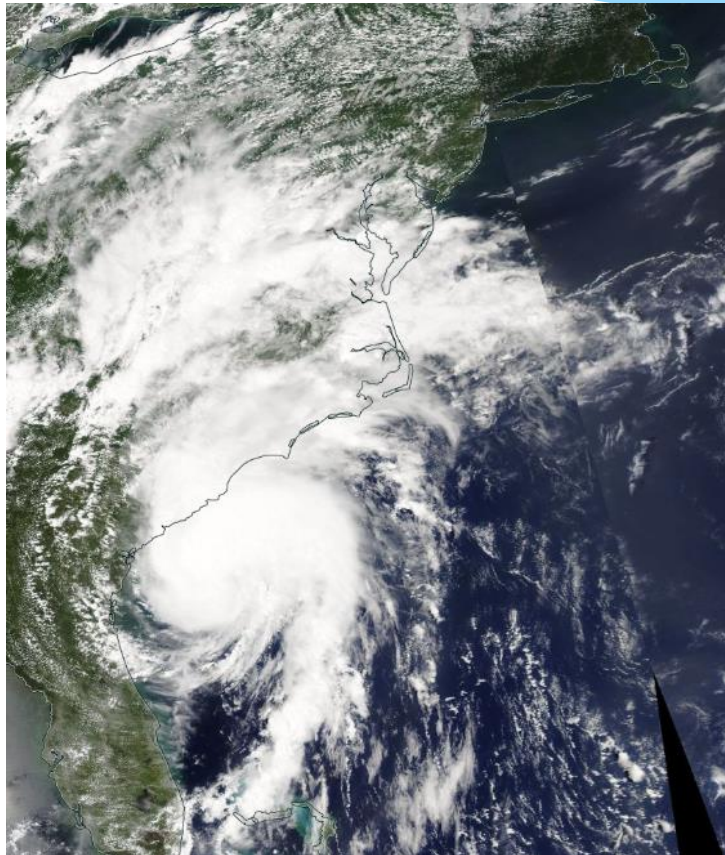
Sources: NWS, NOAA, COD



# Tropical Activity in 2020 - DRB

## Isaias

Fast Moving Storm!



August 3, 2020

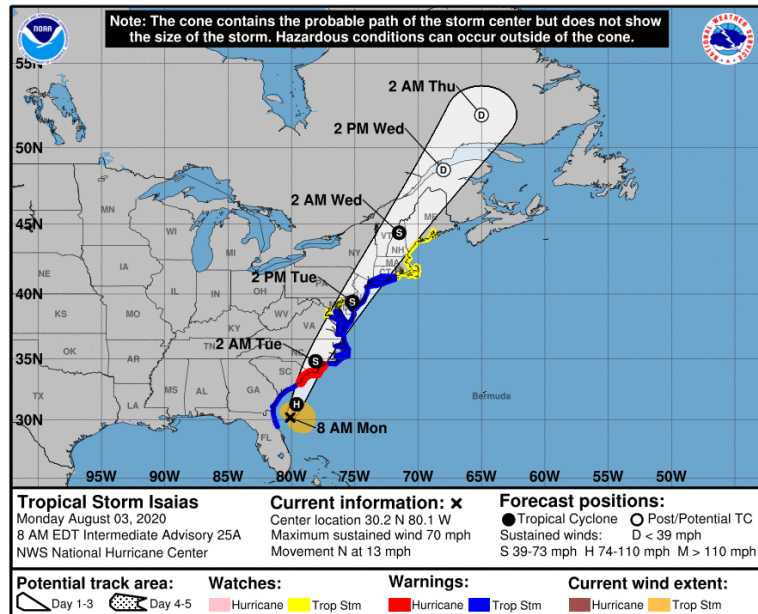


August 4, 2020

Source: NASA Worldview

# Tropical Activity in 2020 - DRB

- \* Isaias
  - \* Made Landfall in North Carolina and continued up the coast
  - \* Arrived in the DRB on August 4



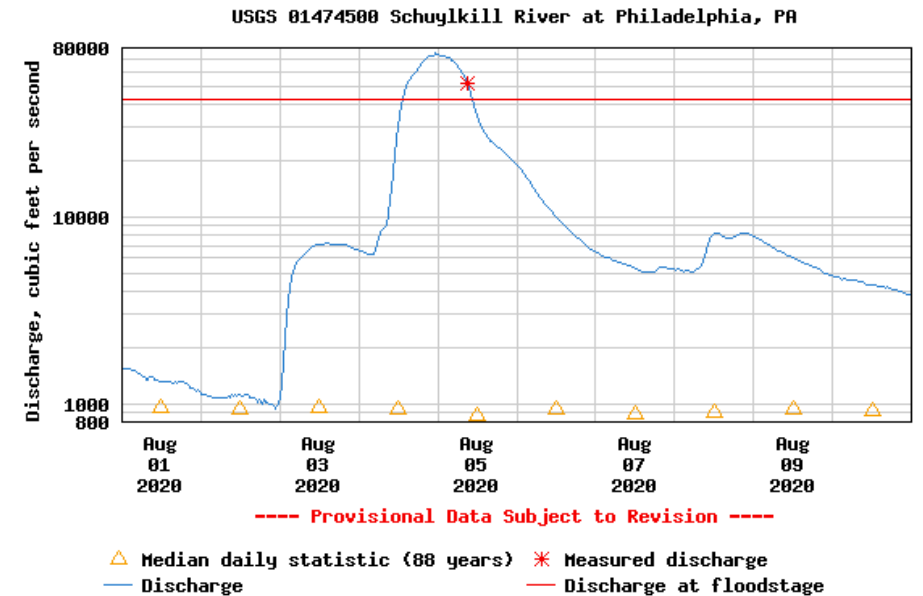
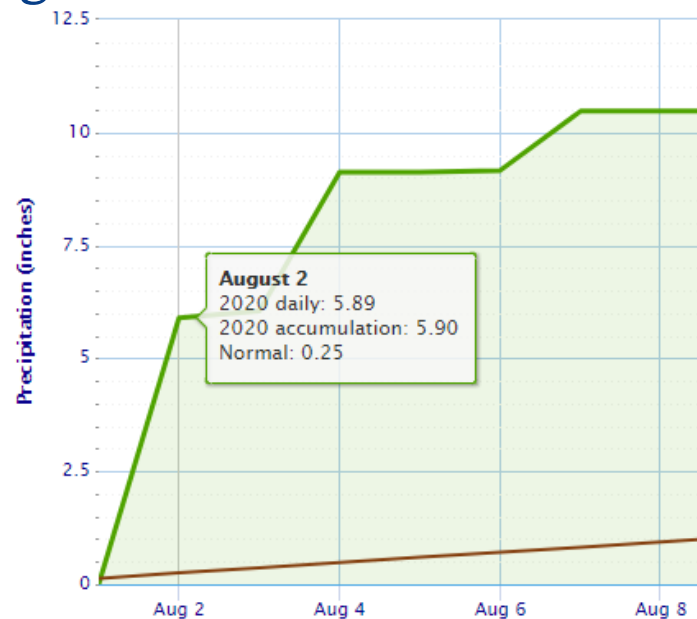
Delaware River at Trenton – 24-hour difference





# Tropical Activity in 2020 - DRB









- \* Isaias Continued
  - \* Caused major flooding on the Schuylkill River. Why?
  - \* Notable Impacts - Barge was loosened

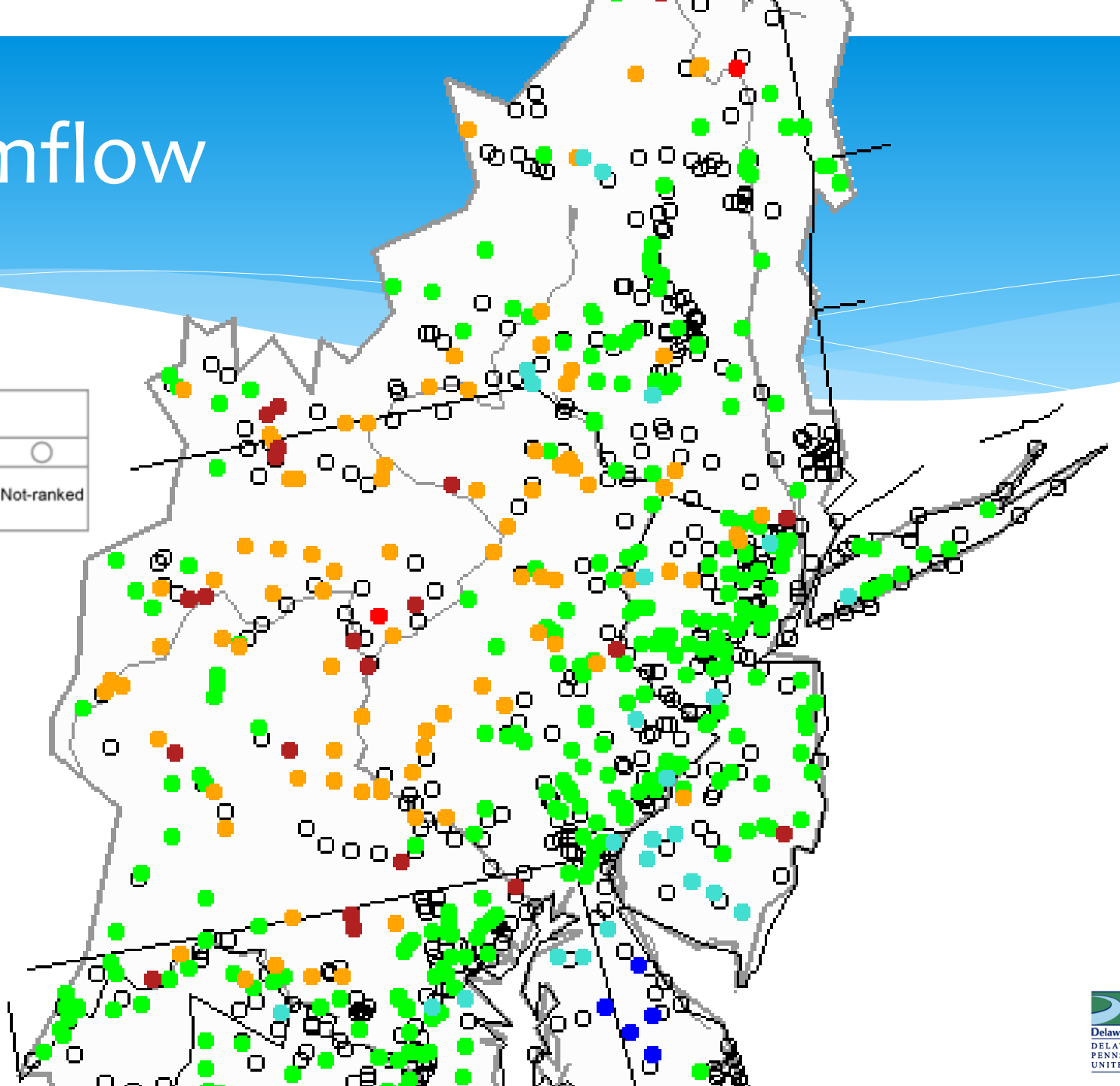


Sources: ACIS, USGS

# Streamflow

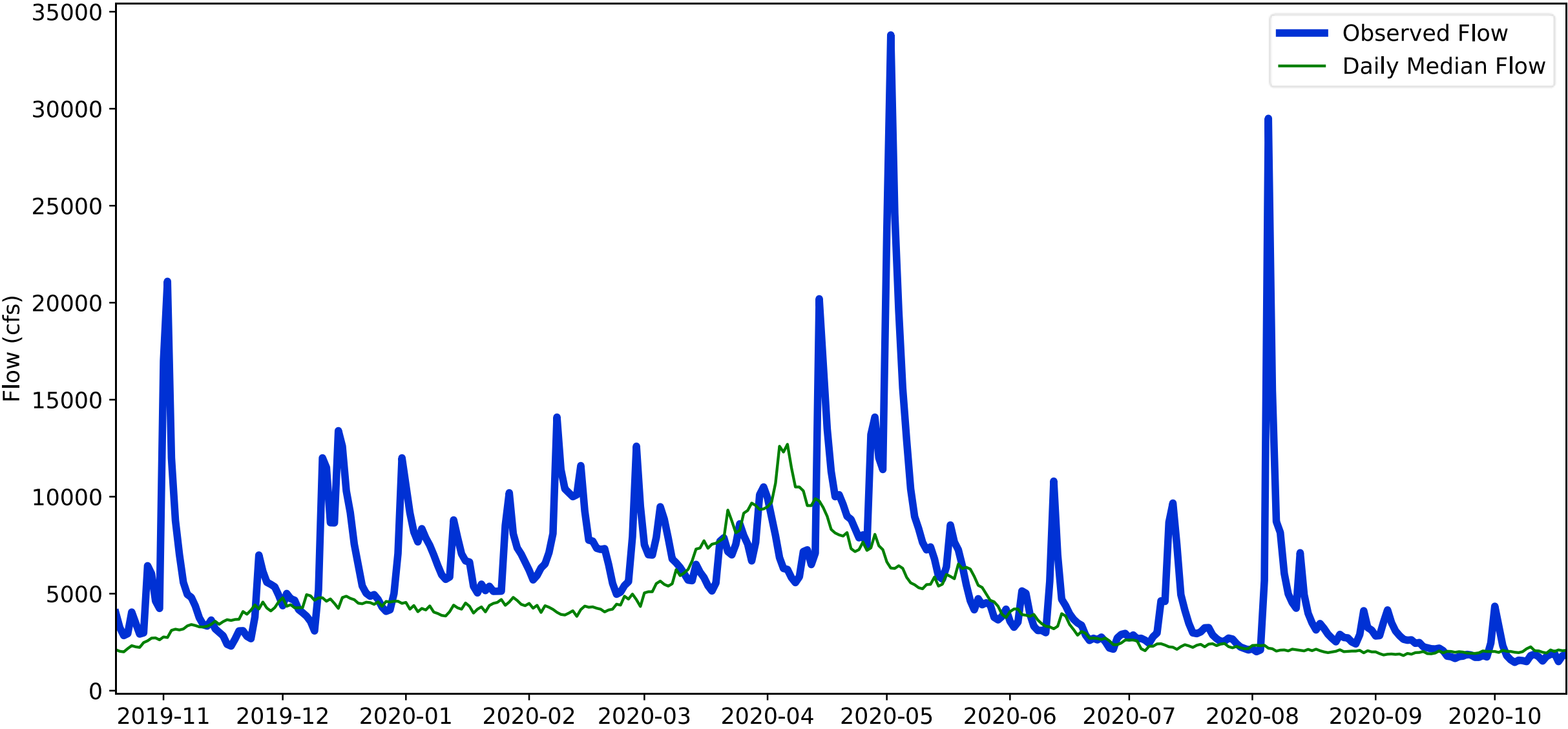
Explanation - Percentile classes

							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked



Sources: USGS

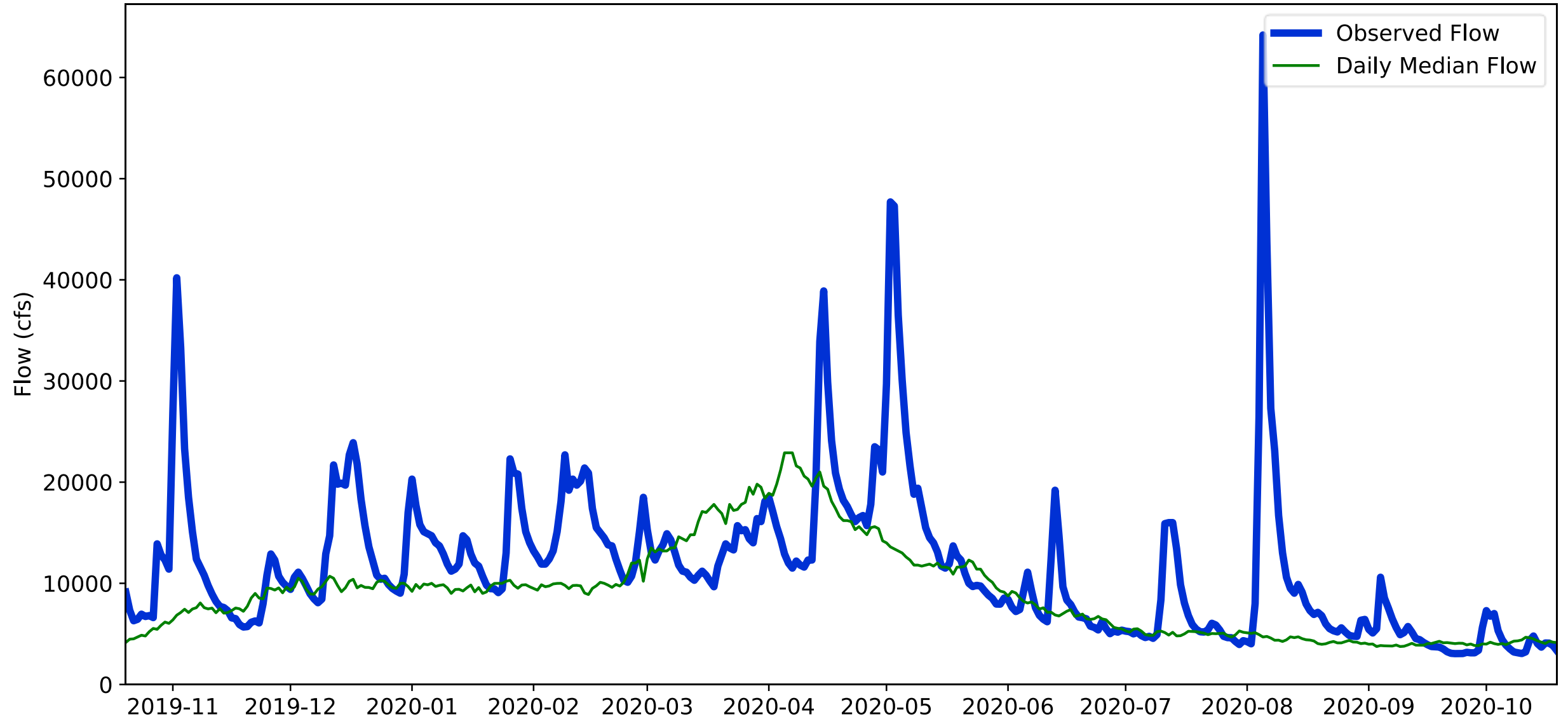
# Delaware River at Montague



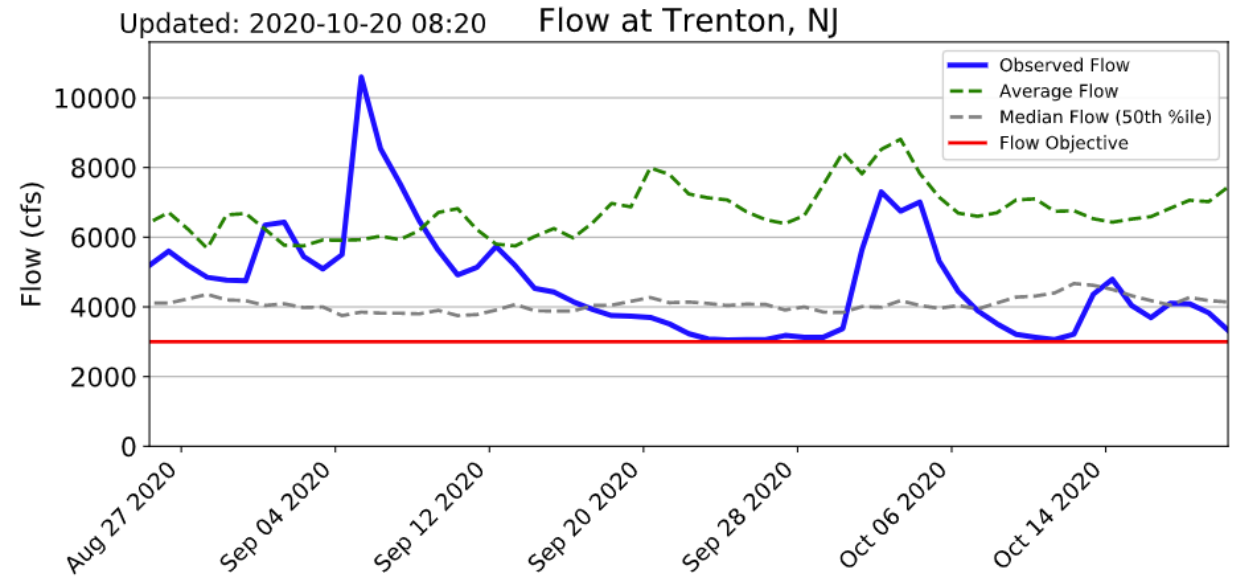
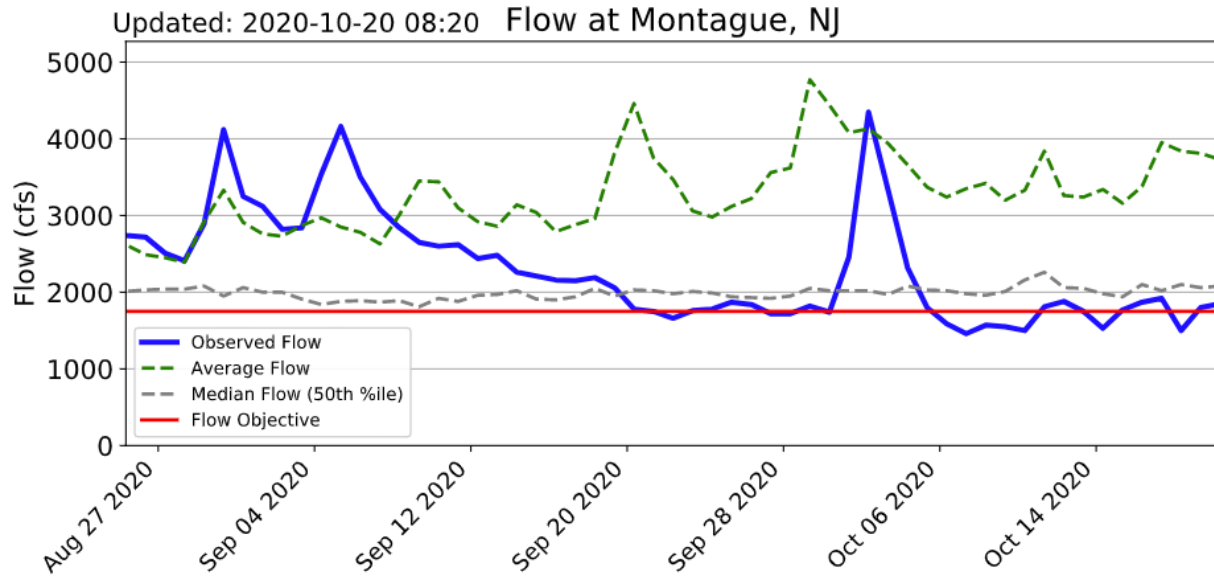
Data: USGS



# Delaware River at Trenton



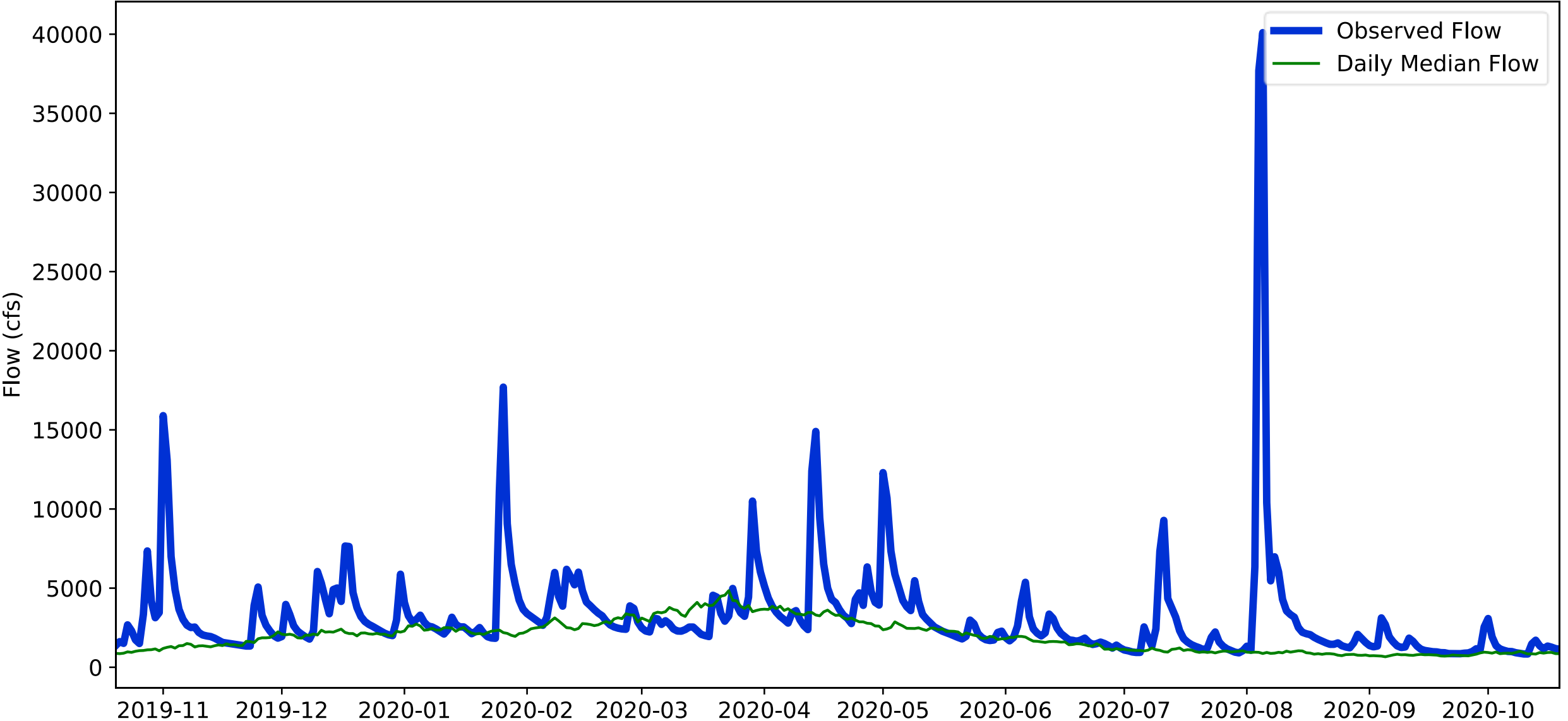
Data: USGS



[hydrosnap.drbc.net](https://hydrosnap.drbc.net)

Data: USGS

# Schuylkill River at Philadelphia

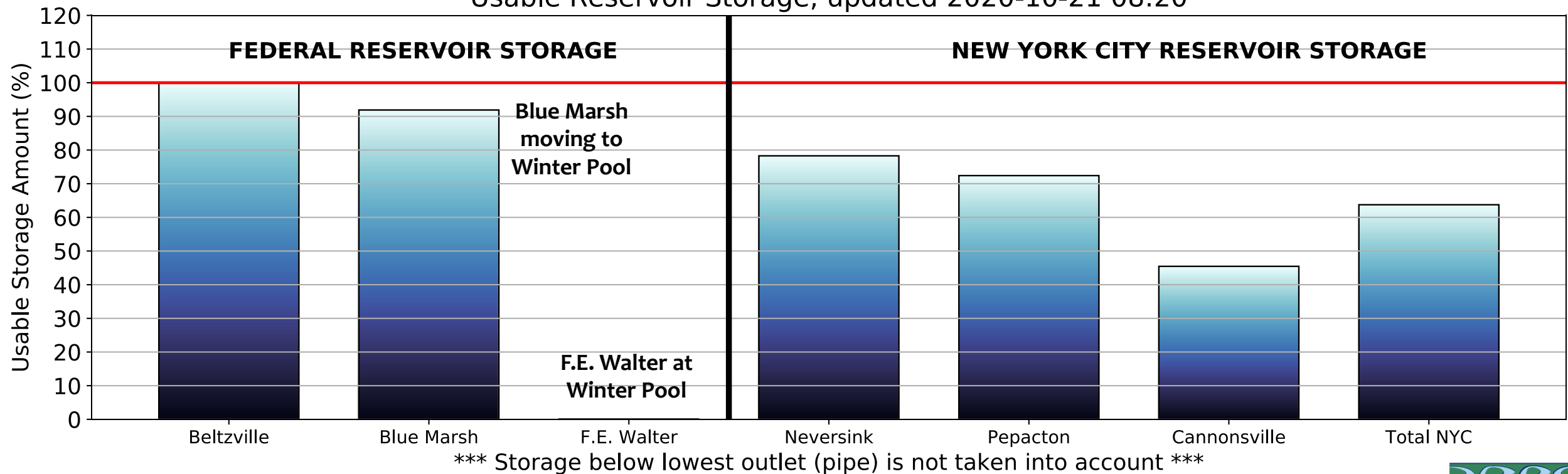


Data: USGS

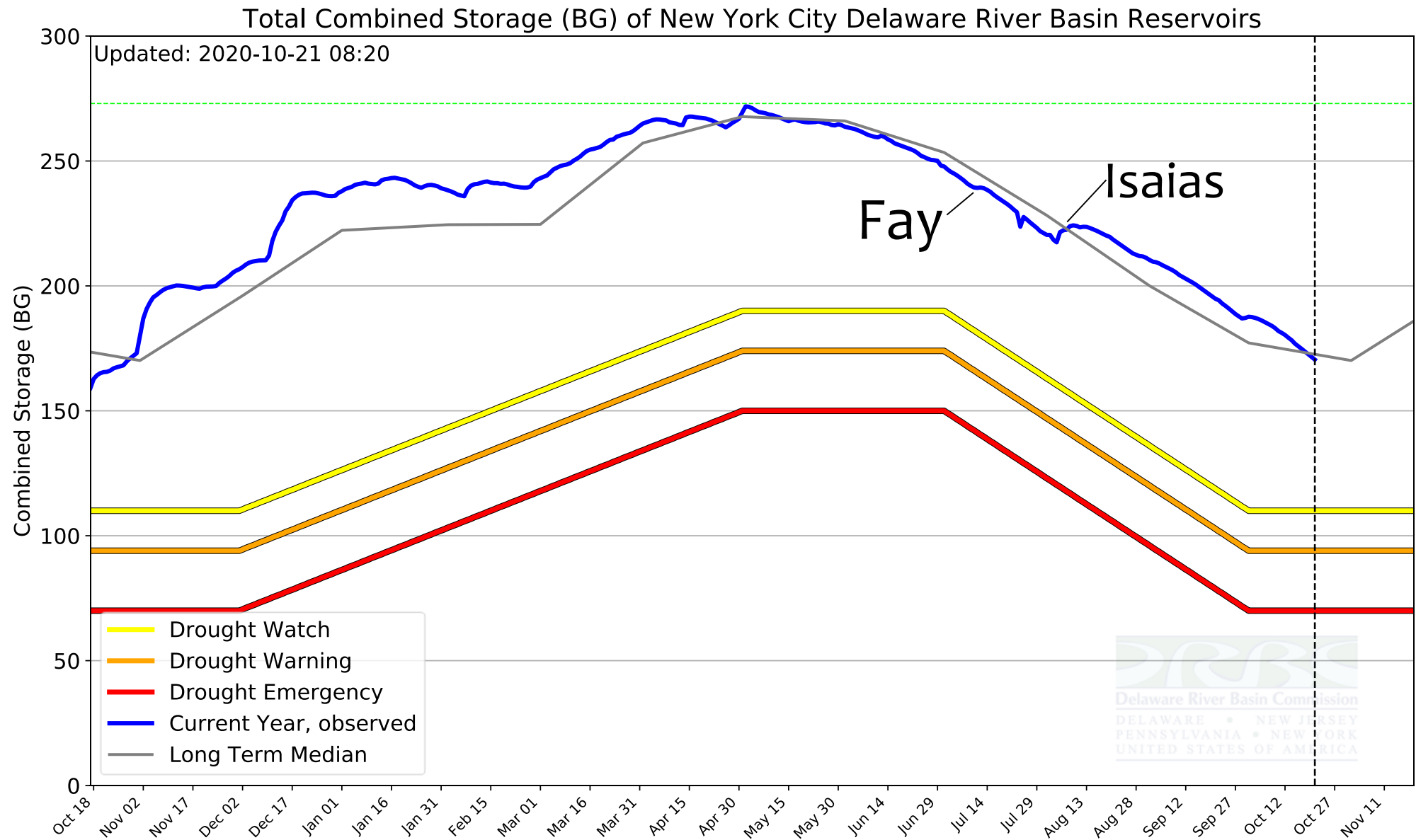


# Basin Storage

Usable Reservoir Storage, updated 2020-10-21 08:20



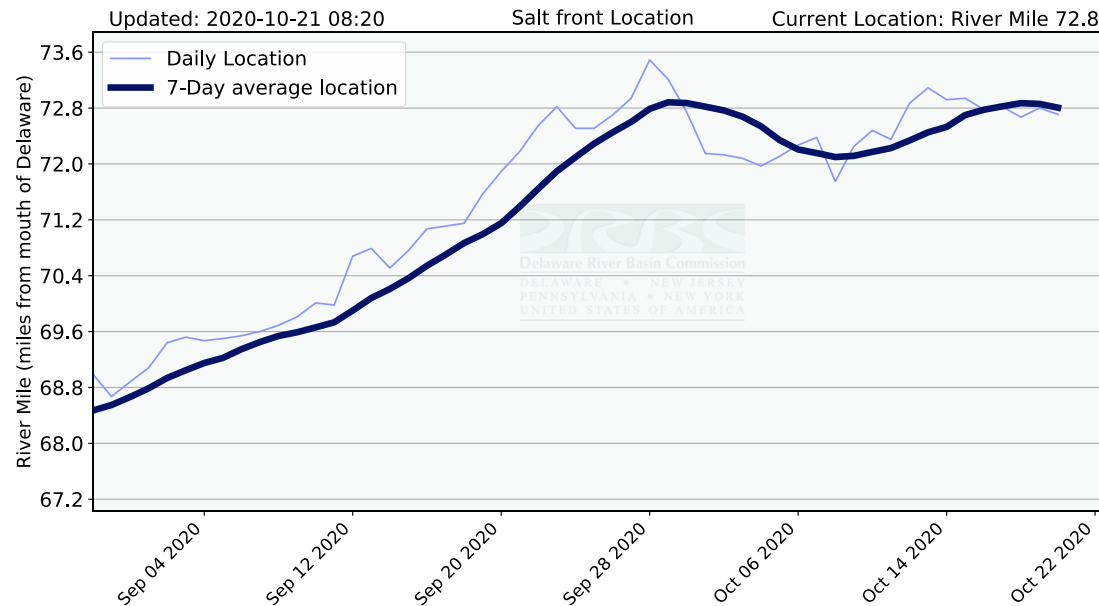
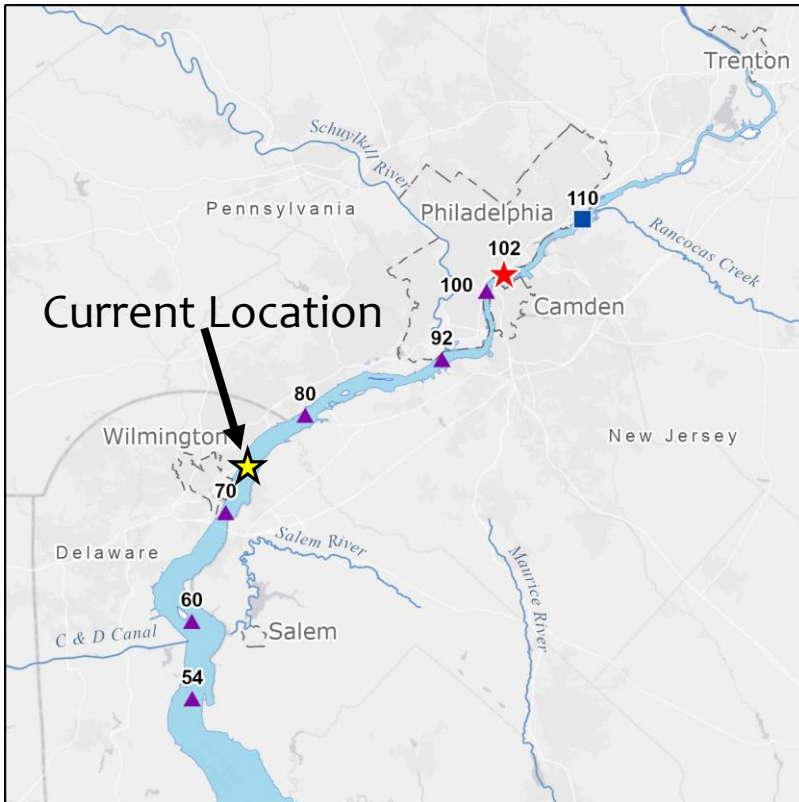
Data: USGS, AHPS



Usable Storage	Cannonsville	Pepacton	Neversink	Total	BG above drought watch = 60.5	BG below median = 2.1
BG	42.5	100.9	27.2	170.5	BG above drought warning = 76.5	BG above one year ago = 4.4
%	45.5	72.4	78.3	63.8	BG above drought = 100.5	

Data: NYC DEP

# Salt Front



**Chlorides**  
**7-Day Average RM**  
**Location of 250 mg/L**

**Current: 72.8**  
**October Normal: 72**

**The Flow Objective at Trenton was designed to repel salinity for the protection of drinking water treatment facilities and industrial intakes.**



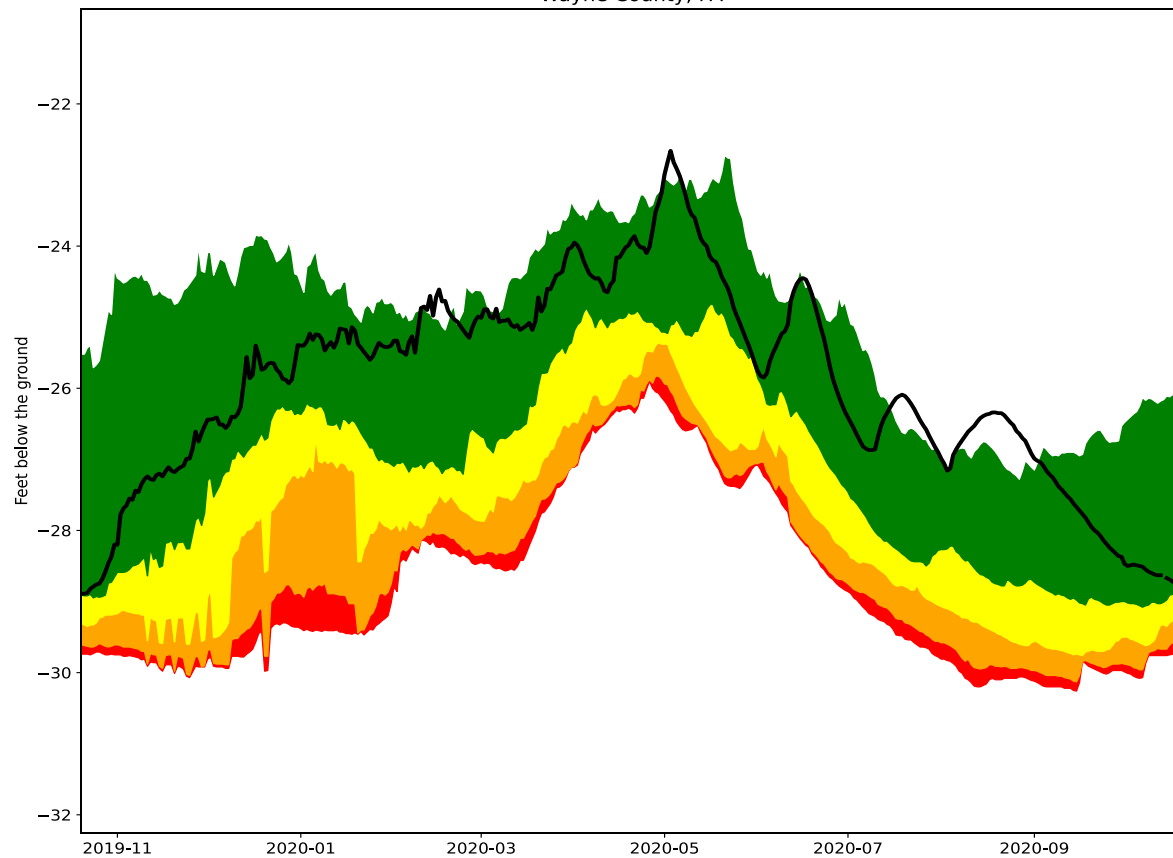
# Groundwater

COUNTY	STATE	DATA SOURCE	WELL ID	INDICATOR AS OF 2020-10-20
Wayne	PA	USGS	WN 64	Normal
Monroe	PA	USGS	MO 190	Normal
Carbon	PA	USGS	CB 104	Drought Watch
Schuylkill	PA	USGS	SC 296	Drought Watch
Lehigh	PA	USGS	LE 372	Above Normal
Bucks	PA	USGS	BK 1020	Normal
Chester	PA	USGS	CH 10	Normal
Delaware	PA	USGS	DE 723	Above Normal
Lebanon	PA	USGS	LB 372	Normal
Burlington	NJ	USGS	050689	Normal
Cumberland	NJ	USGS	110042	Normal

Data: USGS

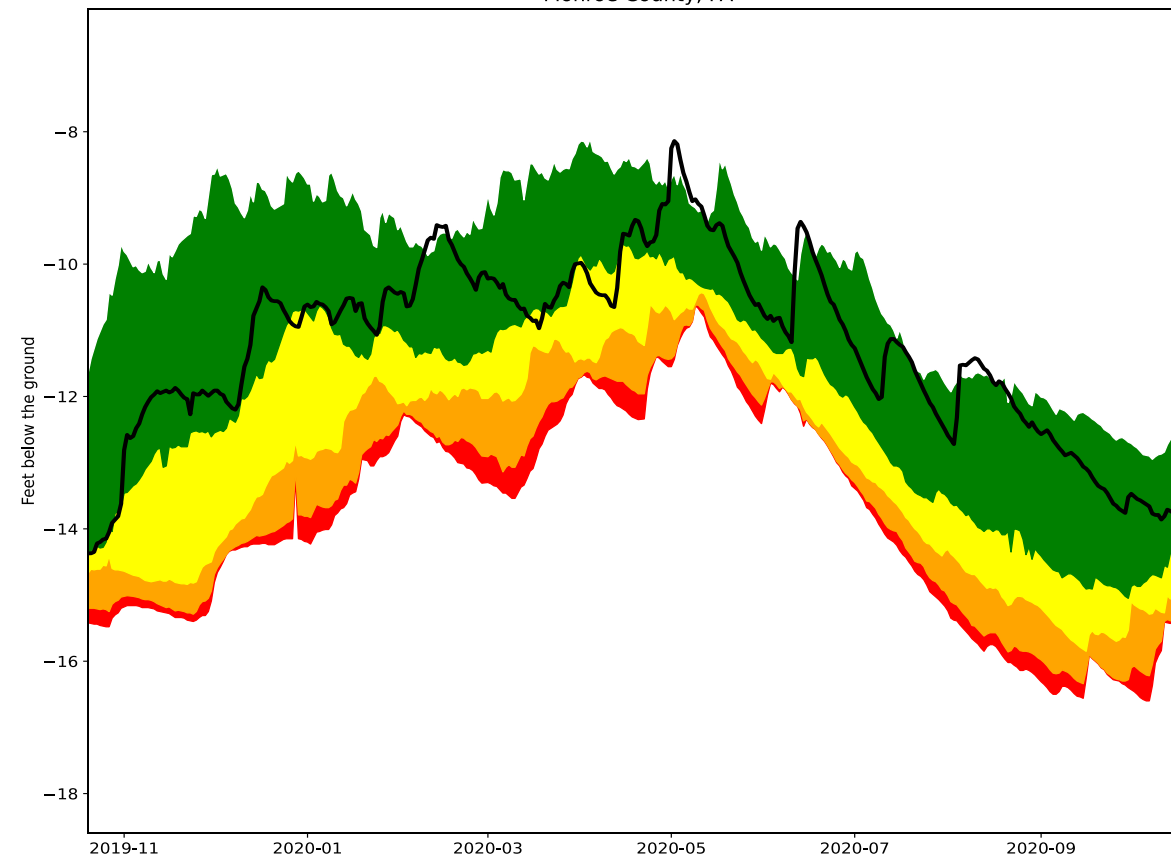
## Upper Basin

Wayne County, PA

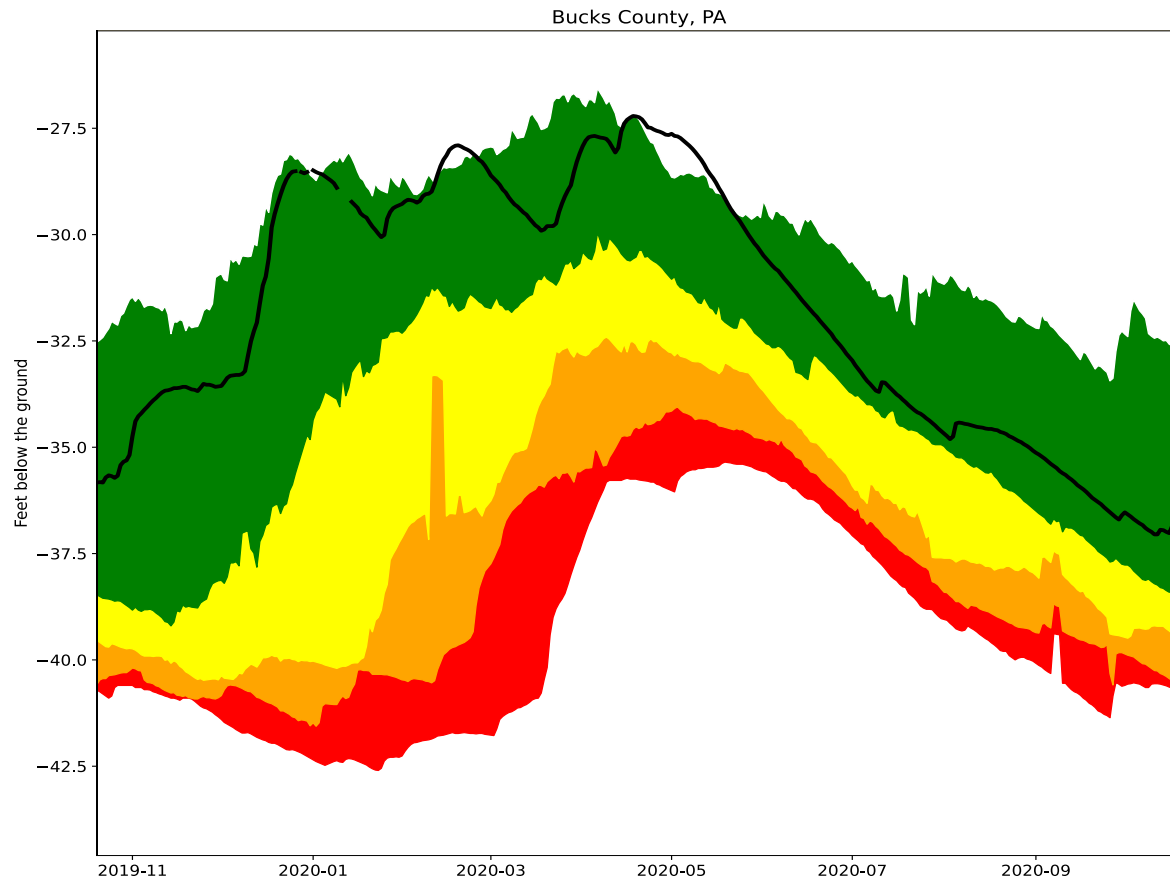


## Middle-Upper Basin

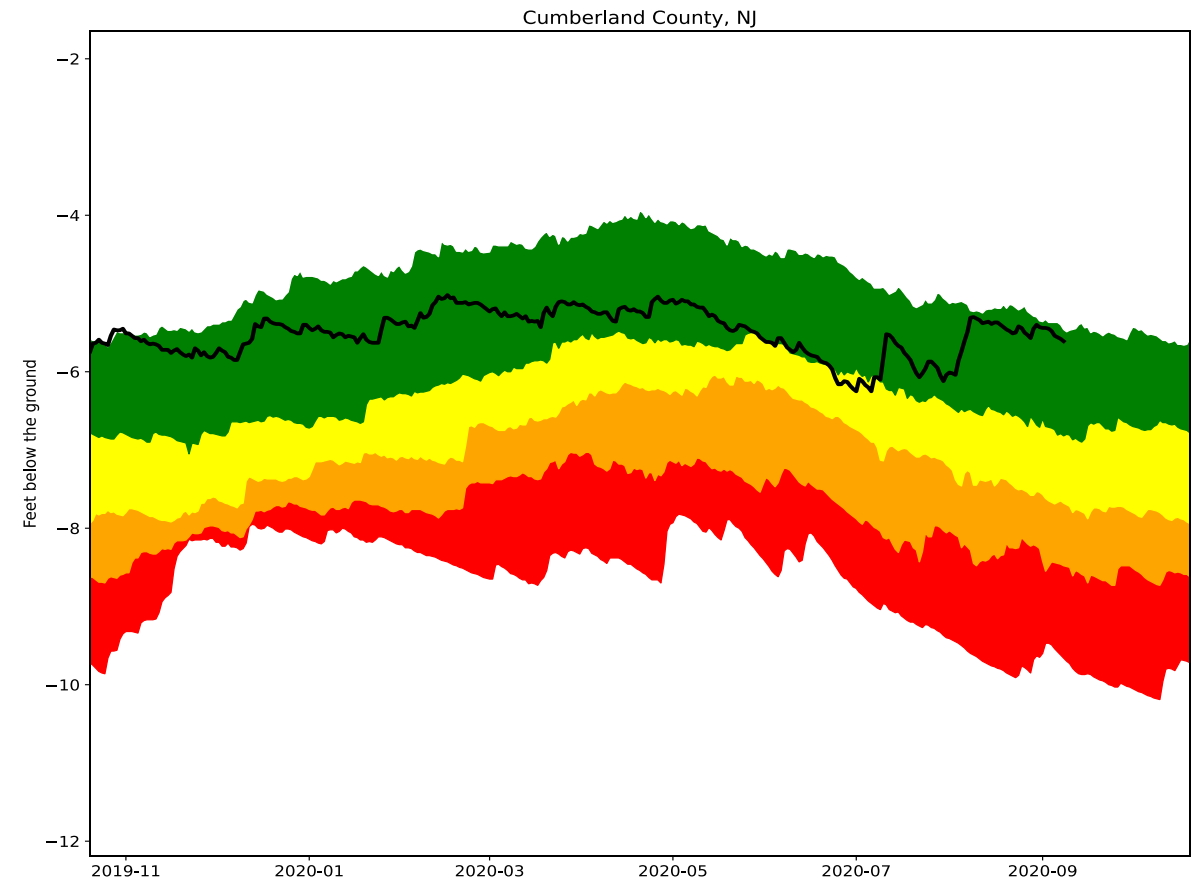
Monroe County, PA



## Middle-Lower Basin



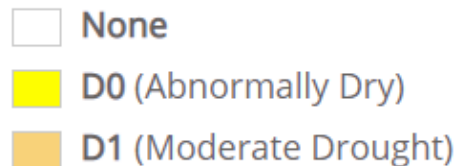
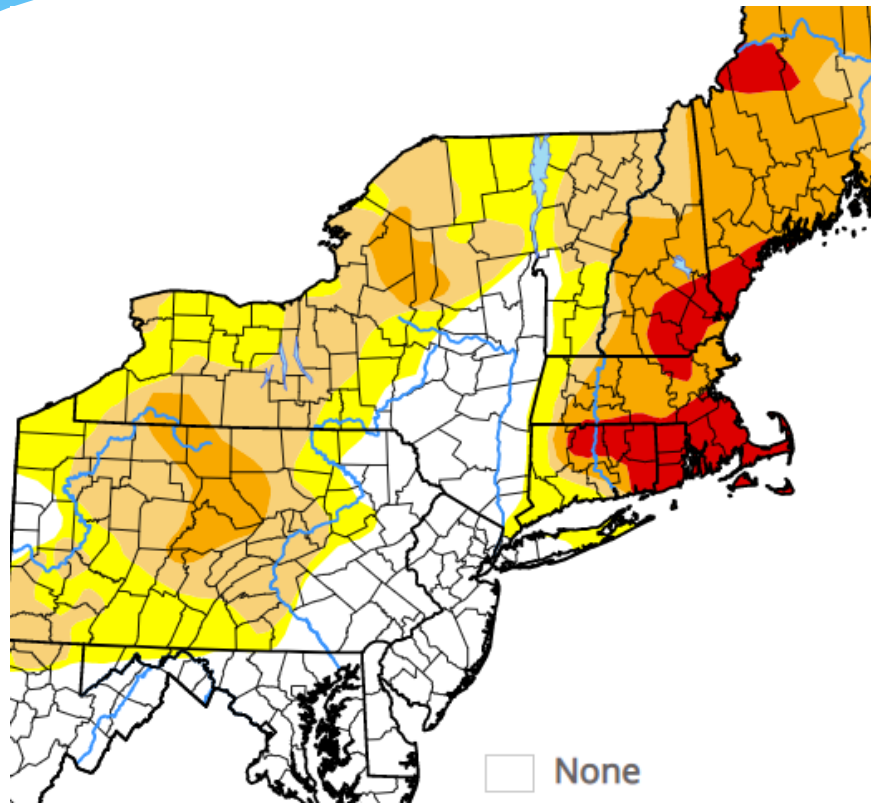
## Lower Basin





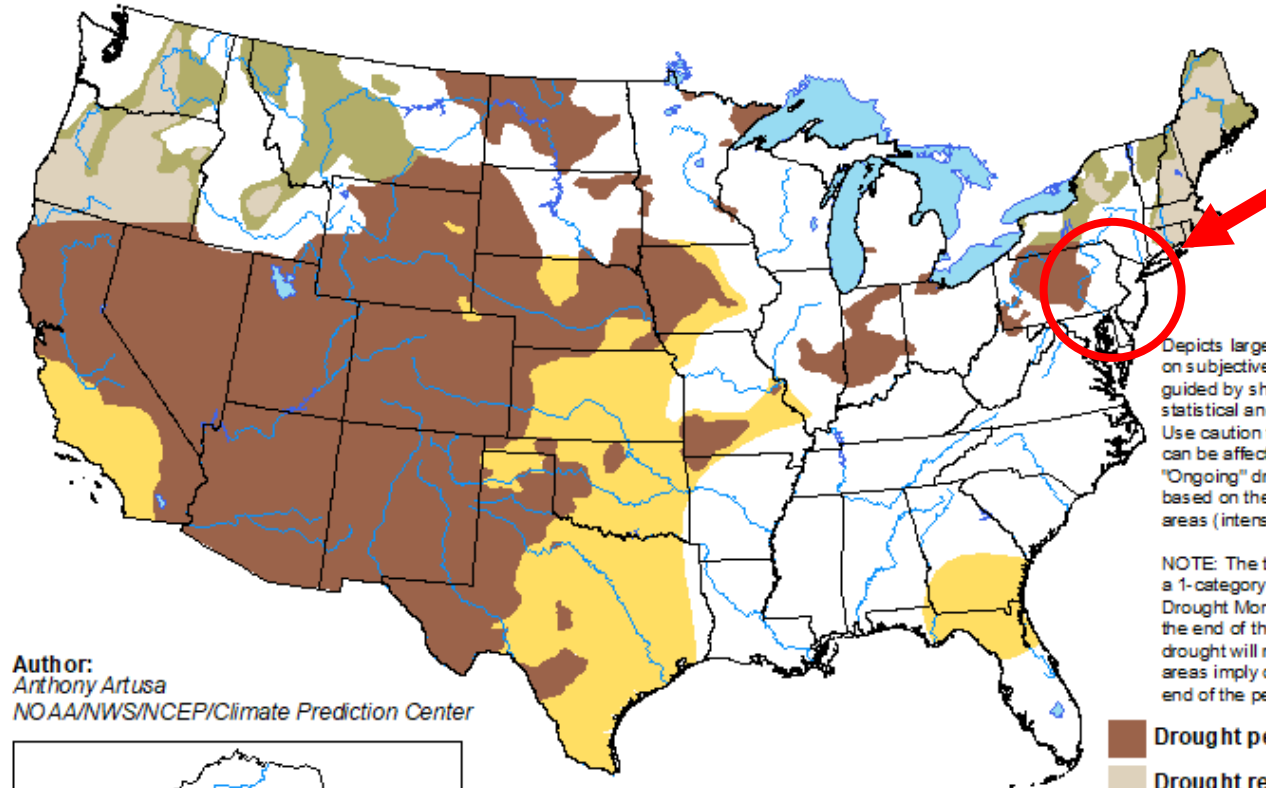
# Drought Monitor

October 15, 2020



## U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for October 15, 2020 - January 31, 2021  
Released October 15, 2020

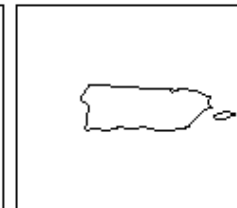
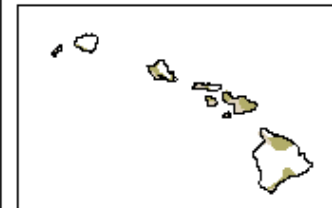
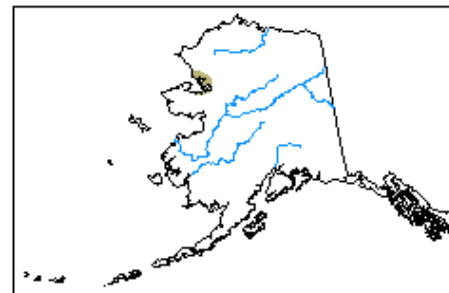


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).



Author:  
Anthony Artusa  
NOAA/NWS/NCEP/Climate Prediction Center



<http://go.usa.gov/3eZ73>

# 7 Day Precipitation Forecast

## Today - Saturday

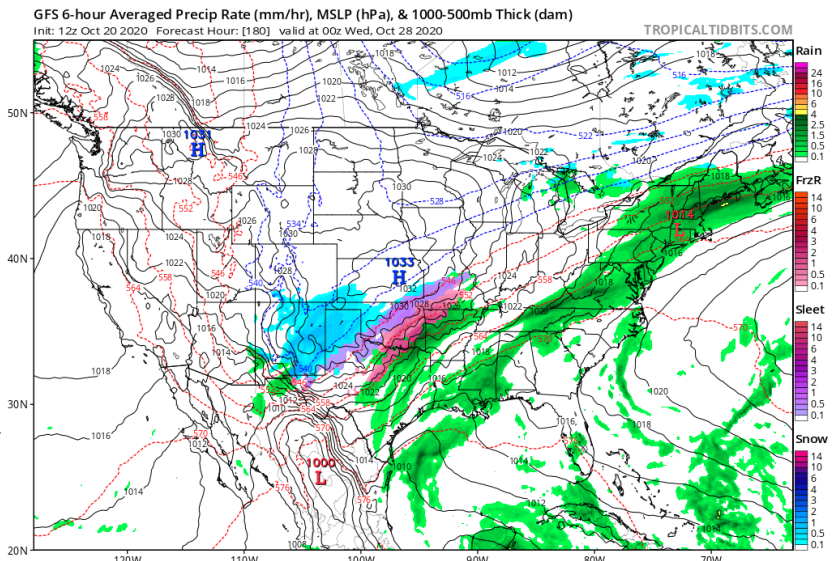
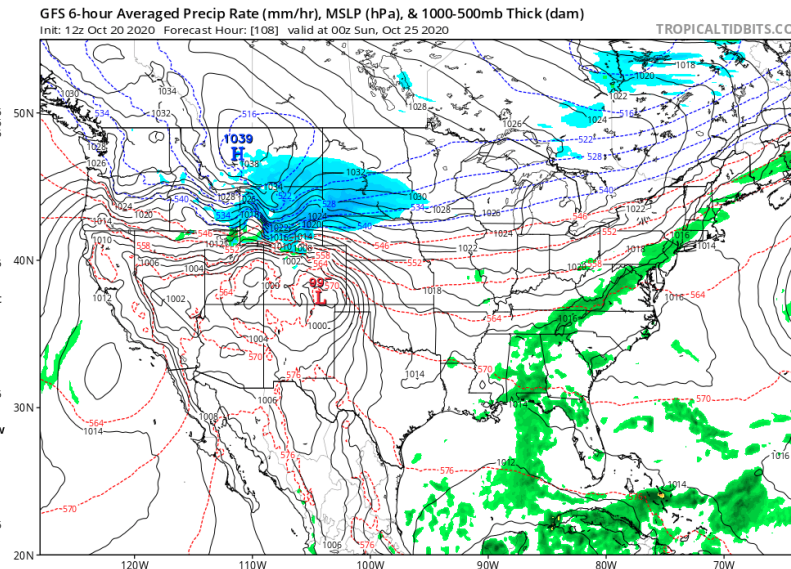
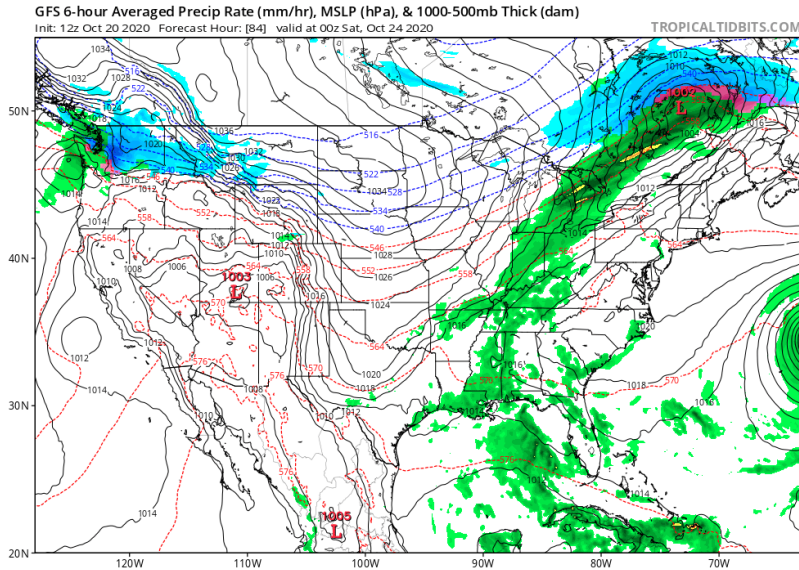
- Humid and warm!
- Light scattered showers possible
- Fog in the mornings

## Sunday

- Front finally moves through
- Brief rain showers in the evening
- Next low pressure forming out west

## Wednesday evening - Thursday

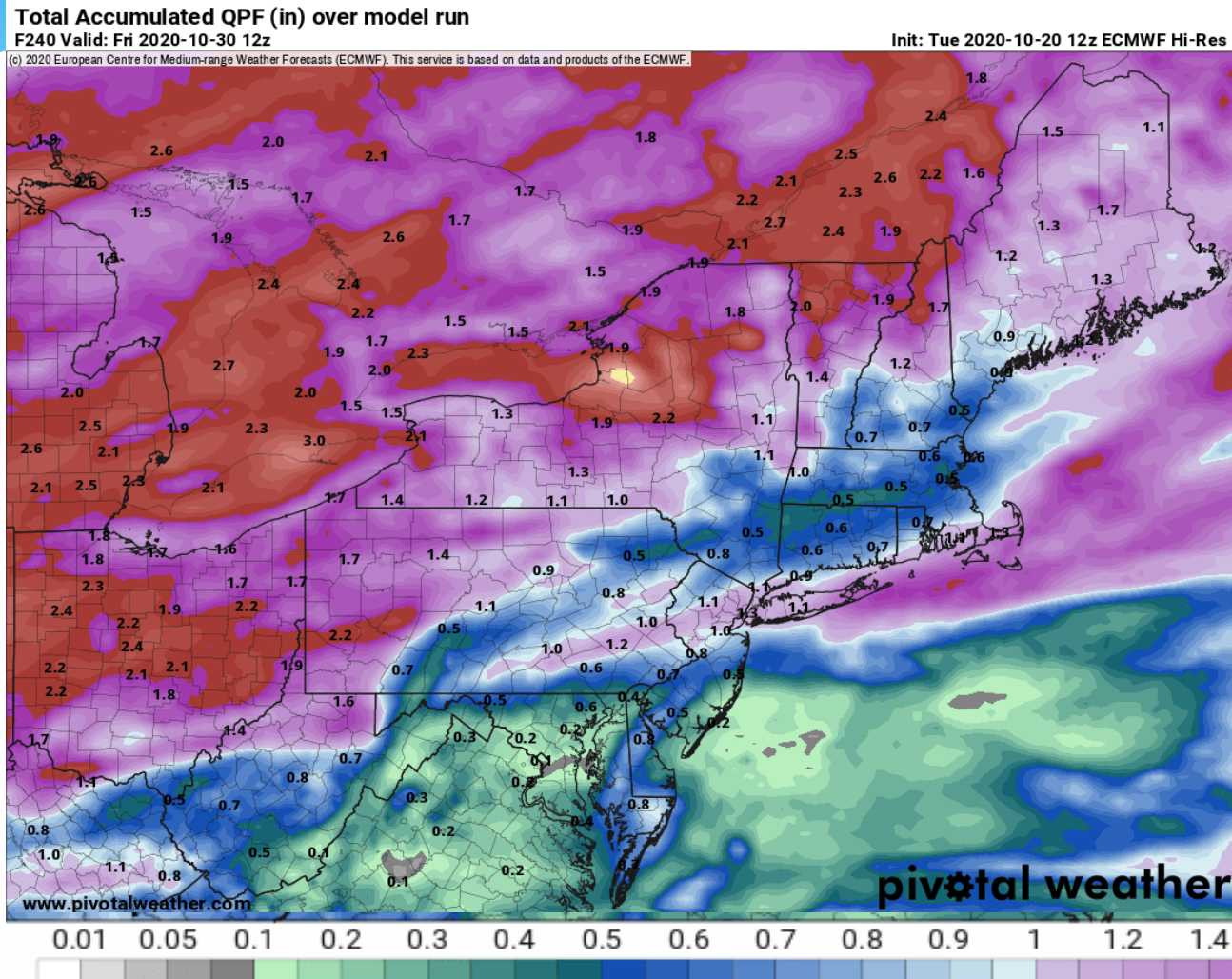
- Rain event?
- Snow for Texas??
- Uncertainty!



Source: Tropical Tidbits



# 9-Day Precipitation Forecast



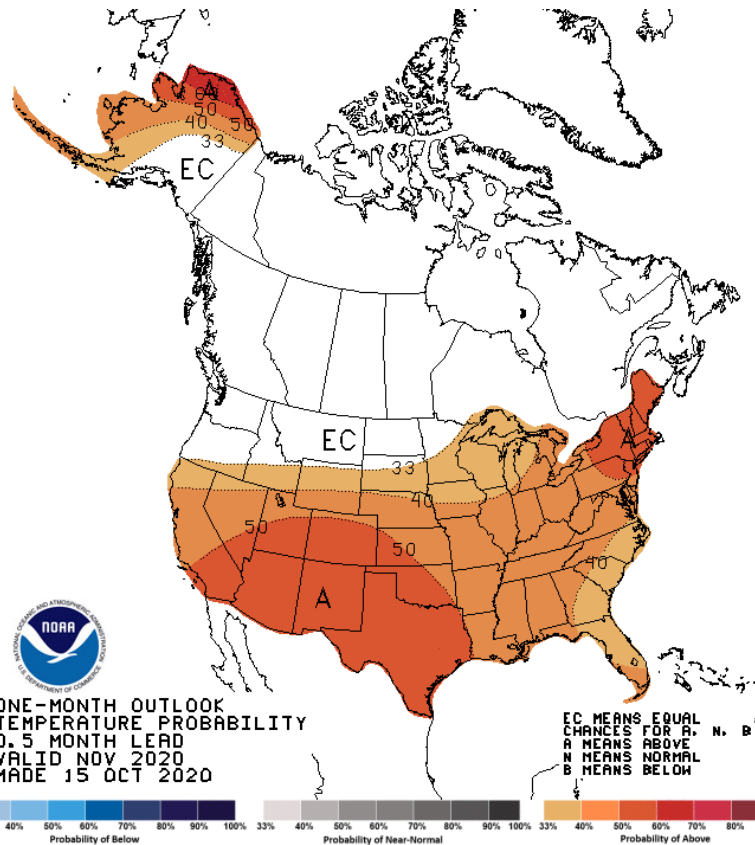
## Summary:

- Average to below average precipitation for this time of year
- Around an inch total for parts of the basin

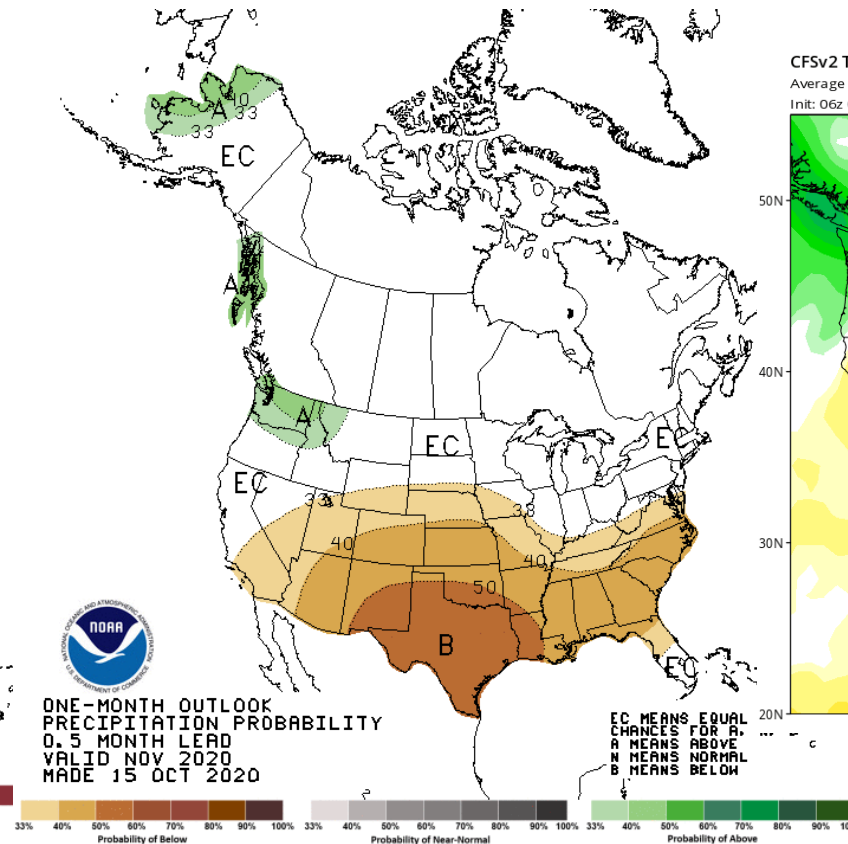
Source: Pivotal Weather

# 1-Month Outlook

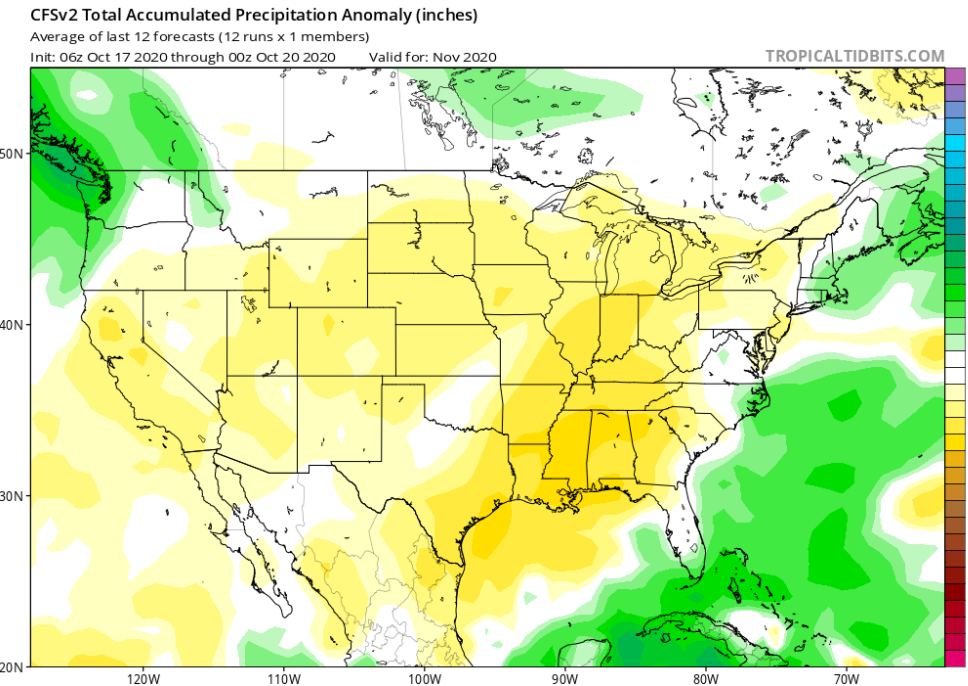
## Temperature



## Precipitation



## Model Prediction



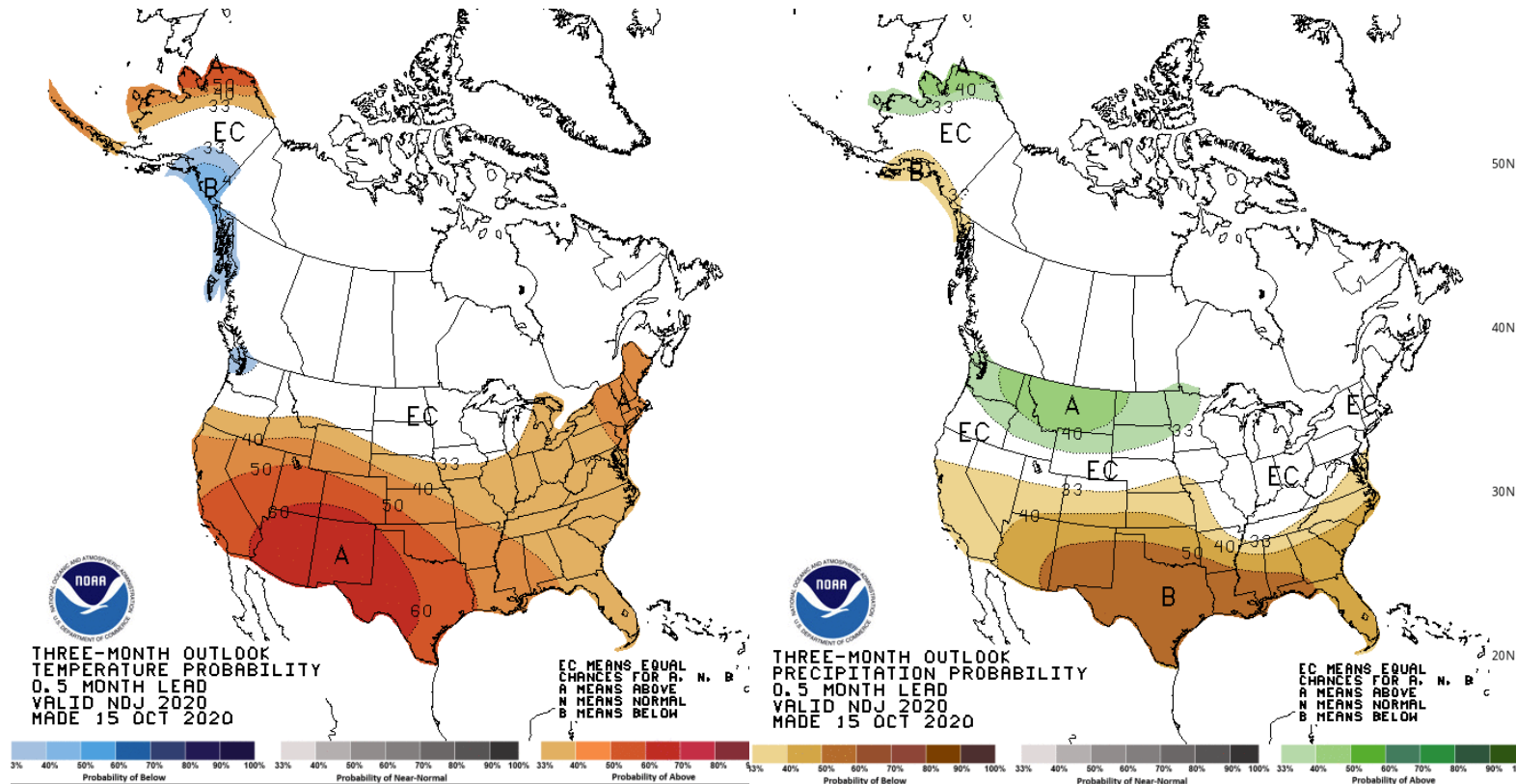
Model Source: Tropical Tidbits

\*Forecast from Climate Prediction Center, Updated Oct 15, 2020. Valid for November.

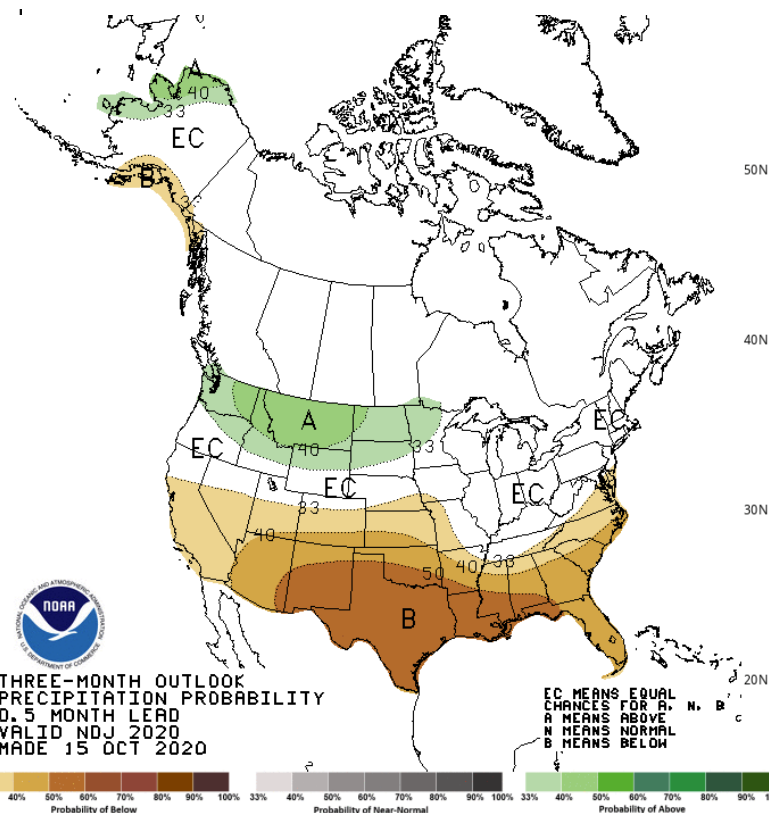


# 3-Month Outlook – La Niña Winter!

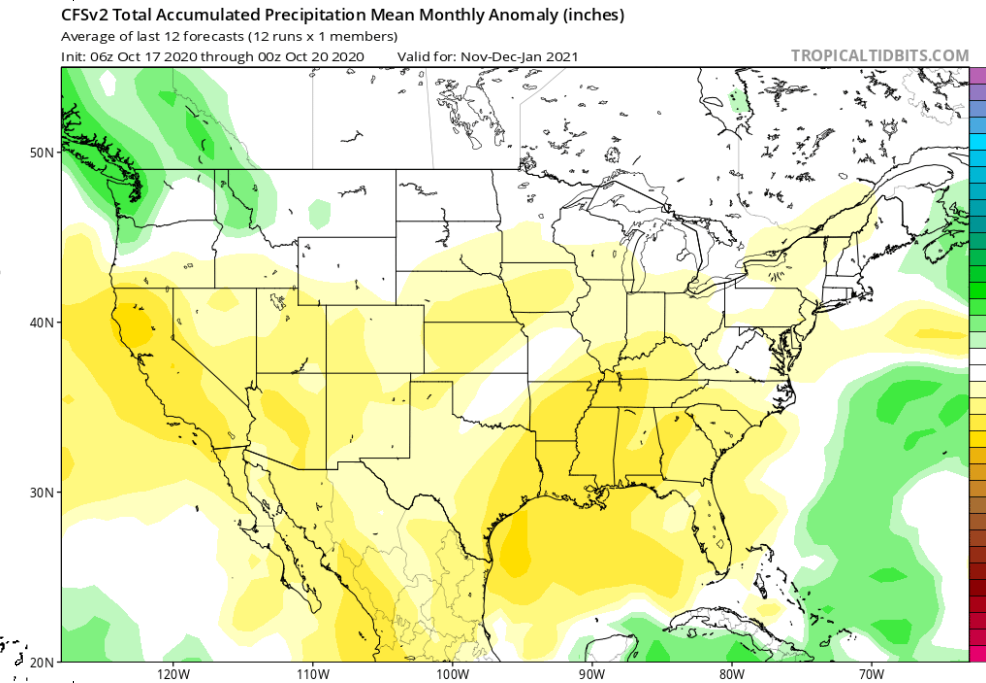
## Temperature



## Precipitation



## Model Prediction



Model Source: Tropical Tidbits

\*Forecast from Climate Prediction Center, updated October 15, 2020.  
Valid for November - January