



Hydrologic Conditions

Sara Sayed
Water Resource Scientist

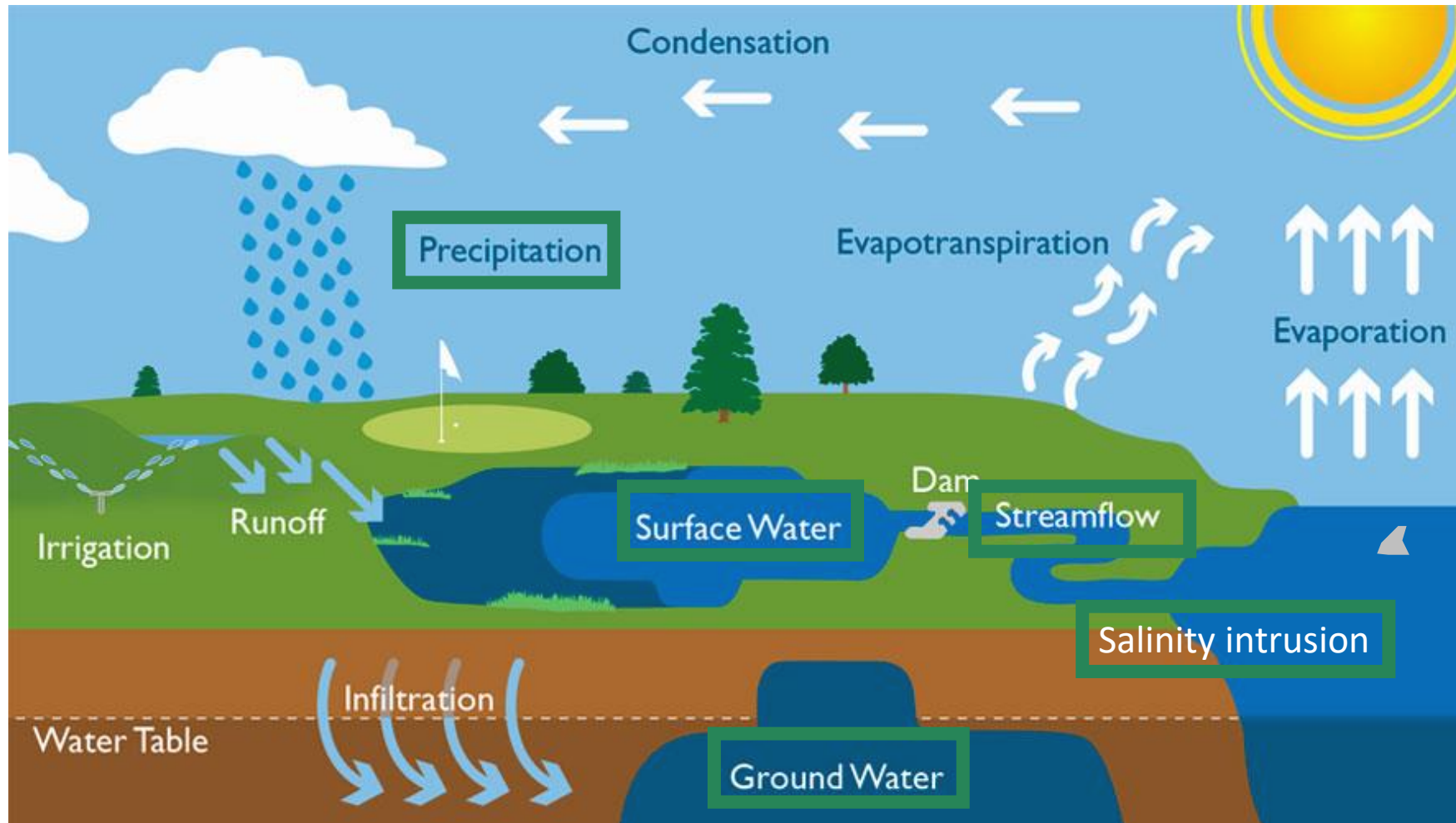
Fanghui Chen
Senior Water Resource Engineer

June 11th, 2025
DRBC 2Q Commission Meeting



The Hydrologic Cycle

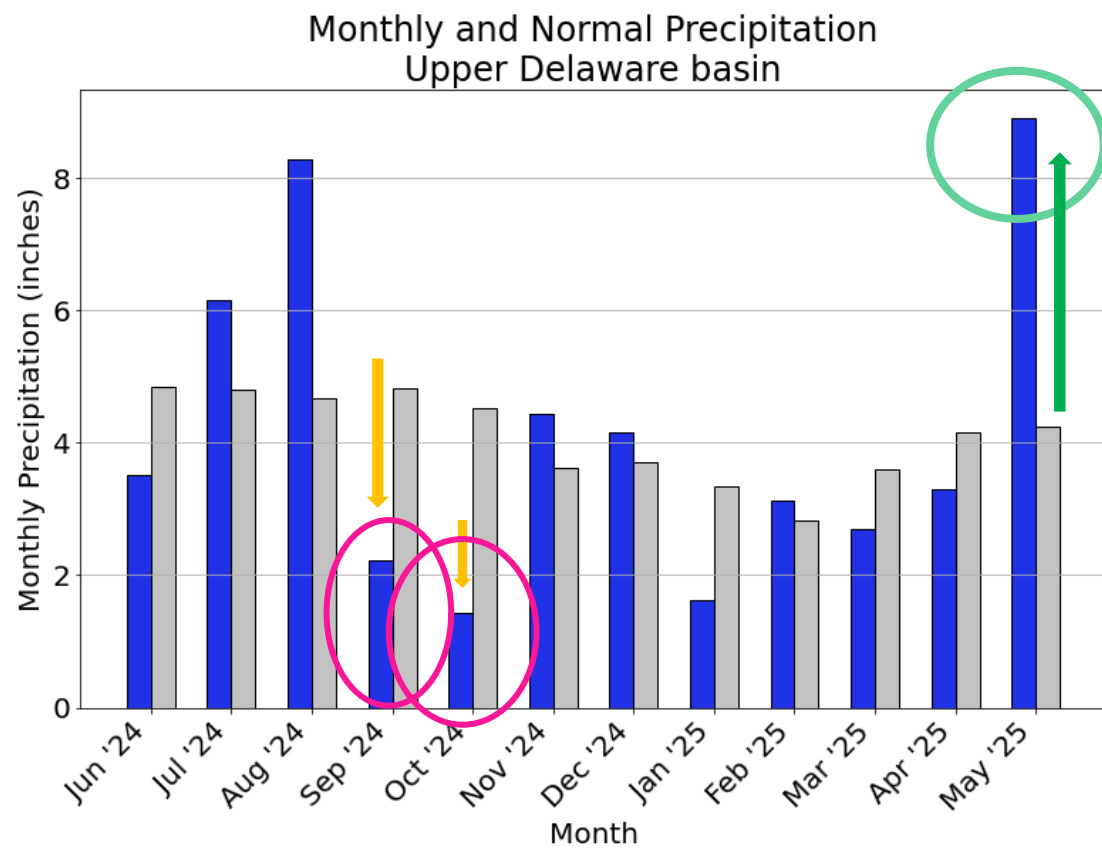
Water moves around the earth through air, soil, and over land.



Graphic courtesy of Pike County Soil Conservation District

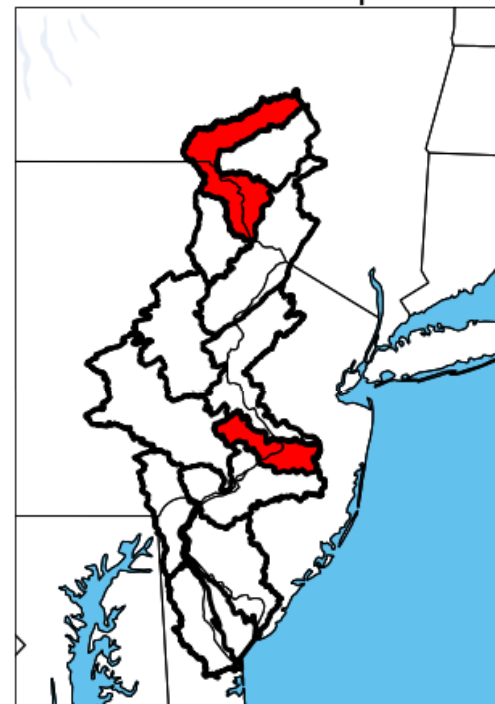
Precipitation between June 2024 to May 2025, Upper Basin (past 365 days)

Precipitation for May was 200% above normal for the month.



■ Monthly Observed Precipitation
■ Monthly Normal (1991 - 2022)

Locator Map



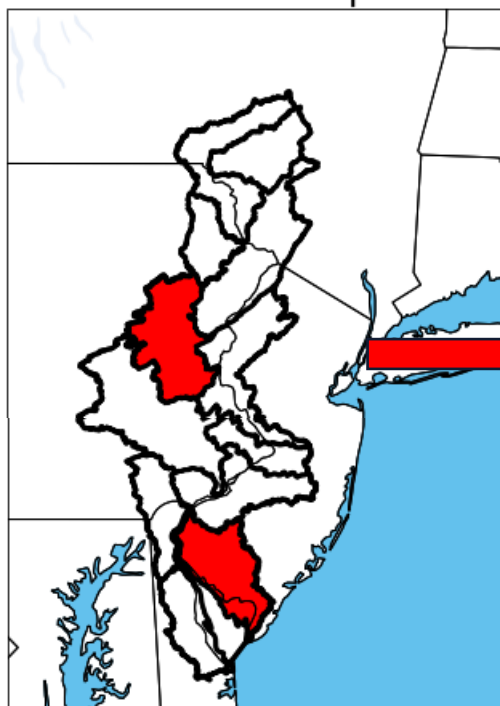
Source: ACIS, USGS HUC: 02040201
Monthly Normal is based on 4 stations in the
Crosswicks-Neshaminy basin

Data Source: ACIS

Precipitation between June 2024 to May 2025, Middle Basin (past 365 days)

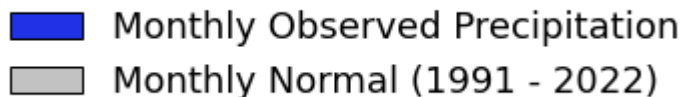
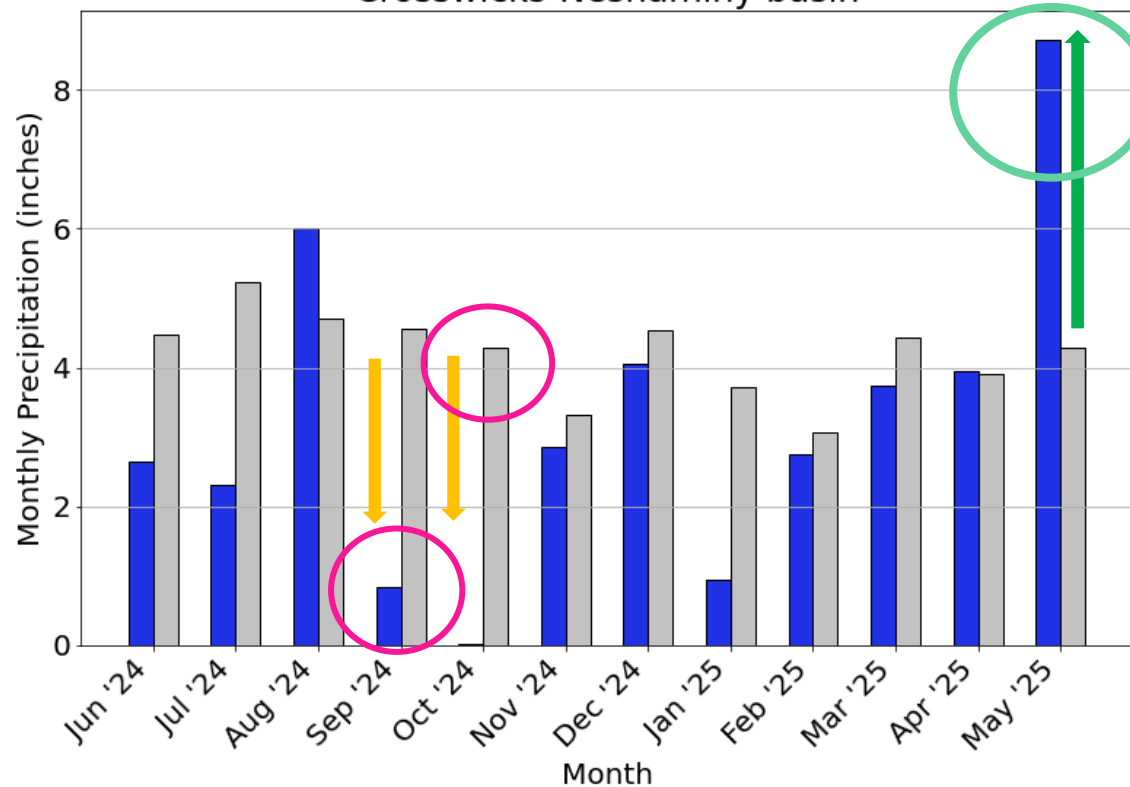
Precipitation for May was 200% above normal for the month.

Locator Map



Source: ACIS, USGS HUC: 02040206
Monthly Normal is based of 3 stations in the
Cohansey-Maurice basin

Monthly and Normal Precipitation
Crosswicks-Neshaminy basin

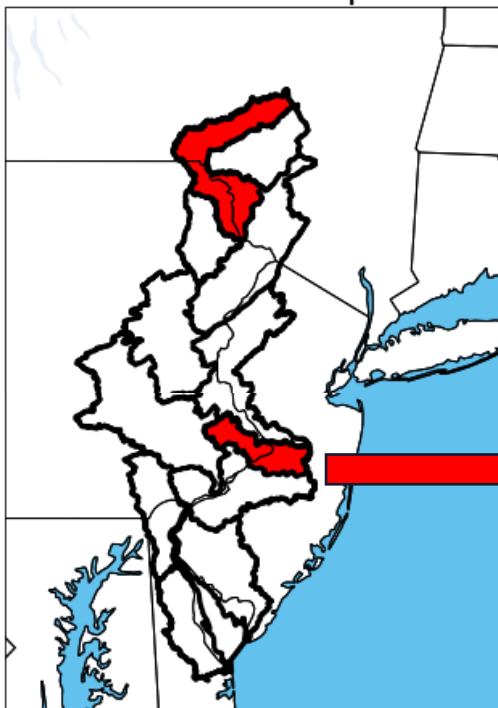


Data Source: ACIS

Precipitation between June 2024 to May 2025, Lower Basin (past 365 days)

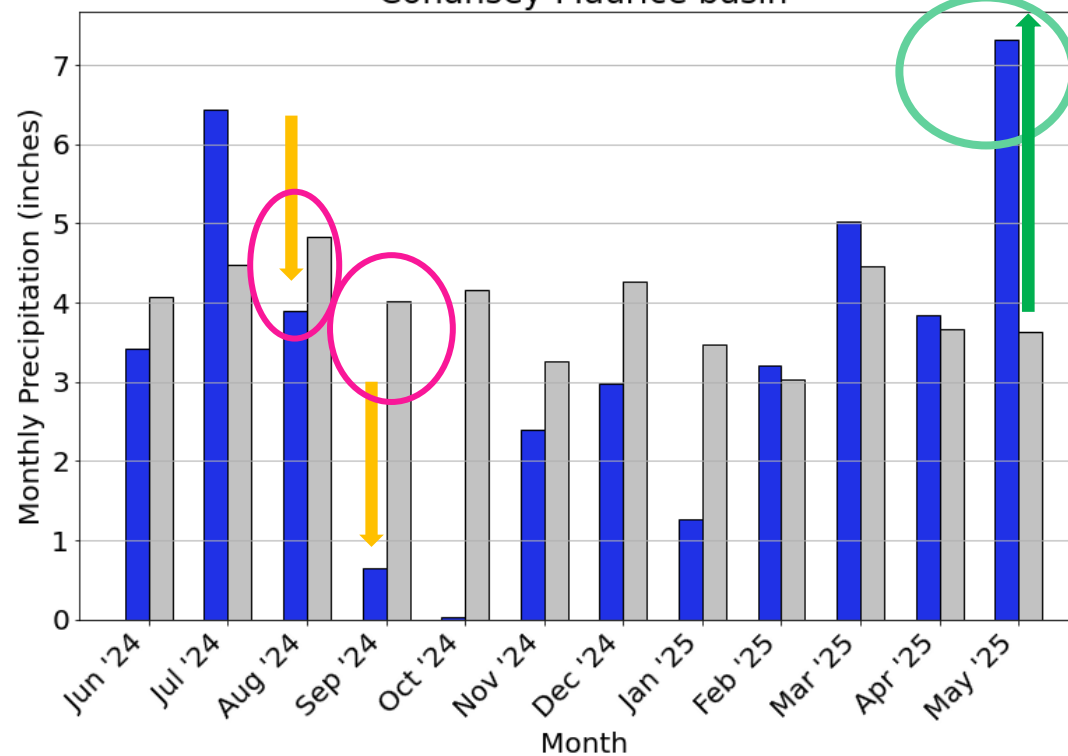
Precipitation for May was above normal for the month.



Locator Map



Source: ACIS, USGS HUC: 02040201
Monthly Normal is based of 4 stations in the
Crosswicks-Neshaminy basin

Monthly and Normal Precipitation
Cohansey-Maurice basin

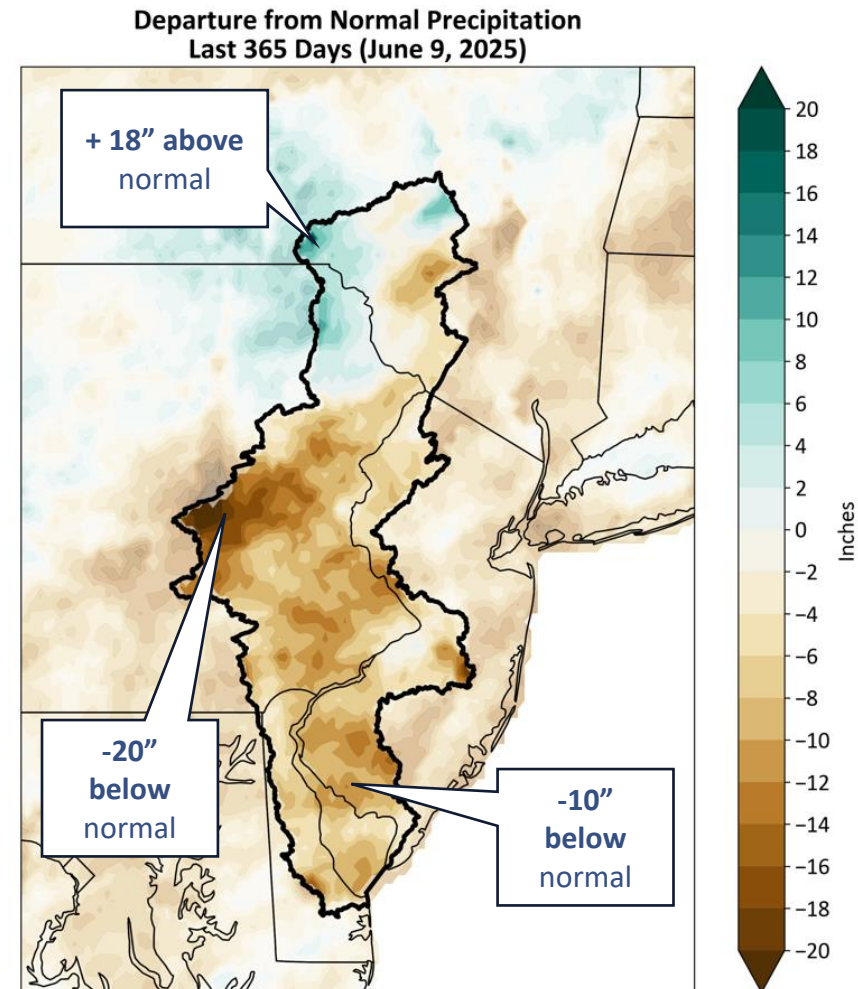
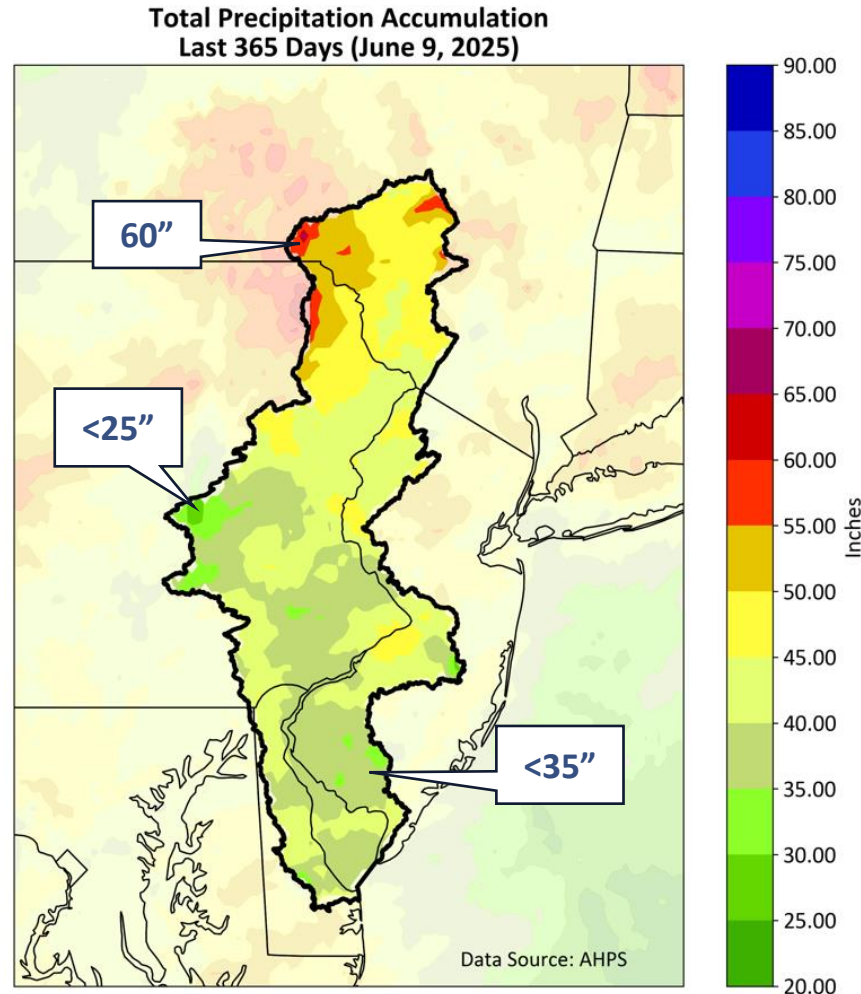


 Monthly Observed Precipitation
 Monthly Normal (1991 - 2022)

Data Source: ACIS

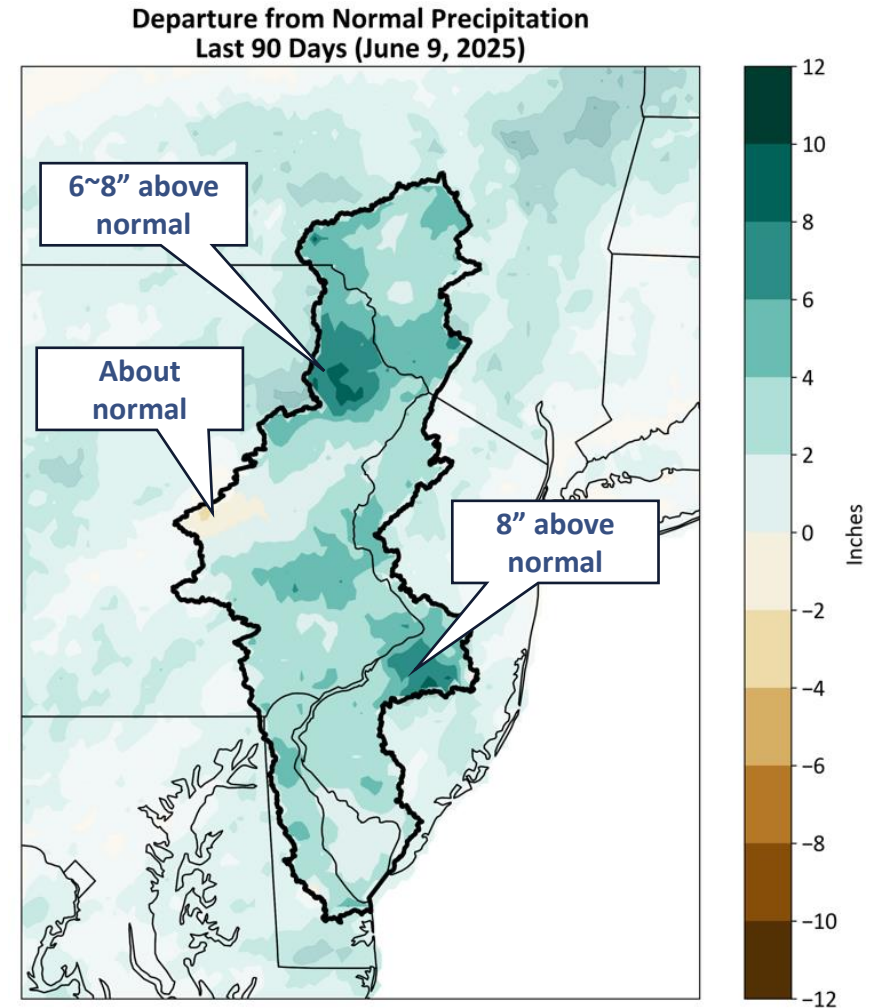
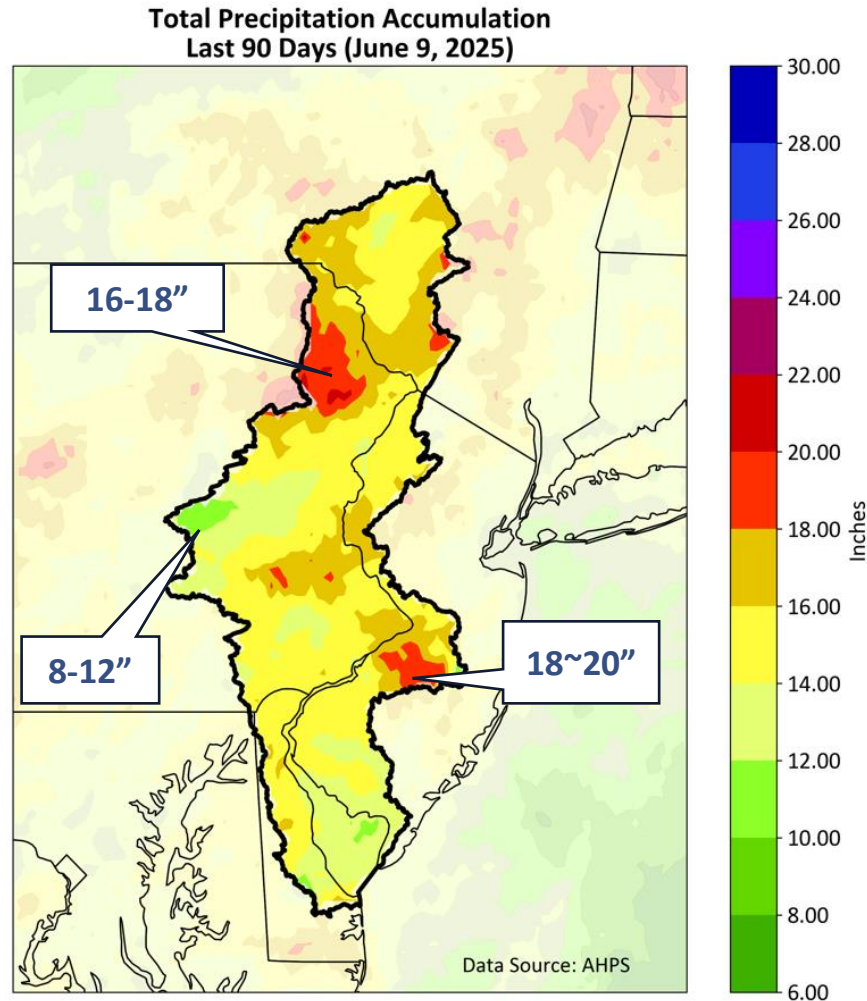
Cumulative Precipitation over the last 365 days

Cumulative totals remain below normal except for the Northeast part of the basin.



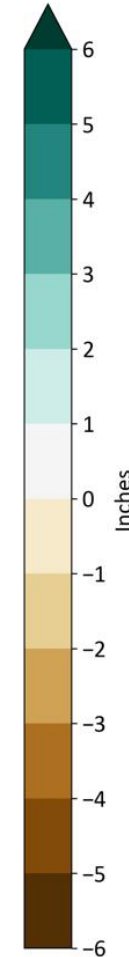
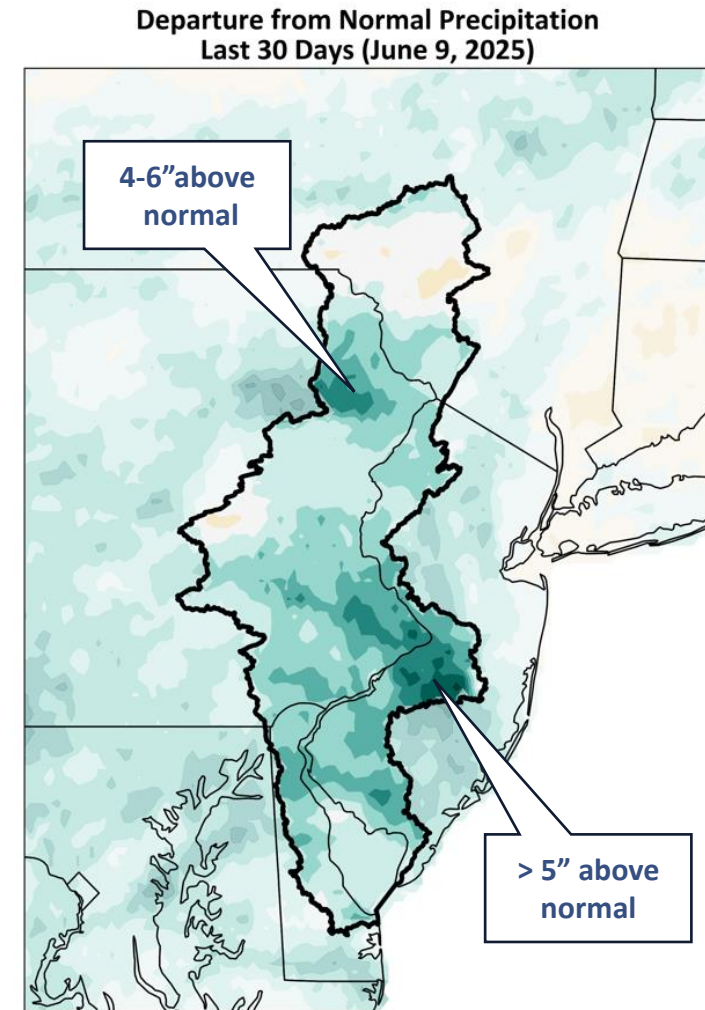
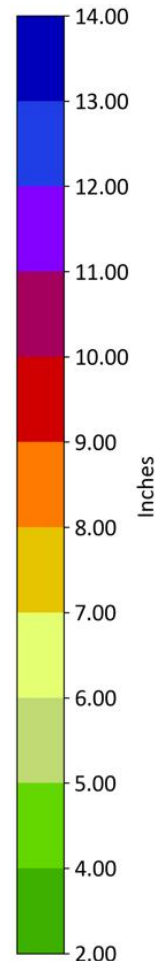
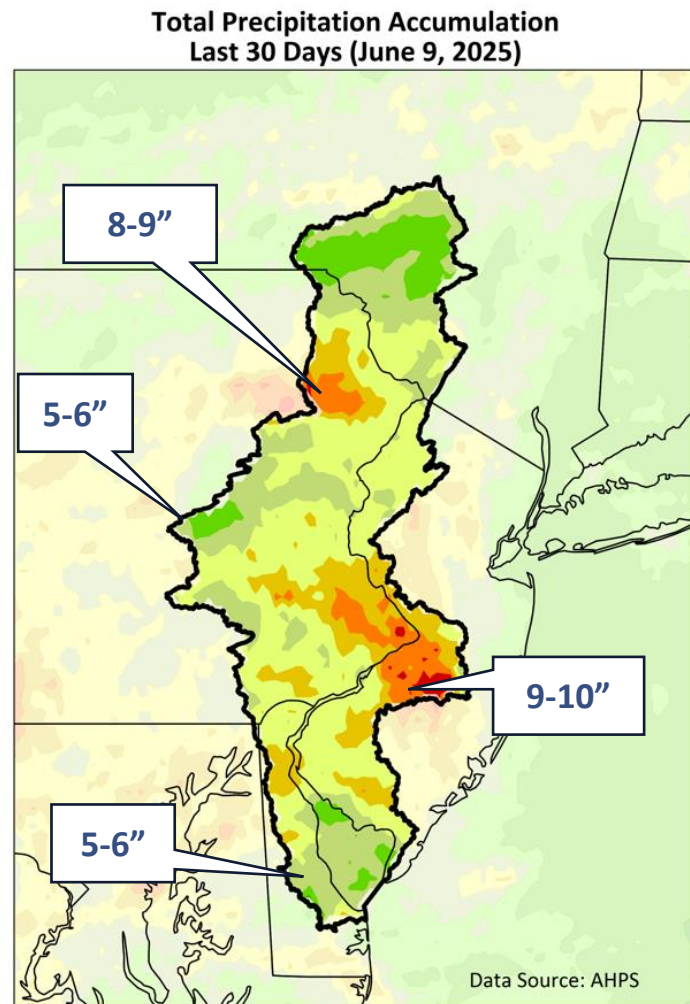
Cumulative Precipitation – Last 90 days

The last three months shows a significant improvement in rainfall totals.



Cumulative Precipitation – Last 30 days

Above normal throughout the basin the last 30 days.



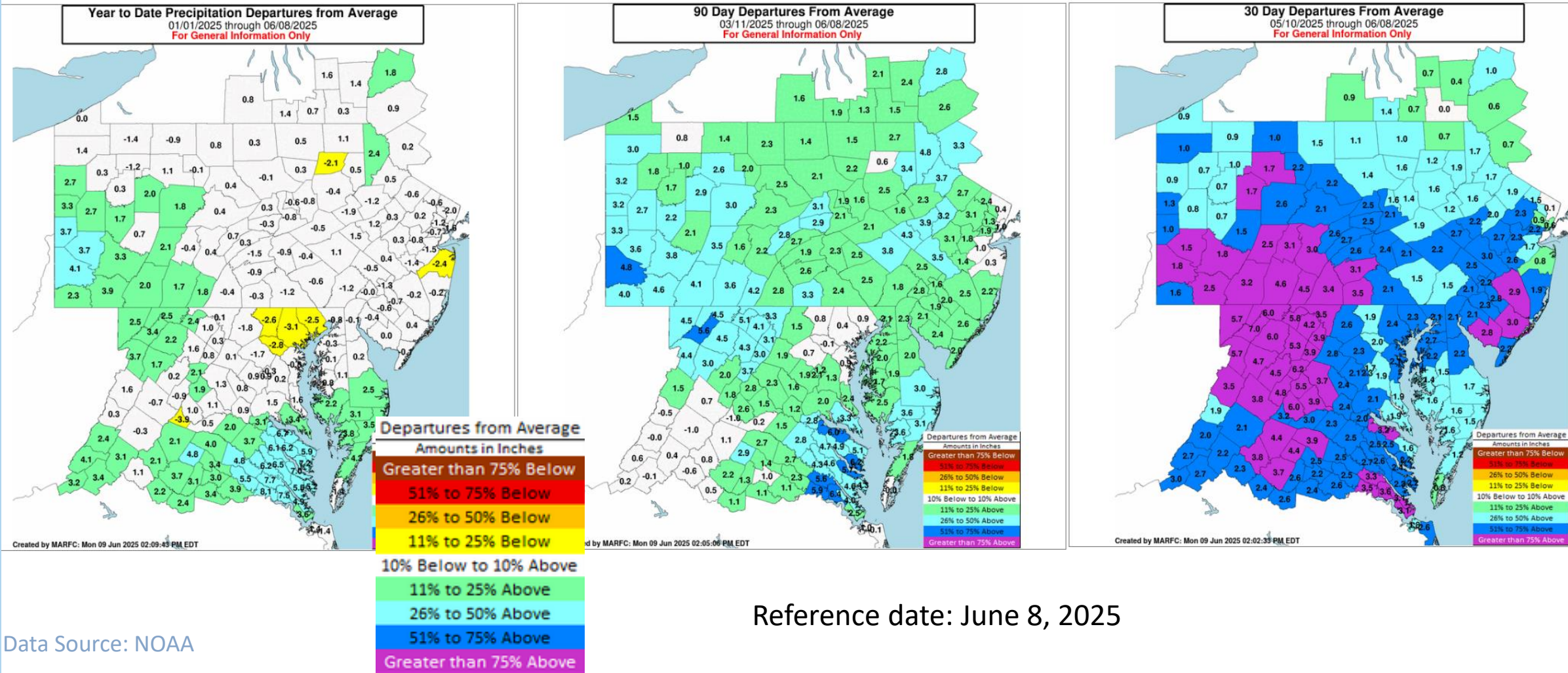
Precipitation Departures Summarized by County

Conditions have significantly recovered in the past 30 days.

Year-to-date

90-day

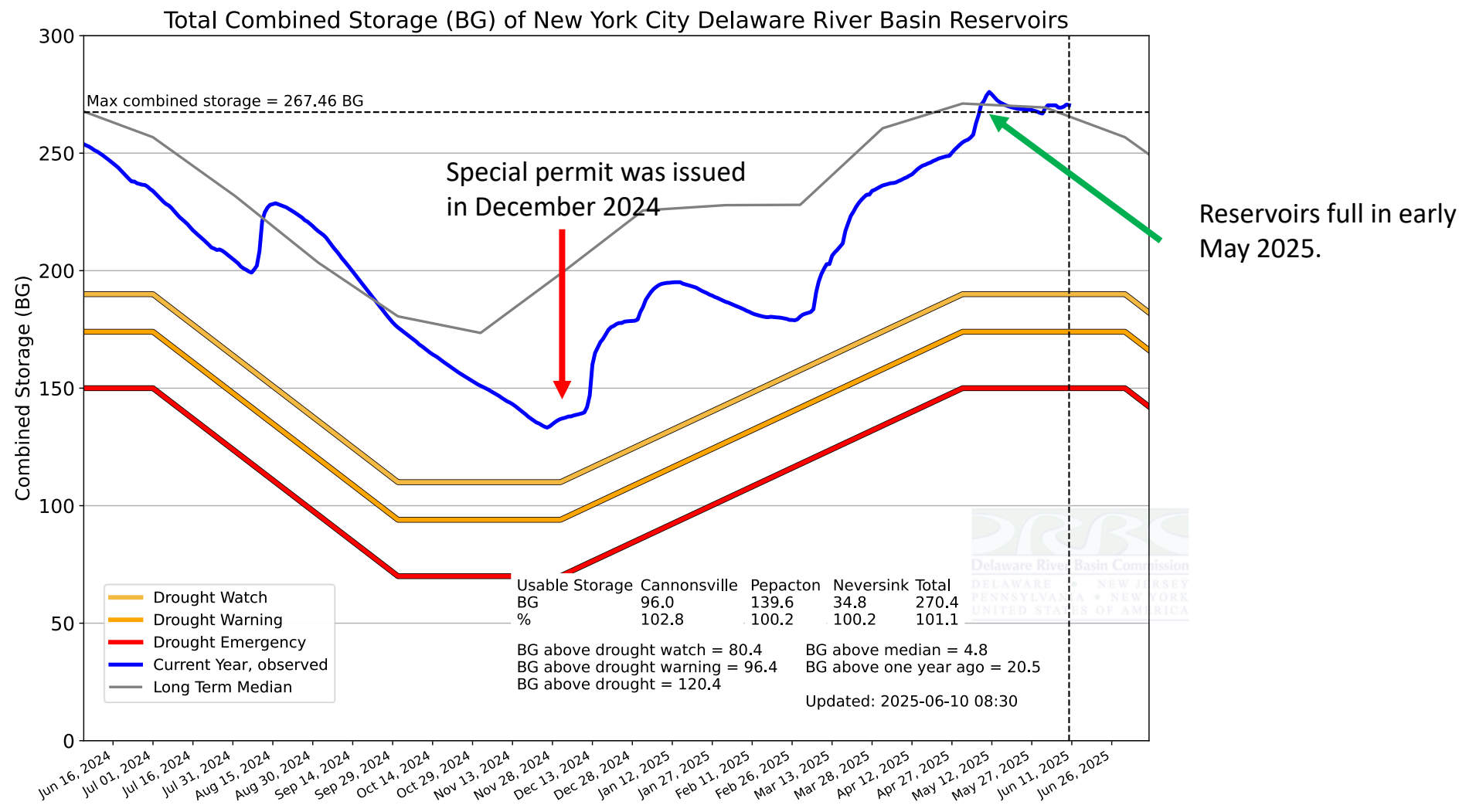
30-day



Reference date: June 8, 2025

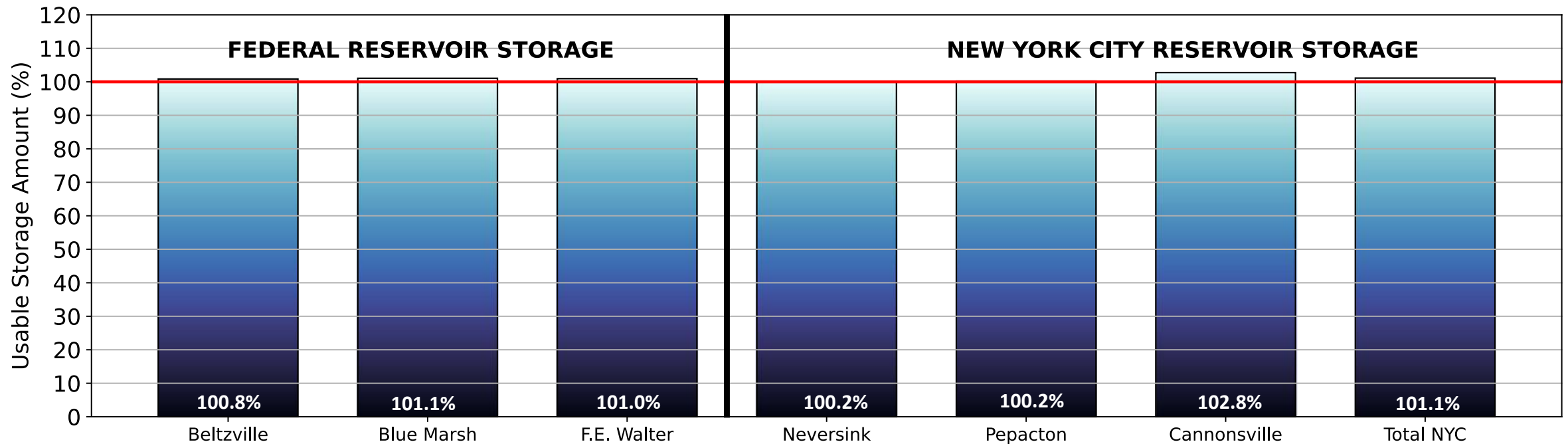
New York City Reservoir Storage

NYC combined storage reached full capacity in early May.



Reservoir Storage for Flow Management

The reservoirs are all at full capacity with increased rainfall.

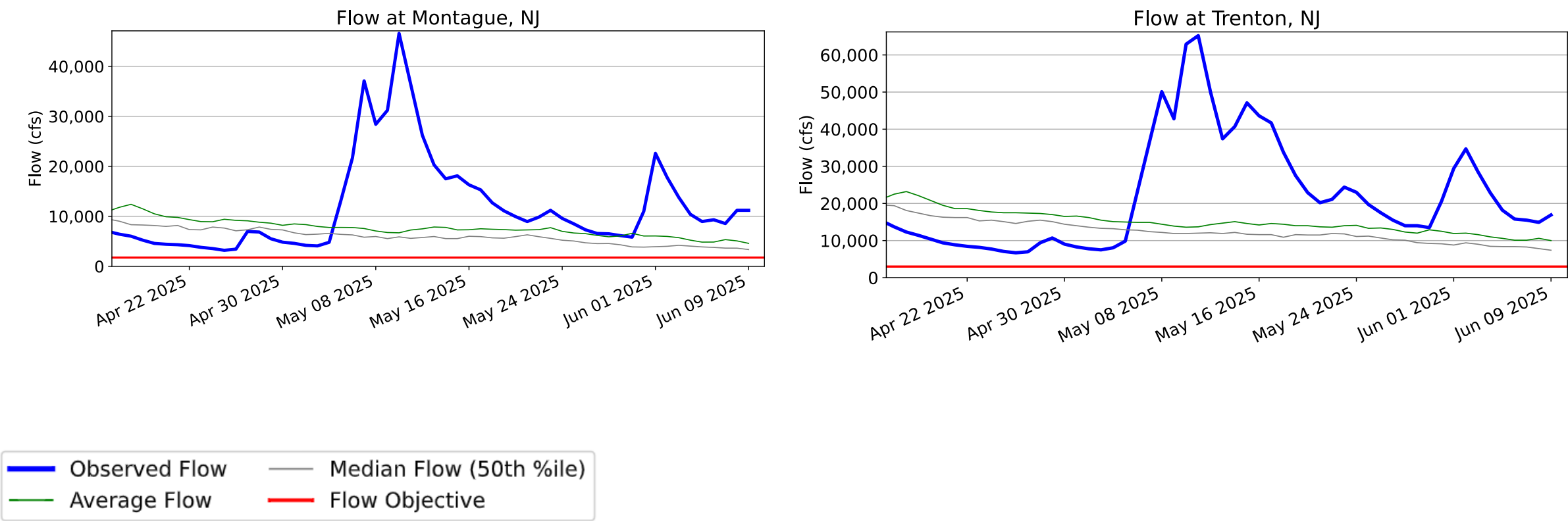


Reference date: June 10, 2025

Releases from Lower and Upper Basin Reservoirs are used to meet flow objectives.

Mainstream Streamflow Conditions along Delaware River

Flows along the mainstem were 200% above normal for the month of May.



Map last updated: 8:30 am, June 10, 2025

Data Source: USGS

Monthly Streamflow for May 2025









Most tributaries have recovered to normal or above normal conditions with recent precipitation.

Flow Conditions on average:

Upper Basin: Normal or above Normal

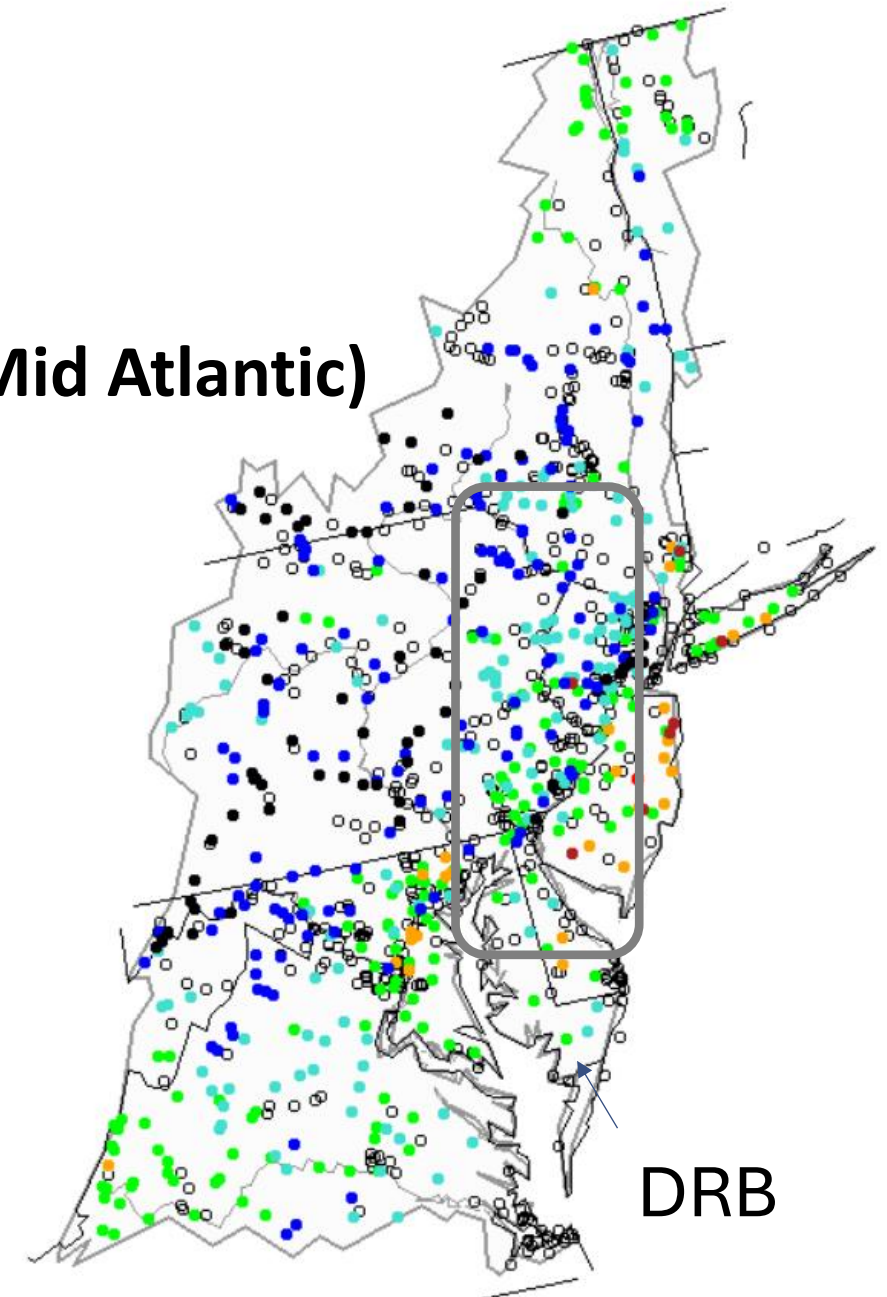
Central Basin: Normal

Lower Basin: Normal or below Normal

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

Data Source: USGS, Water Watch, <https://waterwatch.usgs.gov/index.php?r=02&id=mv01d>

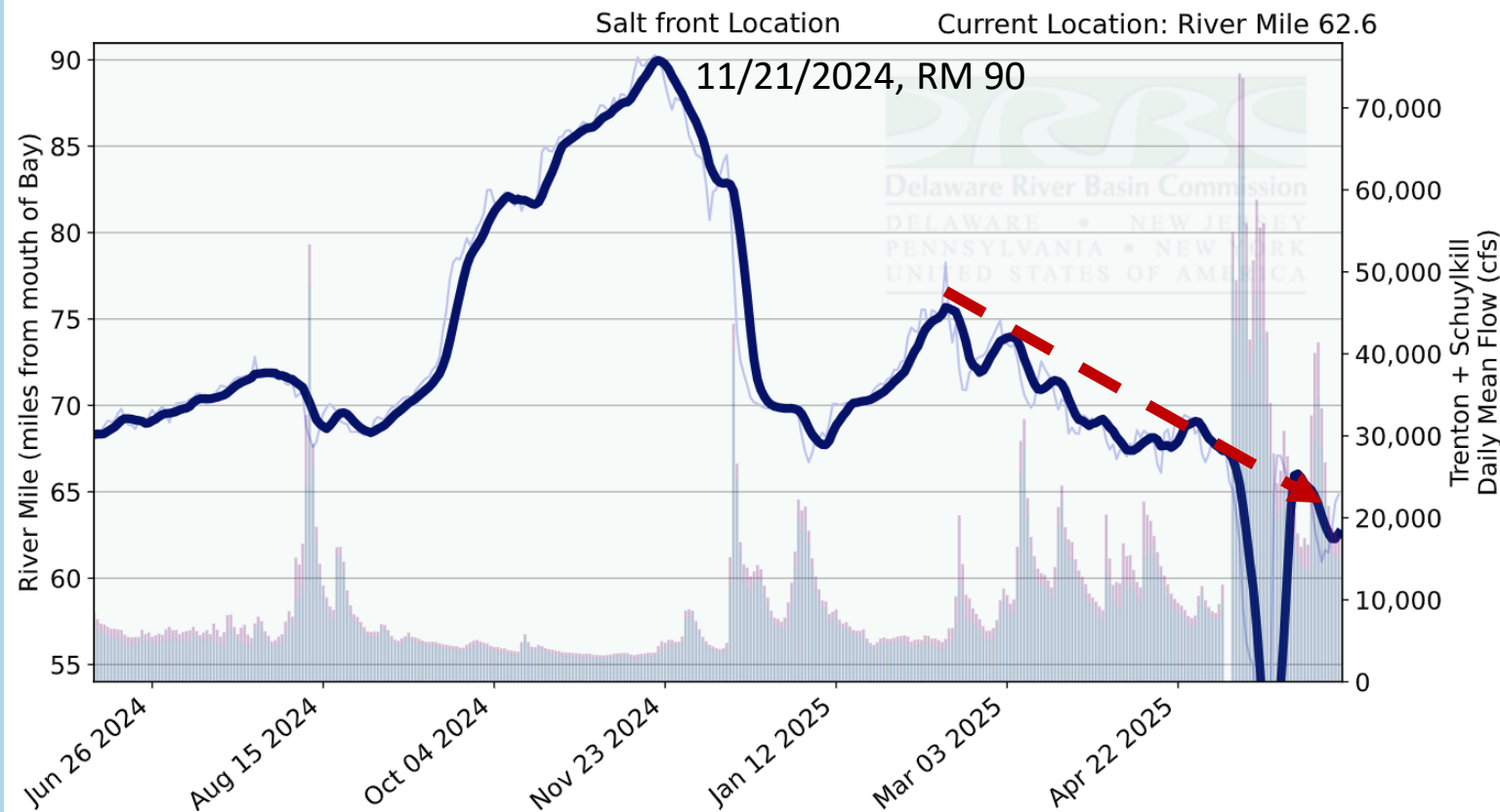
(Mid Atlantic)



DRB

Salt Front Location

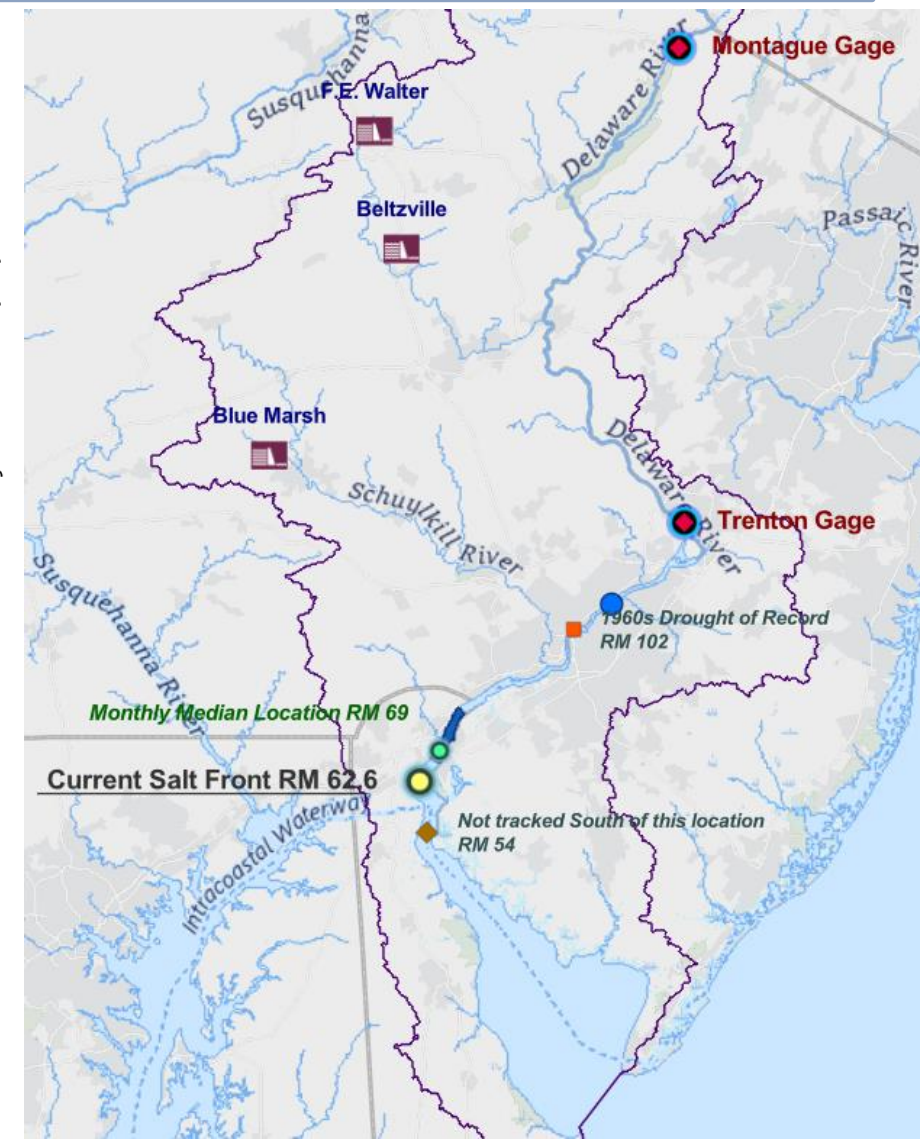
Salt front has been in the normal range since the beginning of this year.



SALT FRONT (river mile) This Week: 64.2 Last Week: 62.6 June Median: 69

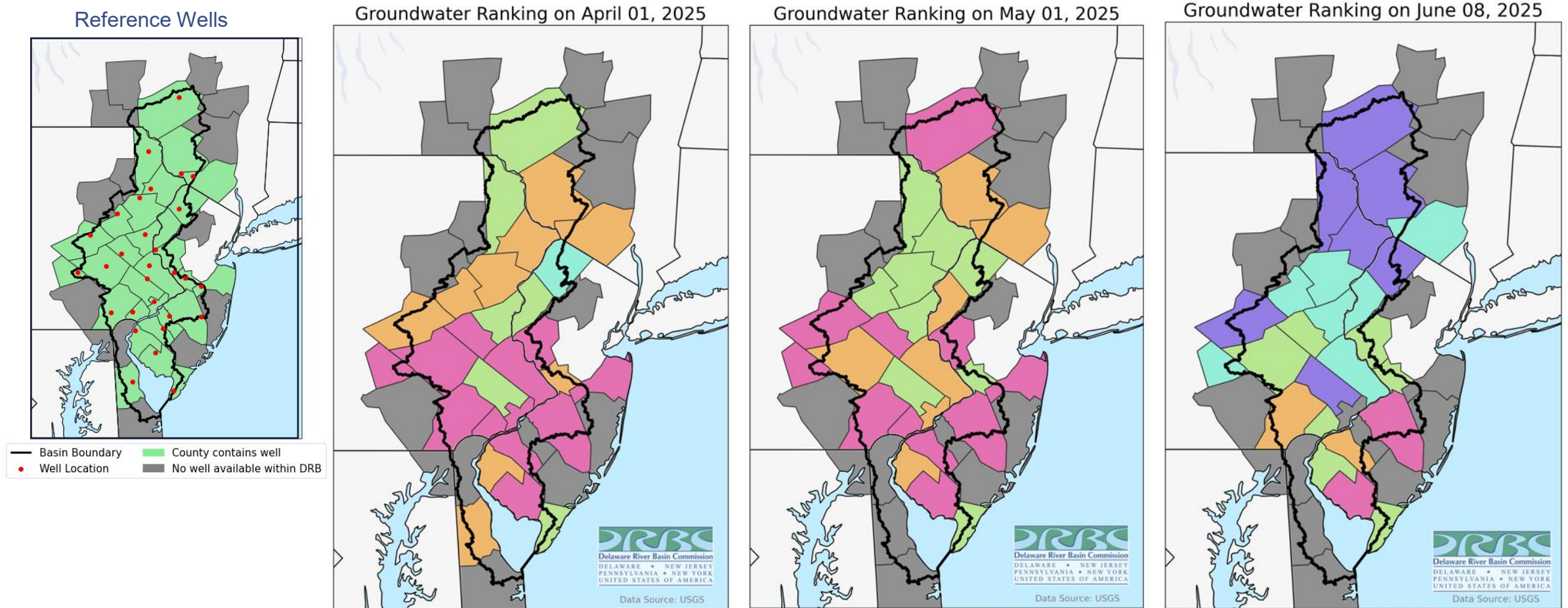
June 9, 2025

DRBC hydrosnap.drbc.net



Groundwater Levels

Groundwater levels have significantly rebounded with the precipitation in May.



Basin Boundary

Much Above Normal

Below Normal

Above Normal

Much Below Normal

Normal

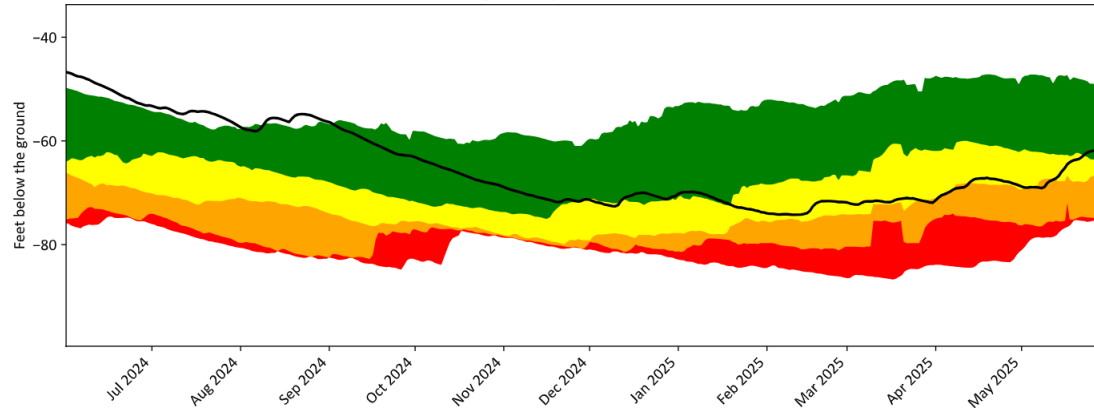
Data unavailable

April 1st through June 8, 2025

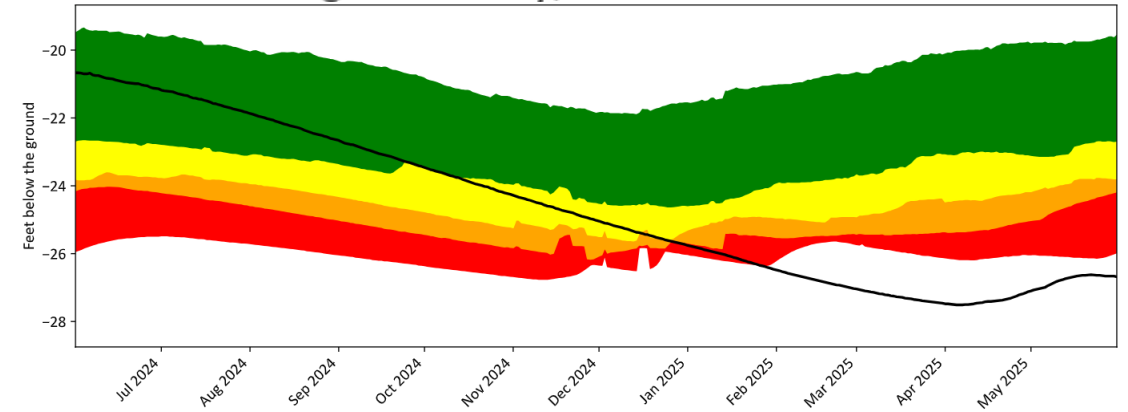
Groundwater Levels

Groundwater levels show a delayed and slow recovery following May rainfall events.

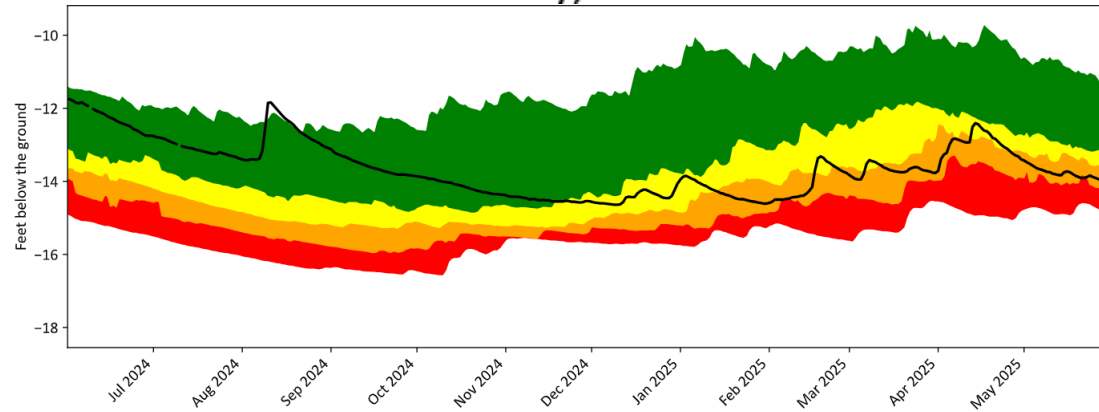
Lehigh County, PA Observation Well



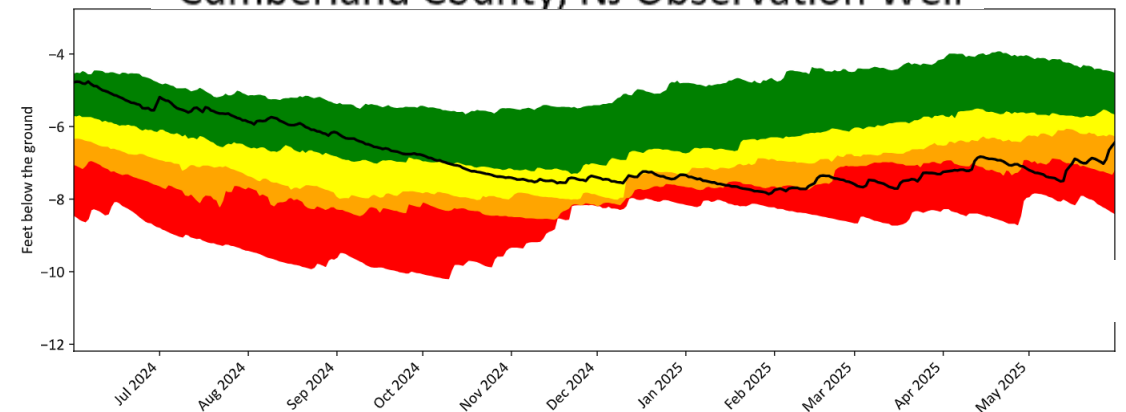
Burlington County, NJ Observation Well



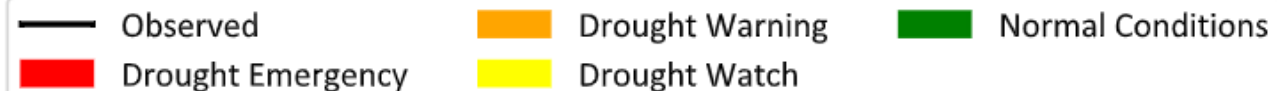
Chester County, PA Observation Well



Cumberland County, NJ Observation Well

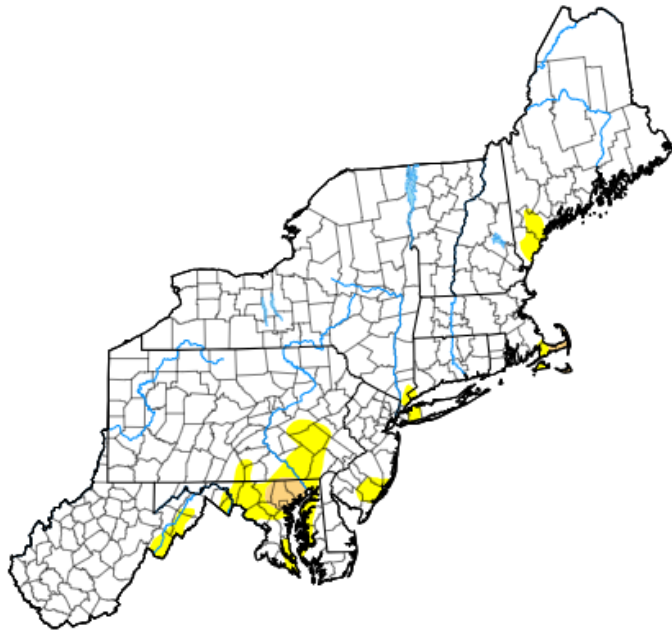


Last updated on June 9, 2025



Drought Monitor

Following May precipitation averaging more than 200 percent of normal, drought has now ended for nearly all the Northeast.



Map released: Thurs. June 5, 2025

Data valid: June 3, 2025 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

Authors

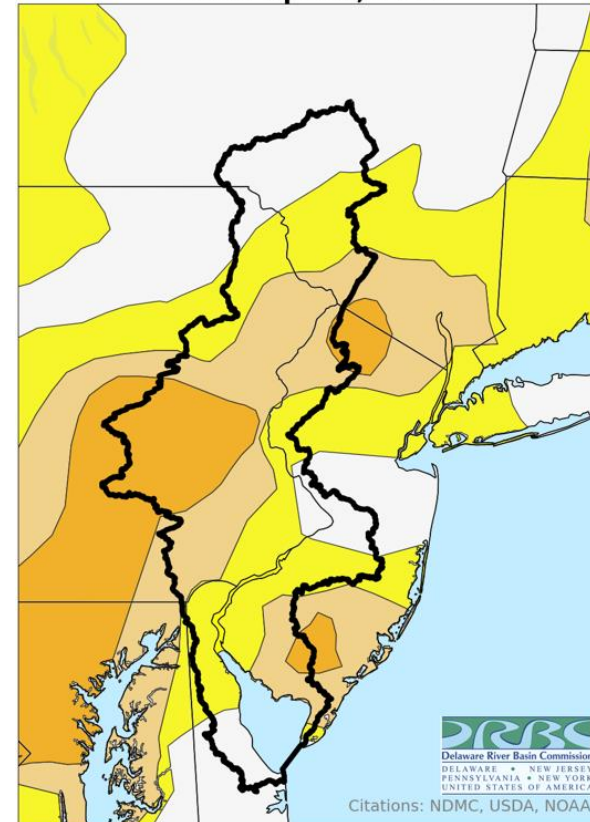
United States and Puerto Rico Author(s):

[Brad Pugh](#), NOAA/CPC

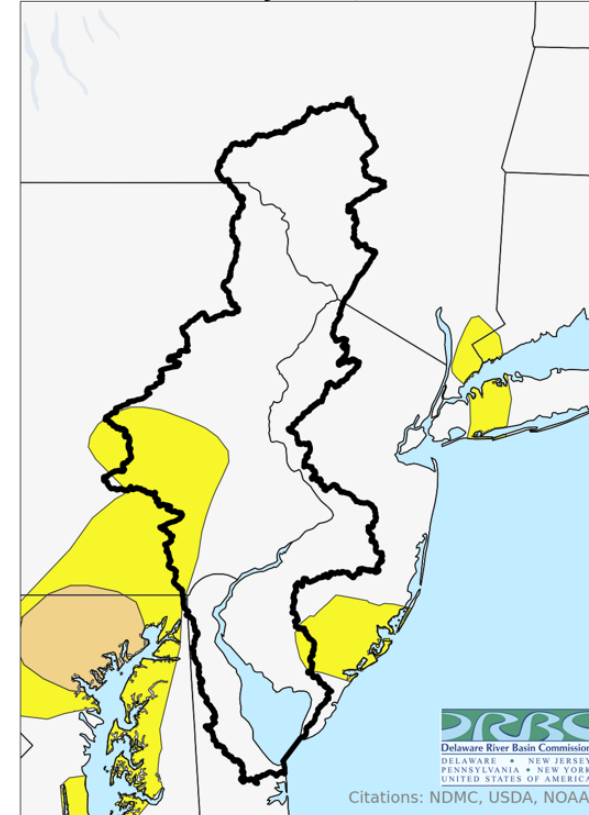
Pacific Islands and Virgin Islands Author(s):

[Curtis Riganti](#), National Drought Mitigation Center

Drought Monitor
Valid: Apr 29, 2025



Drought Monitor
Valid: Jun 03, 2025

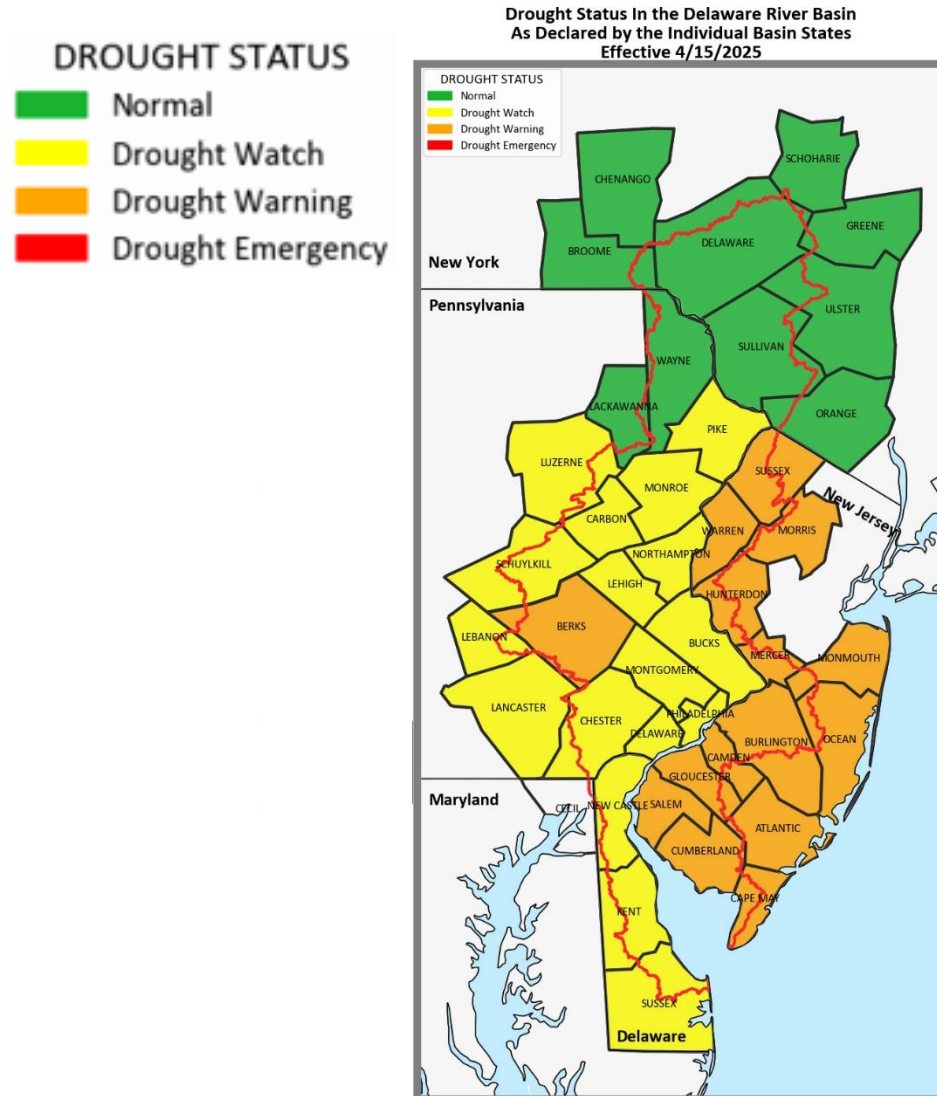


- Basin Boundary
- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought

Data Source: USDM

Drought Status

Dry conditions in the fall 2024 led to a drought watch or warning in the Basin states.



- DRB drought status is normal
- NJ: Drought Warning
- DE: Drought Watch
- NY: Normal as of Jan 2025
- PA: Drought Watch; 1 DRB county in Drought Warning

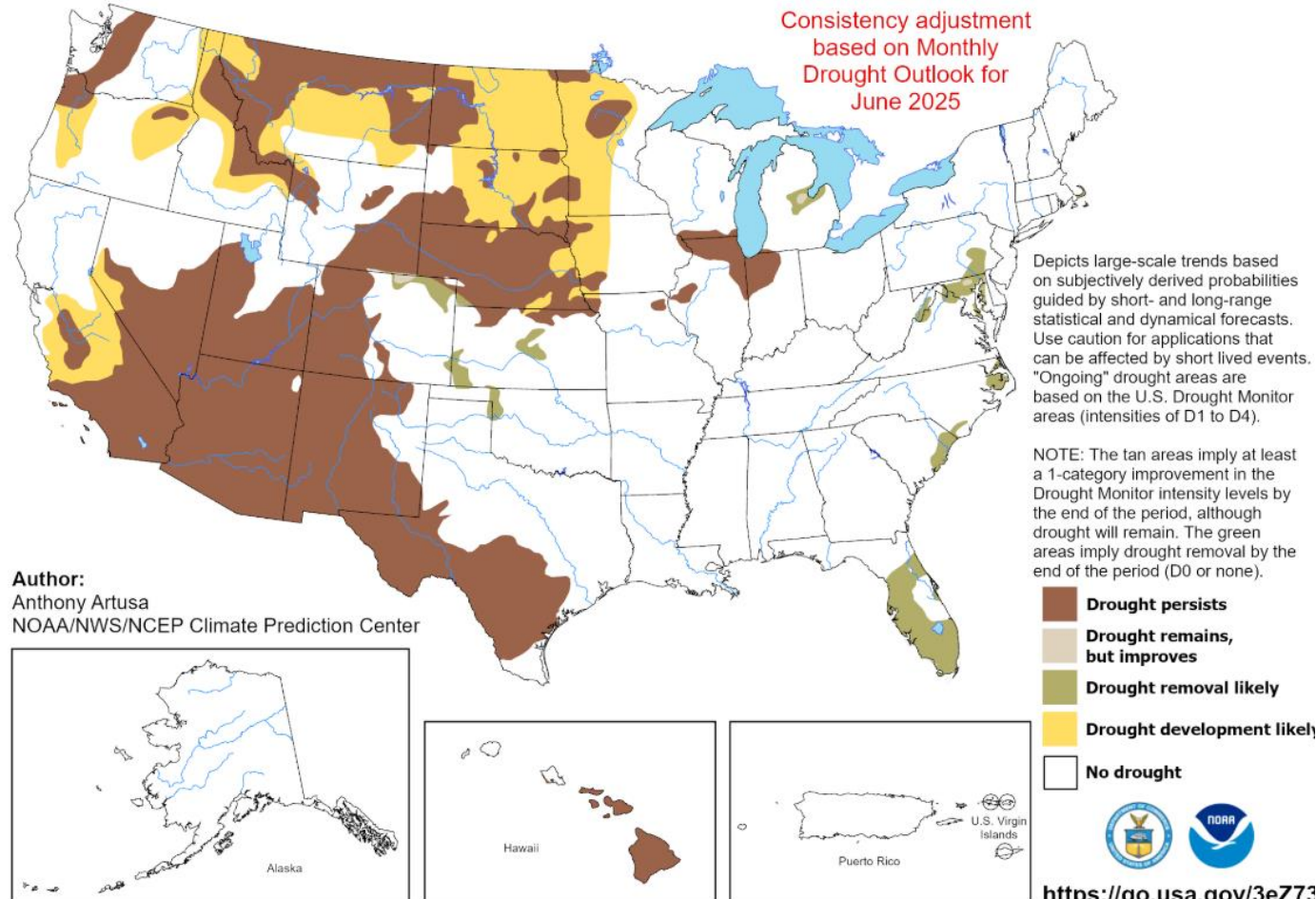
Map last updated on 4/15/2025.
No change since then.

NOAA Seasonal Drought Outlook: June 1 – August 31, 2025

Delaware River Basin is expected to largely remain free of drought conditions through the end of August.

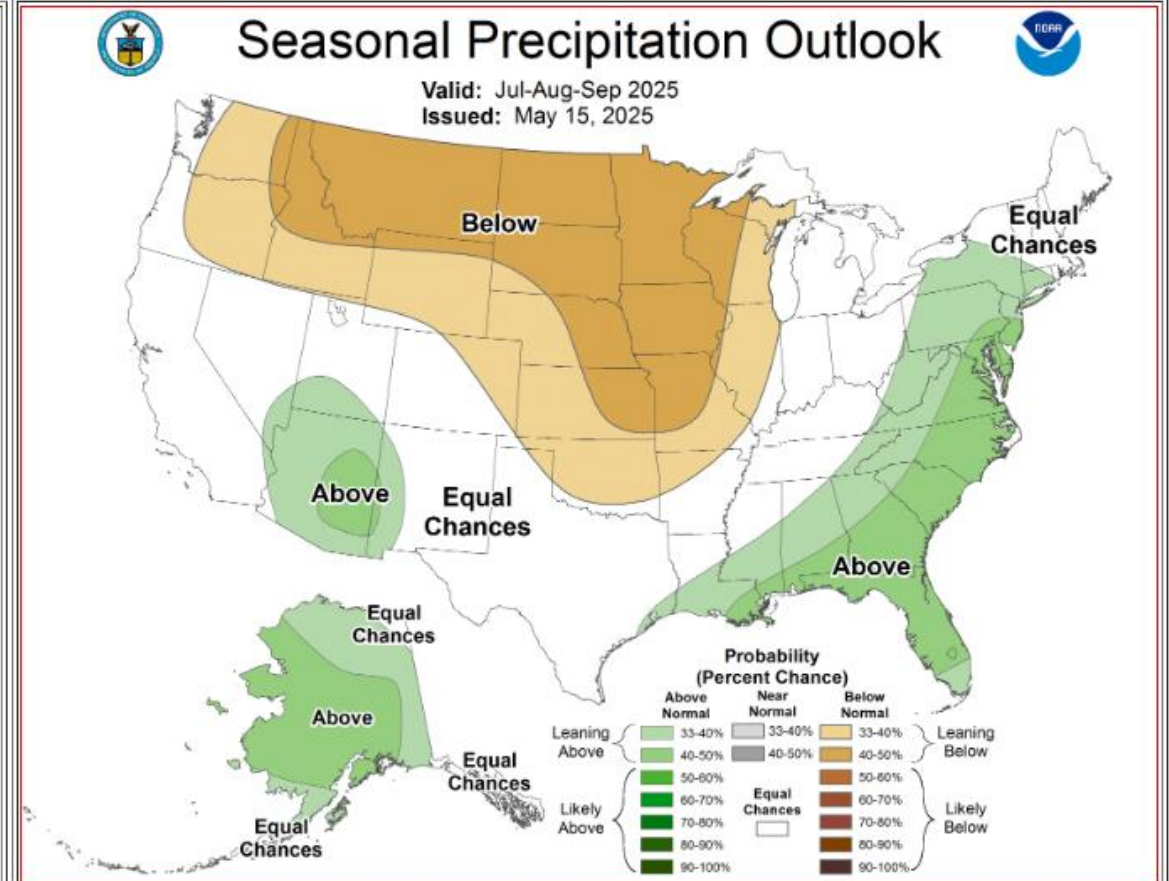
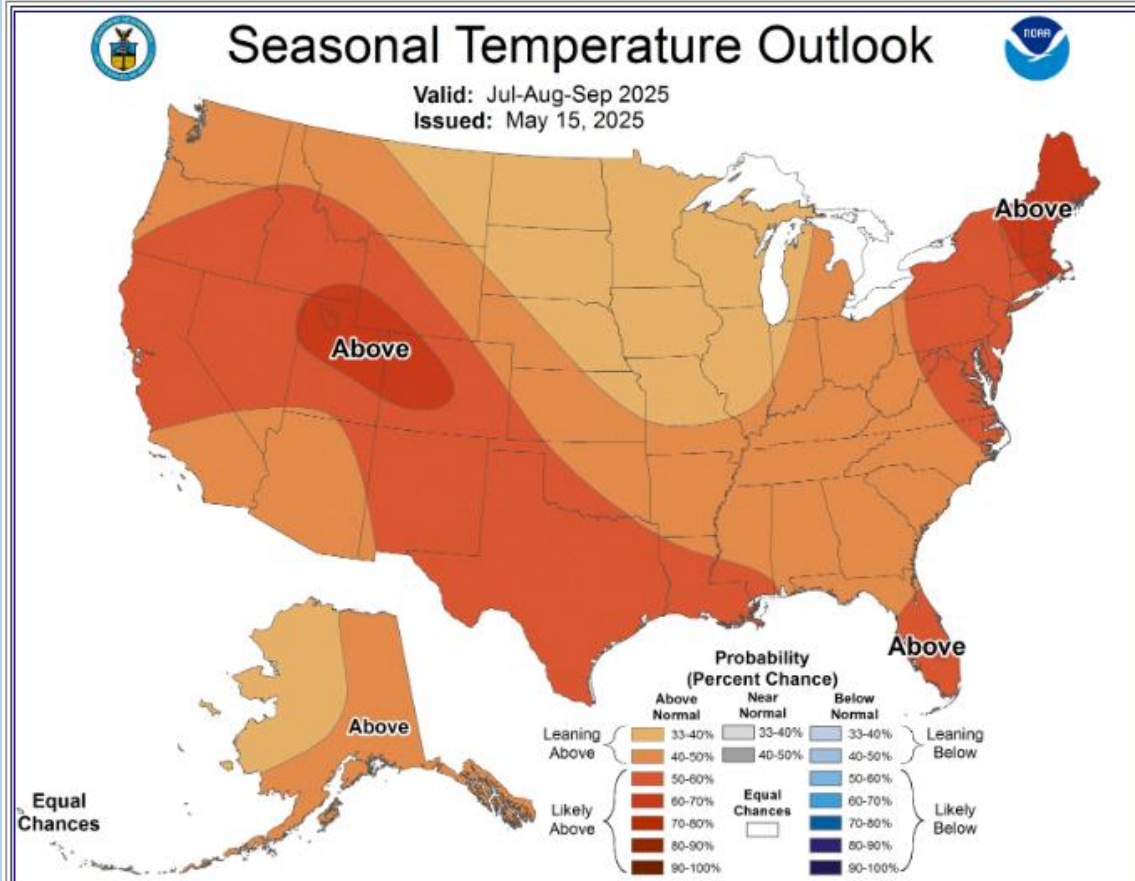
U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for June 1 - August 31, 2025
Released May 31, 2025



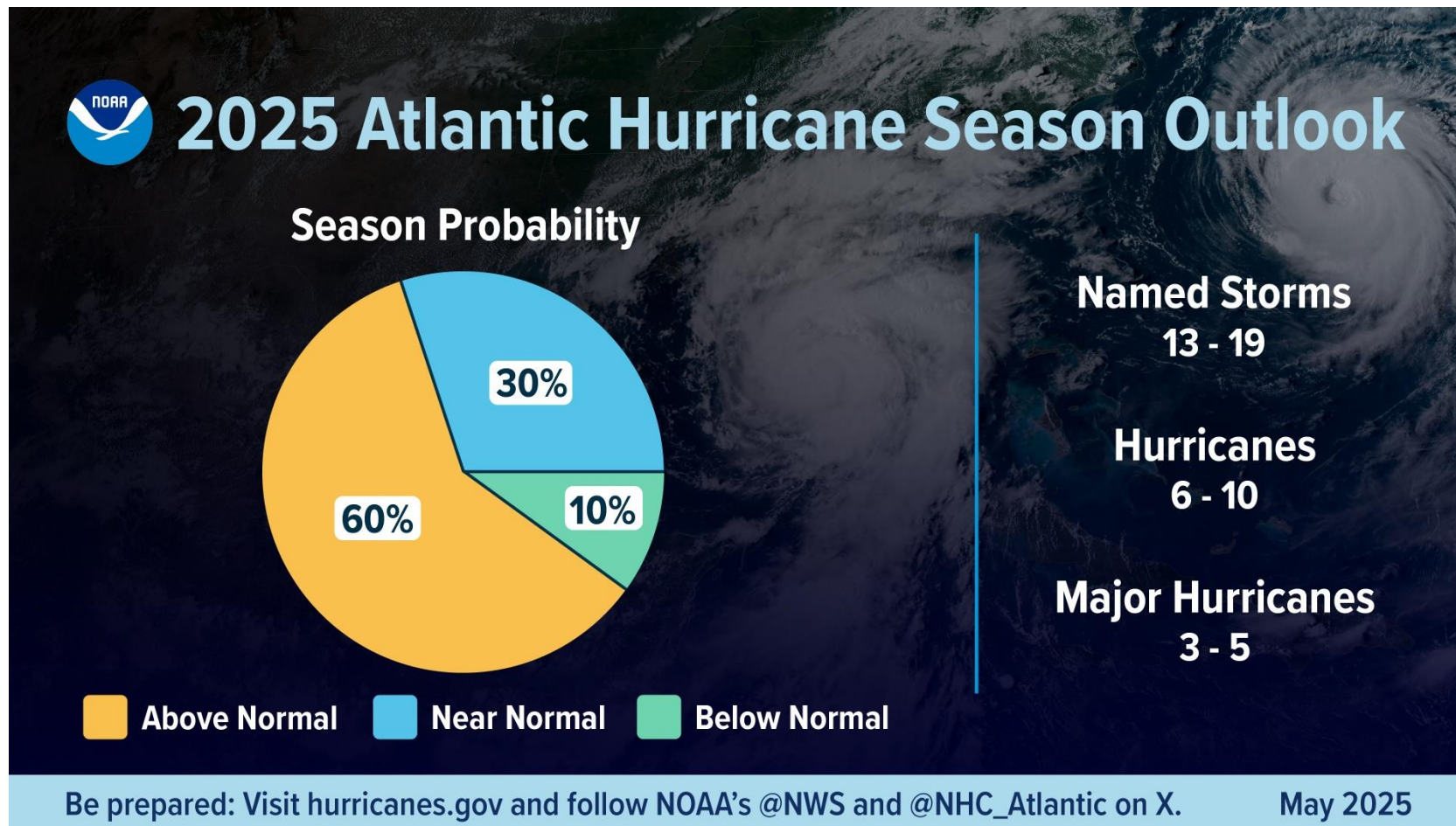
NOAA Seasonal Outlook – Jul-Aug-Sep 2025

A warm summer and wet summer are expected.





NOAA Hurricane Outlook – Summer 2025

An above normal hurricane season is predicted.





Hydrologic conditions summary

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- Conditions have recovered significantly, and many parts of the basin are no longer in a drought. Groundwater wells continue to recover, but slowly.
 - Three-month outlook – warm and wet summer expected. Above average hurricane season expected.
 - Drought conditions are not expected to occur in the next three months.



Enjoy the summer!