Hydrologic Conditions

Sara Sayed
Water Resource Scientist
Water Resource Operations

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DRBC 3Q 2024 Business Meeting

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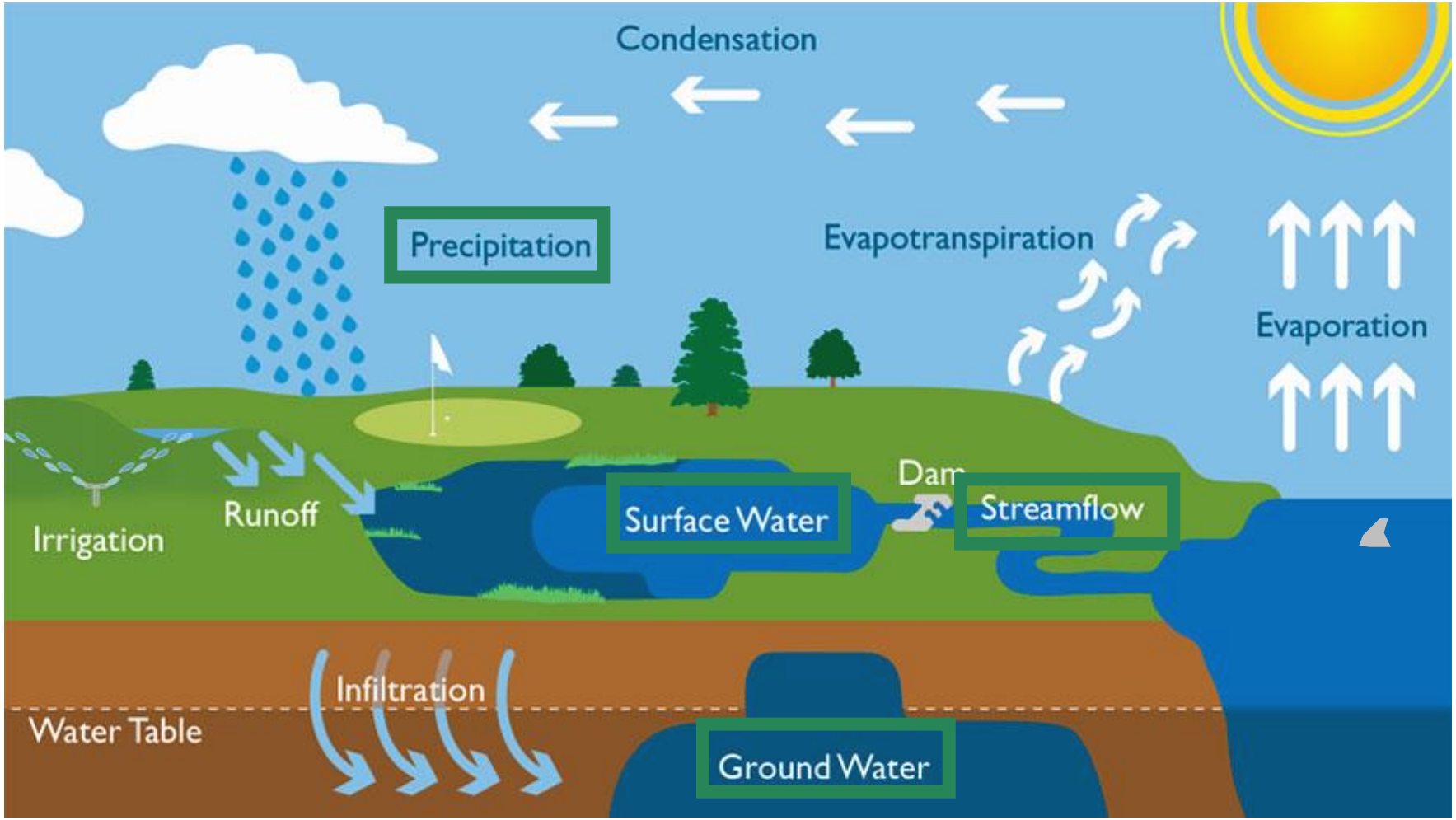
The Hydrologic Cycle

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



Graphic courtesy of Pike County Soil Conservation District

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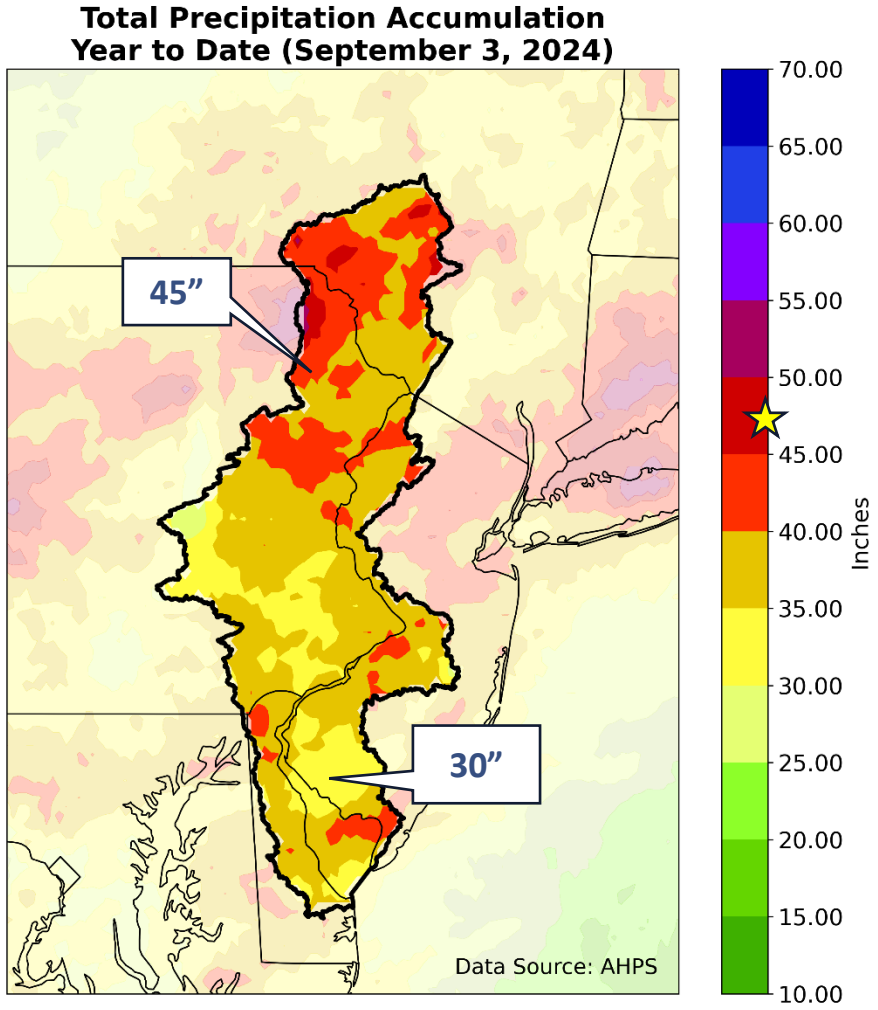
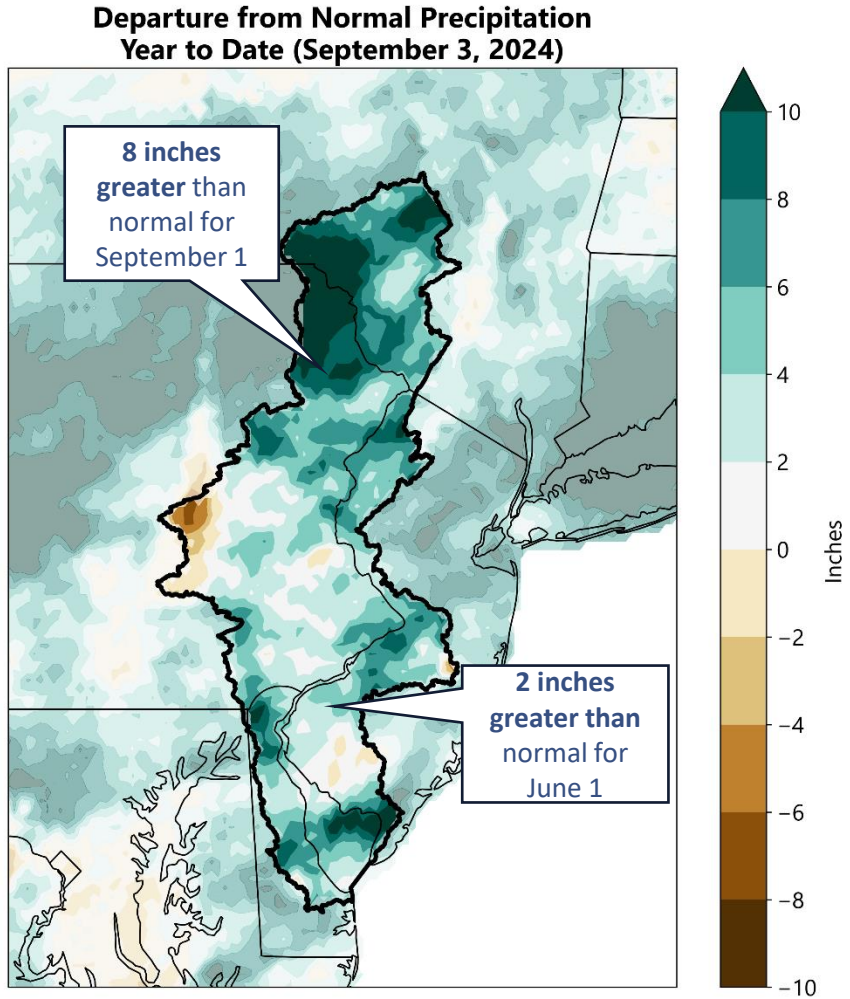
Precipitation since January 1

The basin has received much more than normal rainfall so far this year.





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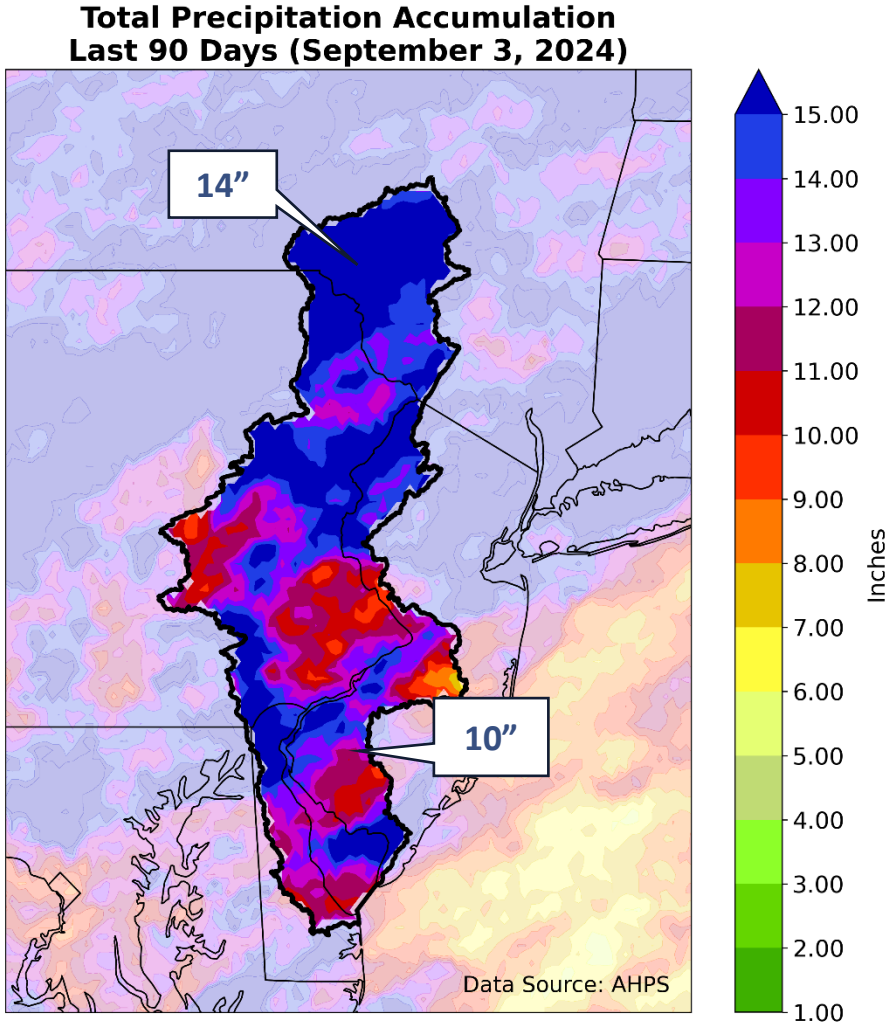
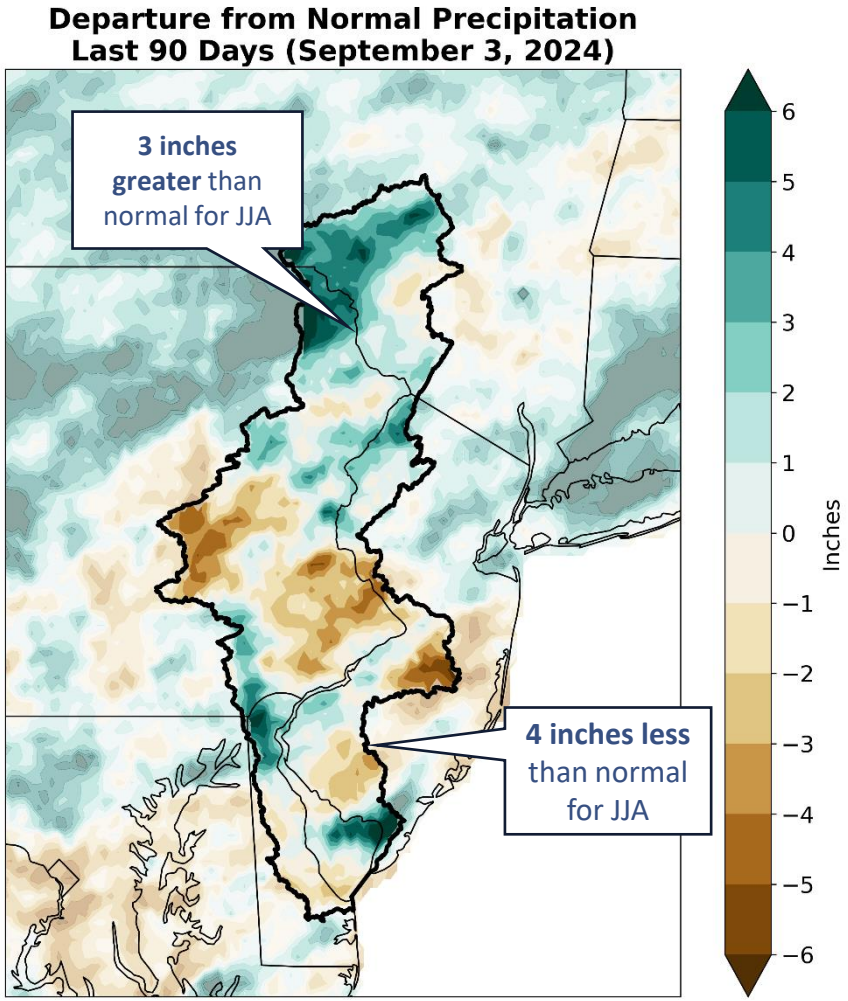
Precipitation – 90 days

The past three-month period has been wetter in the Upper Basin and drier in the lower basin.





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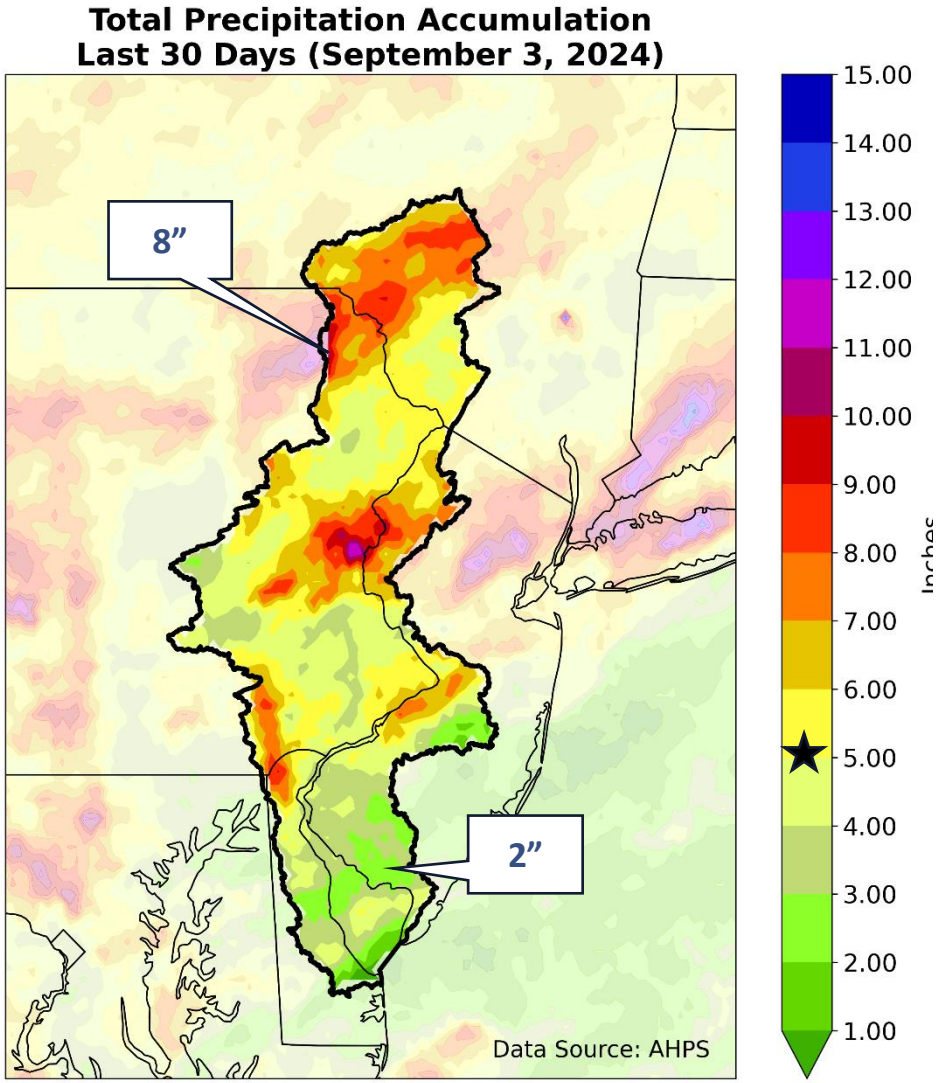
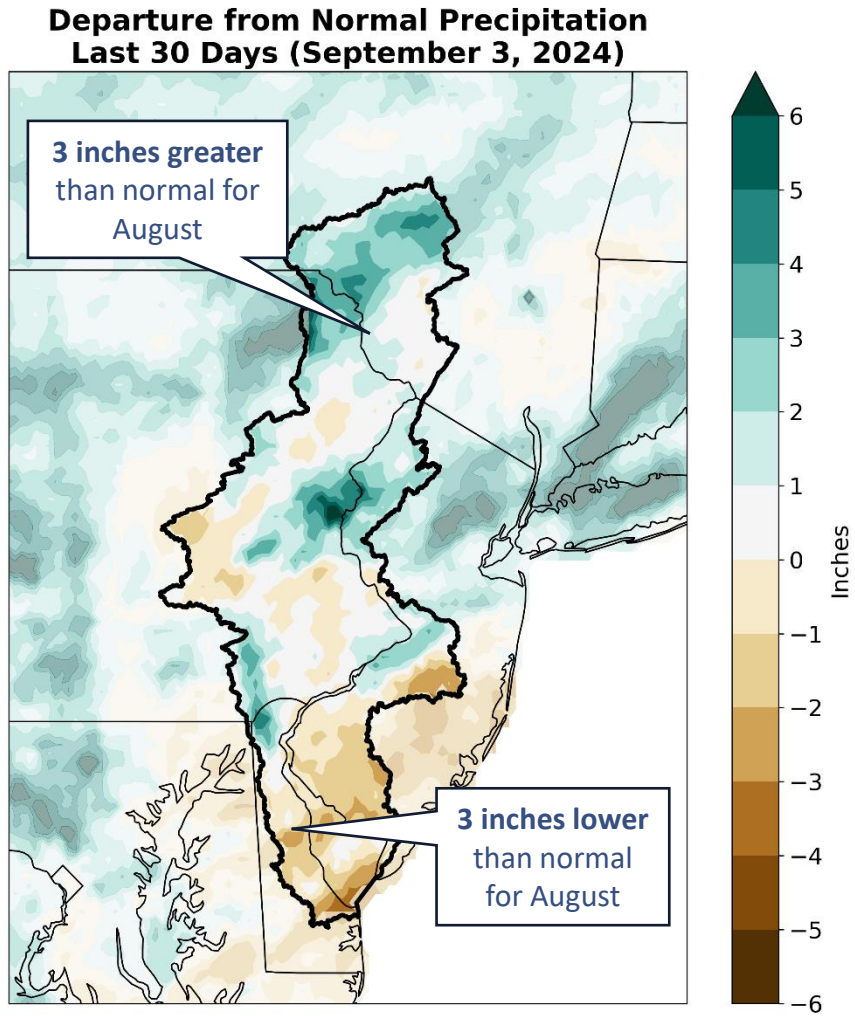
Precipitation – past 30 days

August was relatively drier in the lower basin and wetter in the upper basin.





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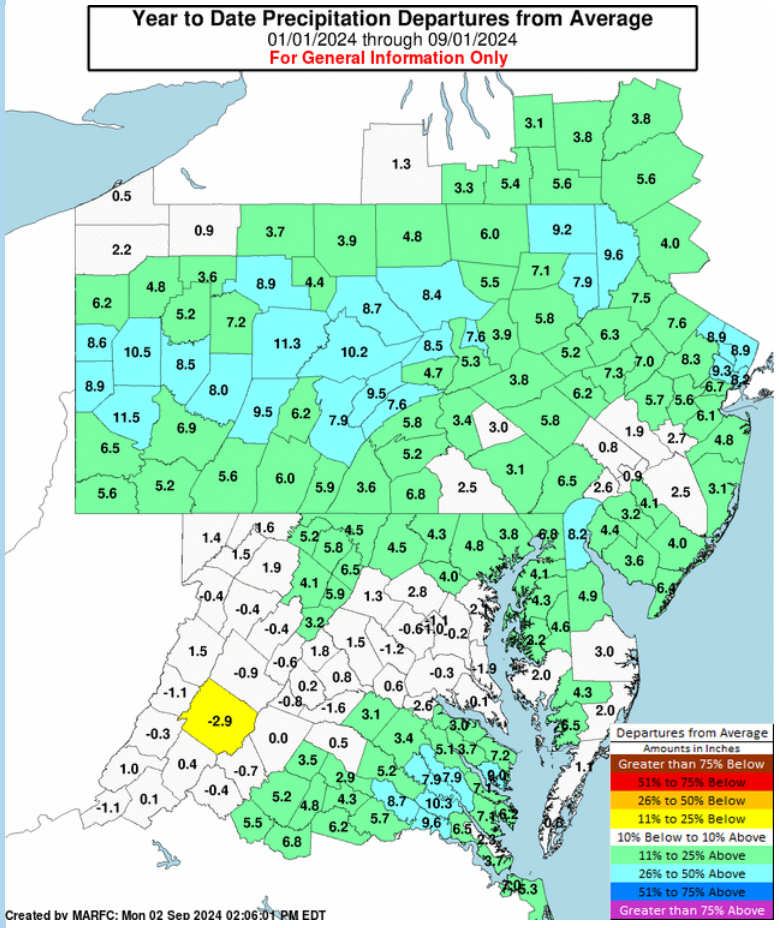
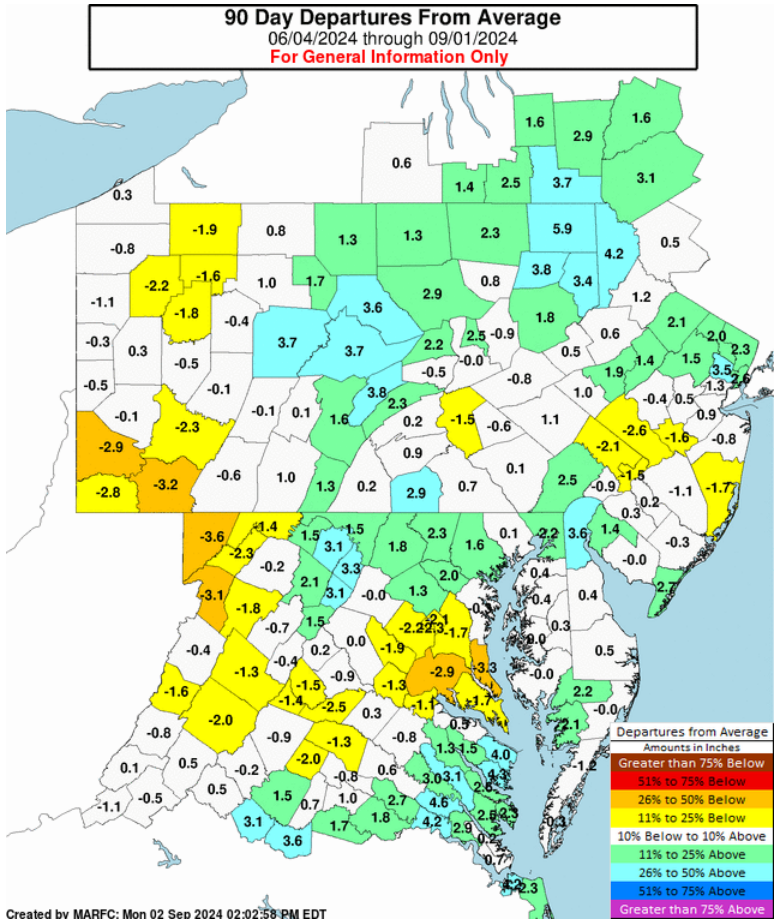
Precipitation Departures

Conditions have become relatively wetter over the past quarter and month.

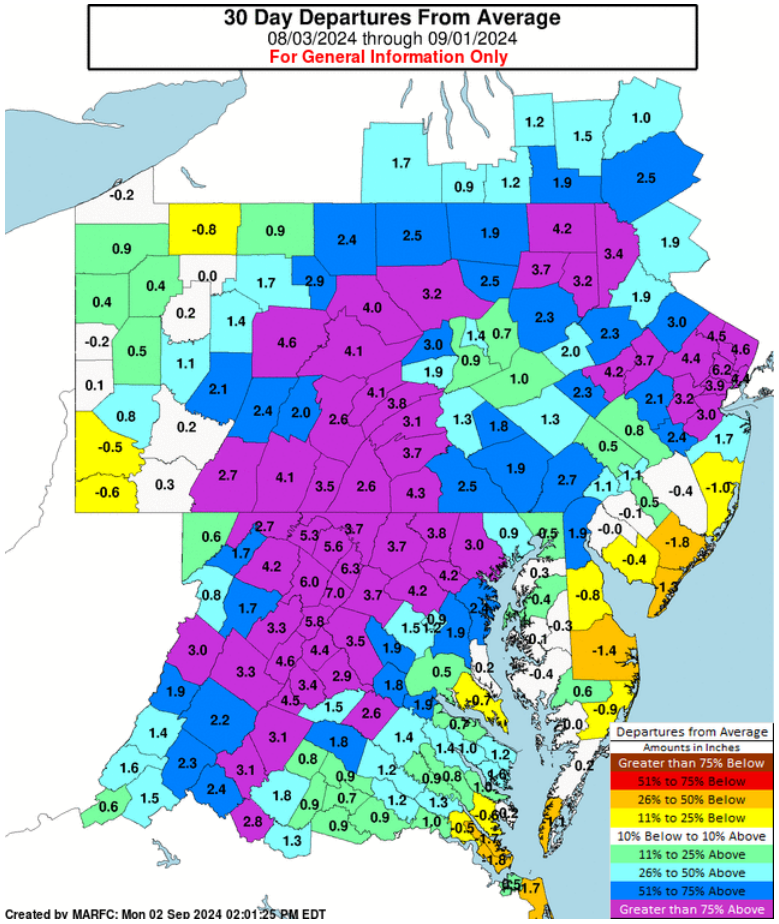
Year-to-date



90-day



30-day



Streamflow

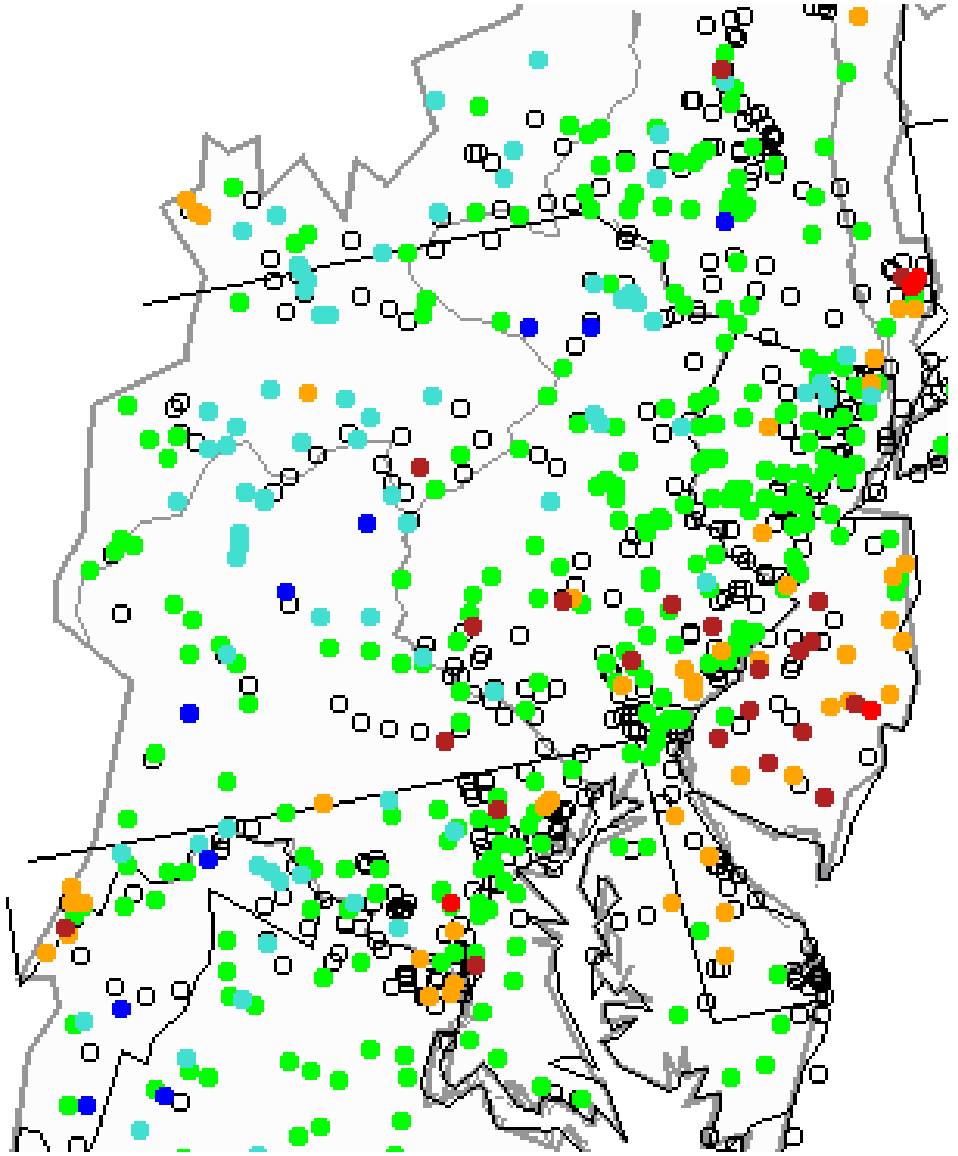
Smaller tributaries remain below normal while larger ones have returned to normal after recent rains.

Flow Conditions:

Upper Basin: Normal

Central Basin: Normal/Below Normal

Lower Basin: Normal/Below Normal



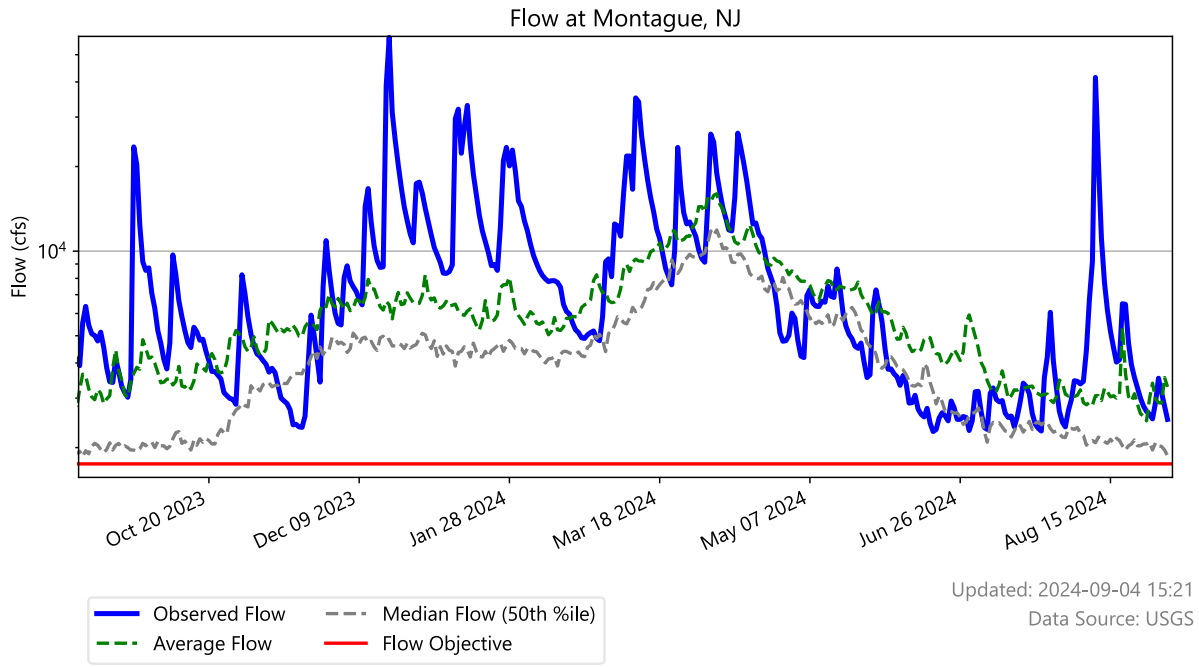
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Map last updated:
1:30 pm, September 3, 2024

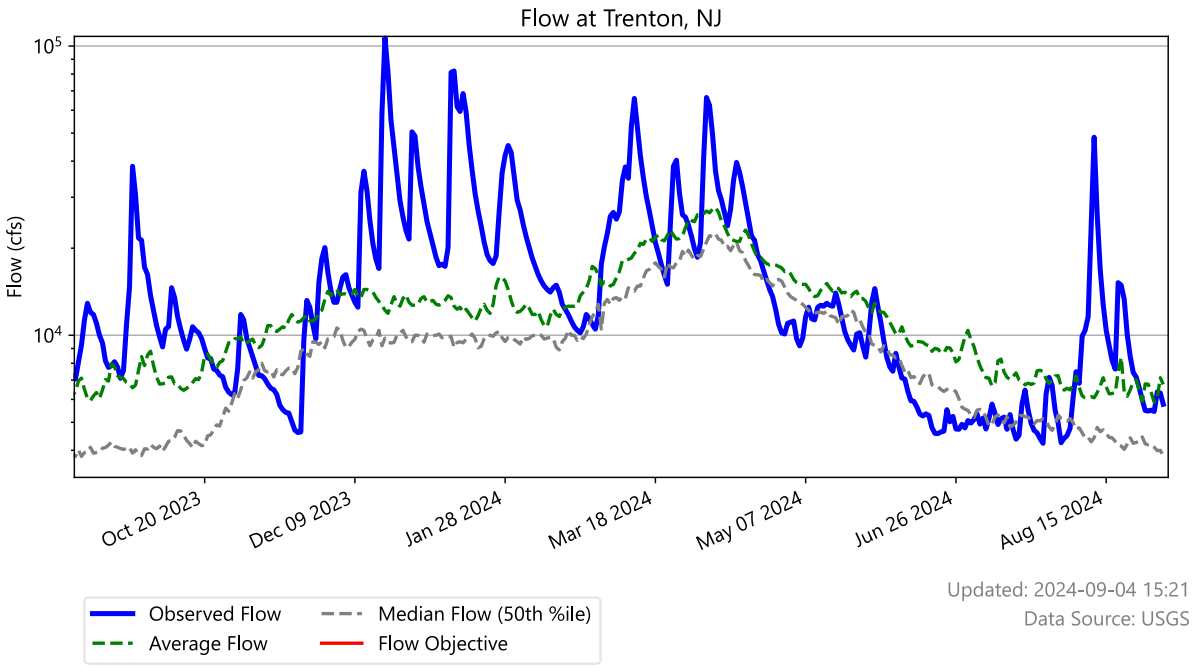
Data Source: USGS

Streamflow

Flows along the mainstem remain above normal to normal after recent rains.



Updated: 2024-09-04 15:21
Data Source: USGS



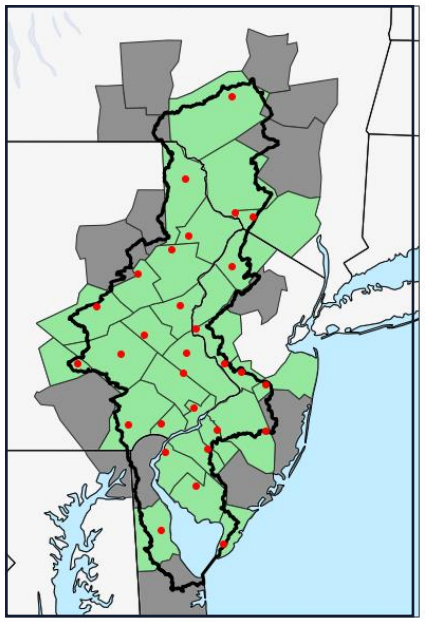
Updated: 2024-09-04 15:21
Data Source: USGS

Map last updated:
3:18 pm, September 4, 2024
Data Source: USGS

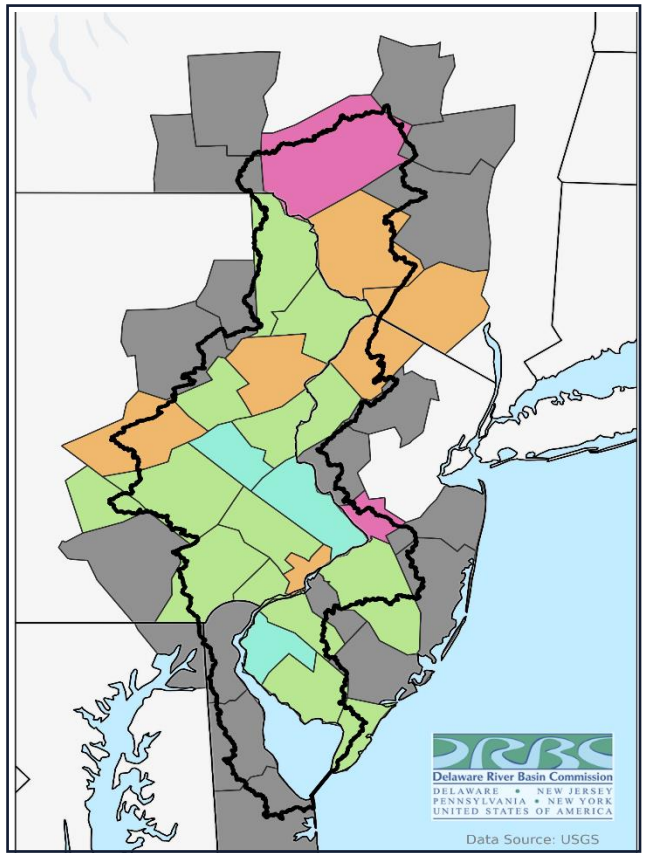
Groundwater Levels

Groundwater levels have recovered to normal levels with higher rainfall.

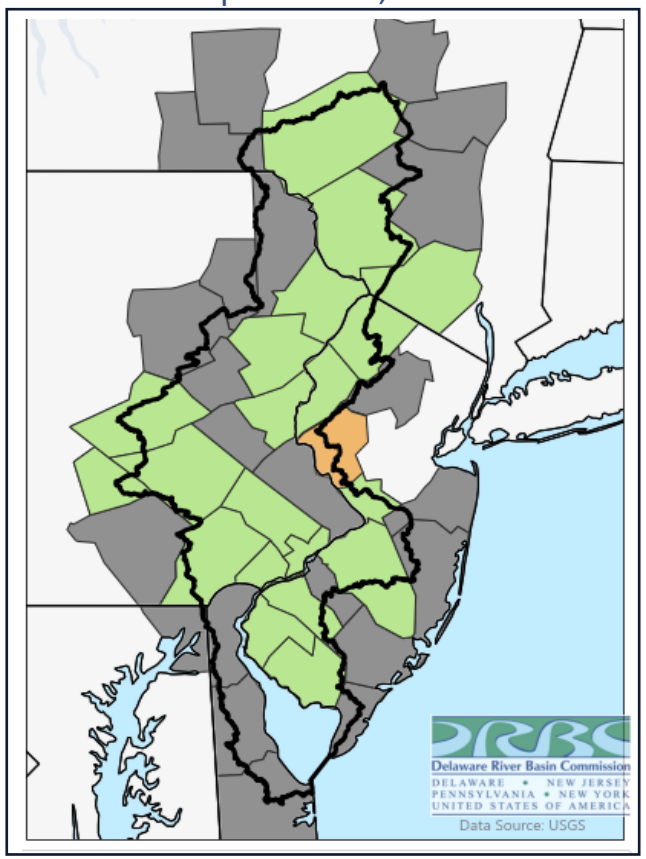
Reference Wells



June 25, 2024



September 4, 2024



Basin Boundary
Much Above Normal
Above Normal
Normal
Below Normal
Much Below Normal
Data unavailable

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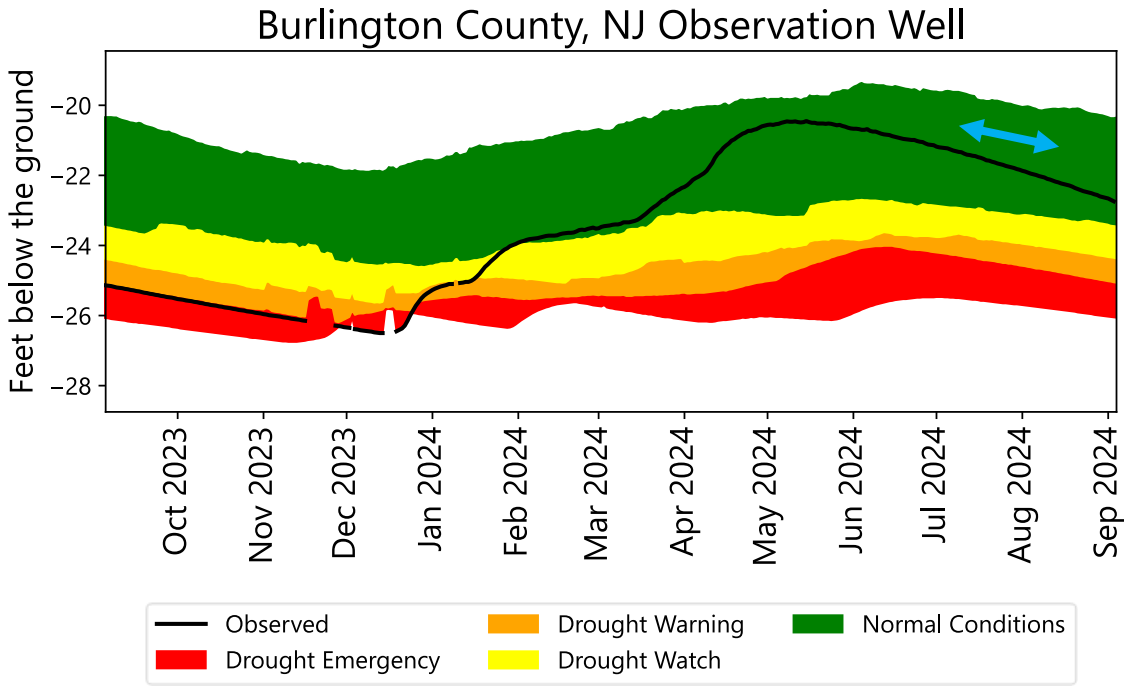
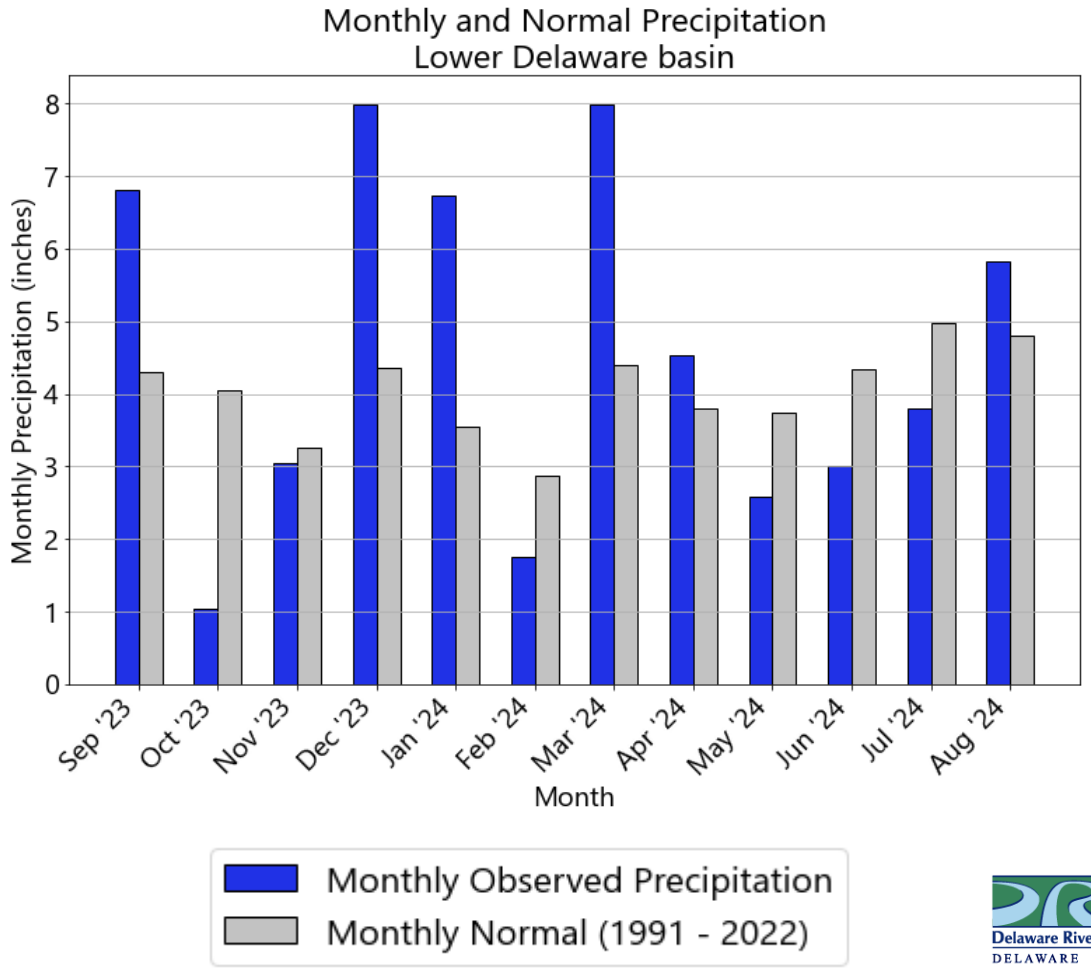
Groundwater Levels

Groundwater levels recovered during and after high rainfall months.



Data Source: USGS



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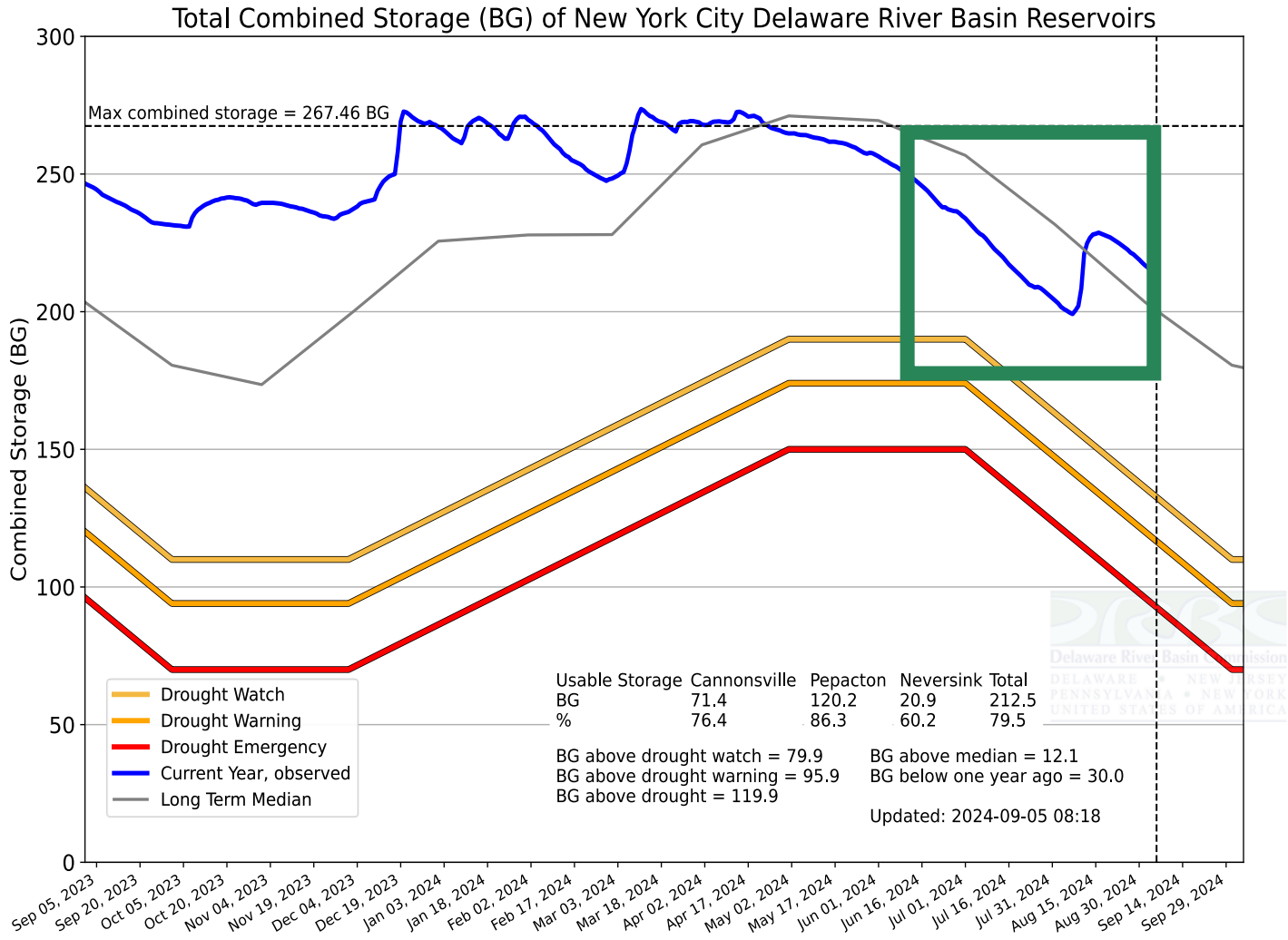
New York City Reservoir Storage

Low rainfall and high diversions are reflected in the combined storage.



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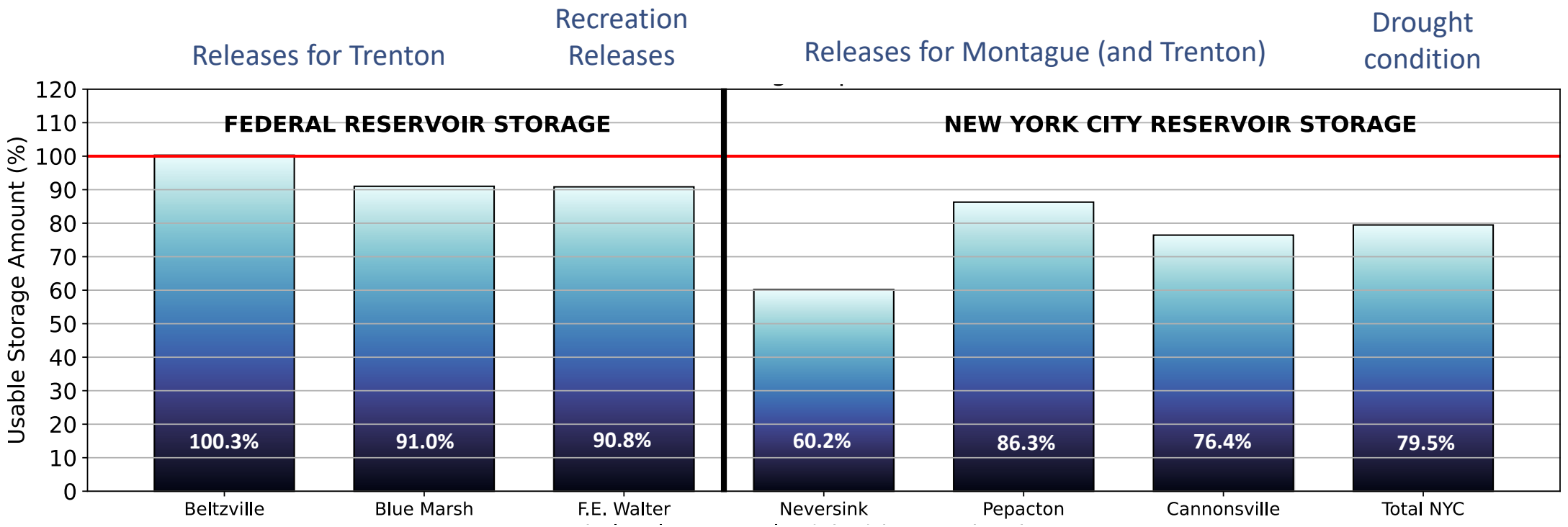
Reservoir Storage for Flow Management

The reservoirs are full or near full.

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



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Delaware Aqueduct Repair (shutdown)

Operations will be in accordance with the **F**lexible **F**low **M**anagement **P**rogram.

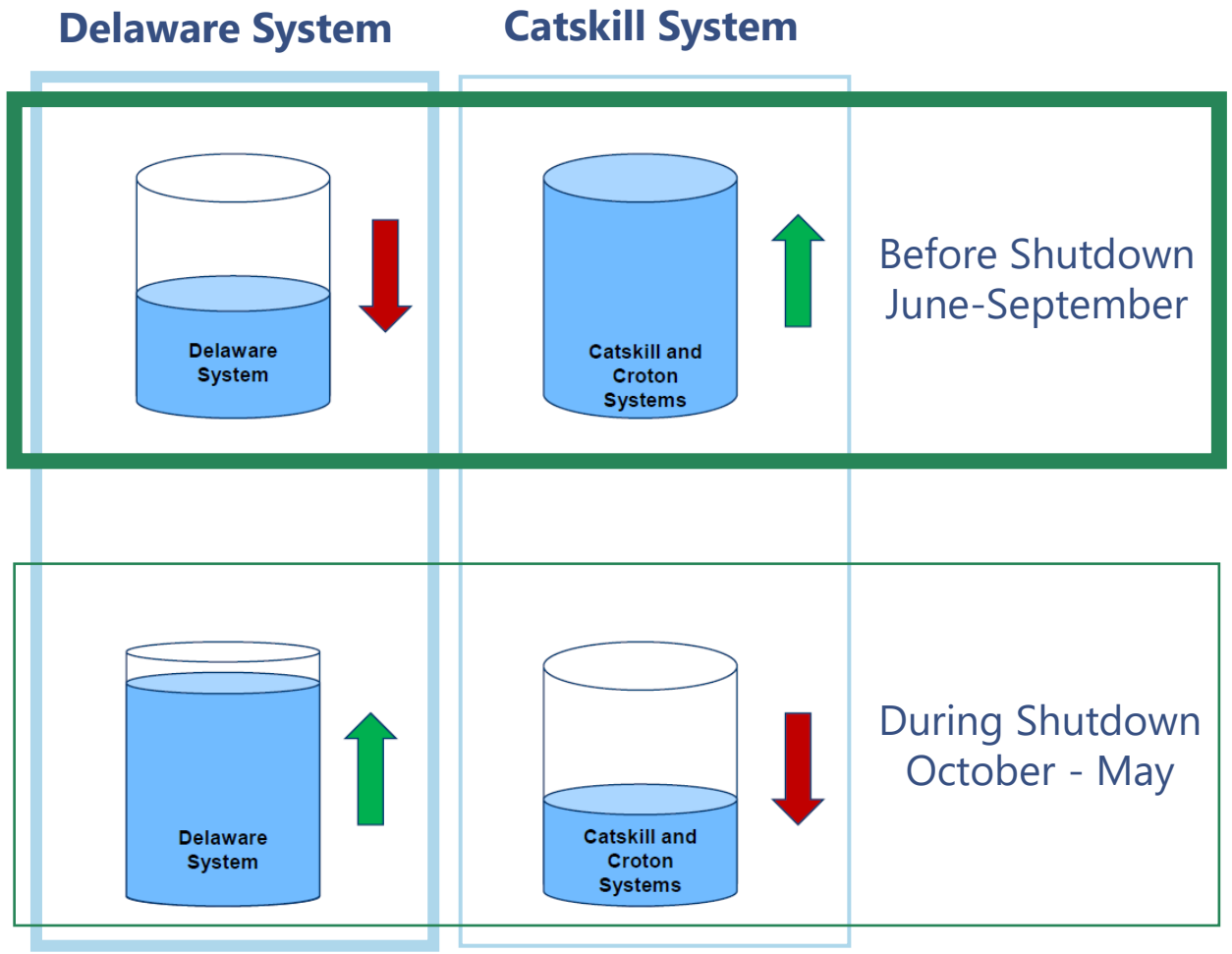
- Shutdown beginning next month.

- FFMP provisions are unaffected.

- Inflow forecasts inform operations.

- Release rates selected based on current AND predicted storage.

- FFMP limits the maximum diversion not when water is diverted.



Links to more information:
https://www.nj.gov/drbc/programs/flow/nyc-aqueduct-shutdown.html

Potential Impacts During Shutdown

Impacts are within the range of standard operations under the FFMP.

Drought Conditions are unlikely.

Releases are expected to be at the best levels for fishing and recreation

Risk of minor flooding has slightly increased and more likely after the hurricane season.

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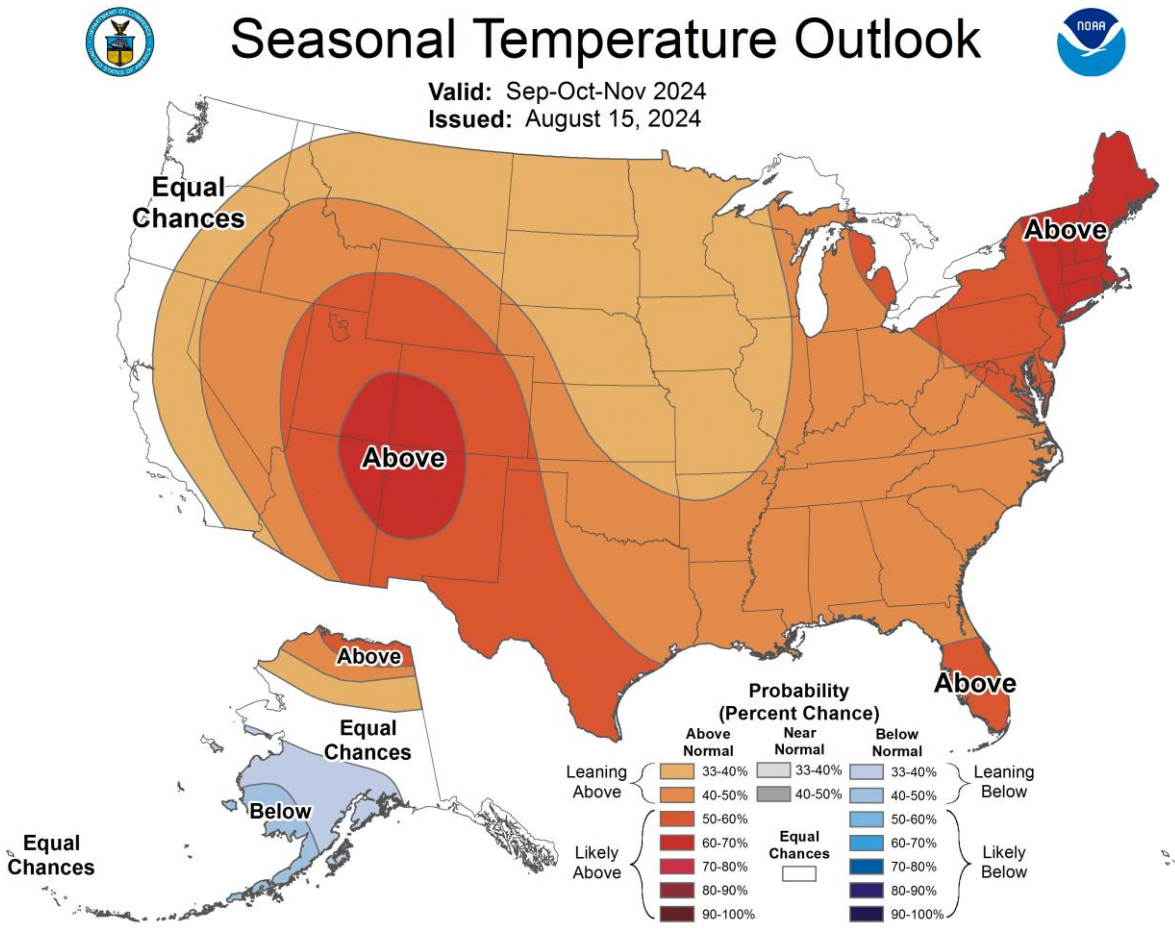
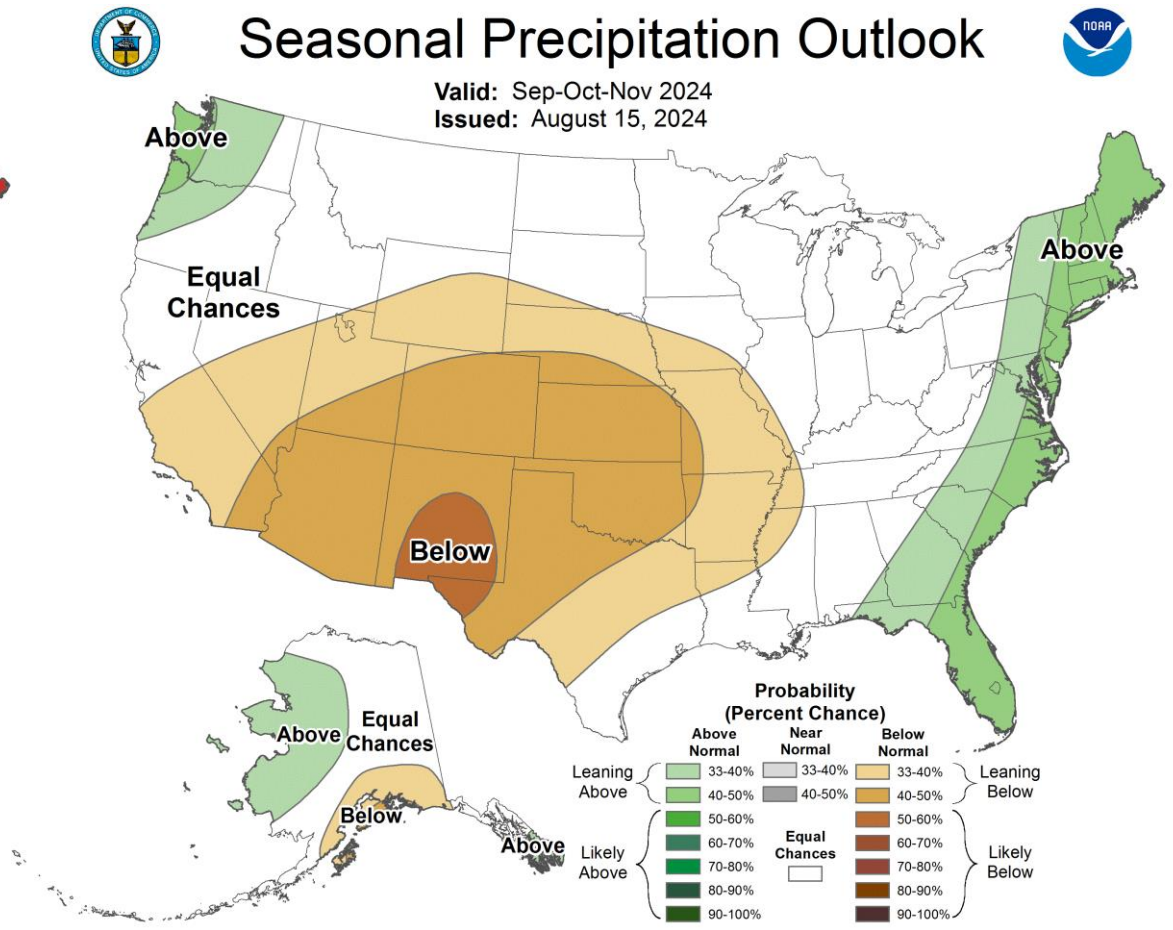
NOAA Seasonal Outlook

Above normal precipitation forecast is due to active hurricane season forecast.





Climate Prediction Center: https://www.cpc.ncep.noaa.gov/

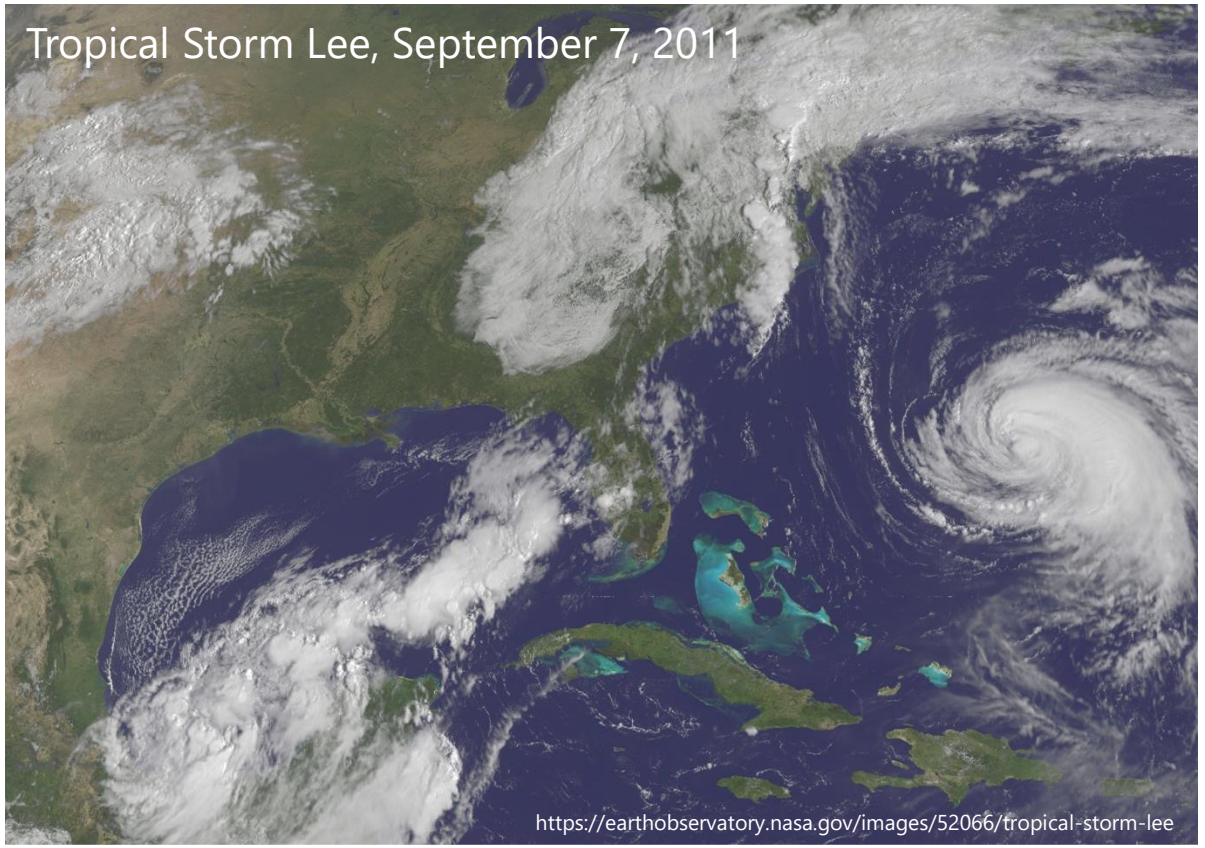
Hurricane Forecast for 2024

Back-to-back hurricanes have produced basin-wide flooding, but not always.

	Forecast 2024	2023	30-year Average
Named Storms	**20 - 25**	**19**	**14**
Hurricanes	**8 - 12**	**7**	**7**
Major Hurricanes	**4 - 7**	**3**	**3**
Likely to Impact US	**4 - 6**	**4**	**4**

The 30-year average was based on 1990-2020 Seasons
NOAA – May 2024; Probability of an above normal season = 85%

Hurricane Names for 2024: Alberto, Beryl, Chris, Debby, Ernesto, Francine, Gordon, Helene, **Isaac**, Joyce, Kirk, Leslie, Milton, Nadine, Oscar, Patty, Rafael, Sara, Tony, Valerie, William.



Impacts of Tropical Storm Lee in the DRB:
https://www.nj.gov/drbc/library/documents/Flood_Website/Irene-Lee2011.pdf

DRBC Flood Portal:
https://www.nj.gov/drbc/programs/flood/portal-flood.html

Hydrologic conditions summary

- Hydrologic conditions in the basin are normal after recent rain in August
- Aqueduct shutdown is proceeding next month- impacts likely minor
- Three-month outlook- warmer and wetter weather continuing

Have a great fall!

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