

Delaware River Basin Commission

Hydrologic Conditions

Amy L. Shallcross, PE

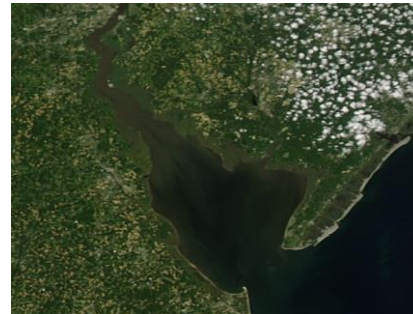
Manager, Water Resource Operations

Anthony Preucil

Water Resource Scientist

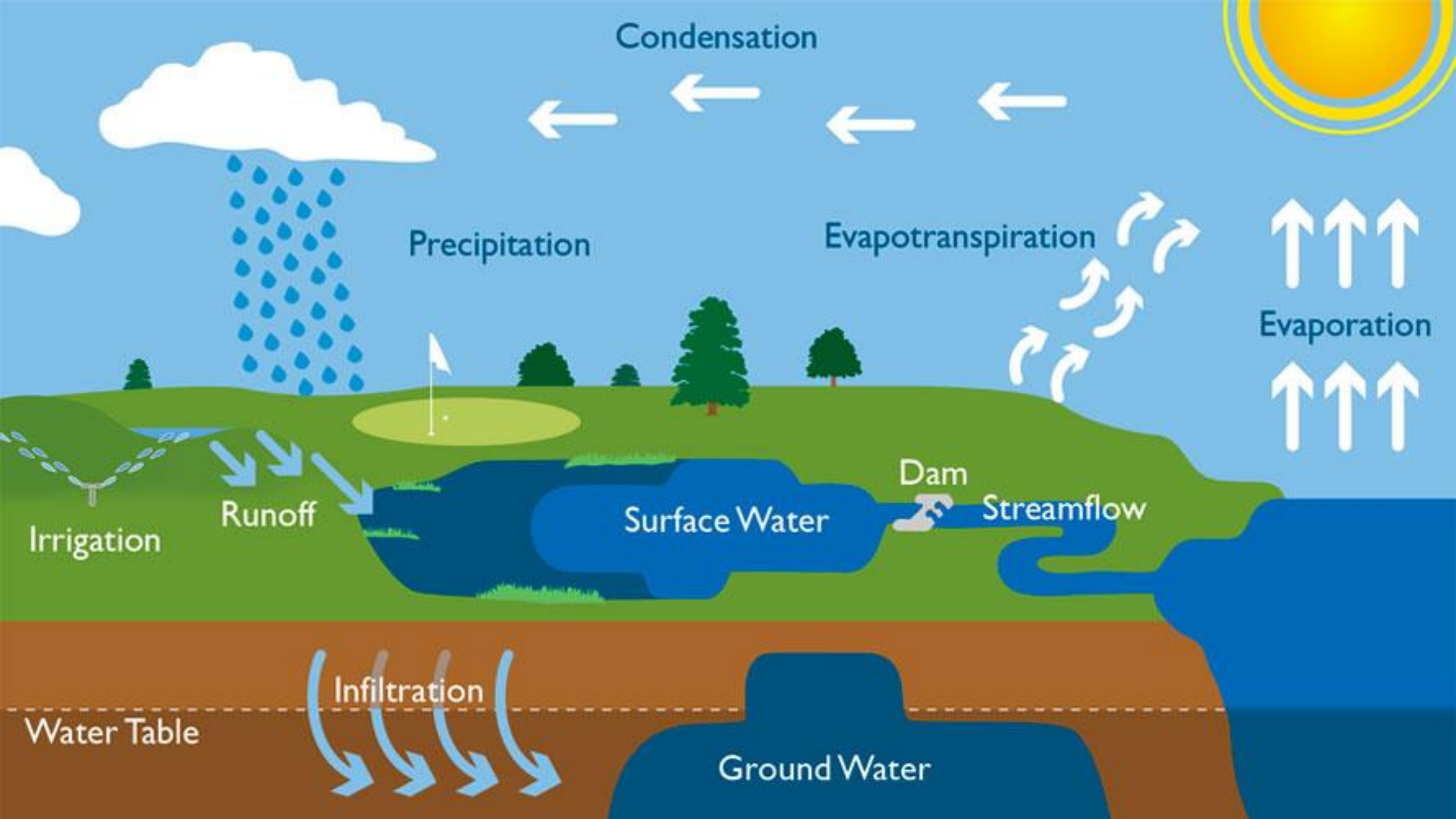
Commission Business Meeting

September 8, 2022



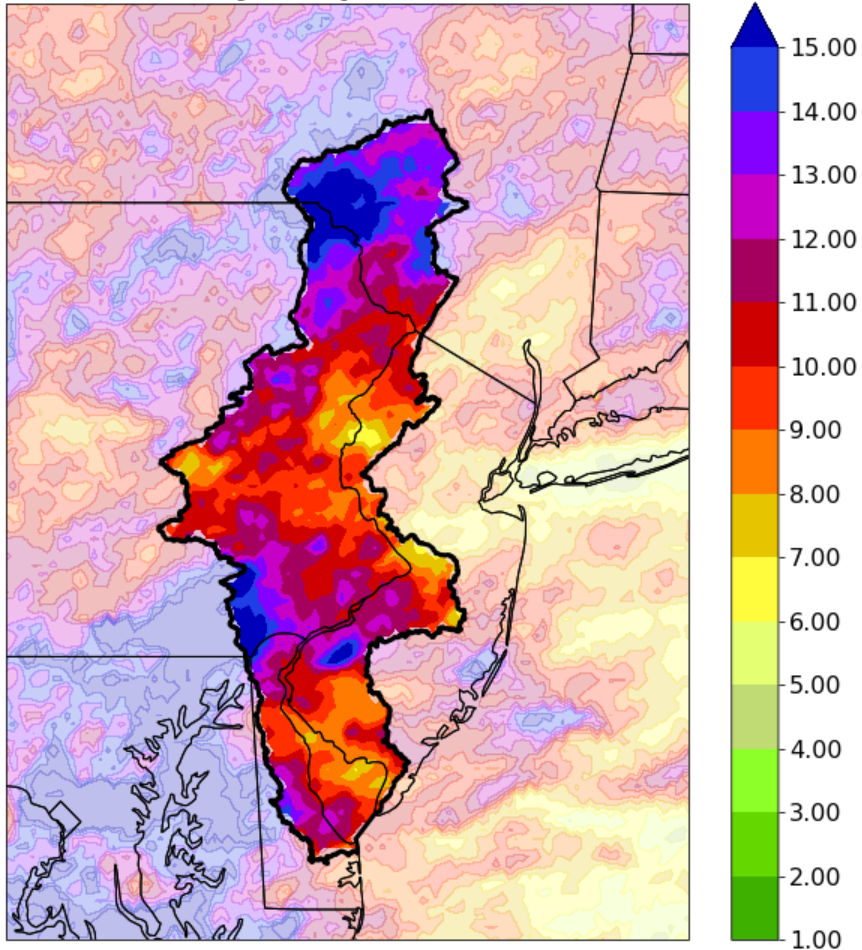
Delaware River Basin Commission

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

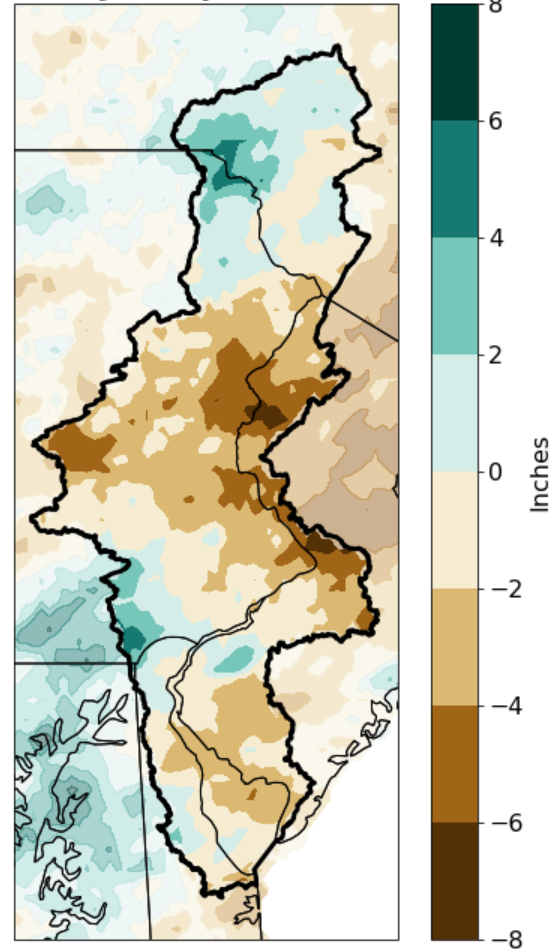


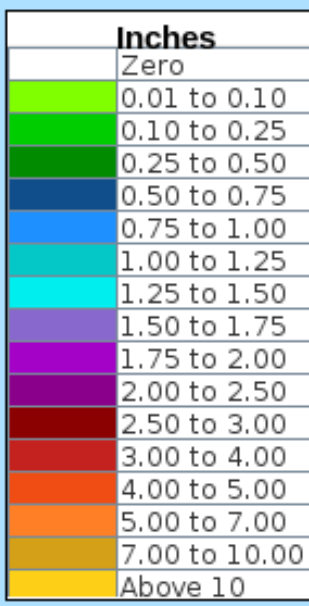
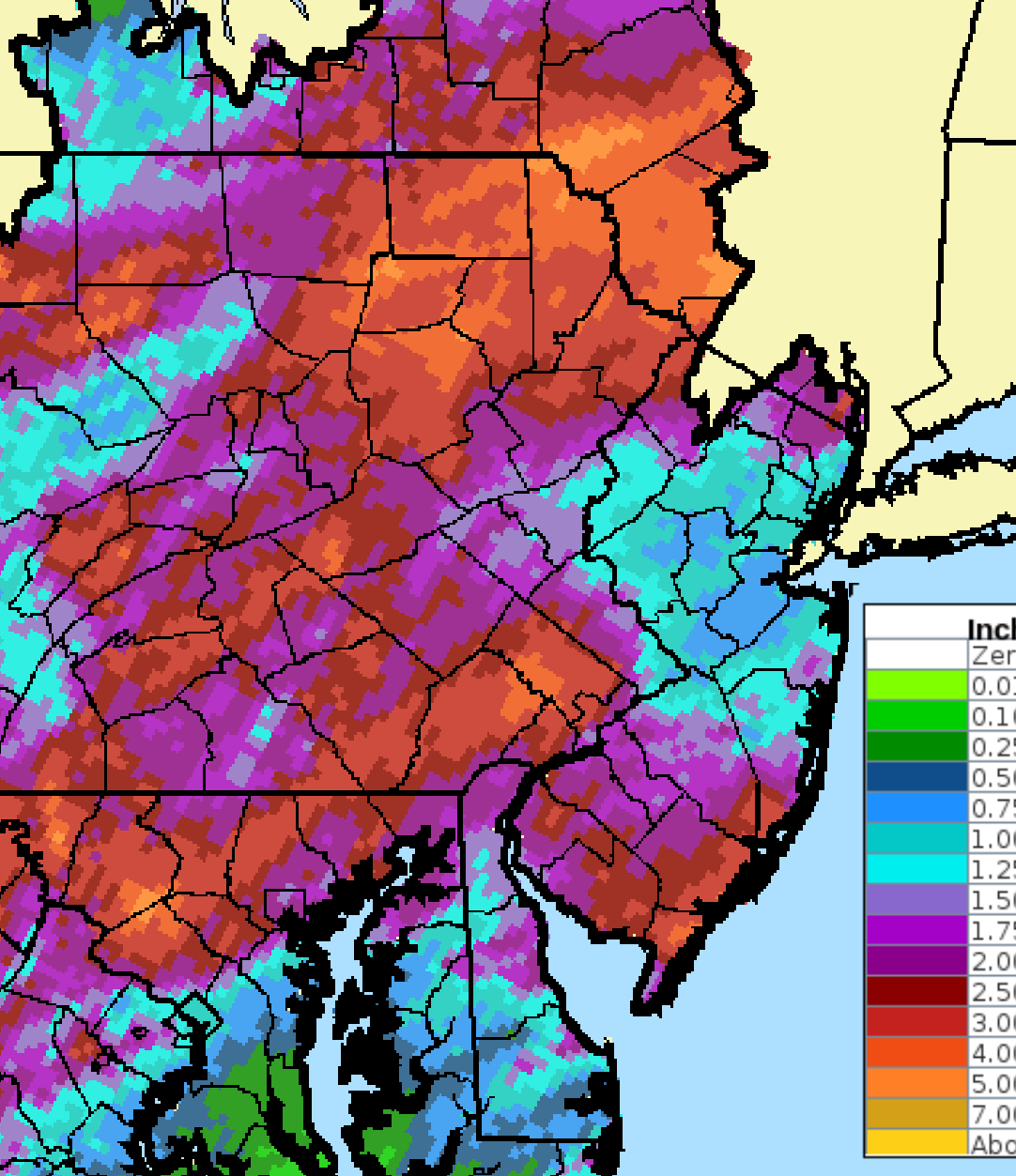
90 Day Precipitation

**Total Precipitation Accumulation
Last 90 days (September 7, 2022)**

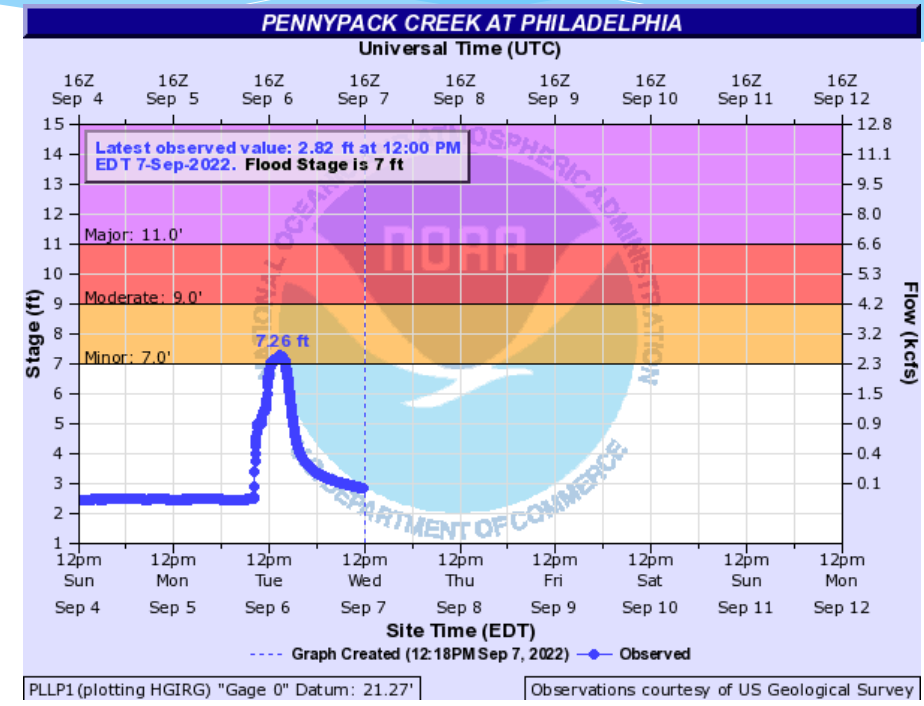


**Departure from Normal Precipitation
Last 90 Days (September 7, 2022)**





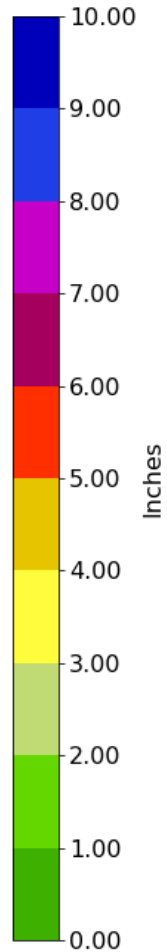
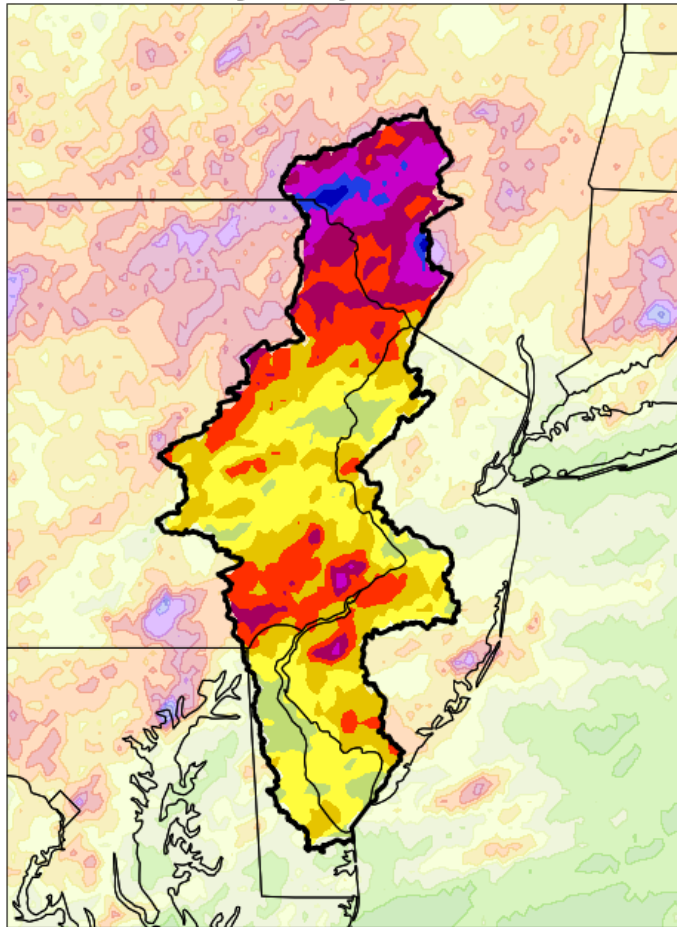
September 5-7, 2022



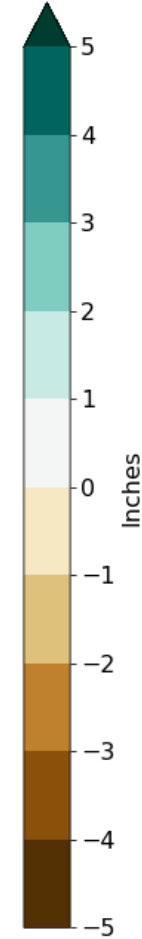
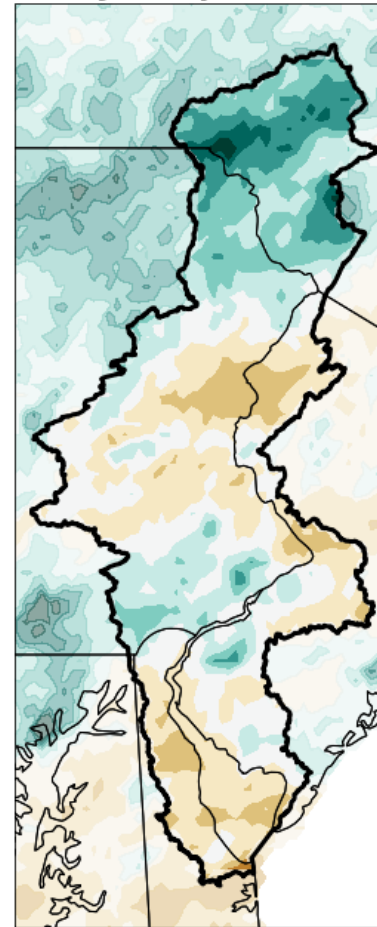
Minor Flood Stage: Pennypack Creek, Phila.
Action Stage:
East Branch Brandywine below Downingtown
East Branch Delaware River at Harvard

30 Day Precipitation

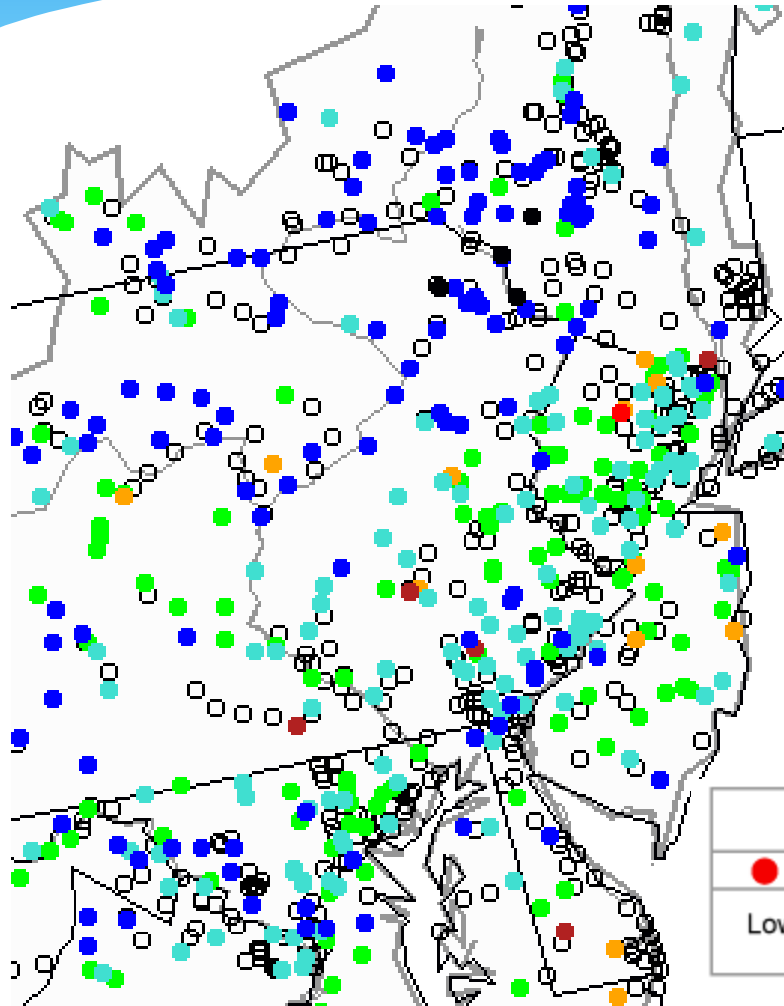
**Total Precipitation Accumulation
Last 30 Days (September 7, 2022)**



**Departure from Normal Precipitation
Last 30 Days (September 7, 2022)**



Streamflow

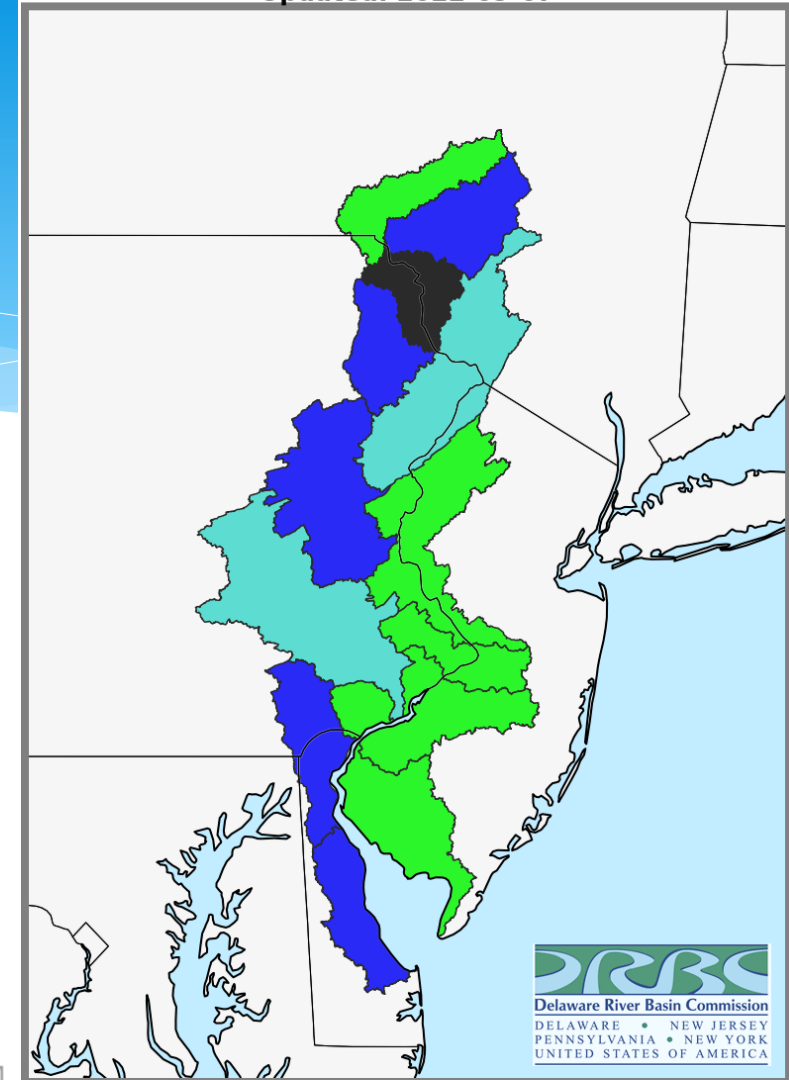


Upper Basin: Above Normal
 Central Basin: Normal/ Above Normal
 Lower Basin: Normal/Above Normal

Map last updated: 12:00 PM,
 September 7, 2022

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		

Representative Streamflow Percentile
 Updated: 2022-09-07

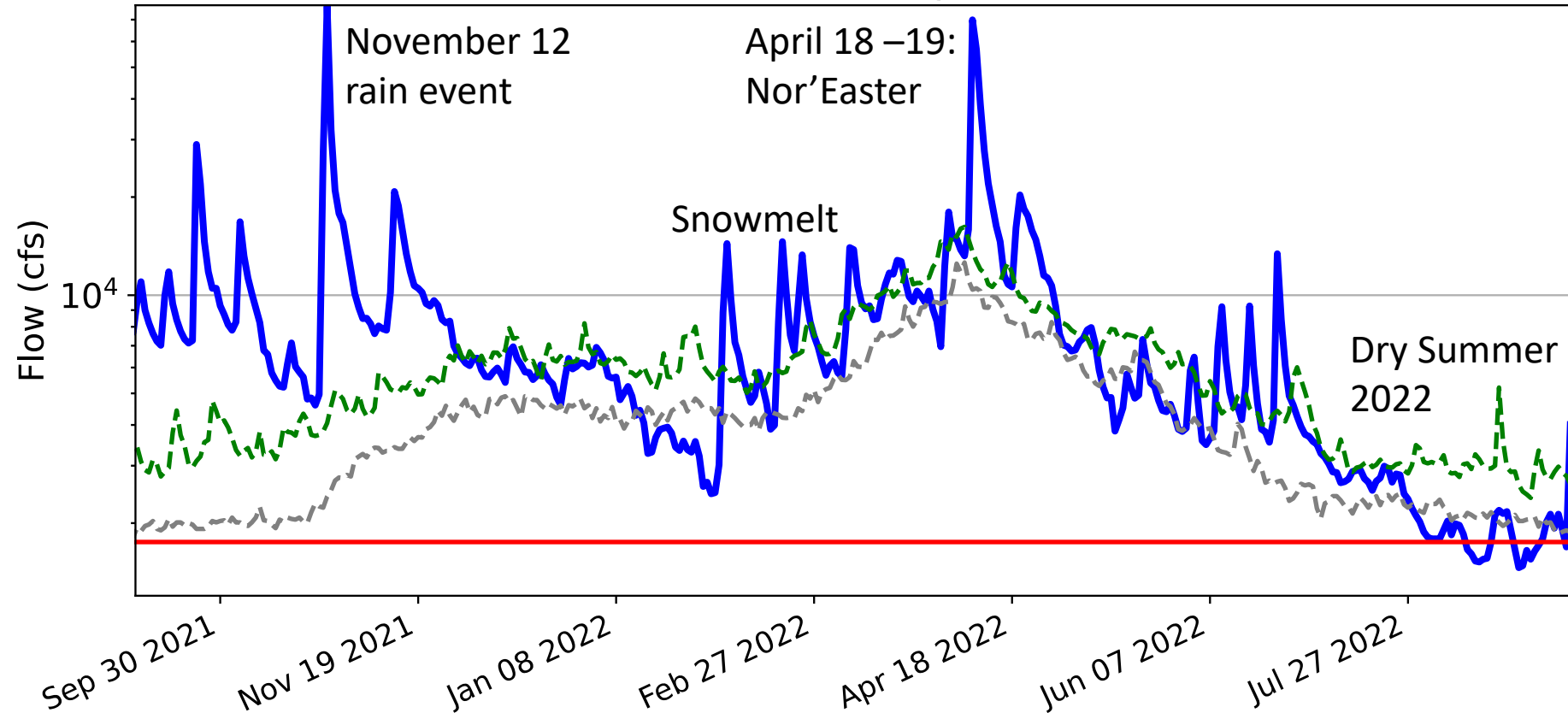


Ranking			
Low	76th-90th percentile	> 90th percentile	
< 10th percentile		High	
10th-24th percentile			
25th-75th percentile			

Montague, NJ

Updated: 2022-09-07 14:16

Flow at Montague, NJ



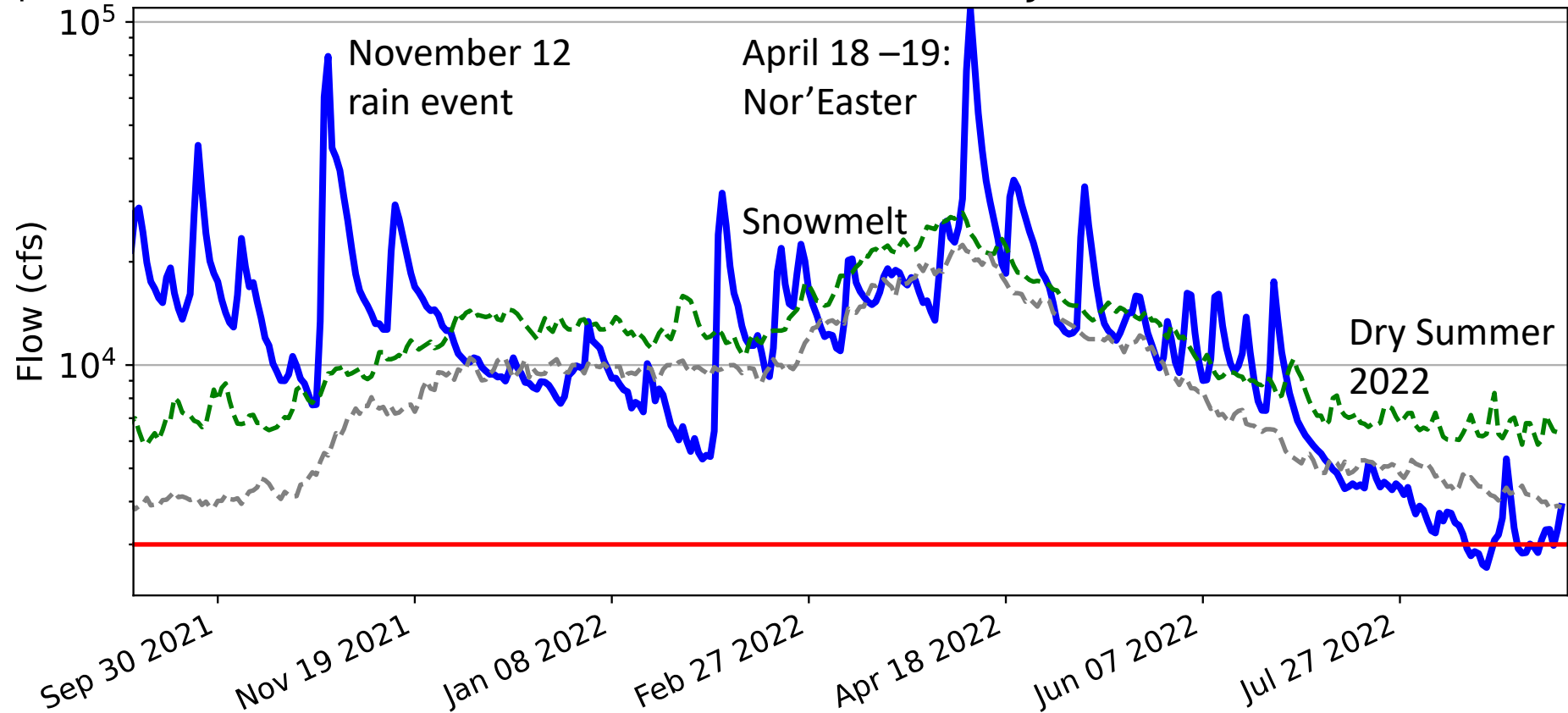
— Observed Flow — Median Flow (50th %ile)
- - Average Flow — Flow Objective

Data Source: USGS

Trenton, NJ

Updated: 2022-09-07 14:16

Flow at Trenton, NJ



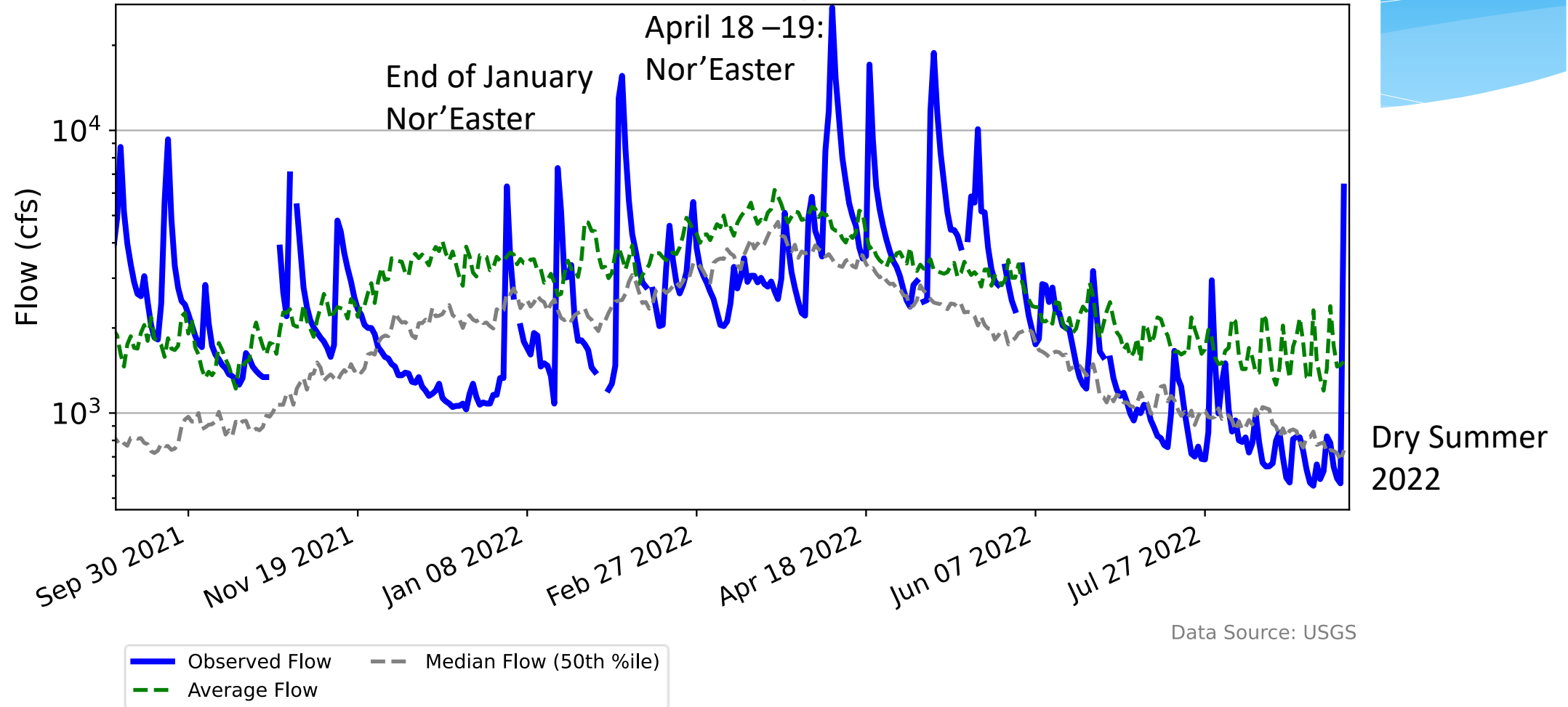
— Observed Flow — Median Flow (50th %ile)
- - Average Flow — Flow Objective

Data Source: USGS

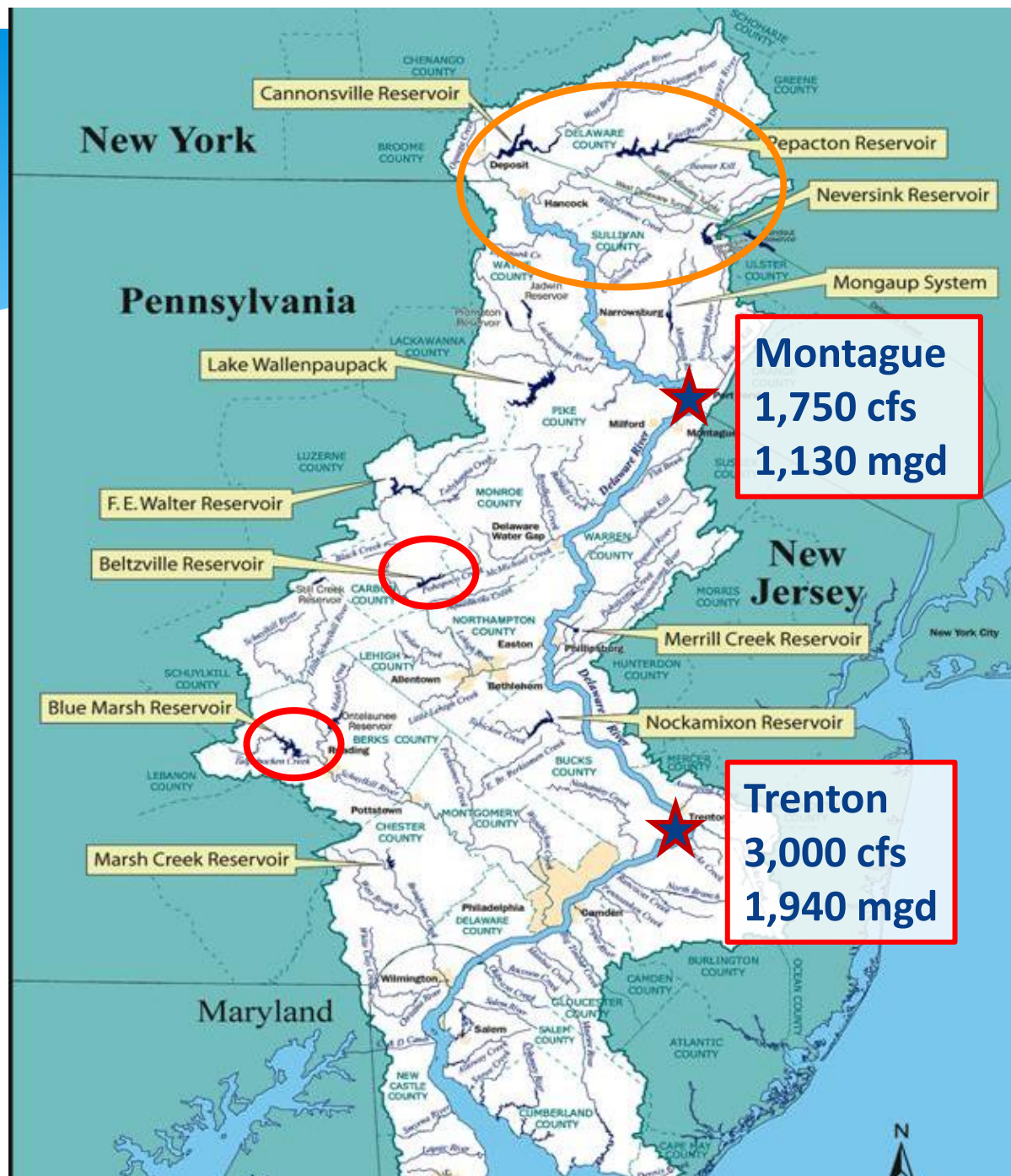
Philadelphia, PA

Updated: 2022-09-07 14:16

Flow at Philadelphia, PA



Storage and Low Flow Augmentation

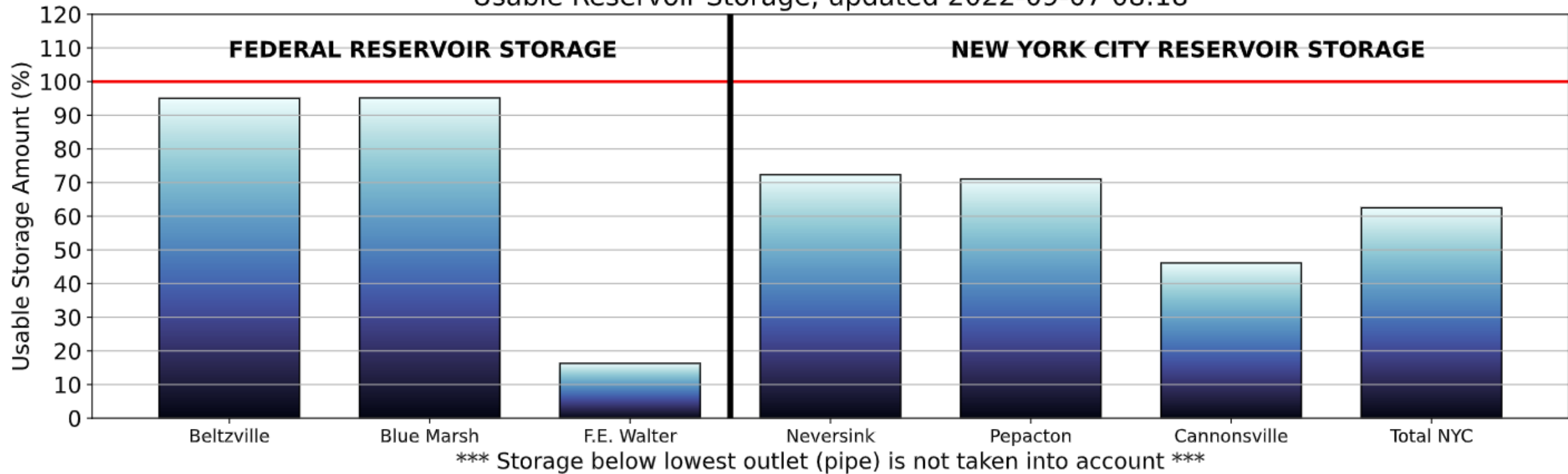


- * Releases made to meet the Montague Flow Objective:
 - * Required 7/27-9/2
 - * 20.3 BG
- * Releases made to meet the Trenton Equivalent Flow Objective:
 - * Required 8/14 – 9/1
 - * 3.9 BG Total
 - * Includes 1.8 BG from FE Walter
 - * NOT released specifically for Trenton
 - * Offsets what is needed from other sources

In very dry periods, flow at Trenton can be 60 percent or more from reservoir releases (all sources)

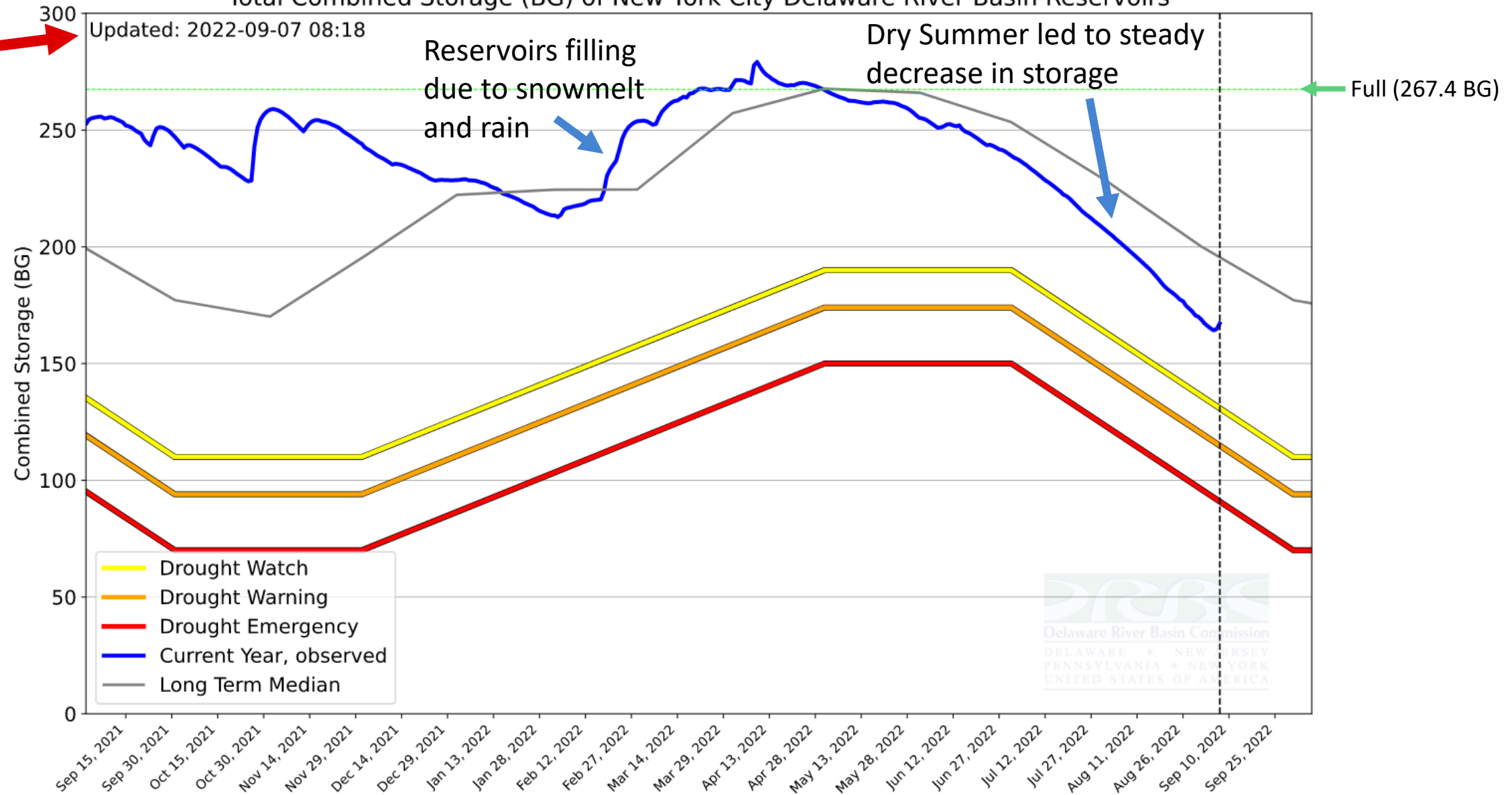
Basin Storage

Usable Reservoir Storage, updated 2022-09-07 08:18



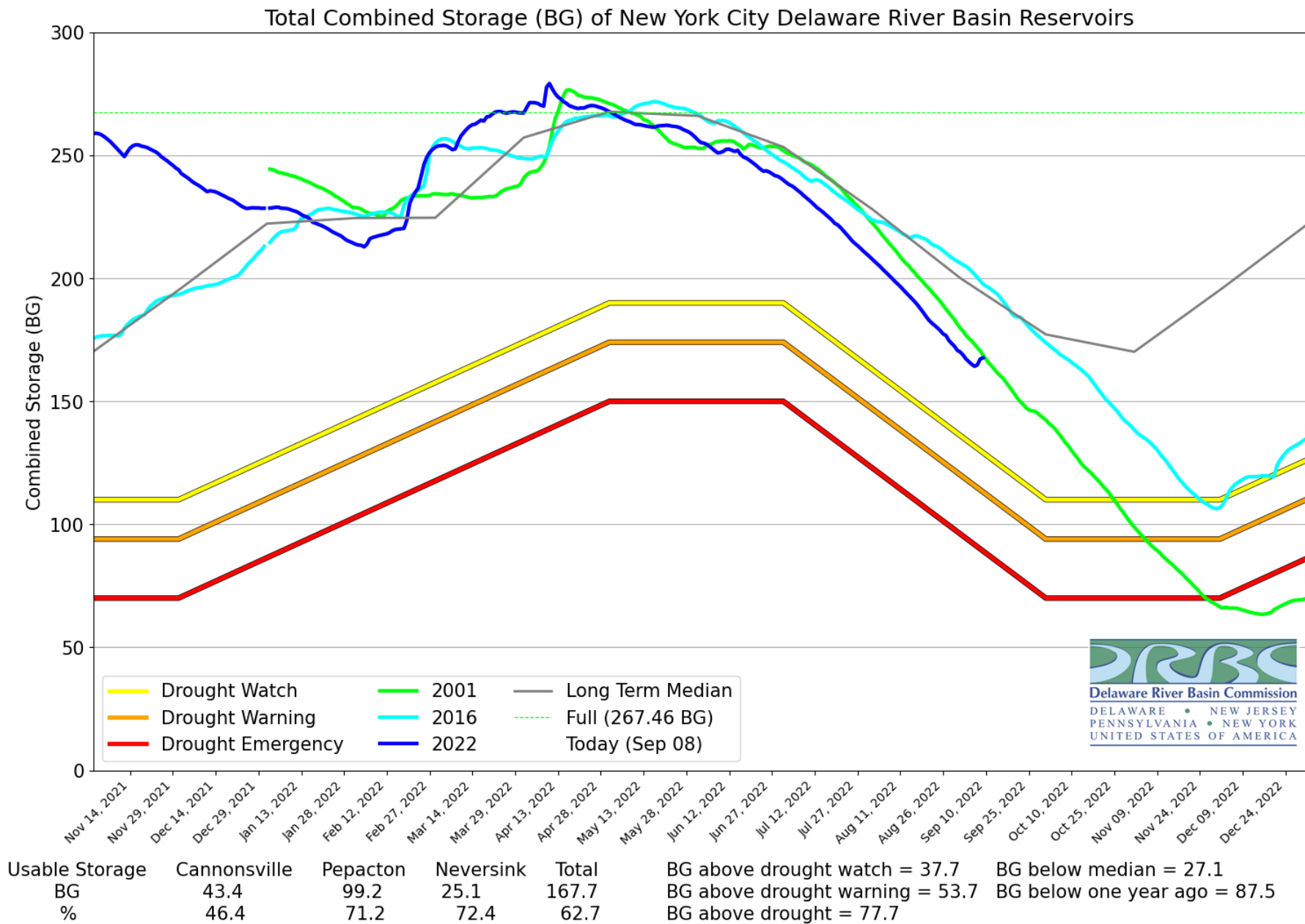
Total Combined Storage (BG) of New York City Delaware River Basin Reservoirs

Updated: 2022-09-07 08:18



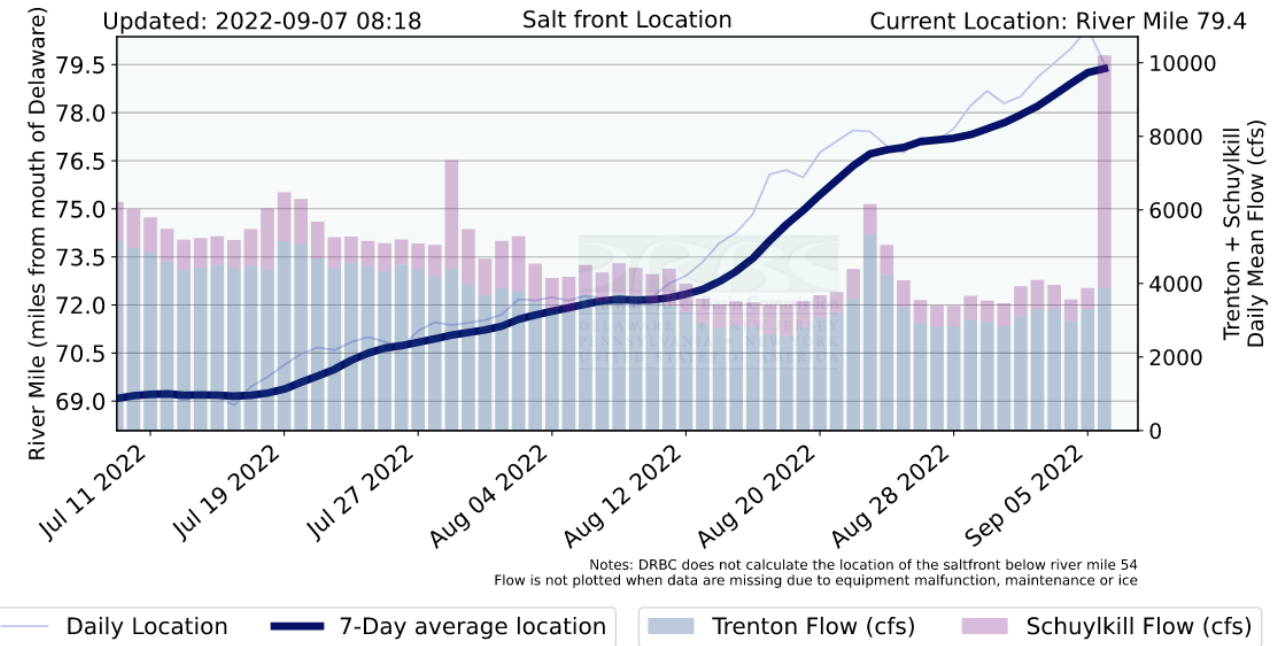
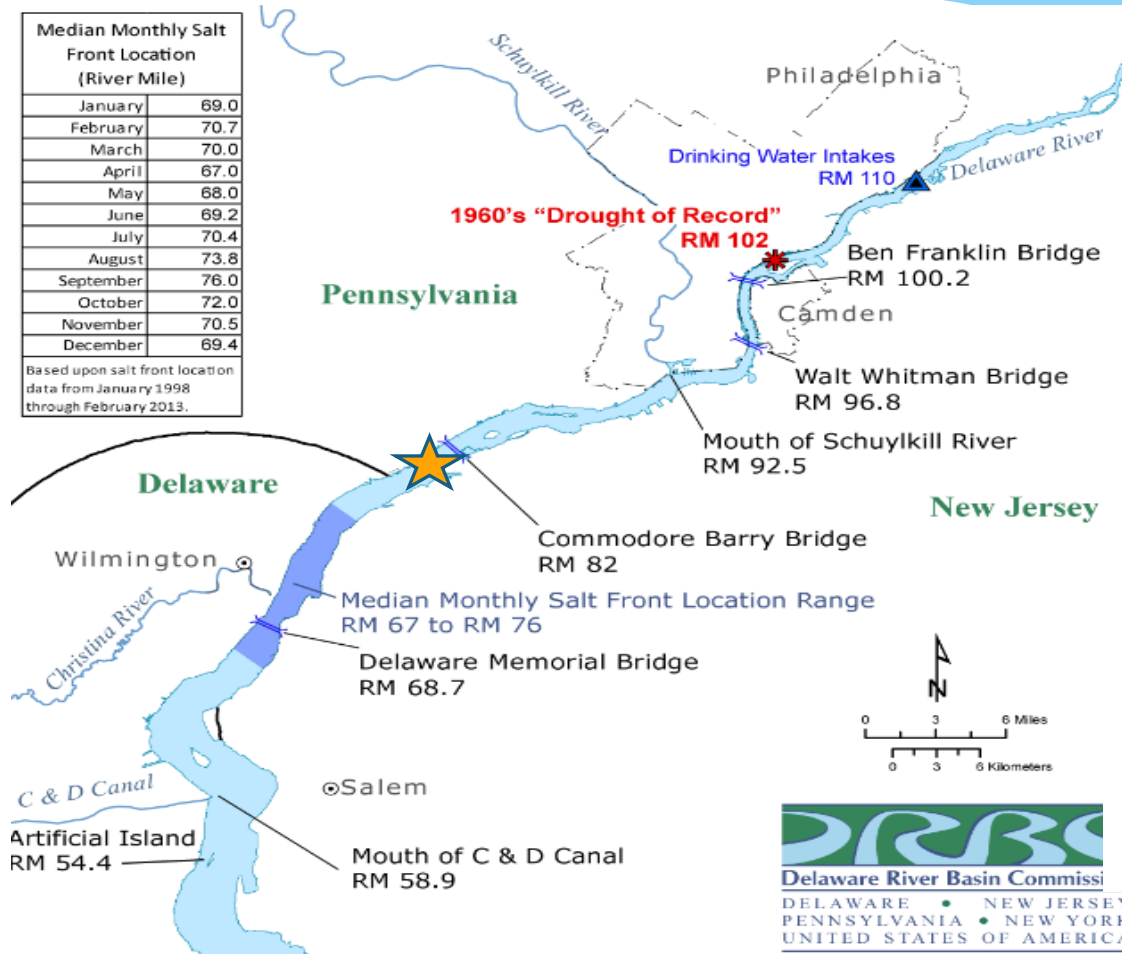
Usable Storage	Cannonsville	Pepacton	Neversink	Total	BG above drought watch = 36.3	BG below median = 28.3
BG	43.1	99.0	25.1	167.2	BG above drought warning = 52.3	BG below one year ago = 87.8
%	46.1	71.1	72.3	62.5	BG above drought = 76.3	

Data Source: USGS



Salt Front

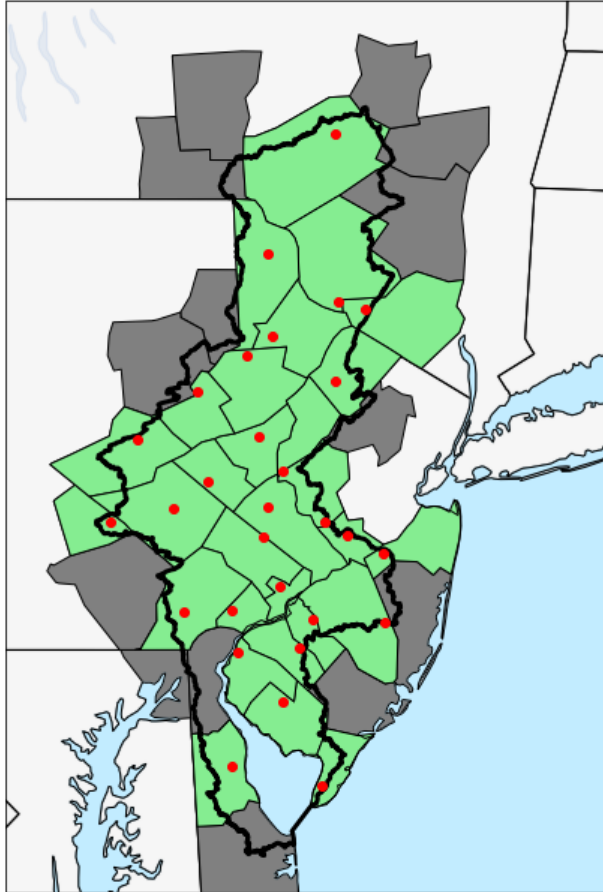
7-day average location of the 250 mg/l Chloride concentration



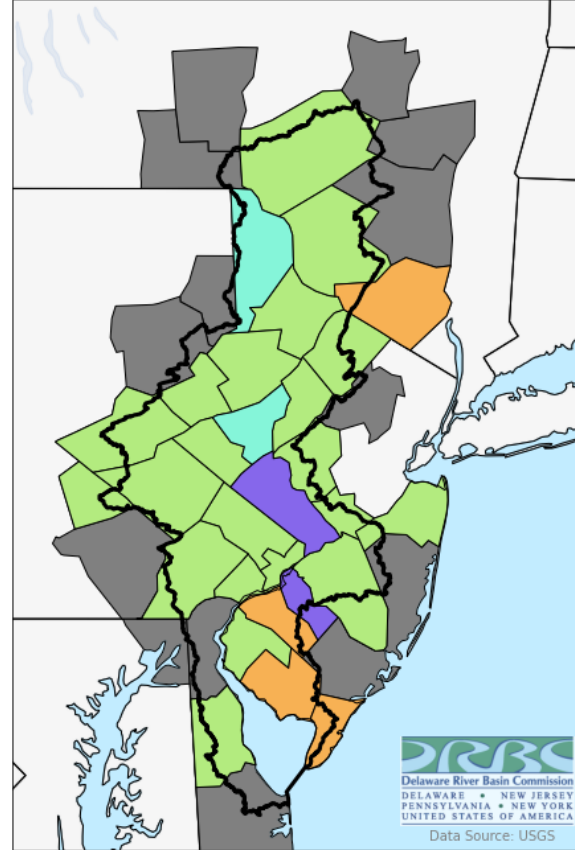
Current (9/7/2022): 79.4
September Median: 76

Groundwater Levels

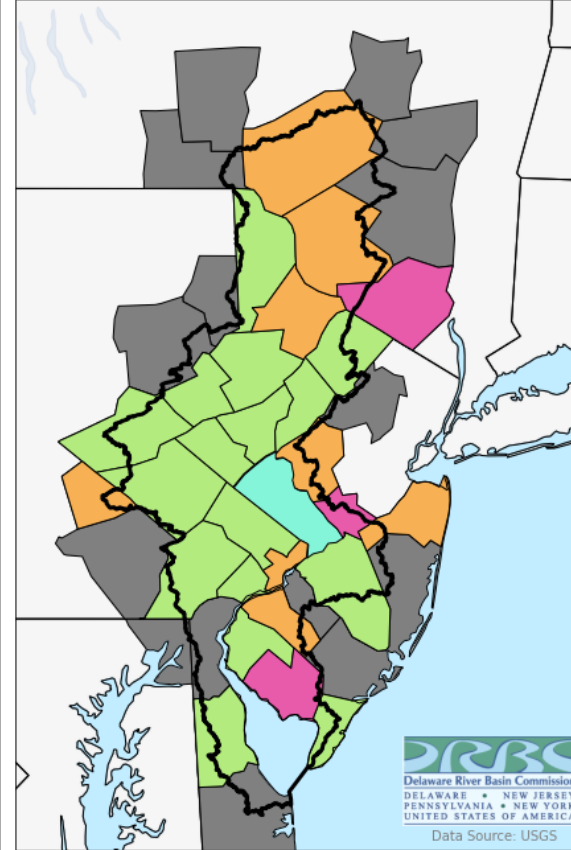
Location of groundwater wells



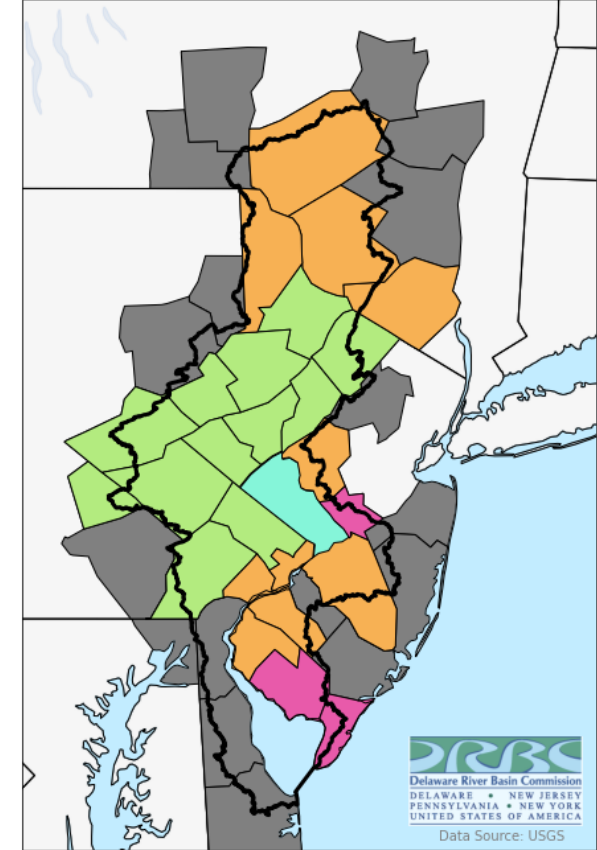
Groundwater Ranking on July 07, 2022



Groundwater Ranking on August 06, 2022



Groundwater Ranking on September 06, 2022

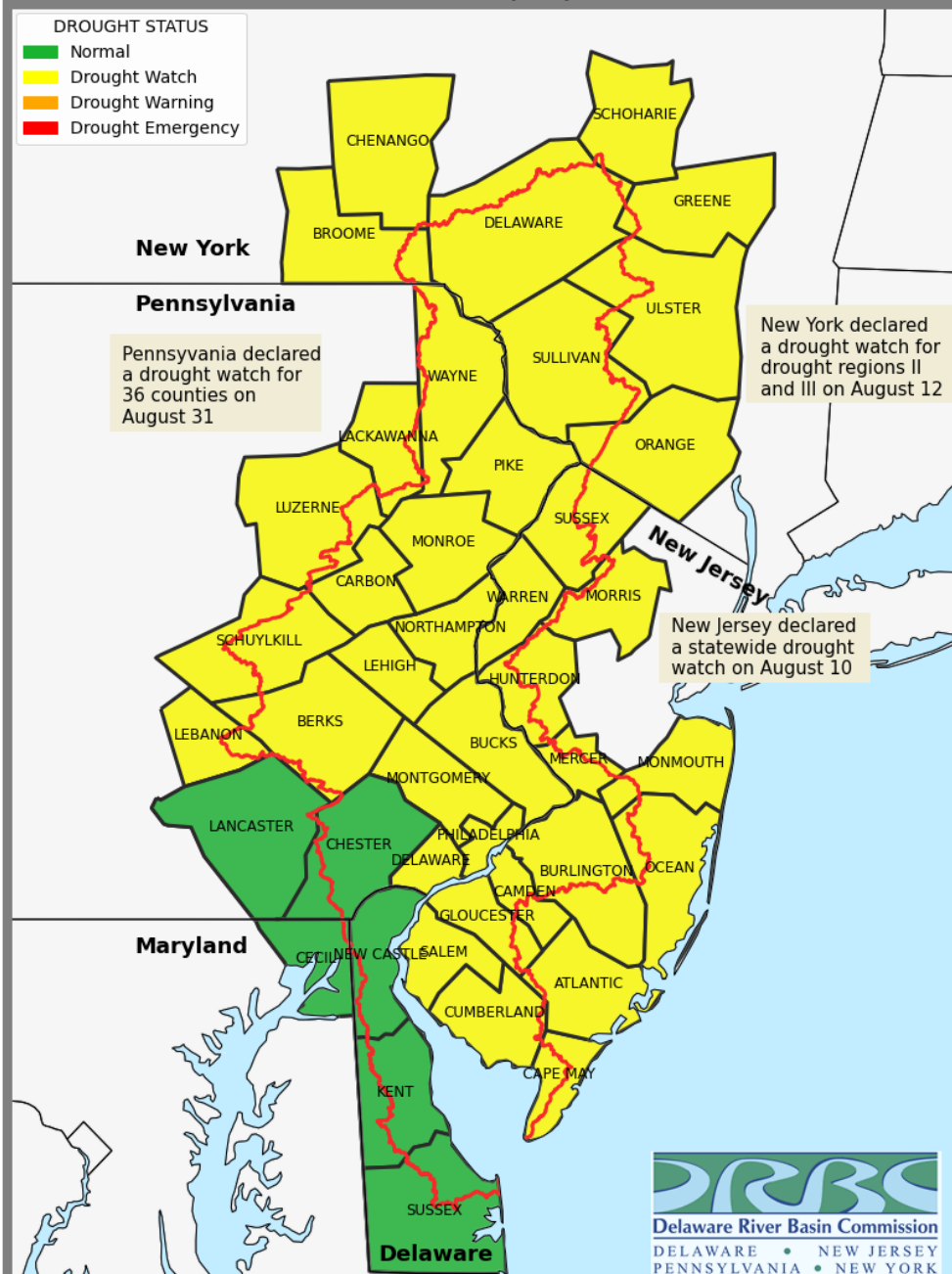


Well selected based on length of period of record

Select Well Conditions

COUNTY	STATE	DATA SOURCE	WELL ID	INDICATOR AS OF 2022-09-07
Wayne	PA	USGS	WN 64	Drought Watch
Monroe	PA	USGS	MO 190	Normal
Carbon	PA	USGS	CB 104	Normal
Schuylkill	PA	USGS	SC 296	Normal
Lehigh	PA	USGS	LE 372	Normal
Bucks	PA	USGS	BK 1020	Normal
Chester	PA	USGS	CH 10	Normal
Delaware	PA	USGS	DE 723	Drought Watch
Lebanon	PA	USGS	LB 372	Normal
Burlington	NJ	USGS	050689	Drought Watch
Cumberland	NJ	USGS	110042	Drought Warning
New Castle	DE	USGS	db24-18	Below Normal
Woodbourne	NY	USGS	sv-535	Normal

**Drought Status In the Delaware River Basin
As Declared by the Individual Basin States
Effective 08/31/2022**



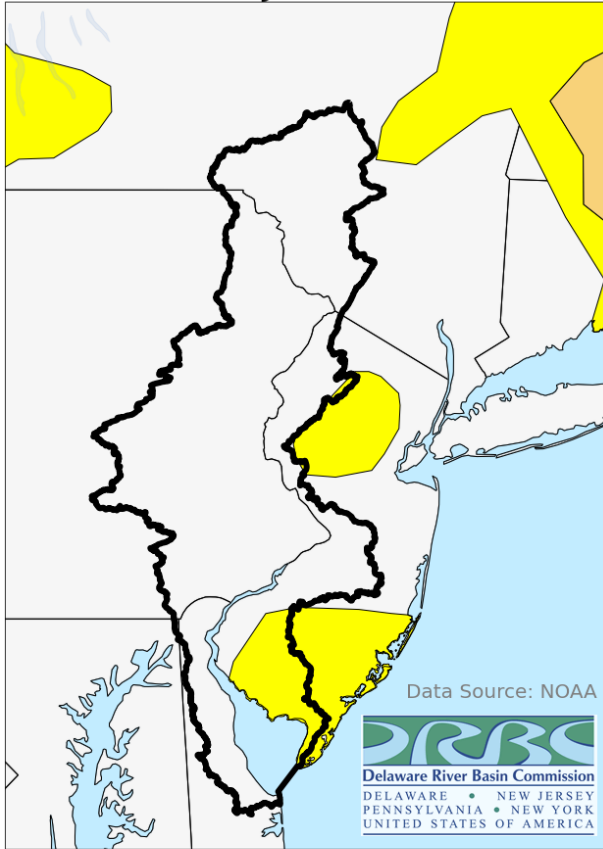
State Drought Conditions

- * DRB Drought Status is still normal (based on combined NYC Storage or LB Reservoir Elevations)
- * New Jersey declared a statewide drought watch on August 10
- * New York declared a drought watch for drought regions II and III on August 12
- * Pennsylvania declared a drought watch for 36 counties on August 31.

For information about drought in the DRB (including links to DRBC and basin state programs):
<https://www.nj.gov/drbc/programs/flow/drought-info.html>

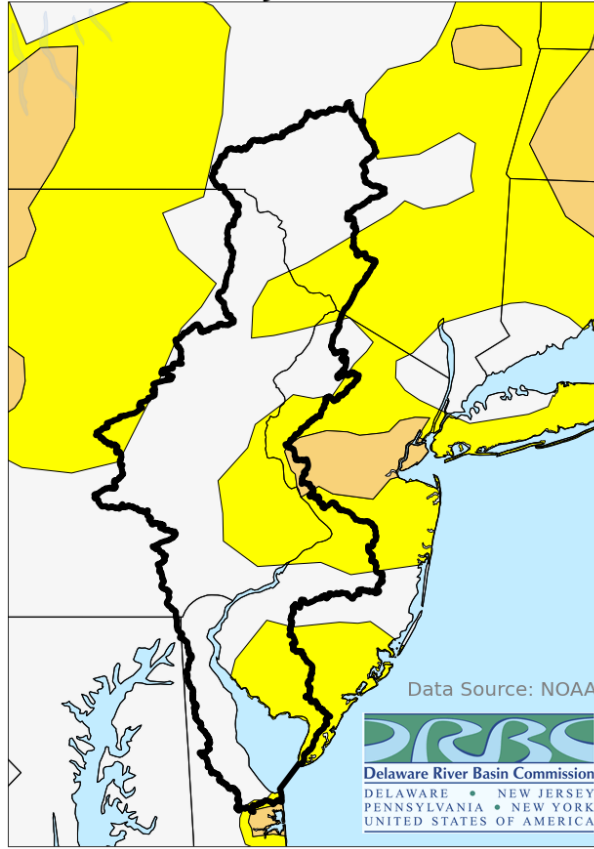
Drought Monitor Progression

Drought Monitor
Valid: Jul 05, 2022



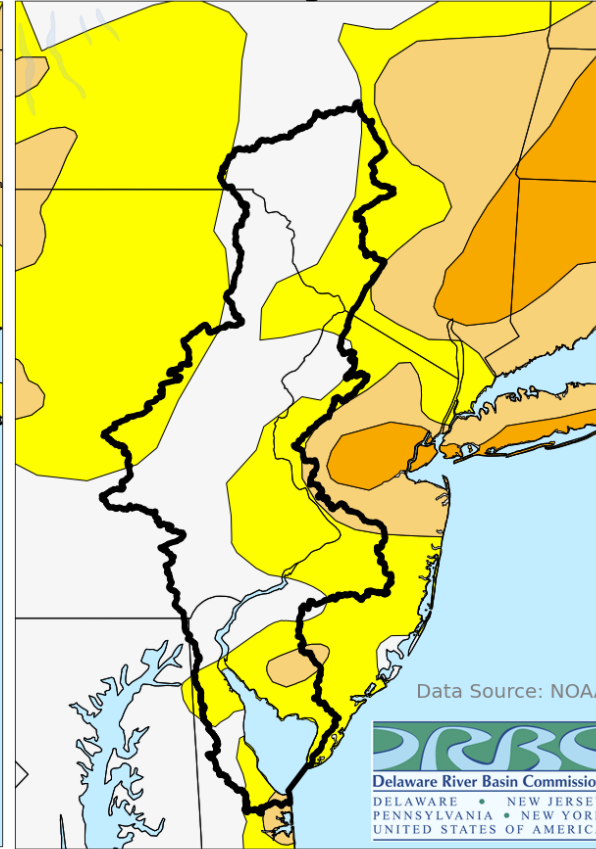
- Basin Boundary
- D0 - Abnormally Dry
- D1 - Moderate Drought

Drought Monitor
Valid: Jul 26, 2022



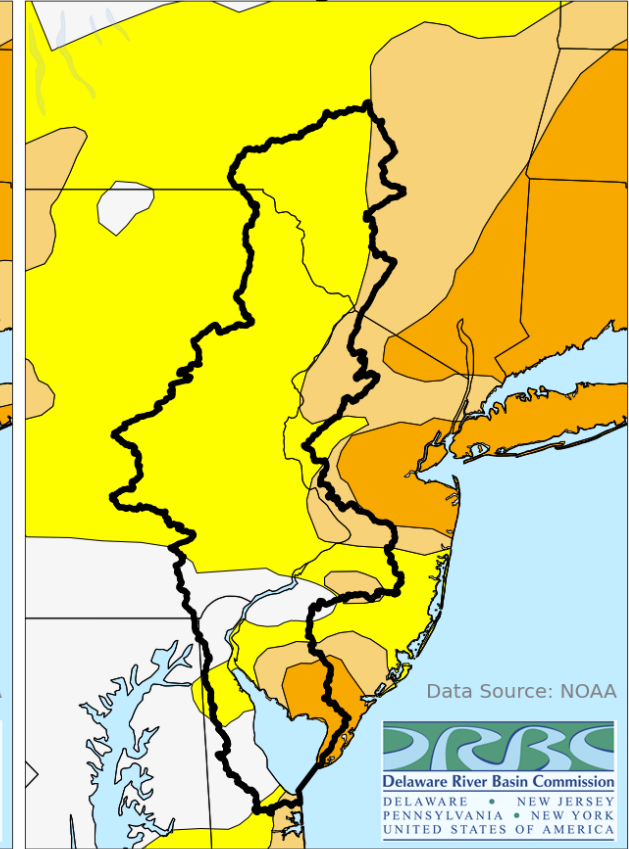
- Basin Boundary
- D0 - Abnormally Dry
- D1 - Moderate Drought

Drought Monitor
Valid: Aug 16, 2022



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

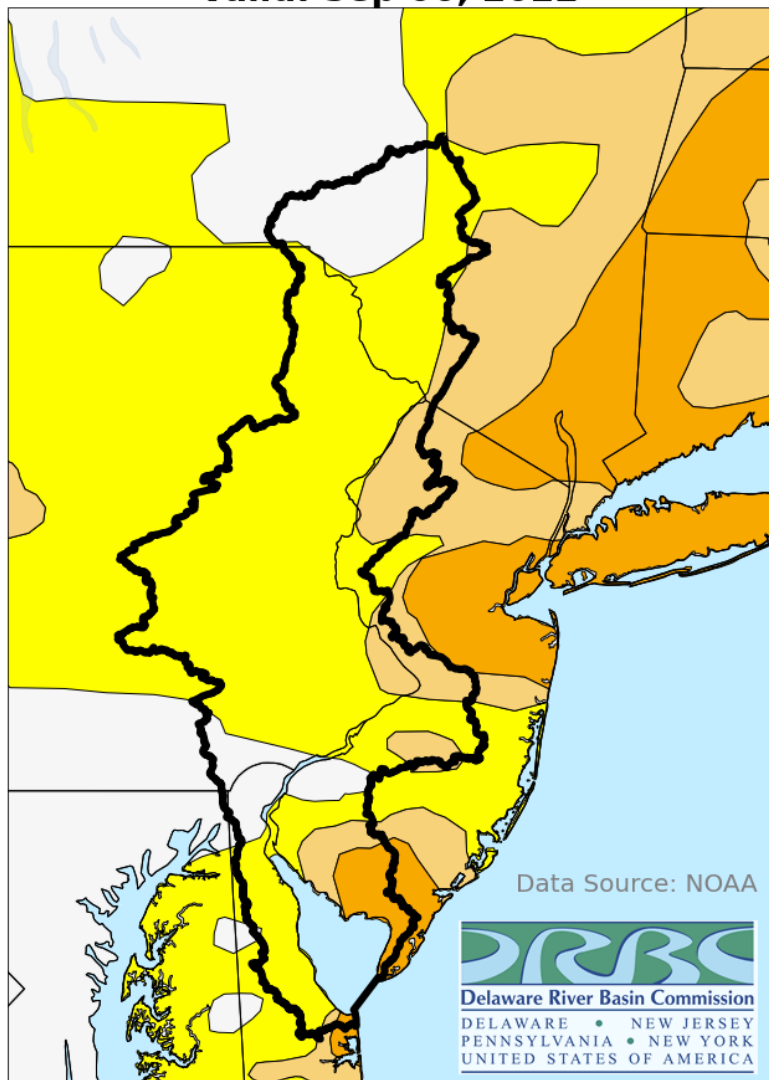
Drought Monitor
Valid: Aug 30, 2022



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

Drought Monitor

Valid: Sep 06, 2022

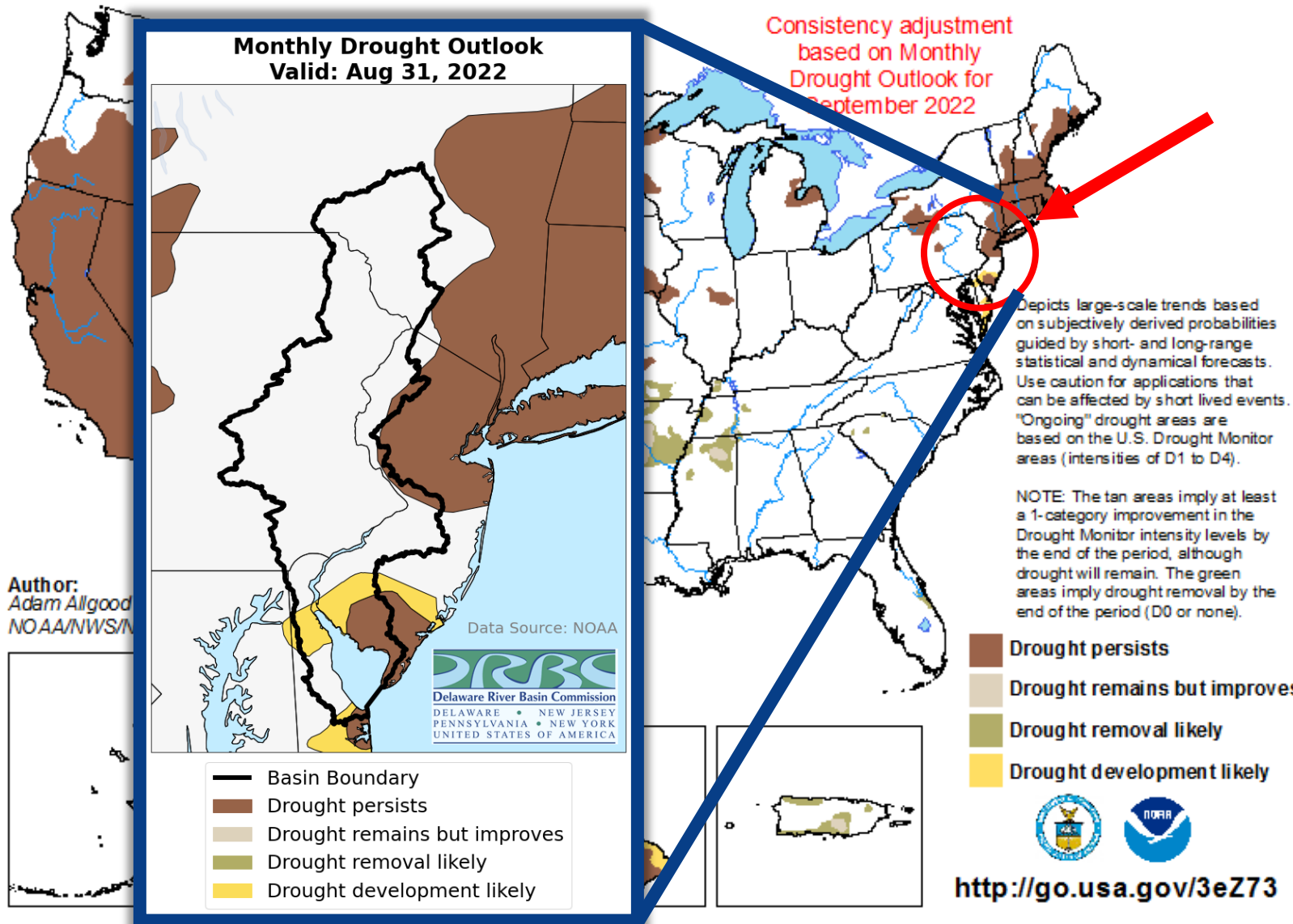


- Basin Boundary
- Yellow D0 - Abnormally Dry
- Orange D1 - Moderate Drought
- Brown D2 - Severe Drought

U.S. Seasonal Drought Outlook

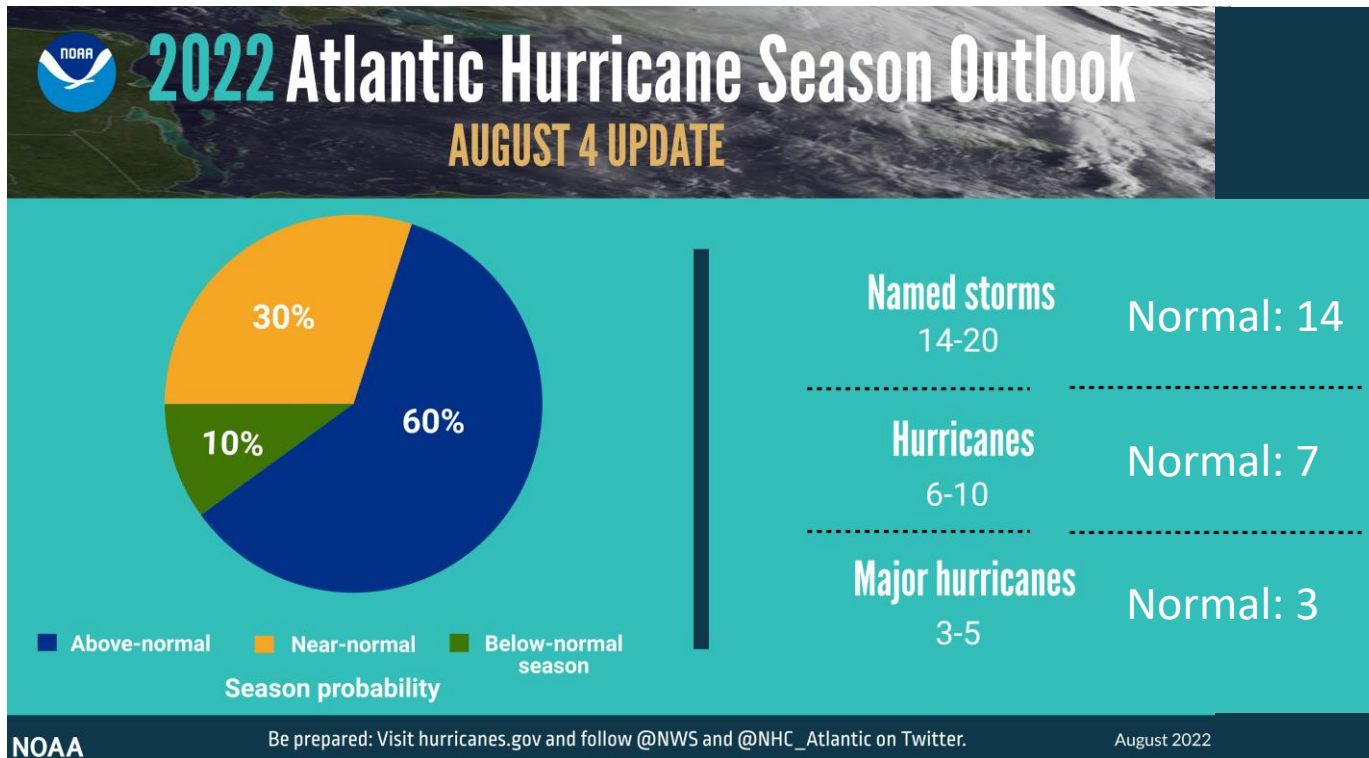
Drought Tendency During the Valid Period

Valid for September 1 - November 30, 2022
Released August 31, 2022



Data Source: NOAA CPC

Hurricane Season 2022



SO FAR...

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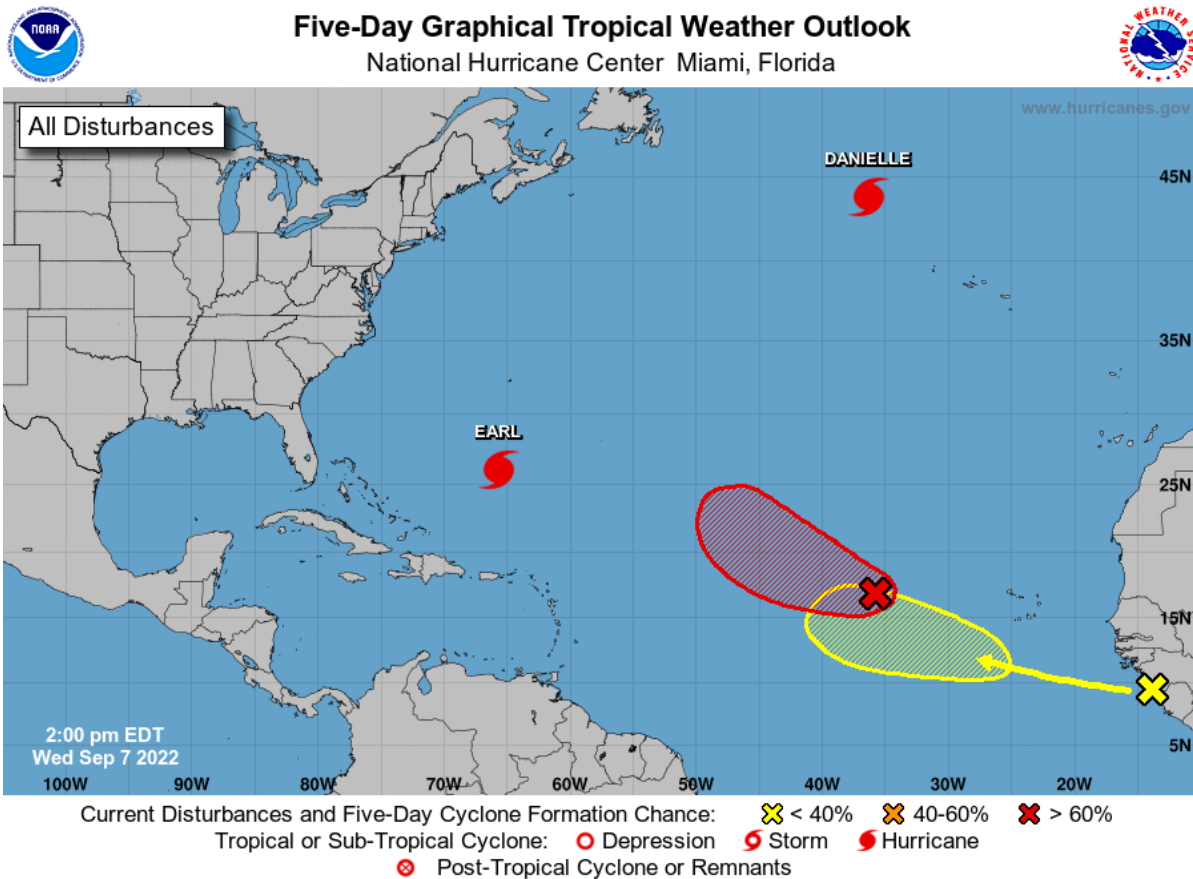
2

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Hurricane season is below normal to date:

- 8 named storms typical by September 9
- 3 Hurricanes typical by September 7
- 1 Major Hurricane typical by September 1

Hurricane Season 2022



National Hurricane Center outlook, September 7, 2022.

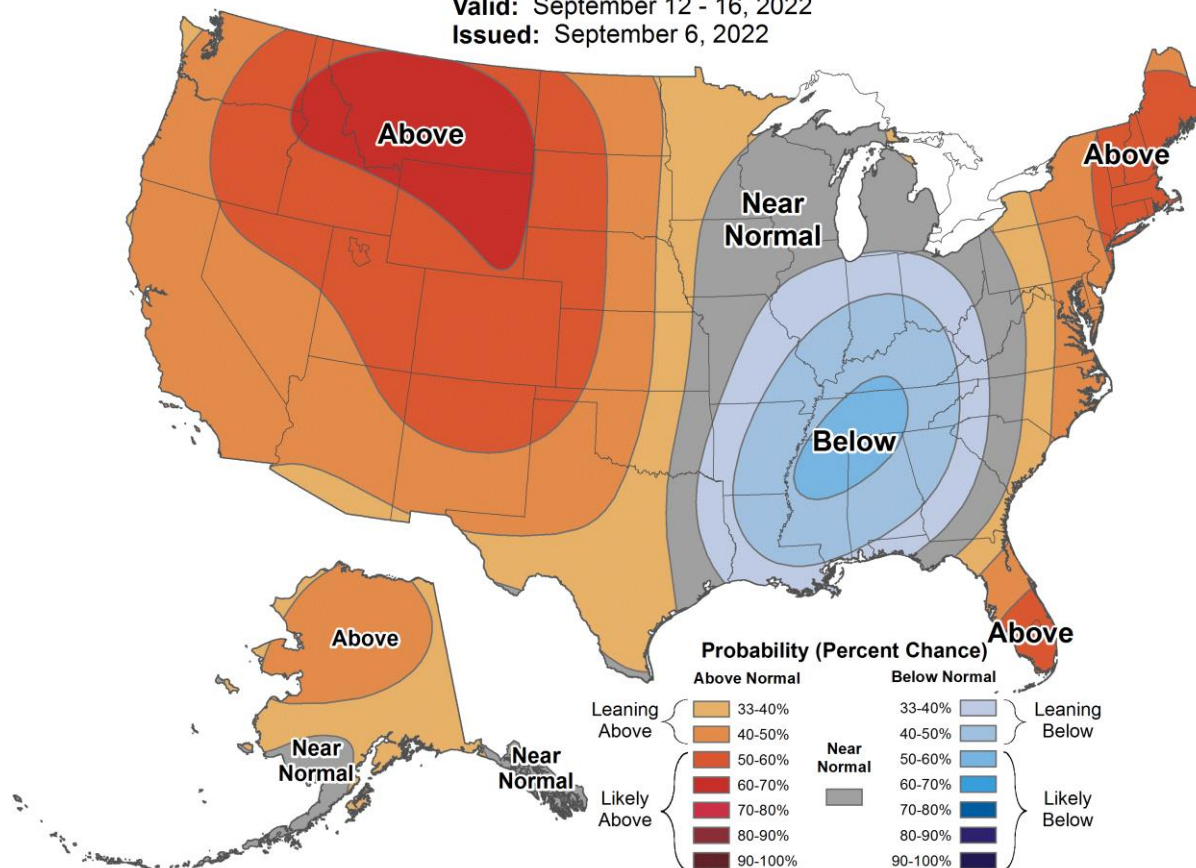
Hurricane Earl on the morning of September 7, 2022.
The storm is not forecast to make landfall.

Data Sources: NHC



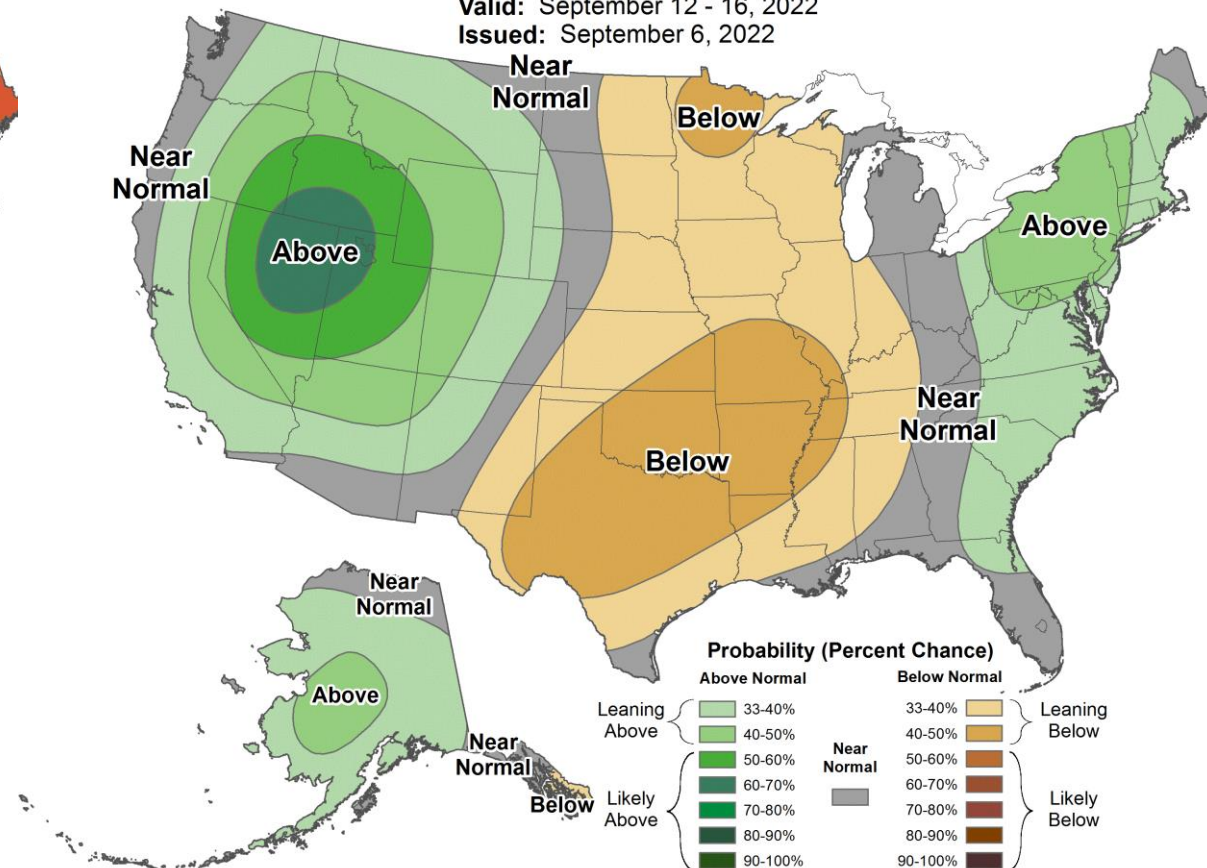
6-10 Day Temperature Outlook

Valid: September 12 - 16, 2022
Issued: September 6, 2022



6-10 Day Precipitation Outlook

Valid: September 12 - 16, 2022
Issued: September 6, 2022



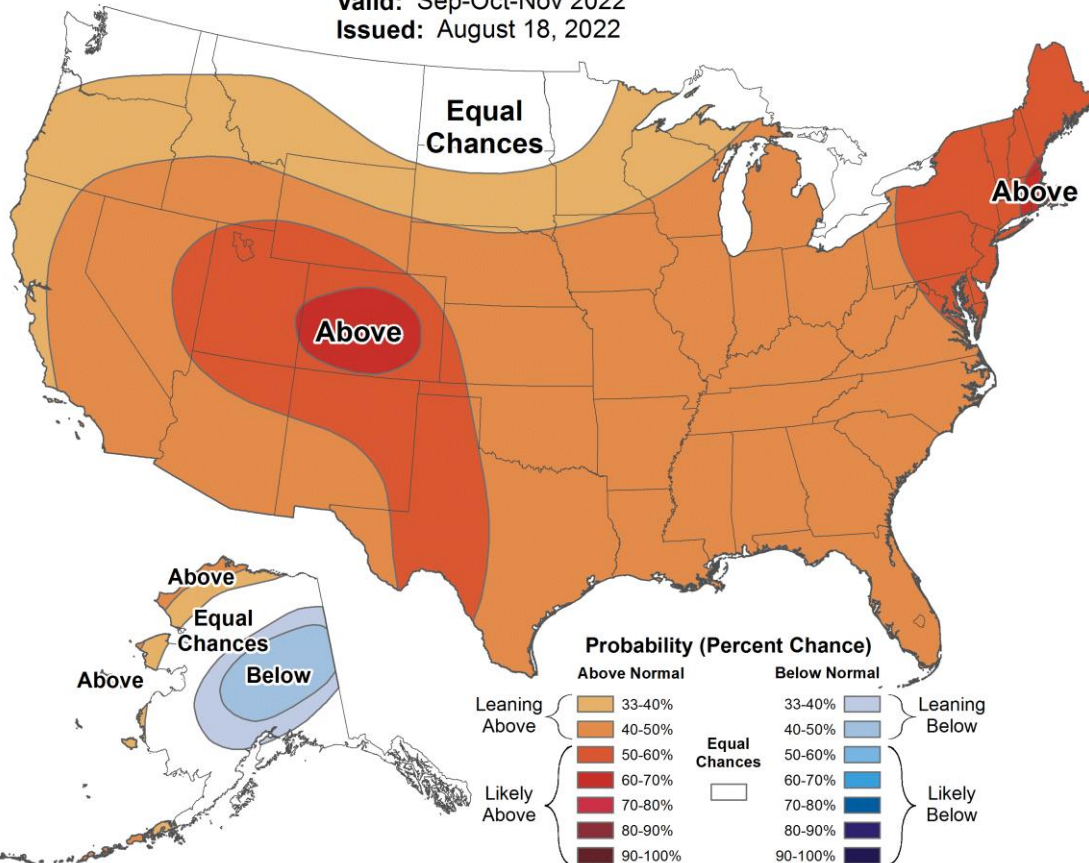
Fall Outlook 2022



Seasonal Temperature Outlook



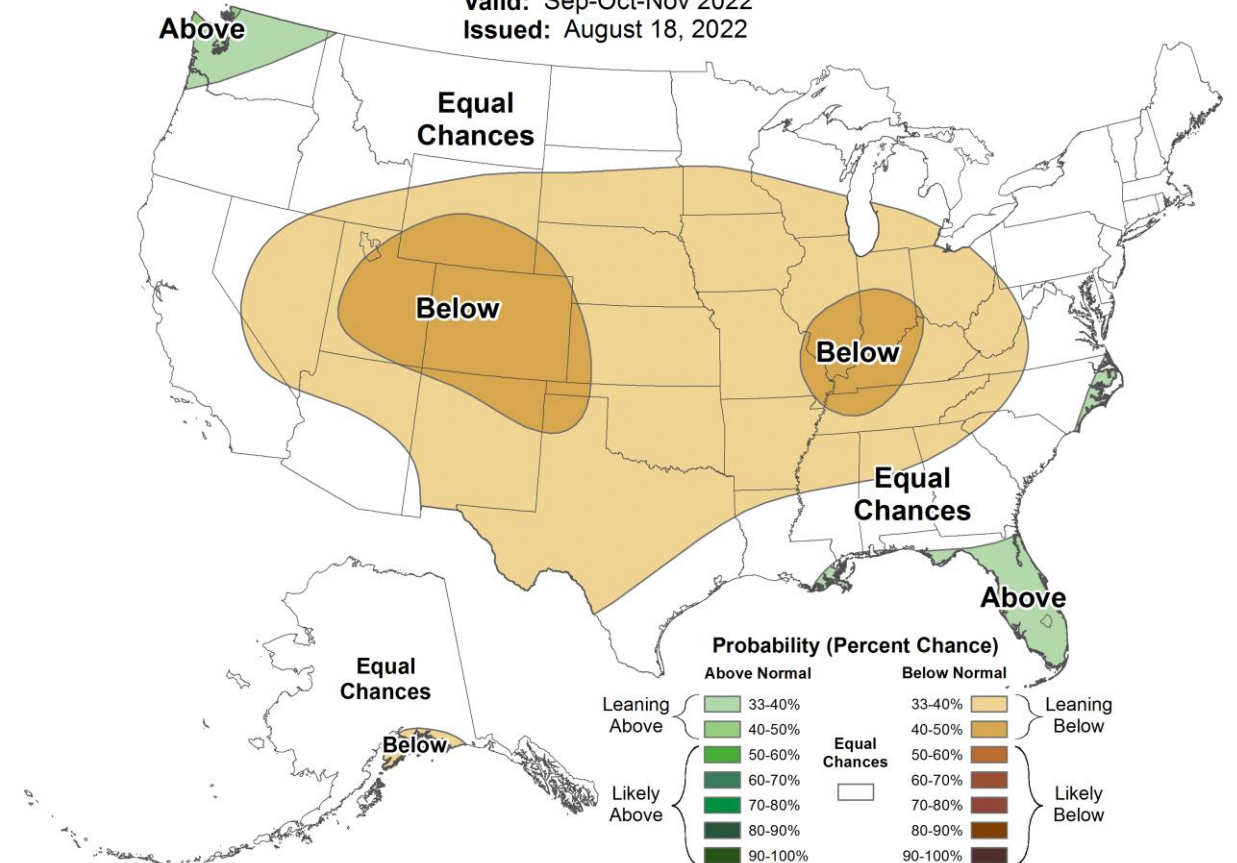
Valid: Sep-Oct-Nov 2022
Issued: August 18, 2022



Seasonal Precipitation Outlook



Valid: Sep-Oct-Nov 2022
Issued: August 18, 2022



Questions?

