

Delaware River Basin Commission

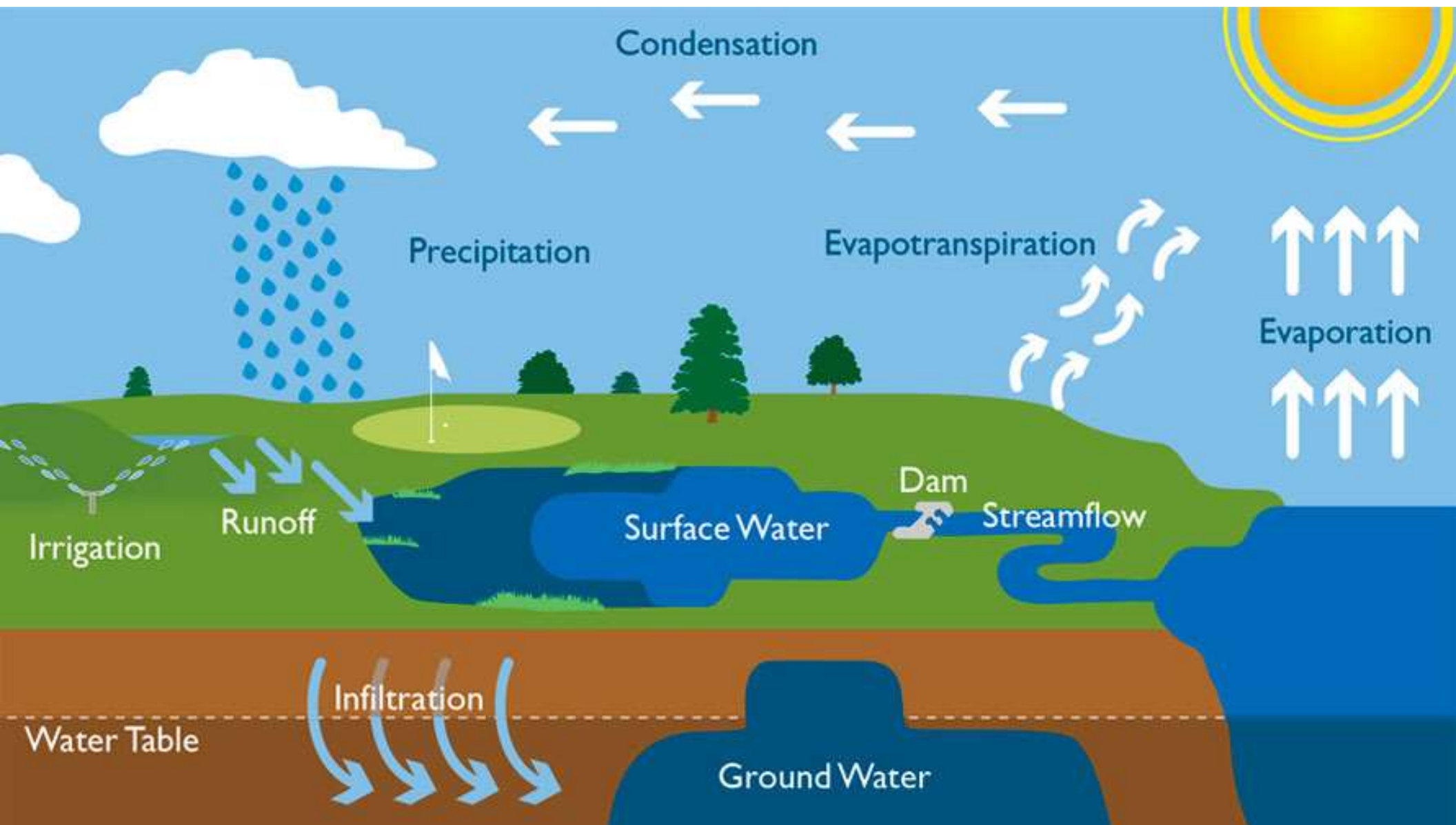
Hydrologic Conditions

Amy L. Shallcross, PE

Manager, Water Resource Operations

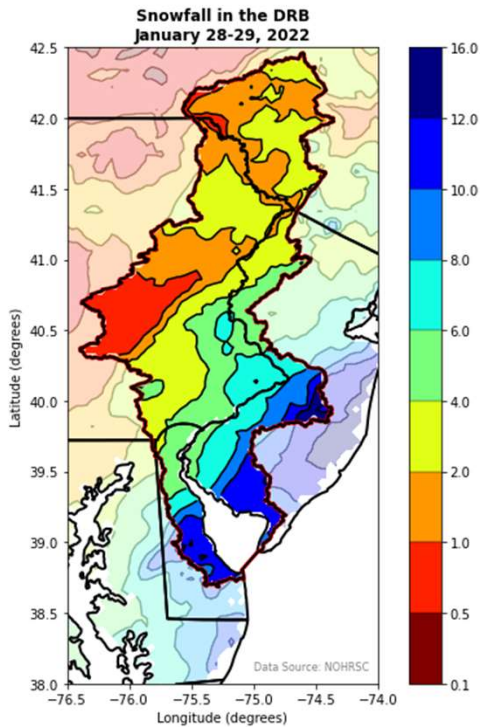
Commission Business Meeting
December 7, 2022



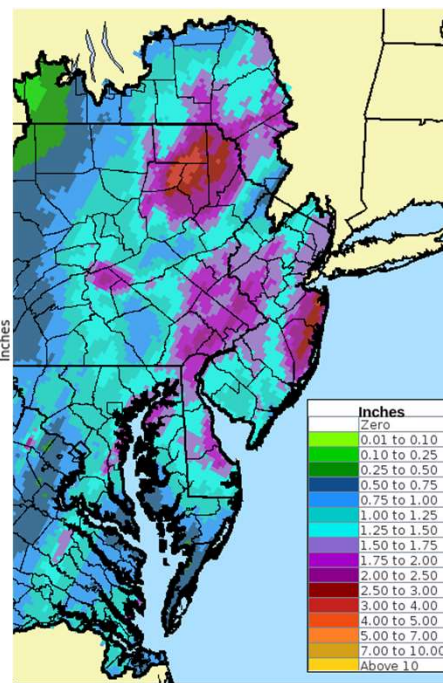


2022 Hydrologic Highlights

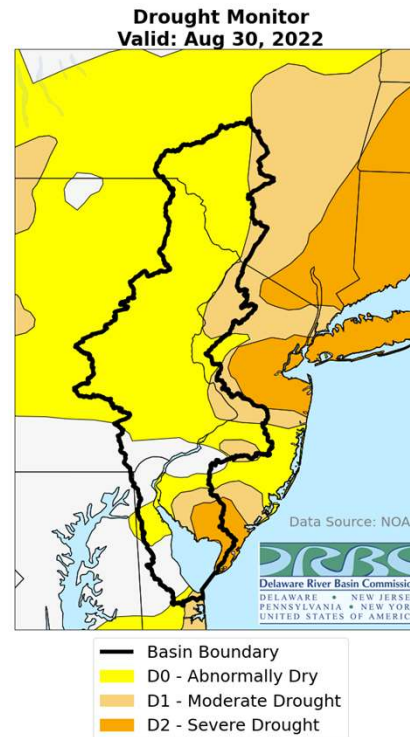
January 29, 2022
Nor'Easter snowstorm



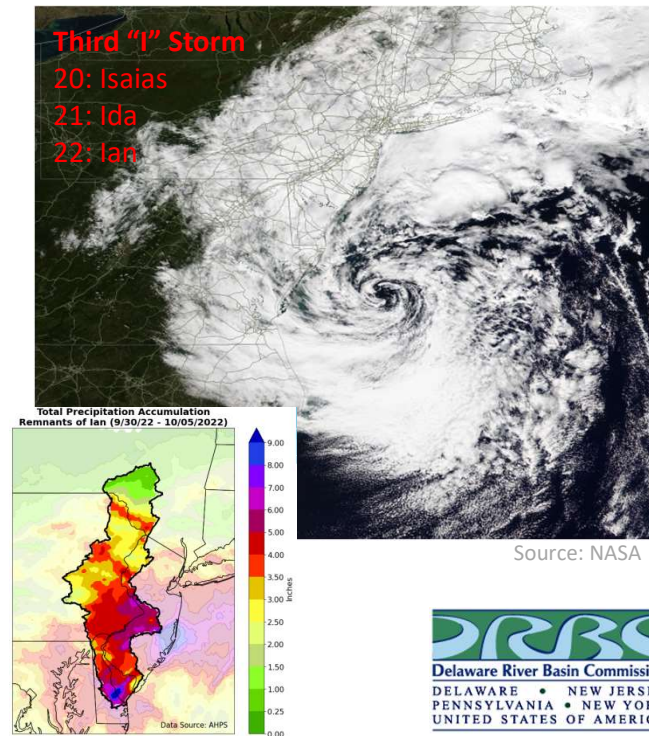
April 19, 2022
Nor'Easter rainstorm



June – August 2022
Dry Conditions



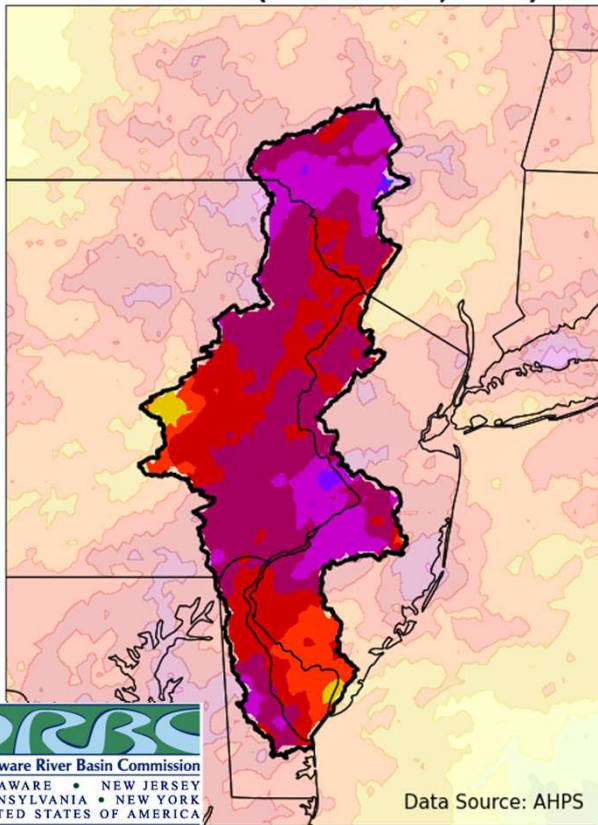
September 30, 2022
Remnants of Ian



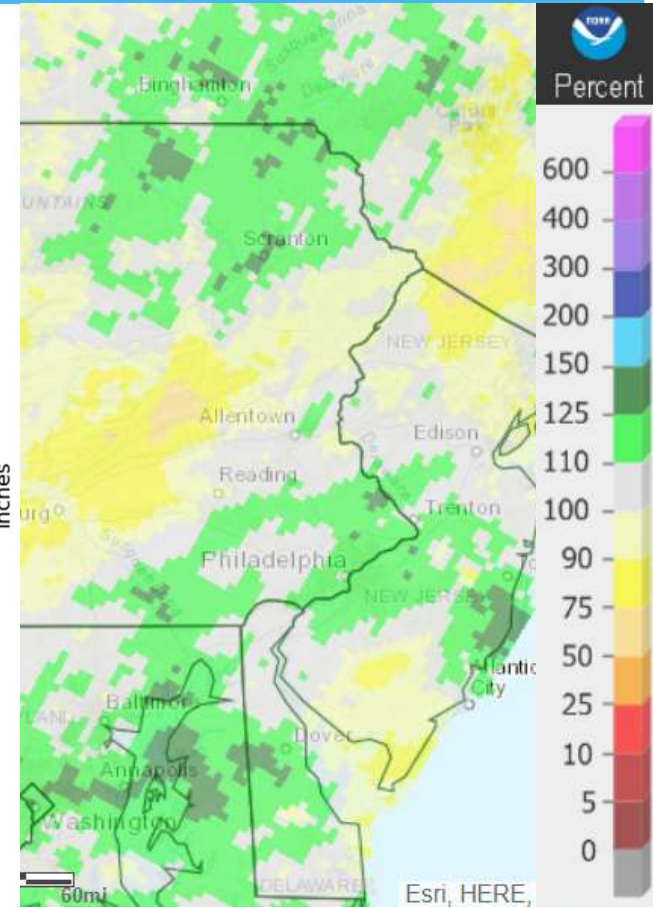
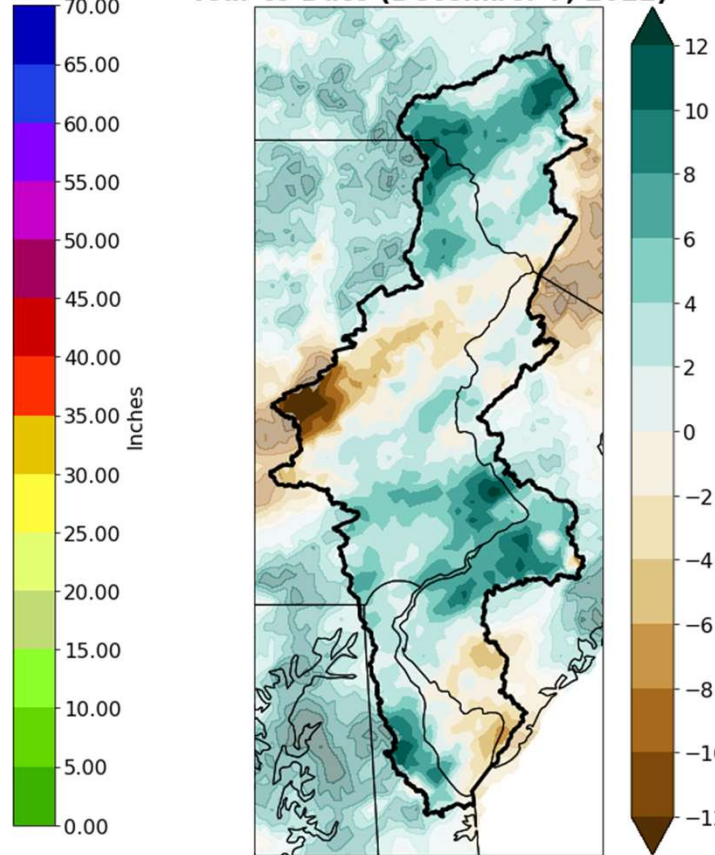
Precipitation Data: NOAA

Year to Date Precipitation

**Total Precipitation Accumulation
Year to Date (December 7, 2022)**

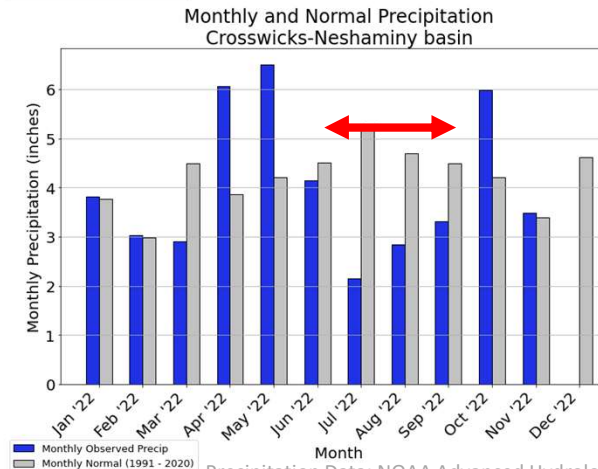
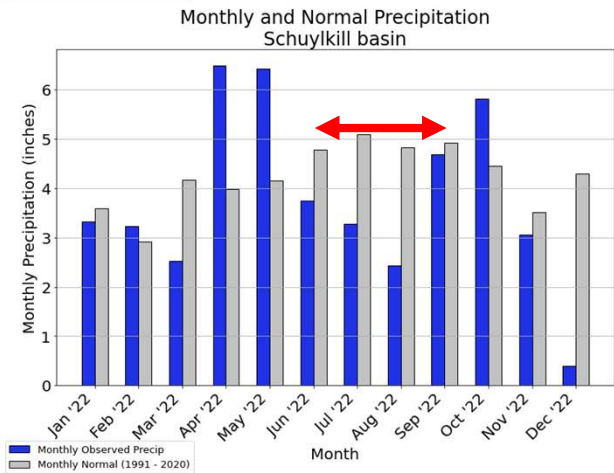
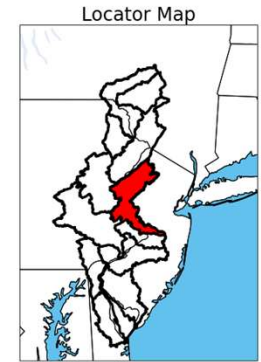
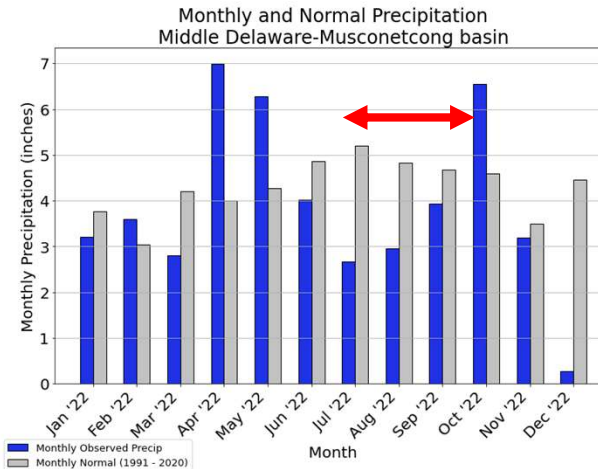
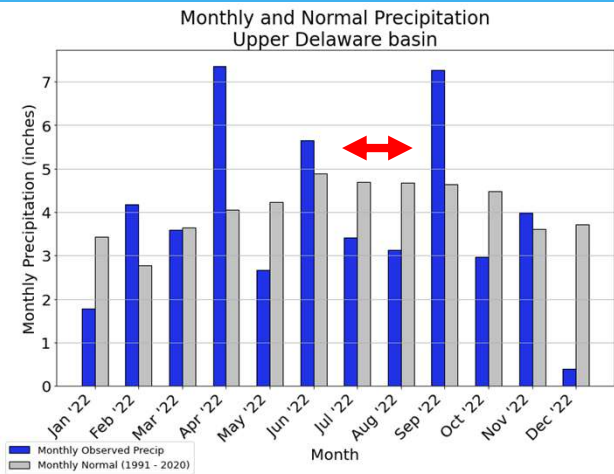


**Departure from Normal Precipitation
Year to Date (December 7, 2022)**



Precipitation Data: NOAA Advanced Hydrologic Conditions Report

Precipitation By HUCs (year-to-date)



Cannonsville Reservoir

July 12, 2022

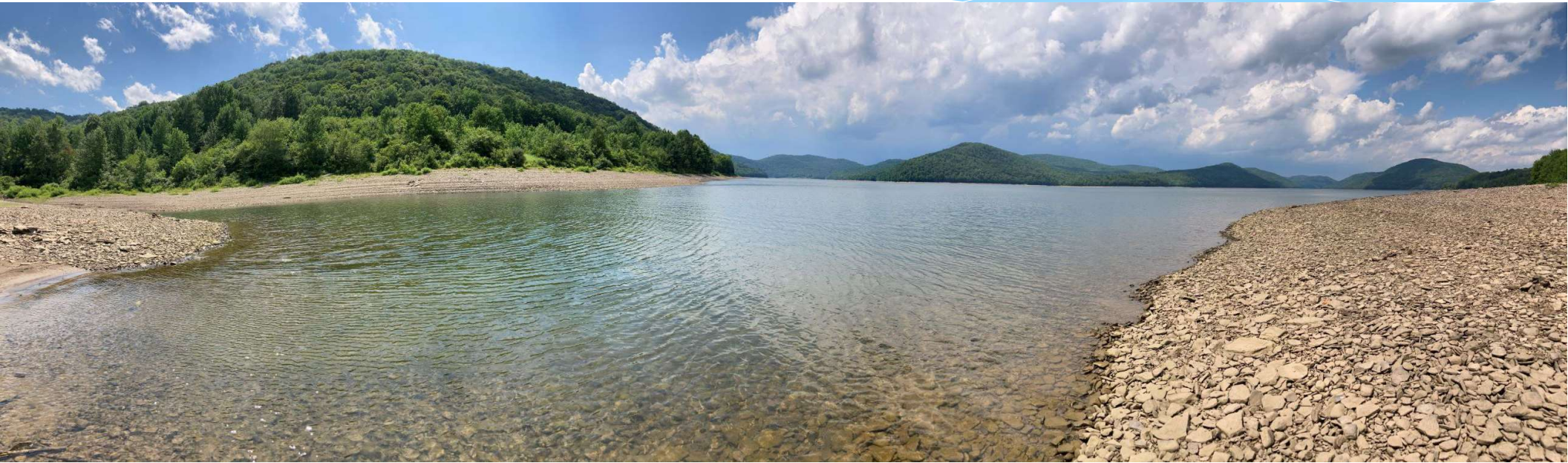
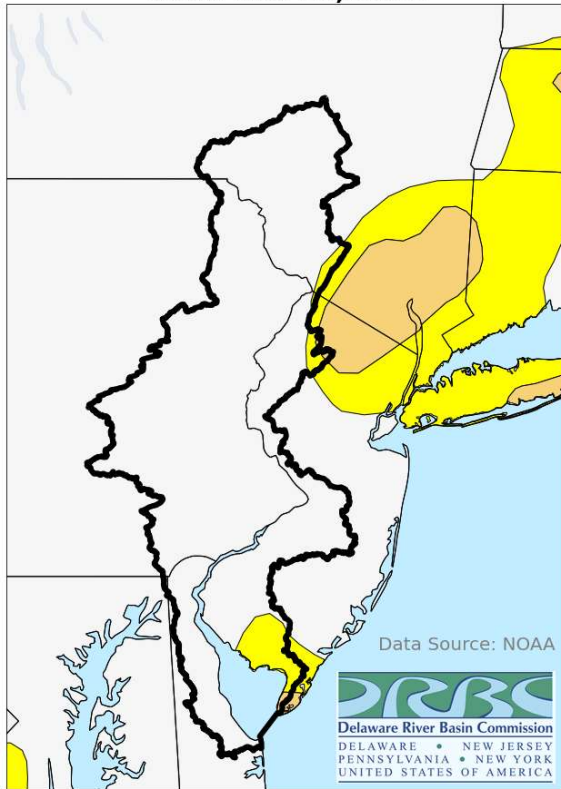


Photo: J. Bransky, DRBC

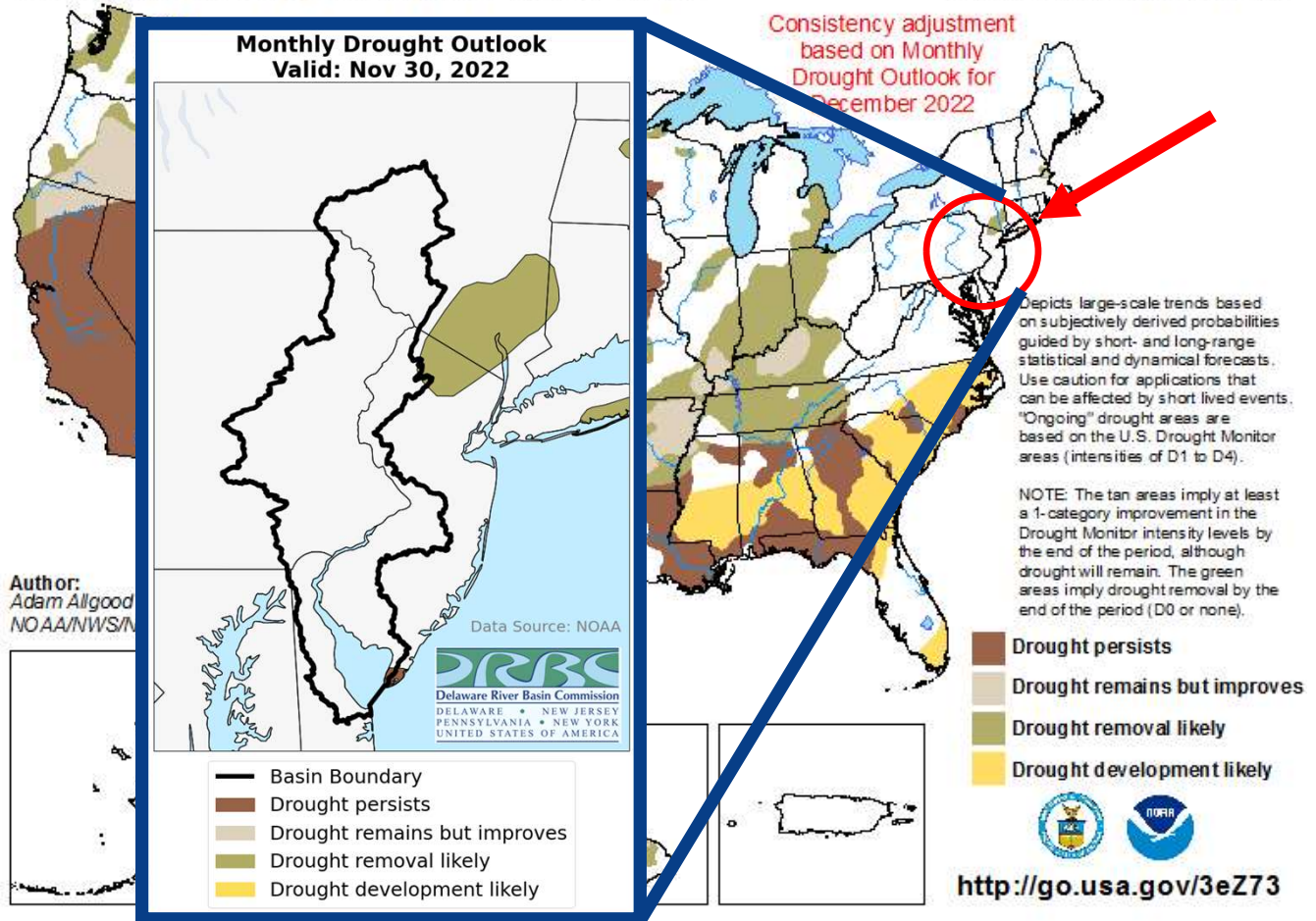
Drought Monitor
Valid: Nov 29, 2022



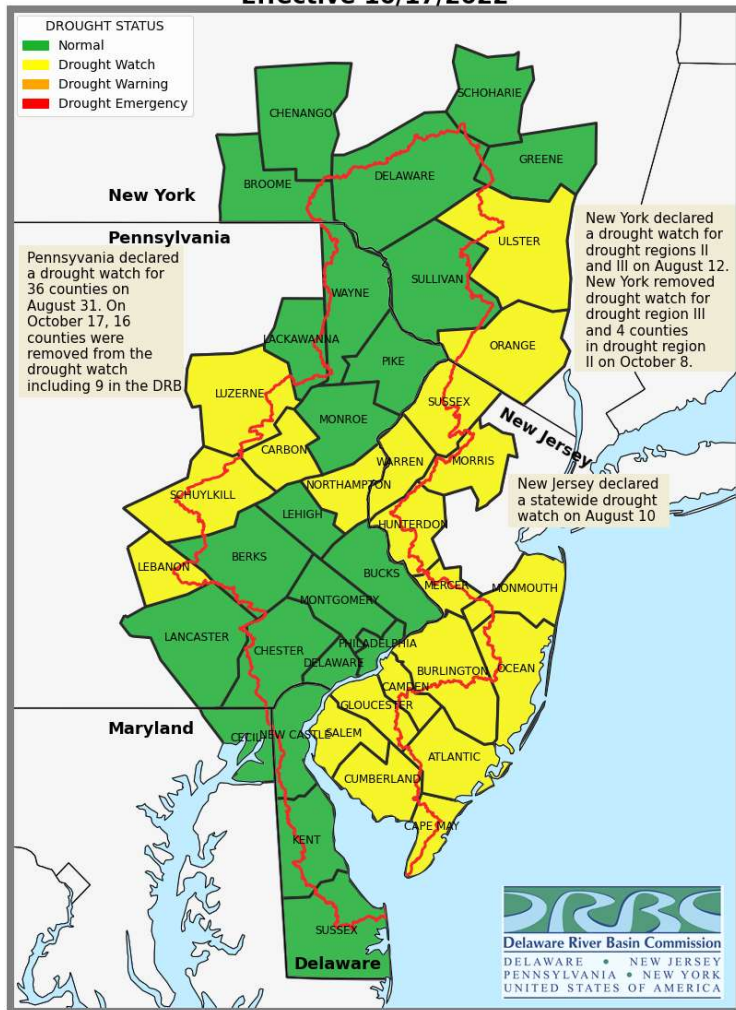
- Basin Boundary
- D0 - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought

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

Valid for December 1, 2022 - February 28, 2023
Released November 30, 2022



**Drought Status In the Delaware River Basin
As Declared by the Individual Basin States
Effective 10/17/2022**



Current Drought Status

- DRB Drought Status is normal
- DRB States have declared droughts for several counties.
- 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. The drought watch was lifted on October 8.
- Pennsylvania declared a drought watch for 36 counties on August 31. The drought watch was lifted for all DRB counties except for 5.

DRBC: <https://www.nj.gov/drbc/programs/flow/drought-info.html>; DE: <https://www.dgs.udel.edu/water-conditions-summary-Delaware>; NJ: <https://dep.nj.gov/drought/>; NY: <https://www.dec.ny.gov/lands/5011.html>; <https://www.dep.pa.gov/Business/Water/PlanningConservation/Drought/Pages/default.aspx>

Streamflow

Upper Basin: **Above Normal - High**
 Central Basin: **Normal - High**
 Lower Basin: **Above Normal - Much Above**

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		

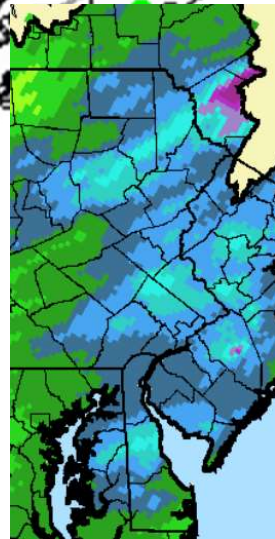
Map last updated: 6:30 am
 December 7, 2022

Locations with Minimum Flow Objectives

- ◆ Montague, NJ - Established by 1954 Decree
- ◆ Trenton, NJ - Established by Water Code

Data Source: USGS

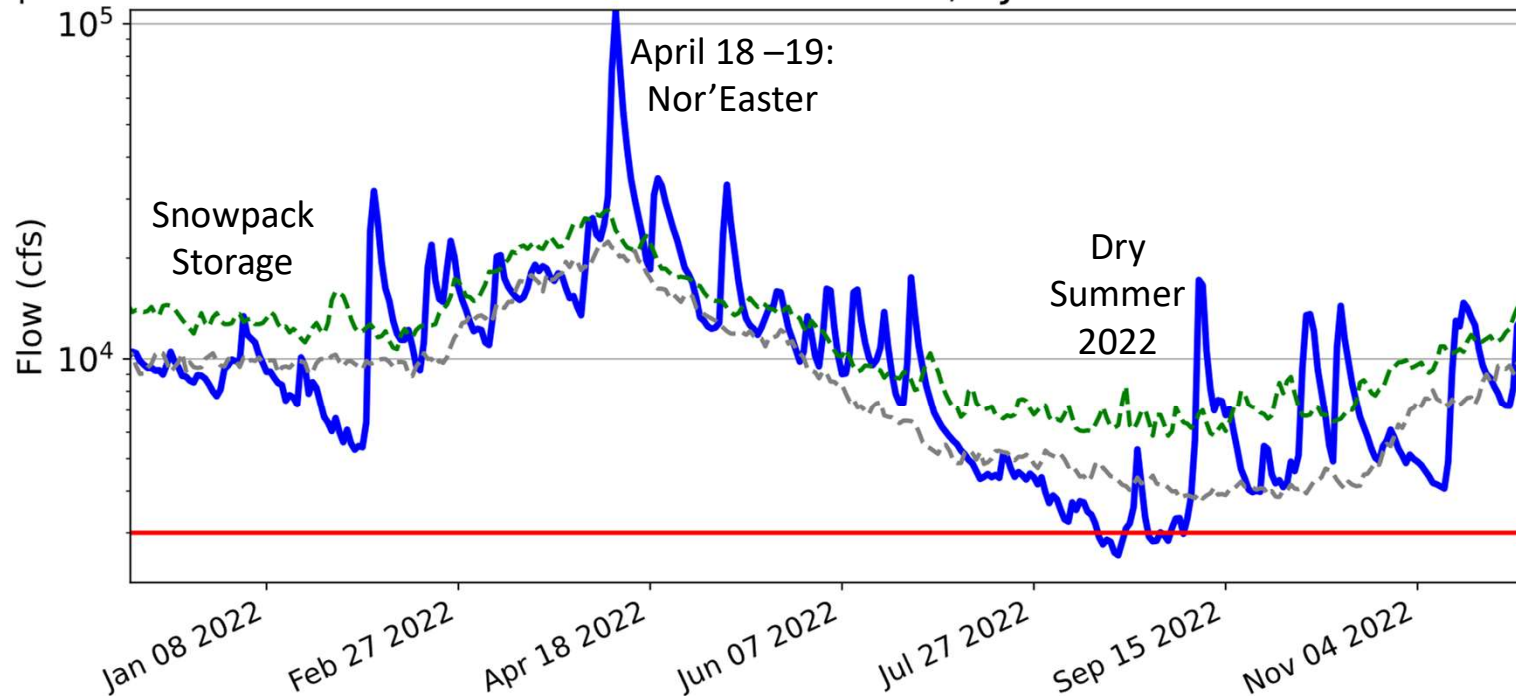
Past 48 hrs:
 0.75 - 1.5"



Delaware River Flow at Trenton, NJ

Updated: 2022-12-02 12:21

Flow at Trenton, NJ

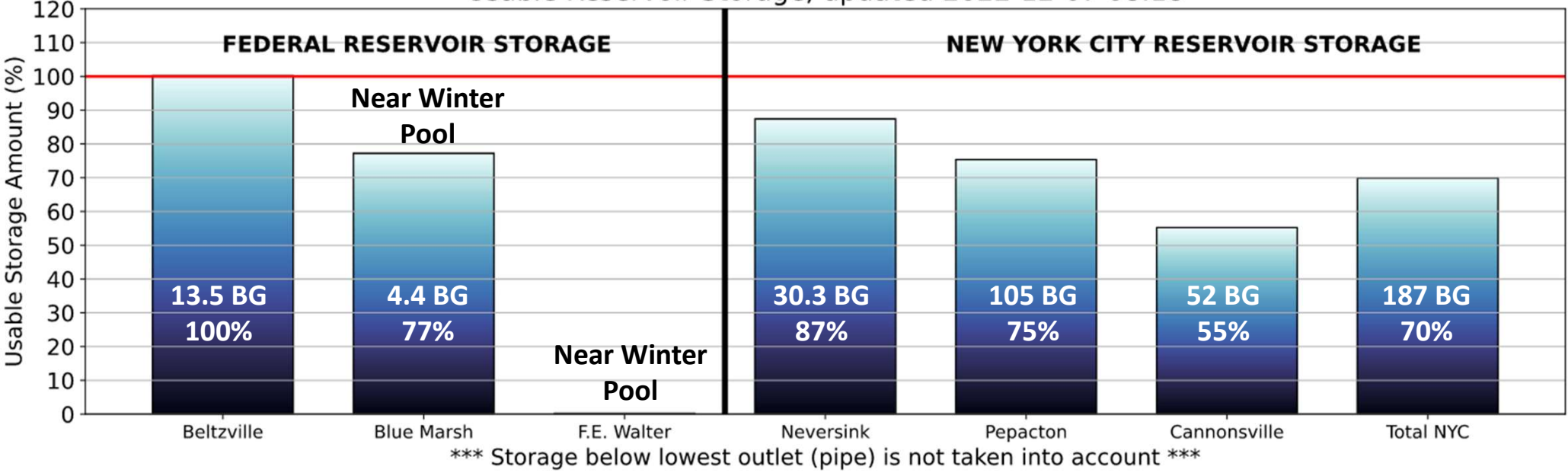


Data Source: USGS

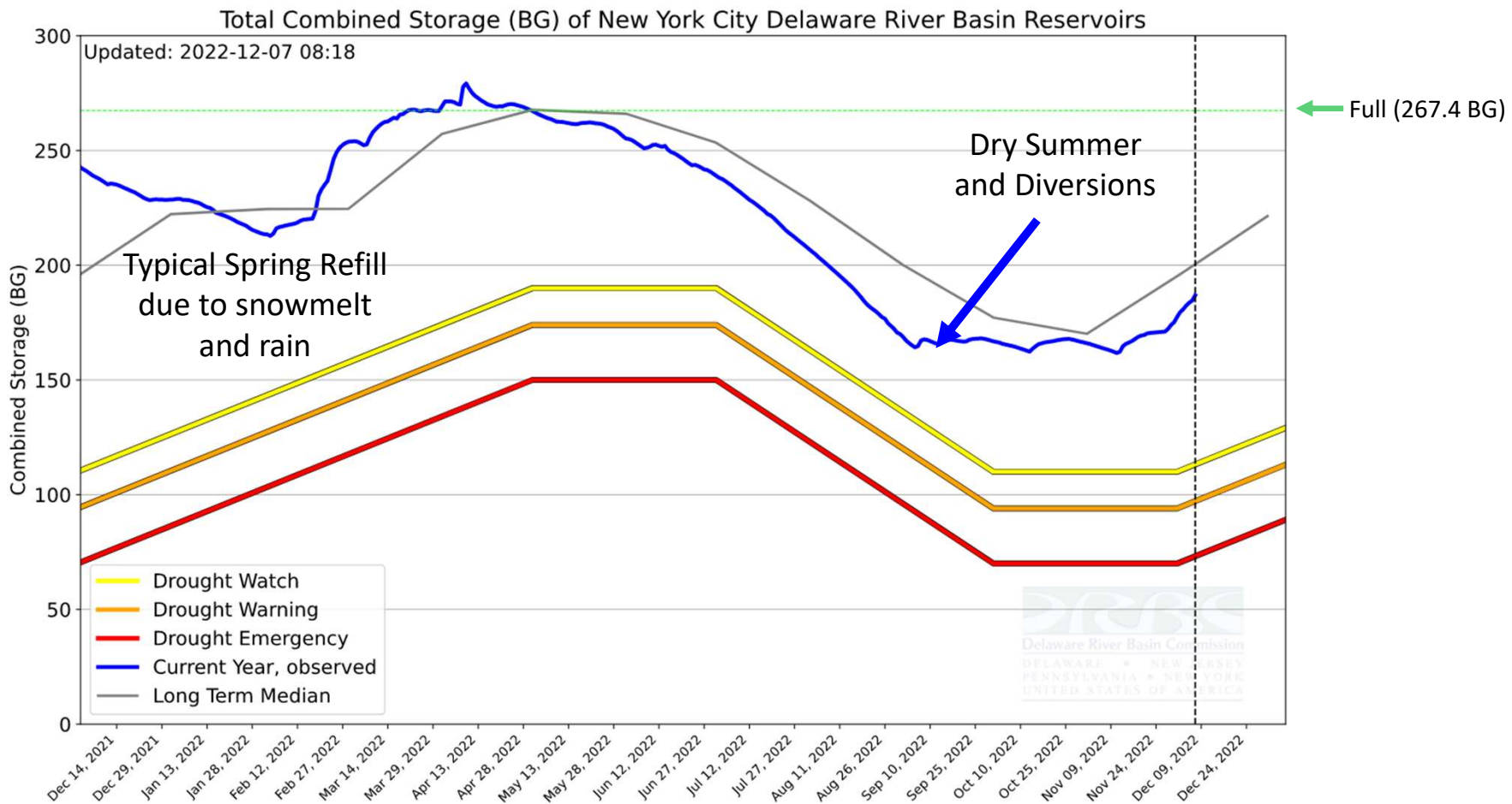


Basin Storage

Usable Reservoir Storage, updated 2022-12-07 08:18



Data Sources: USGS, AHPS, USACE, NYCDEP



Usable Storage	Cannonsville	Pepacton	Neversink	Total	BG above drought watch = 73.7	BG below median = 13.5
BG	51.6	105.0	30.3	186.9	BG above drought warning = 89.7	BG below one year ago = 50.9
%	55.2	75.3	87.4	69.9	BG above drought = 113.7	

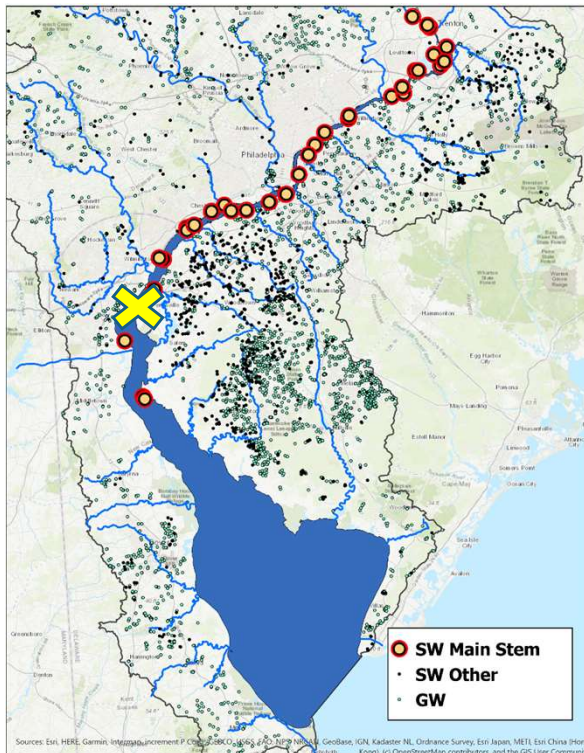


Data Source: NYCDEP, USGS

Salt Front

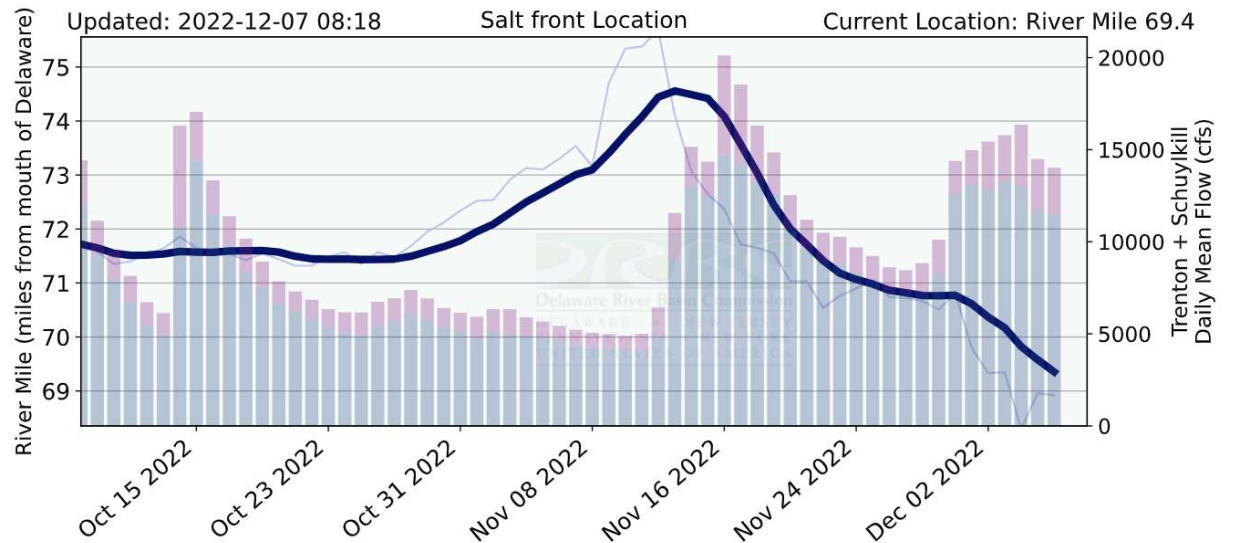
7-day average location of the 250 mg/l isochlor (chloride concentration)

Water Withdrawals



Current (12/6/2022): RM 69.4

December Median: RM 69

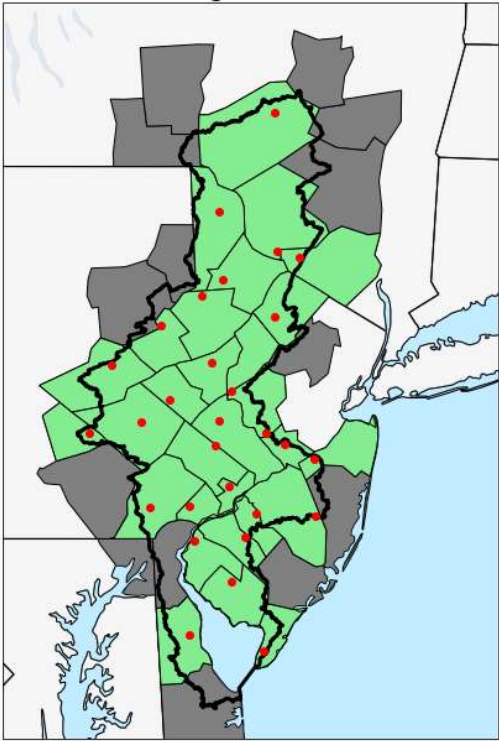


— Daily Location — 7-Day average location Trenton Flow (cfs) Schuylkill Flow (cfs)

Derived using specific conductance data from USGS monitoring locations in the Delaware Estuary

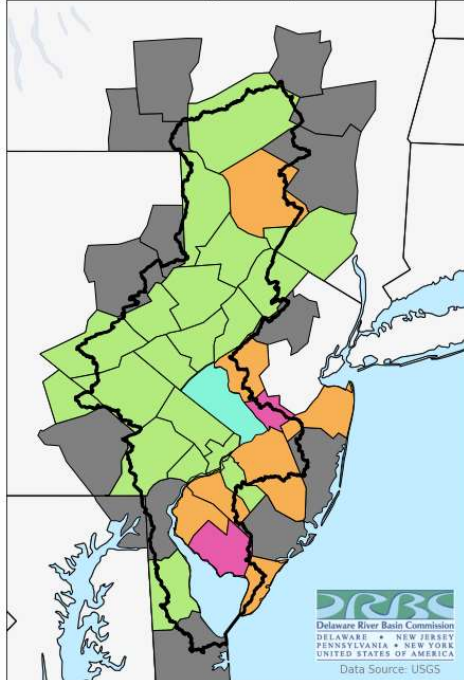
Groundwater Levels

Location of groundwater wells



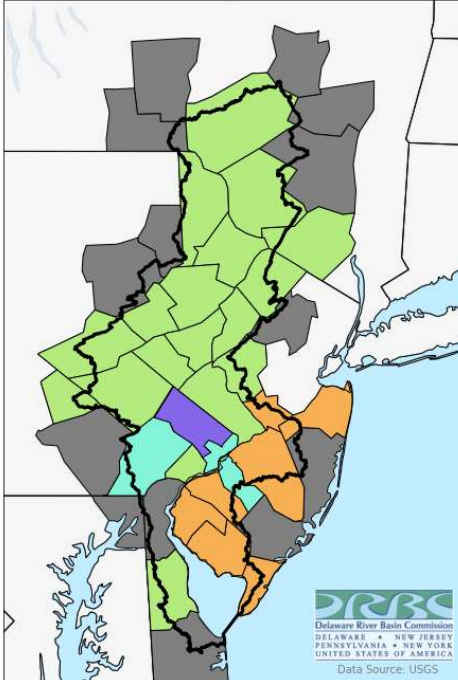
- Basin Boundary
- Well Location
- County contains well
- No well available within DRB

Groundwater Ranking on September 08, 2022



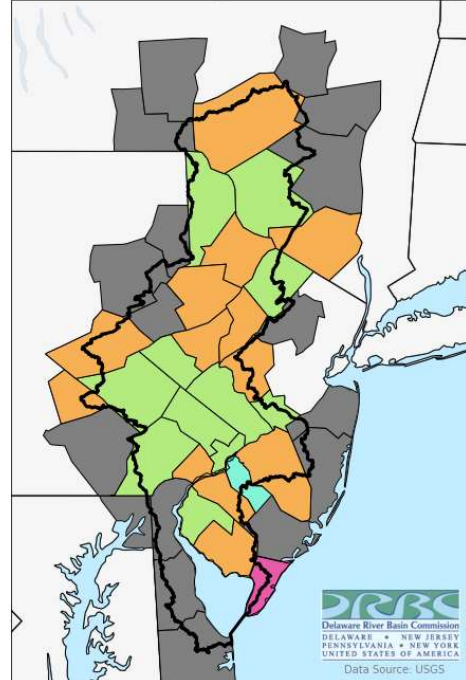
- Basin Boundary
- Much Above Normal
- Above Normal
- Normal
- Below Normal
- Much Below Normal
- Data unavailable

Groundwater Ranking on October 08, 2022



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

Groundwater Ranking on November 10, 2022



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

Well selected based on length of period of record

Typical La Nina forecast!

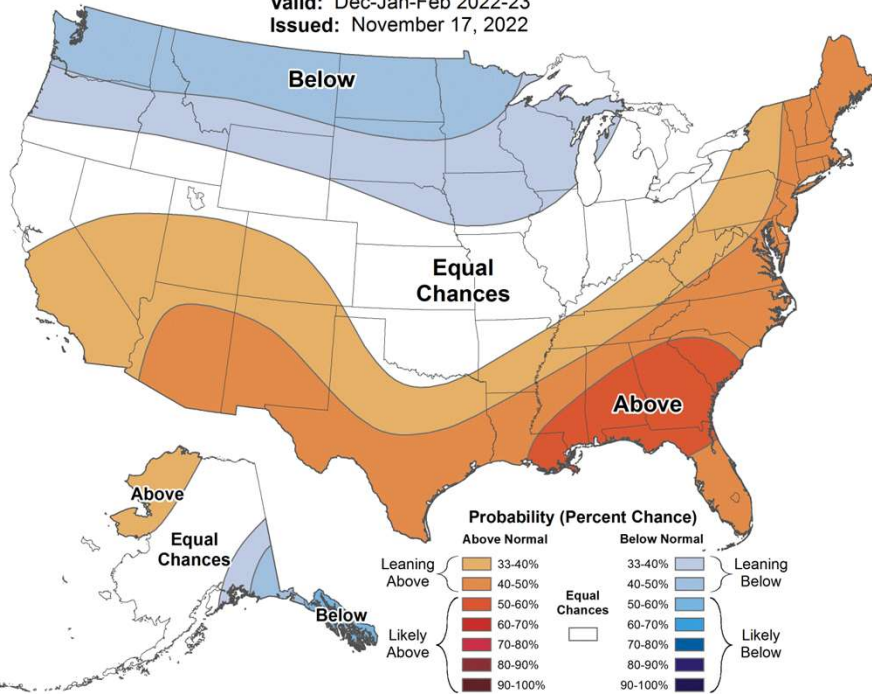
Winter Outlook 2022



Seasonal Temperature Outlook



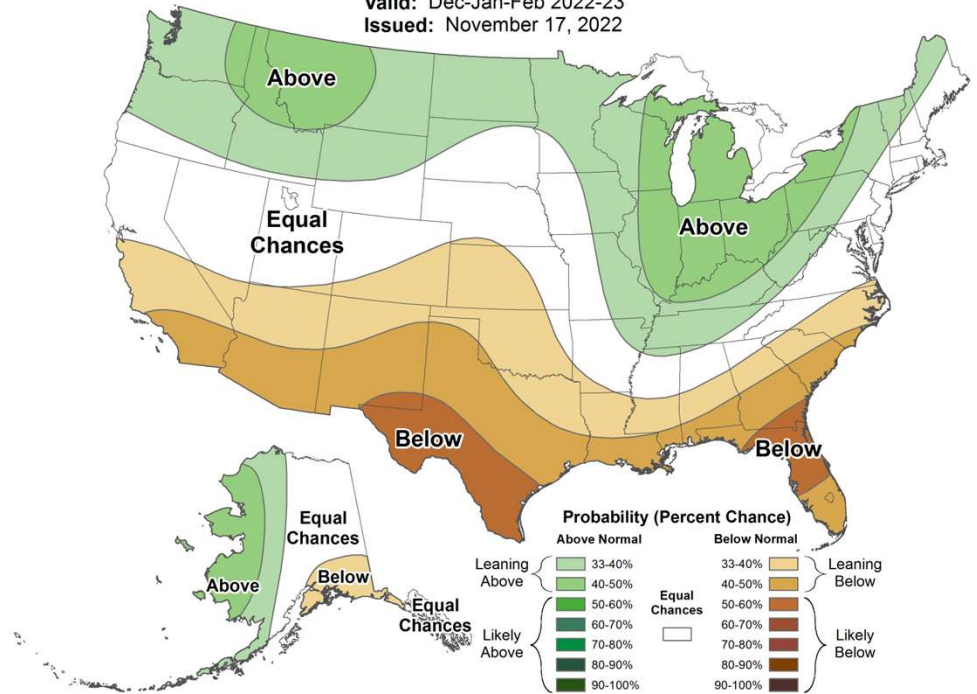
Valid: Dec-Jan-Feb 2022-23
 Issued: November 17, 2022



Seasonal Precipitation Outlook



Valid: Dec-Jan-Feb 2022-23
 Issued: November 17, 2022



Trenton, New Jersey

January 14, 2018



Ice accumulates in the river during cold spells





Photo: DRBC



Photo: DRBC

Washington Crossing Reenactment

**CHECK IT OUT
TOTALLY WORTH GOING!**



Painting: Washington Crossing the Delaware, Emanuel Leutze, 1851

Washington Crossing Historic Park

Additional Details: <https://www.washingtoncrossingpark.org/cross-with-us/>

Re-enactment (Rehearsal): 12/11: 11 am – 3 pm (Crossing at 1:00 pm) - **\$8**

Re-enactment: 12/25: Noon – 3 pm (Crossing 1:00 pm) - **FREE**

Patriots Festivities Week in Trenton: 12/26 -12/31

Experience the Battle of Princeton: 1/8 9:30-1:00 pm



Have a Safe, Healthy, and Wonderful Holiday.
Best Wishes for an Amazing New Year.

Questions: Amy.Shallcross@DRBC.gov
Select Graphics: [Hydro Report \(arcgis.com\)](http://hydroreport.arcgis.com)

Photo: Icy Sunset over the Delaware River by Carolyn Sues