

Delaware River Basin Commission

Hydrologic Conditions

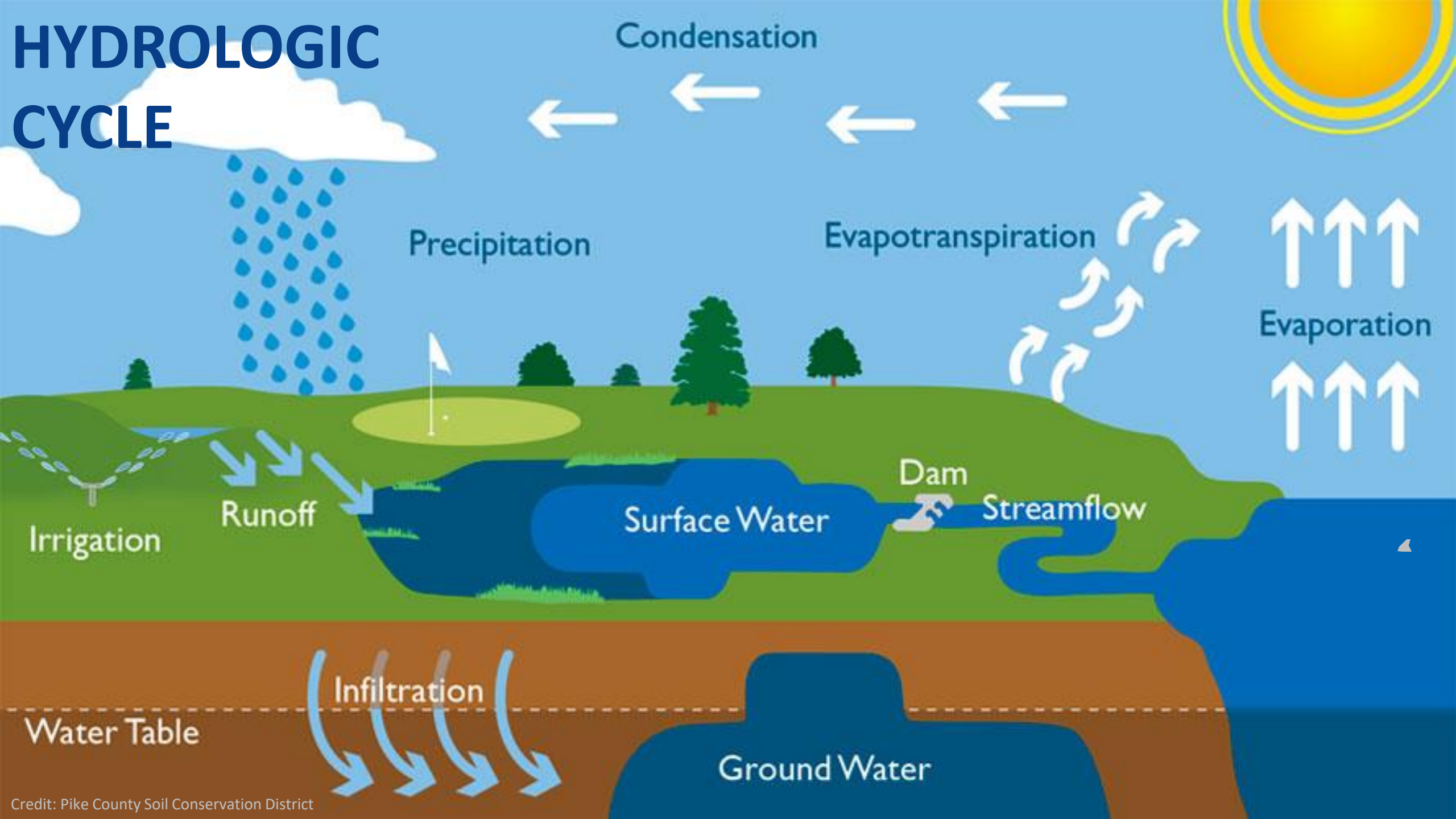
Fanghui Chen

Senior Water Resource
Engineer, Water Resource
Operations

March 6, 2024

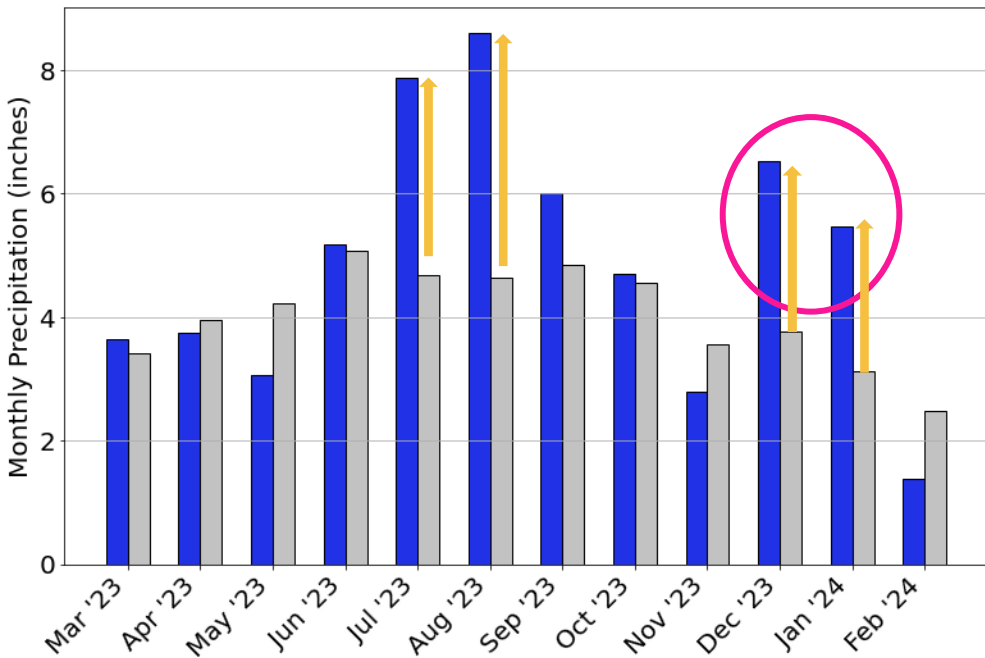


HYDROLOGIC CYCLE

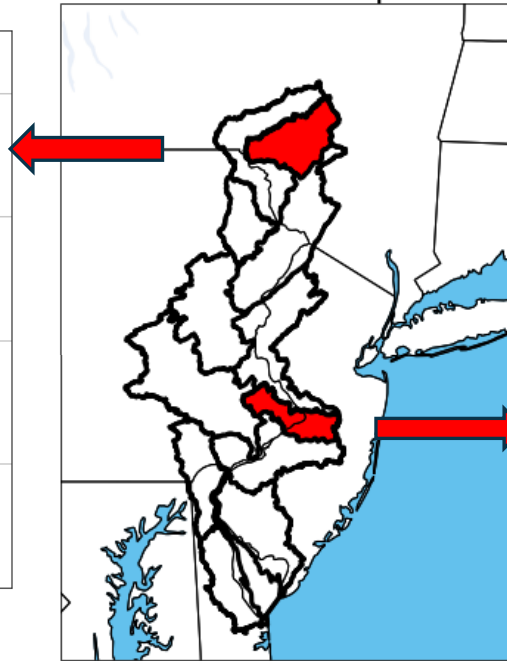


Precipitation from March 2023 to February 2024 (past 365 days)

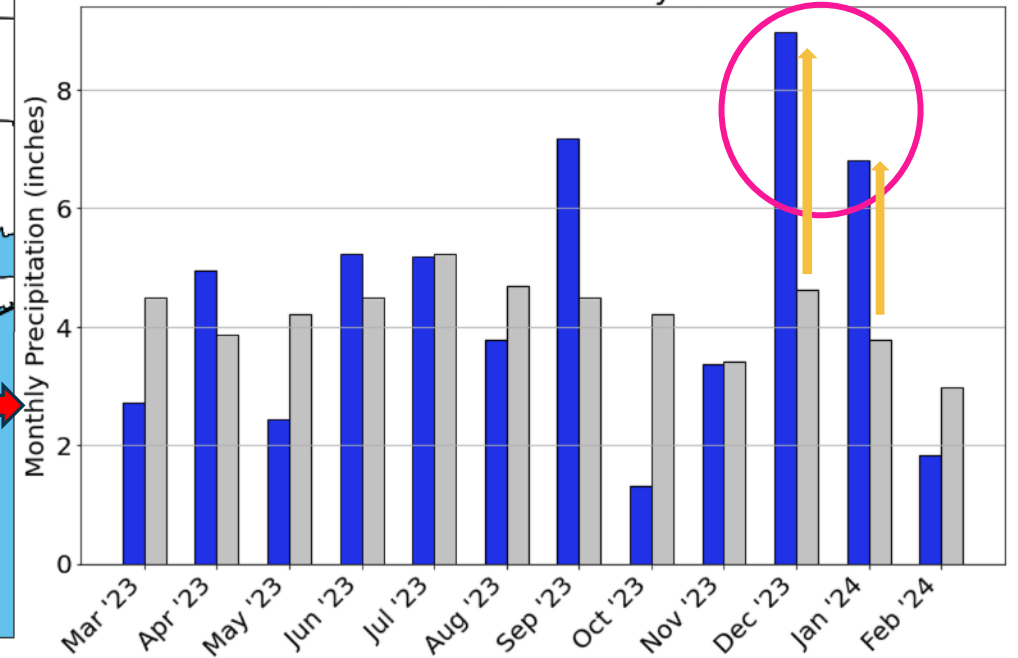
Monthly and Normal Precipitation
East Branch Delaware basin



Locator Map



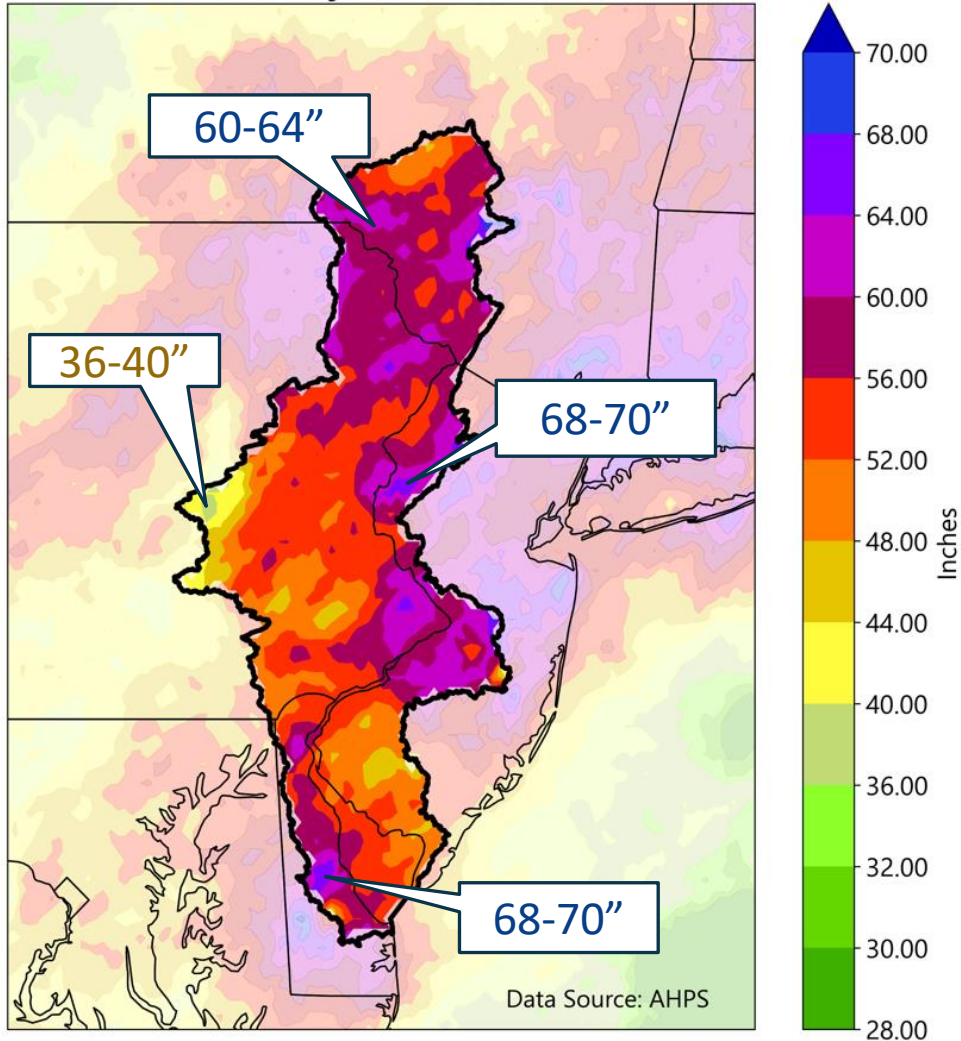
Monthly and Normal Precipitation
Crosswicks-Neshaminy basin



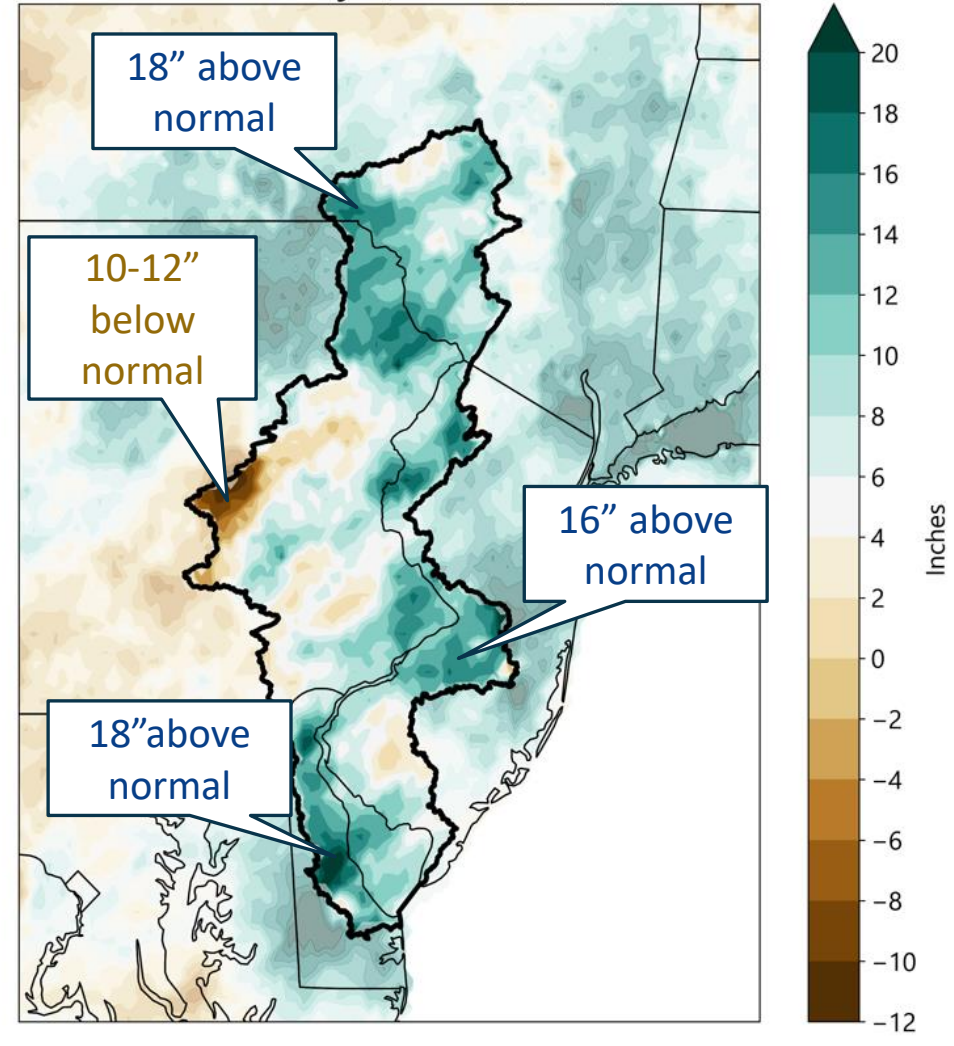
Monthly Observed Precipitation
 Monthly Normal (1991 - 2022)

Precipitation – past 365 days (3/4/2024)

**Total Precipitation Accumulation
Last 365 Days (March 4, 2024)**

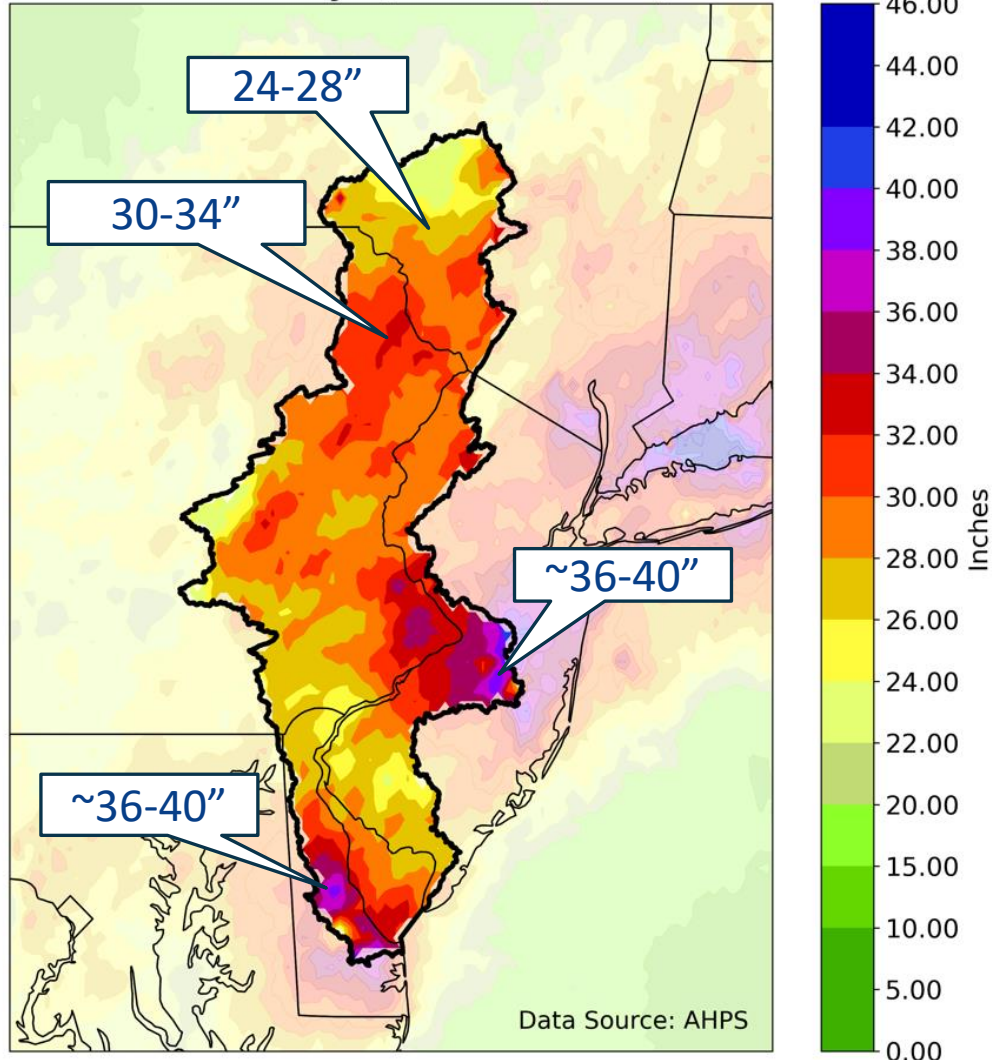


**Departure from Normal Precipitation
Last 365 Days (March 4, 2024)**

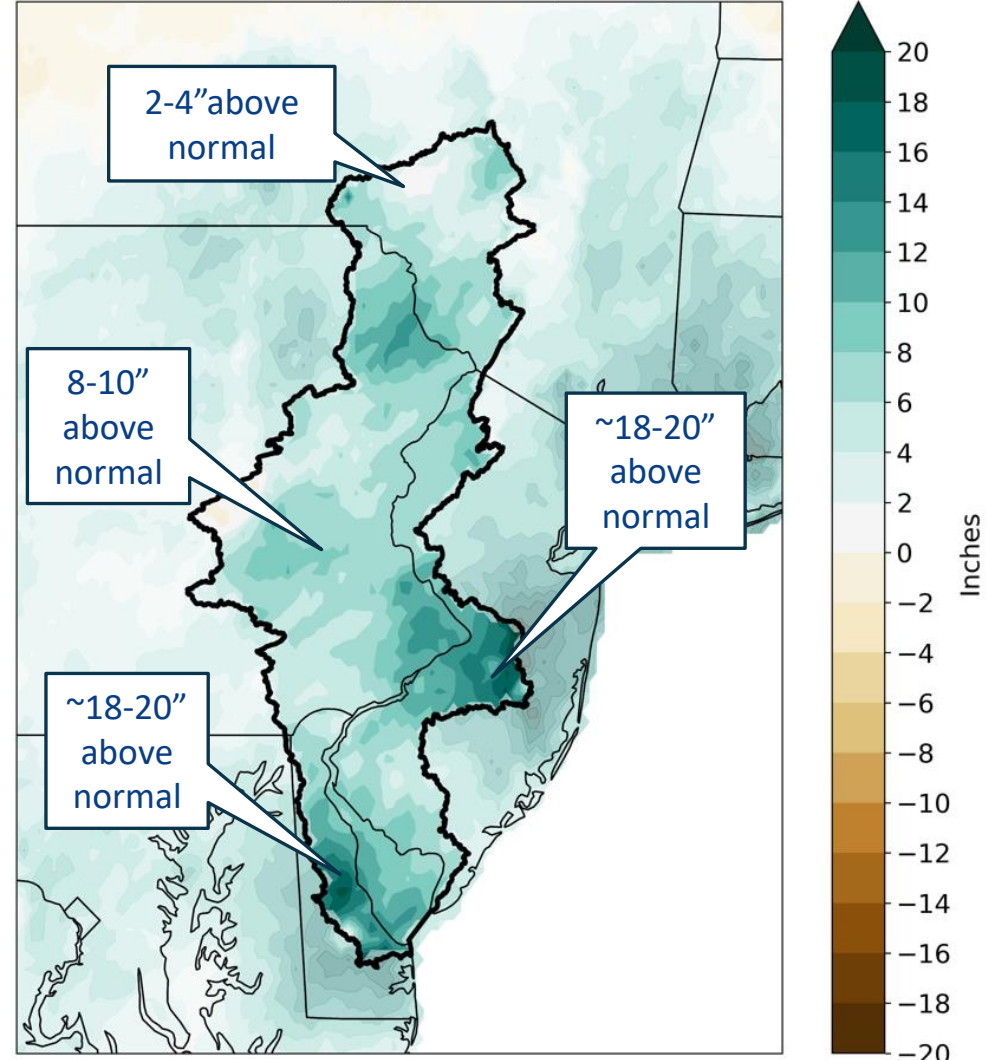


Precipitation – past 180 days (3/4/2024)

**Total Precipitation Accumulation
Last 180 Days (March 4, 2024)**

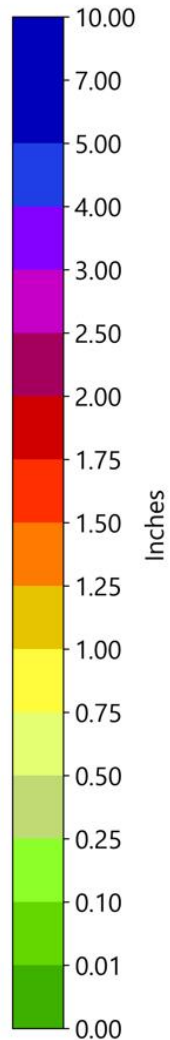
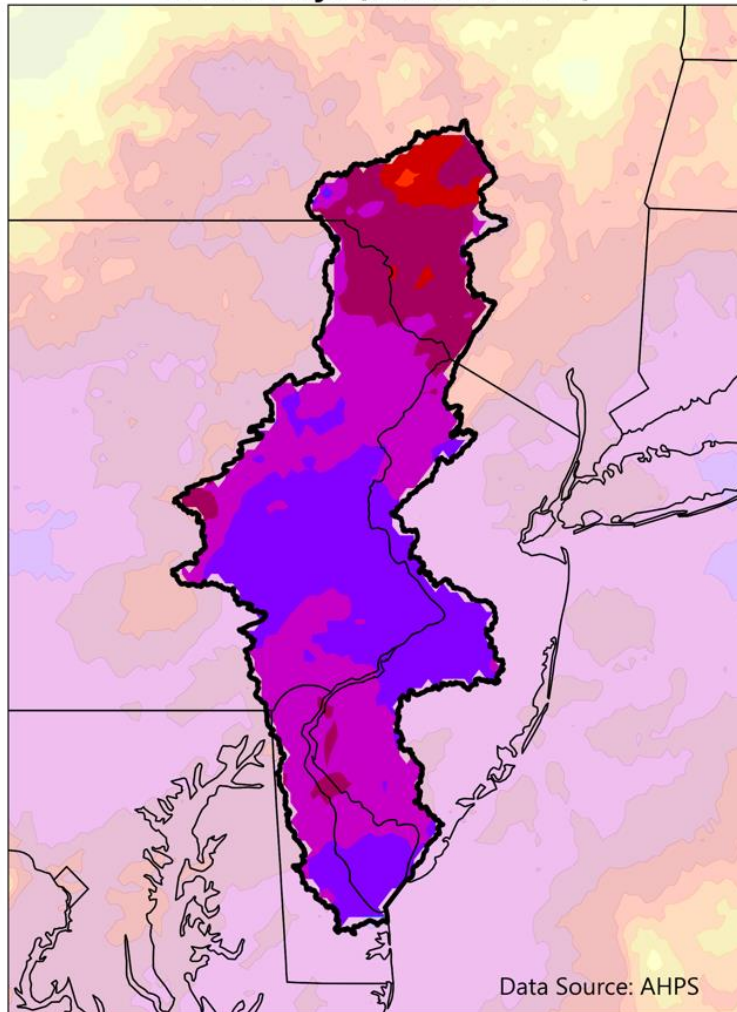


**Departure from Normal Precipitation
Last 180 Days (March 4, 2024)**

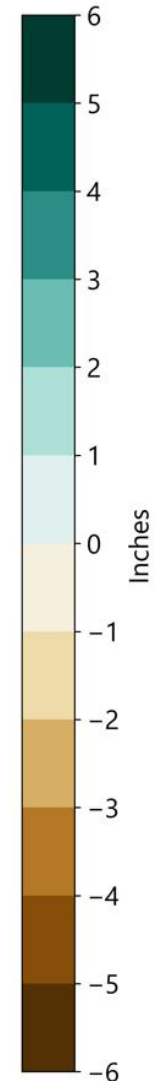
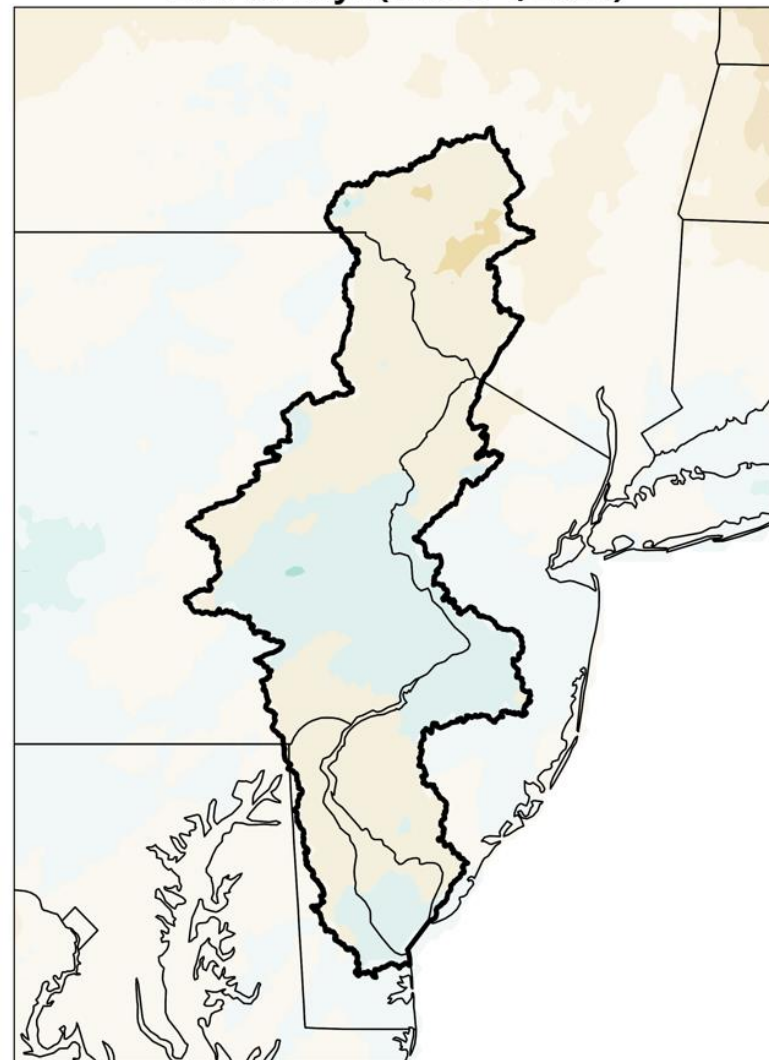


Precipitation – past 30 days (3/4/2024)

**Total Precipitation Accumulation
Last 30 Days (March 4, 2024)**



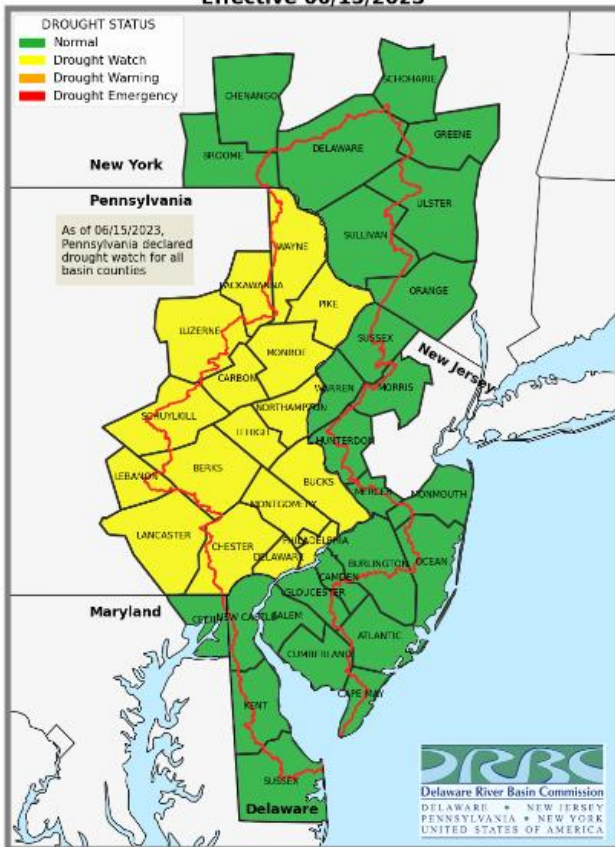
**Departure from Normal Precipitation
Last 30 Days (March 4, 2024)**



Drought Conditions

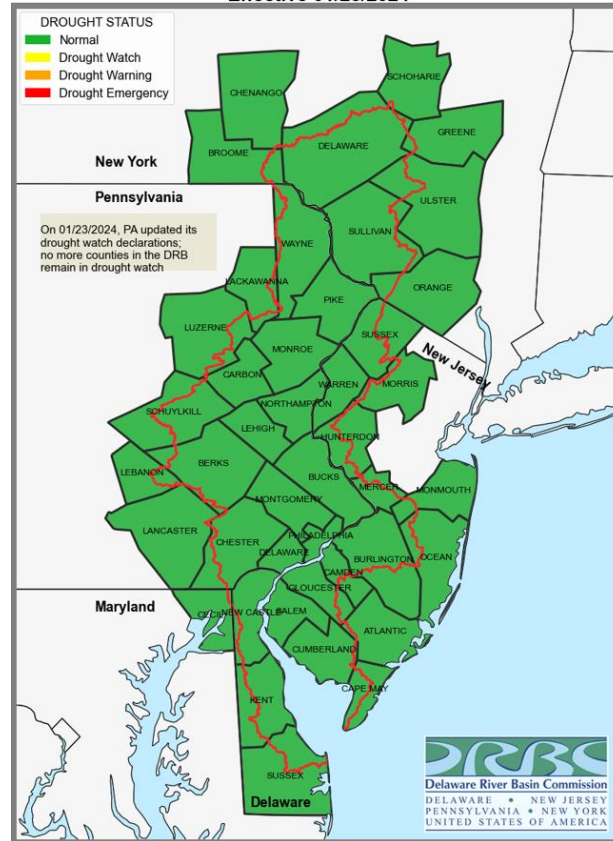
June 15, 2023

**Drought Status In the Delaware River Basin
As Declared by the Individual Basin States
Effective 06/15/2023**



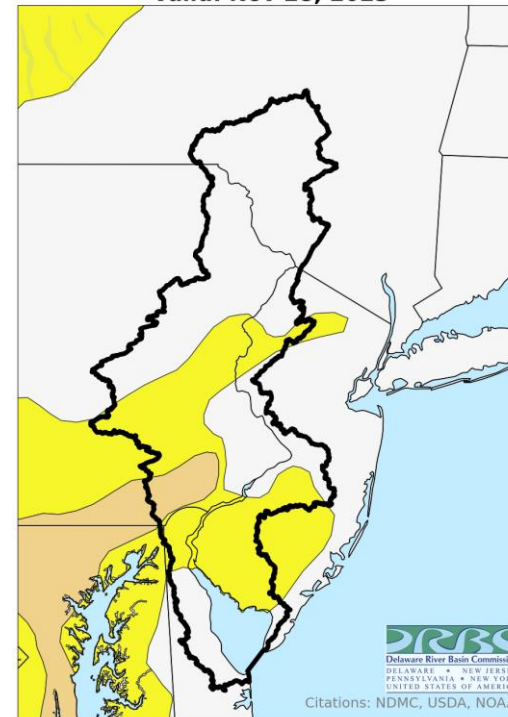
January 23, 2024

**Drought Status In the Delaware River Basin
As Declared by the Individual Basin States
Effective 01/23/2024**



Drought Monitor 11/28, 2023 → 02/06, 2024

**Drought Monitor
Valid: Nov 28, 2023**



**Drought Monitor
Valid: Feb 06, 2024**



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

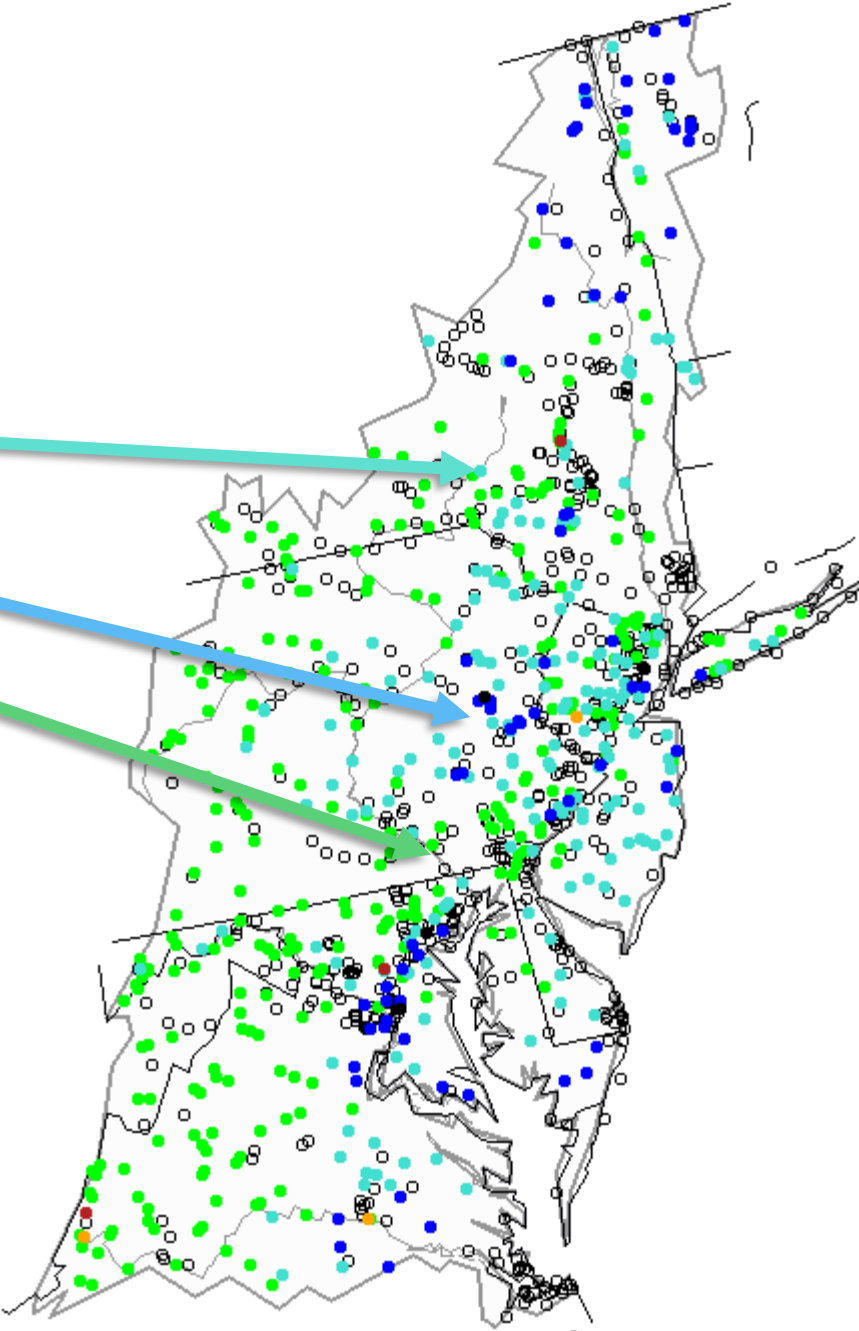
Data from NOAA

Streamflow

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

Map last updated:
10:30ET Tuesday, March 05, 2024

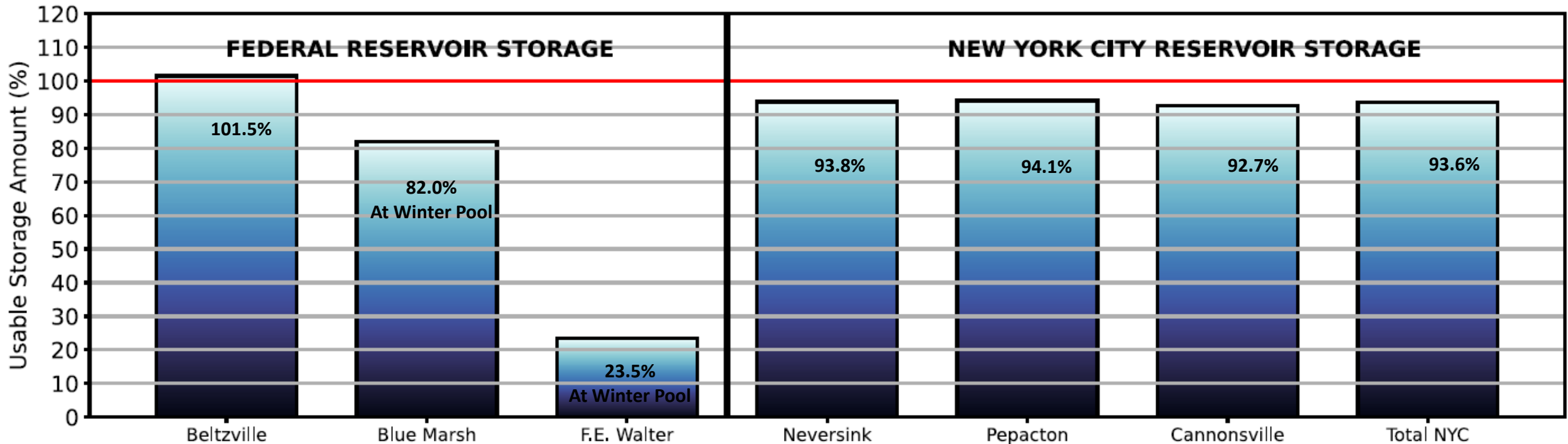


Reservoir Storage and Releases



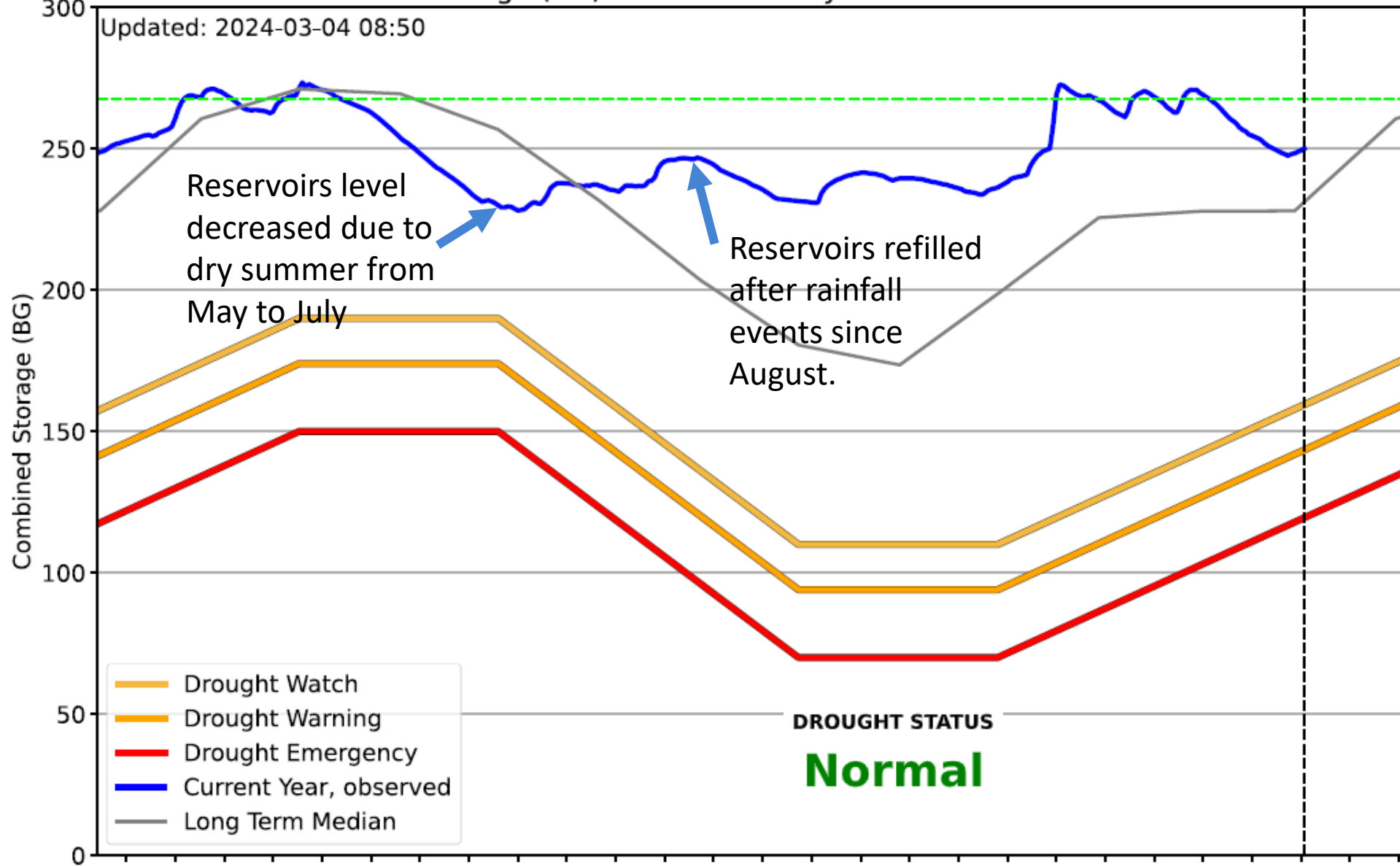
- * Thirteen major reservoirs in the basin's **drought management plan**
- * Two Flow Objectives
 - * Montague, NJ
 - * Releases from NYC Reservoirs
 - * Compensation for out-of-basin diversion of water
 - * Trenton, NJ
 - * Releases from DRBC Storage in USACE Reservoirs
 - * Repel salinity to protect water users

Basin Storage (3-04-2024)

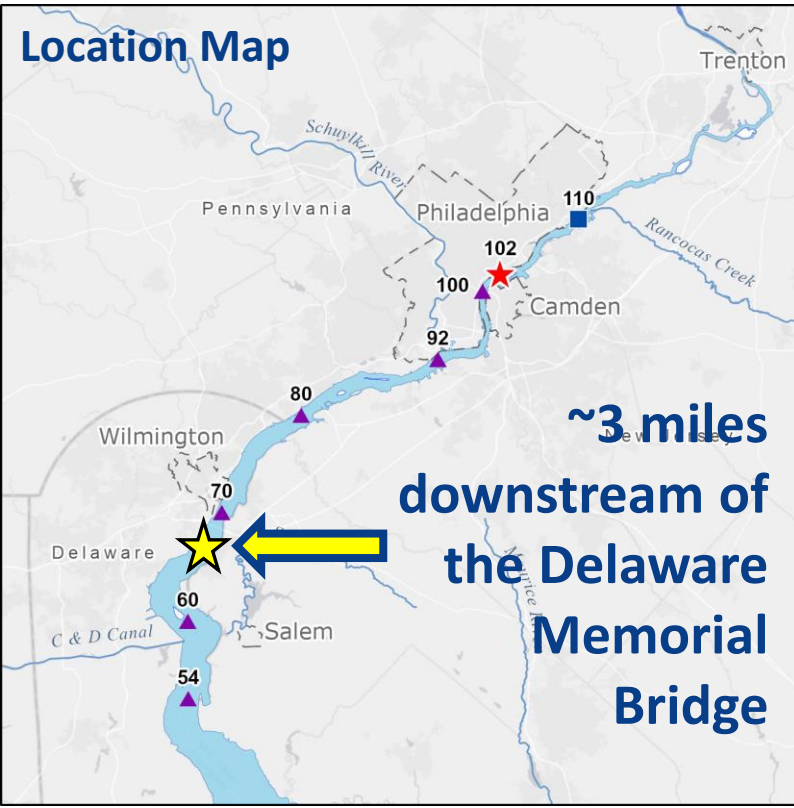


Total Combined Storage (BG) of New York City Delaware River Basin Reservoirs

Updated: 2024-03-04 08:50

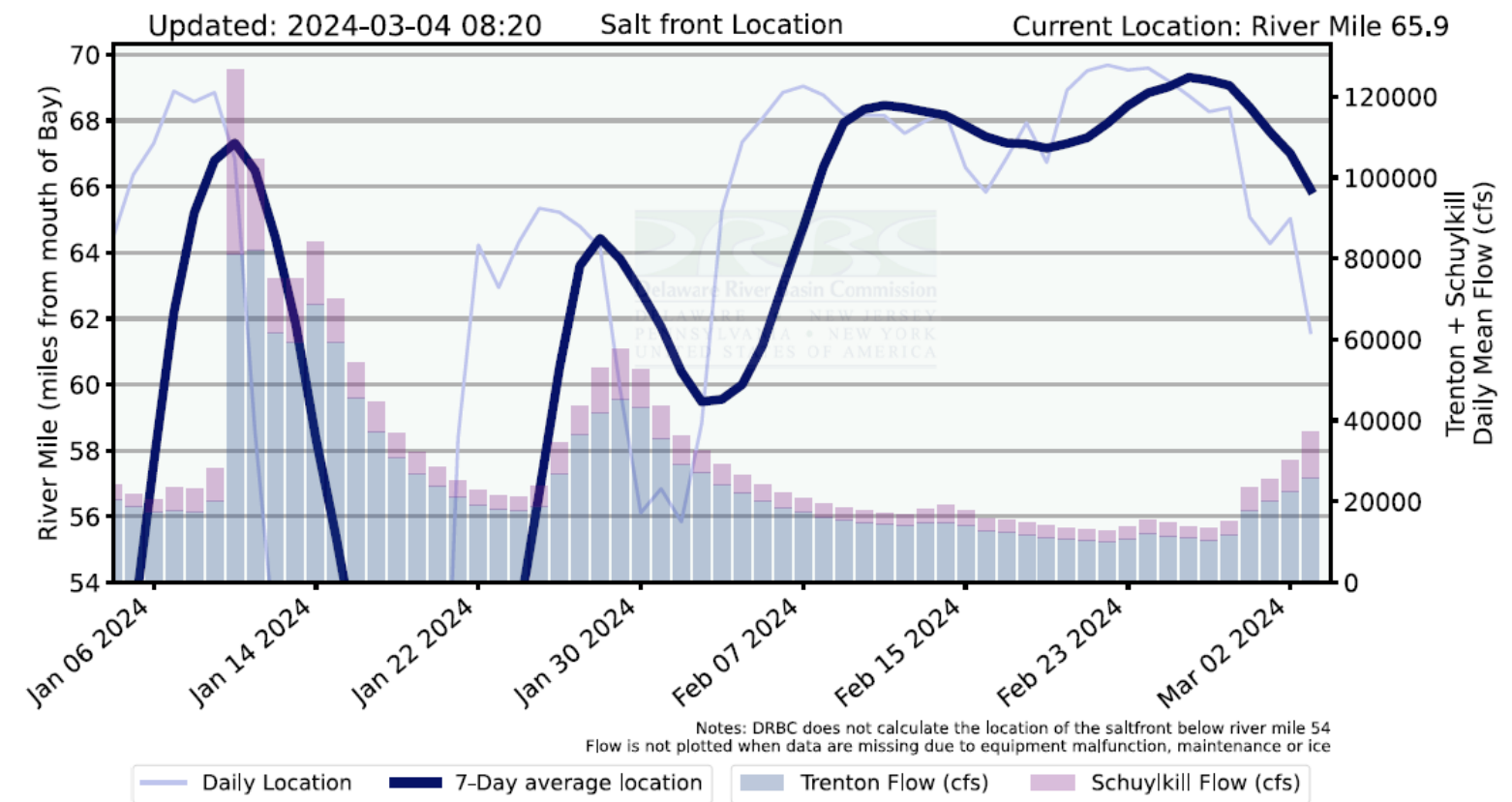


Usable Storage BG %	Cannonsville	Pepacton	Neversink	Total	BG above drought watch = 90.6	BG above drought warning = 106.6	BG above drought = 130.6	BG above median = 18.8	BG below one year ago = 1.7
	86.6	130.9	32.5	250.0					
	92.7	93.9	93.8	93.5					



Salt Front (2/12/2024)

the Estuary Salinity Indicator



The salt front is the 7-Day Average Location of the 250 mg/L isochlor

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

Current (3/4/2024): 65.9
March Median: 70

Updates to hydrologic conditions can be viewed daily on hydrosnap.drbc.net

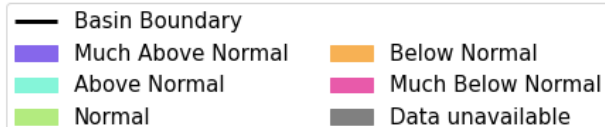
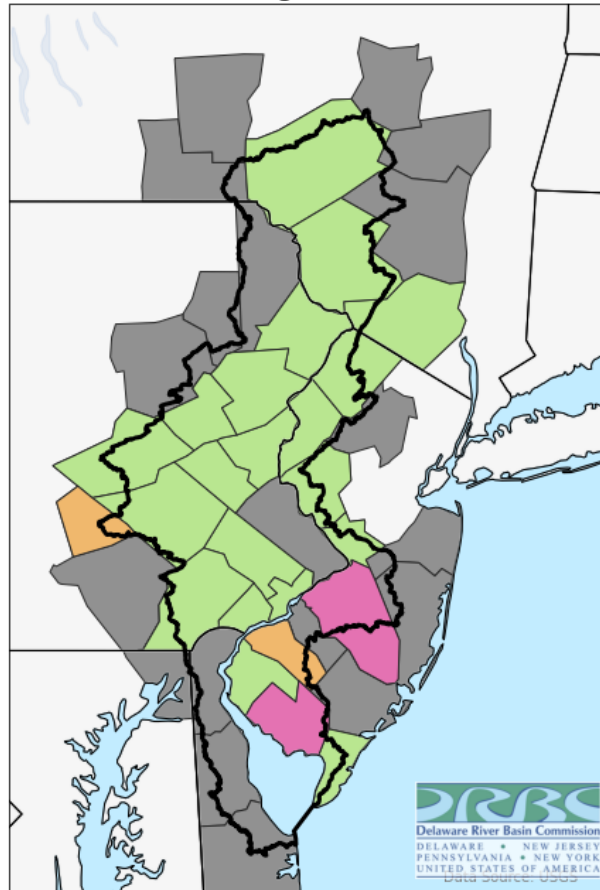
Groundwater Level Status

December 04, 2023

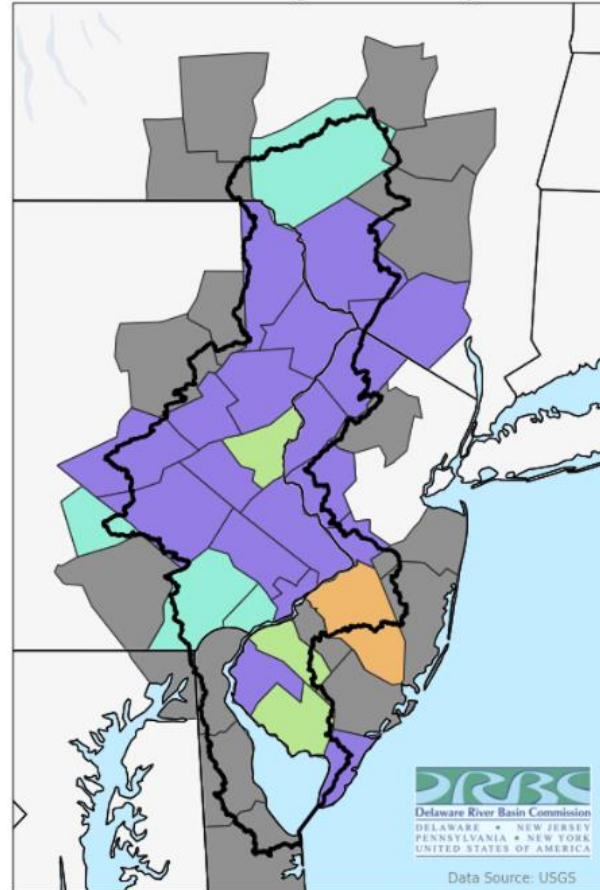
February 01, 2024

March 01, 2024

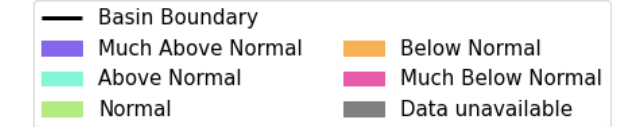
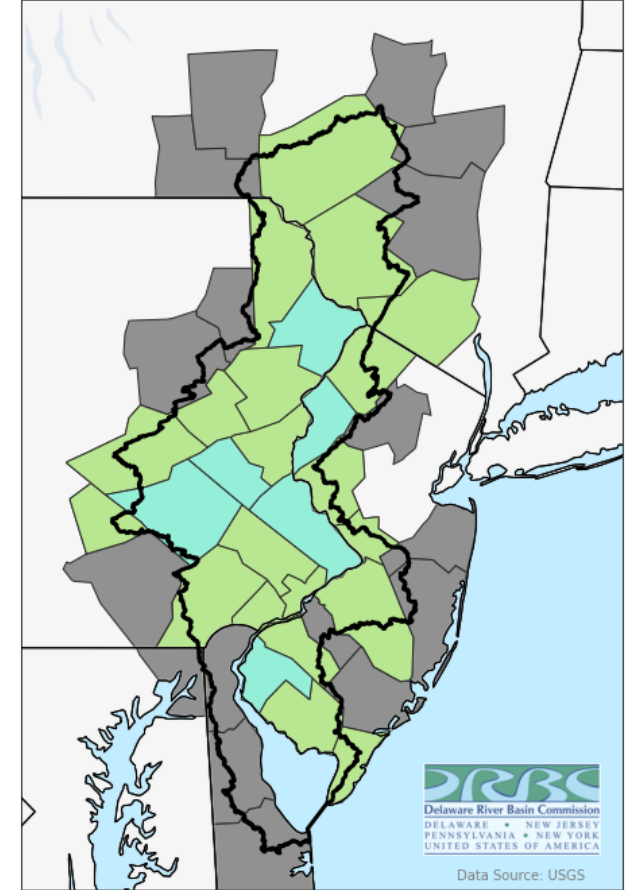
Groundwater Ranking on December 04, 2023



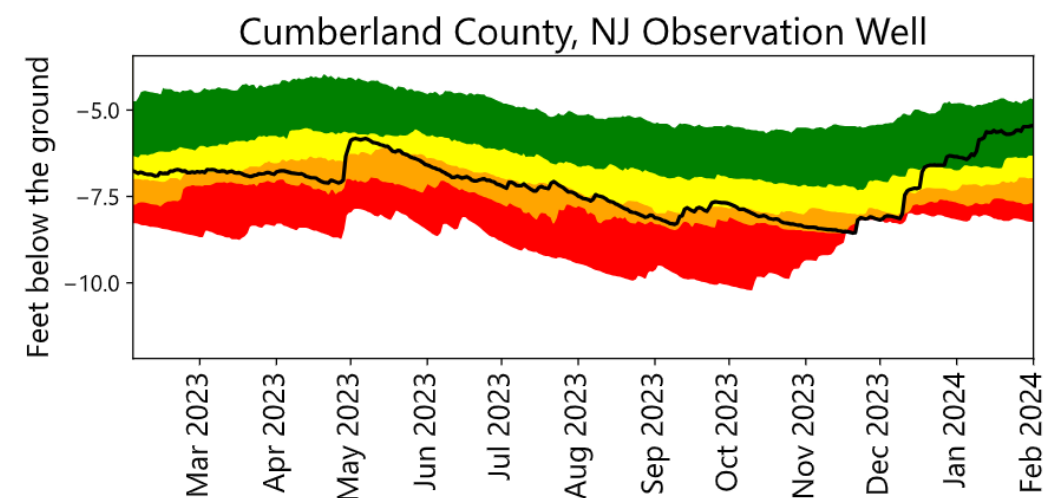
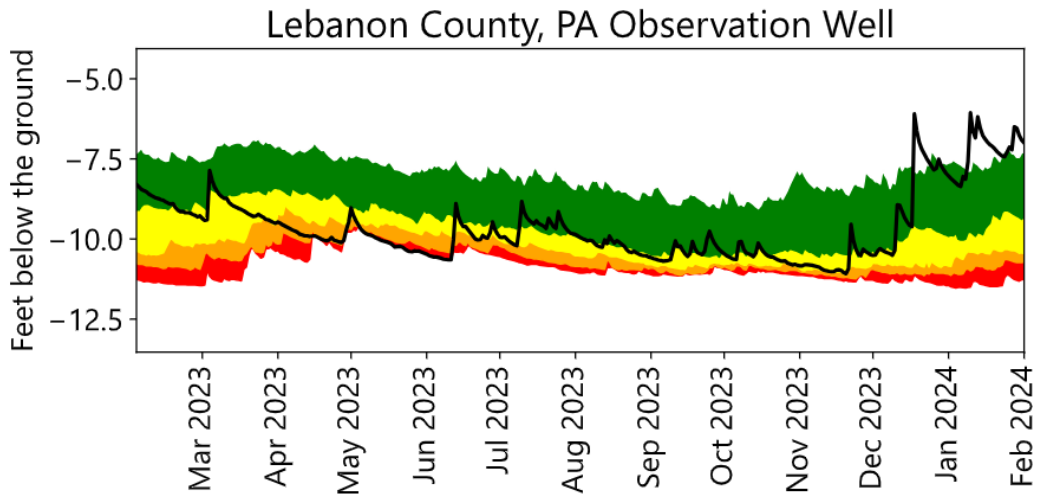
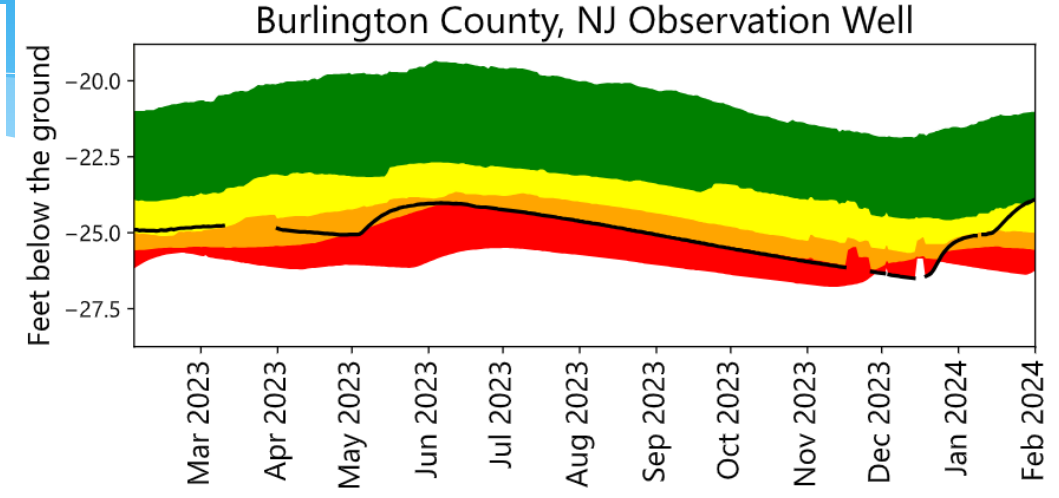
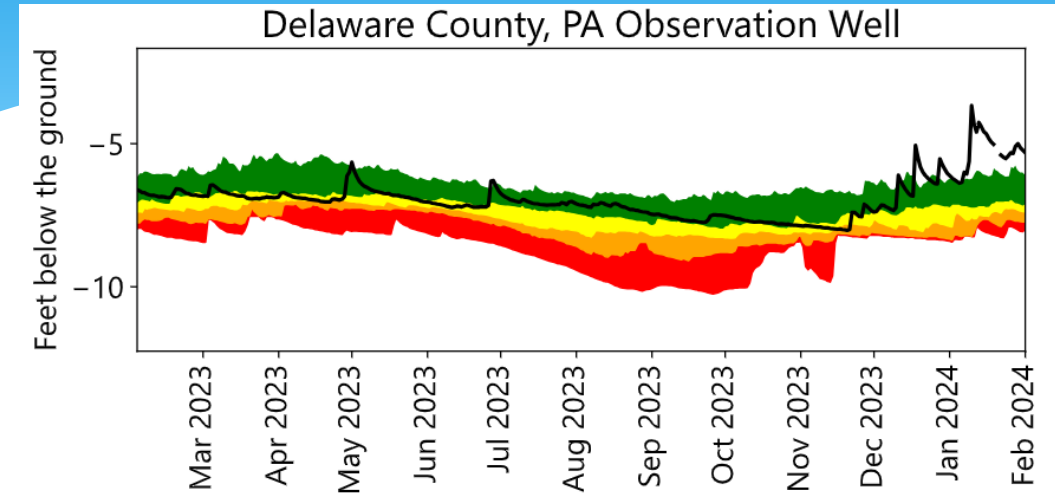
Groundwater Ranking on February 01, 2024



Groundwater Ranking on March 01, 2024

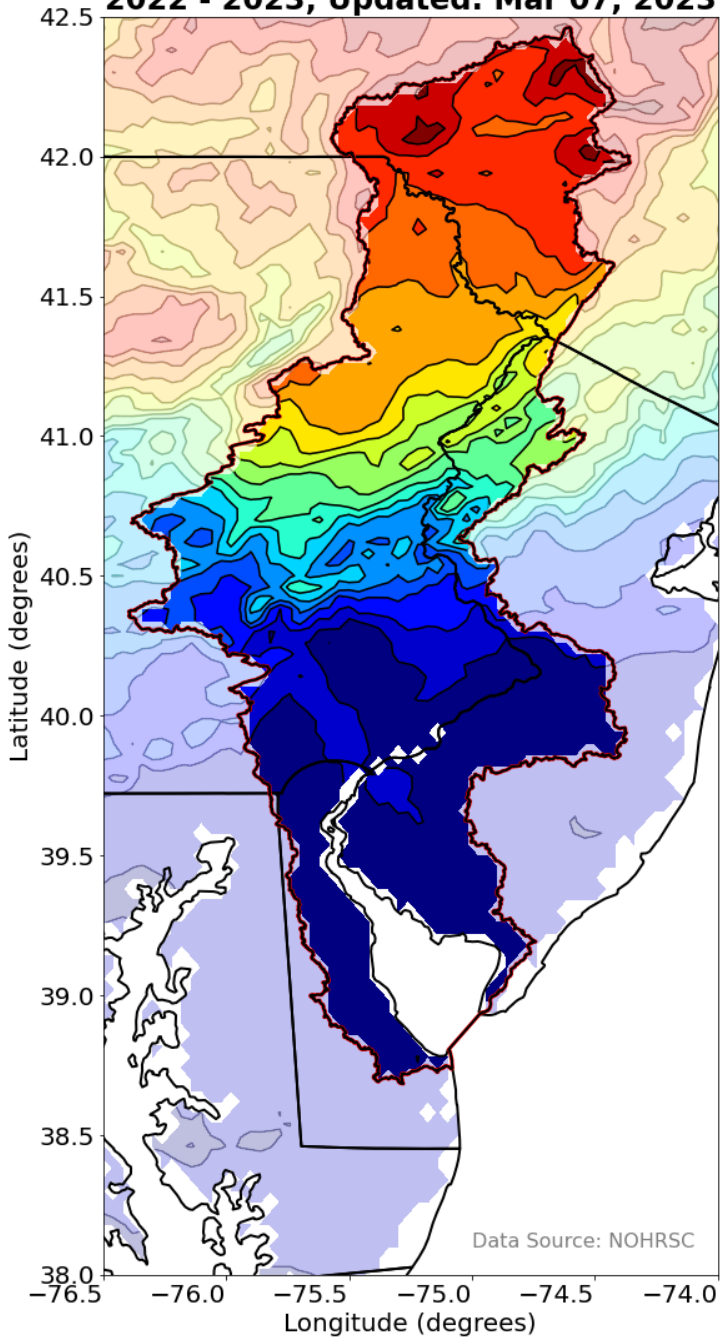


Groundwater Levels (on 2/29/2024)

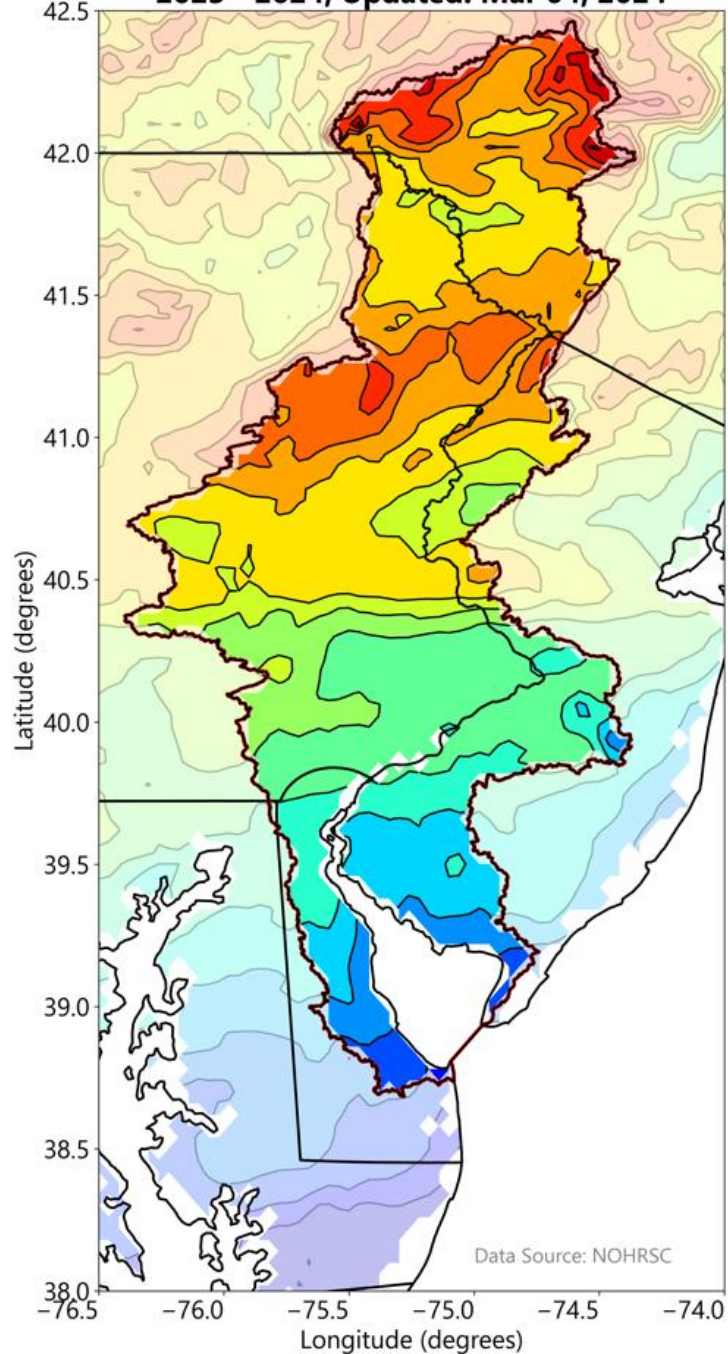


- Observed
- Drought Emergency
- Drought Warning
- Drought Watch
- Normal Conditions

**Seasonal Snowfall in the DRB
2022 - 2023, Updated: Mar 07, 2023**



**Seasonal Snowfall in the DRB
2023 - 2024, Updated: Mar 04, 2024**



Seasonal Snowfall

**2022-2023
vs.
2023-2024**

Season: October 1
Through March 31

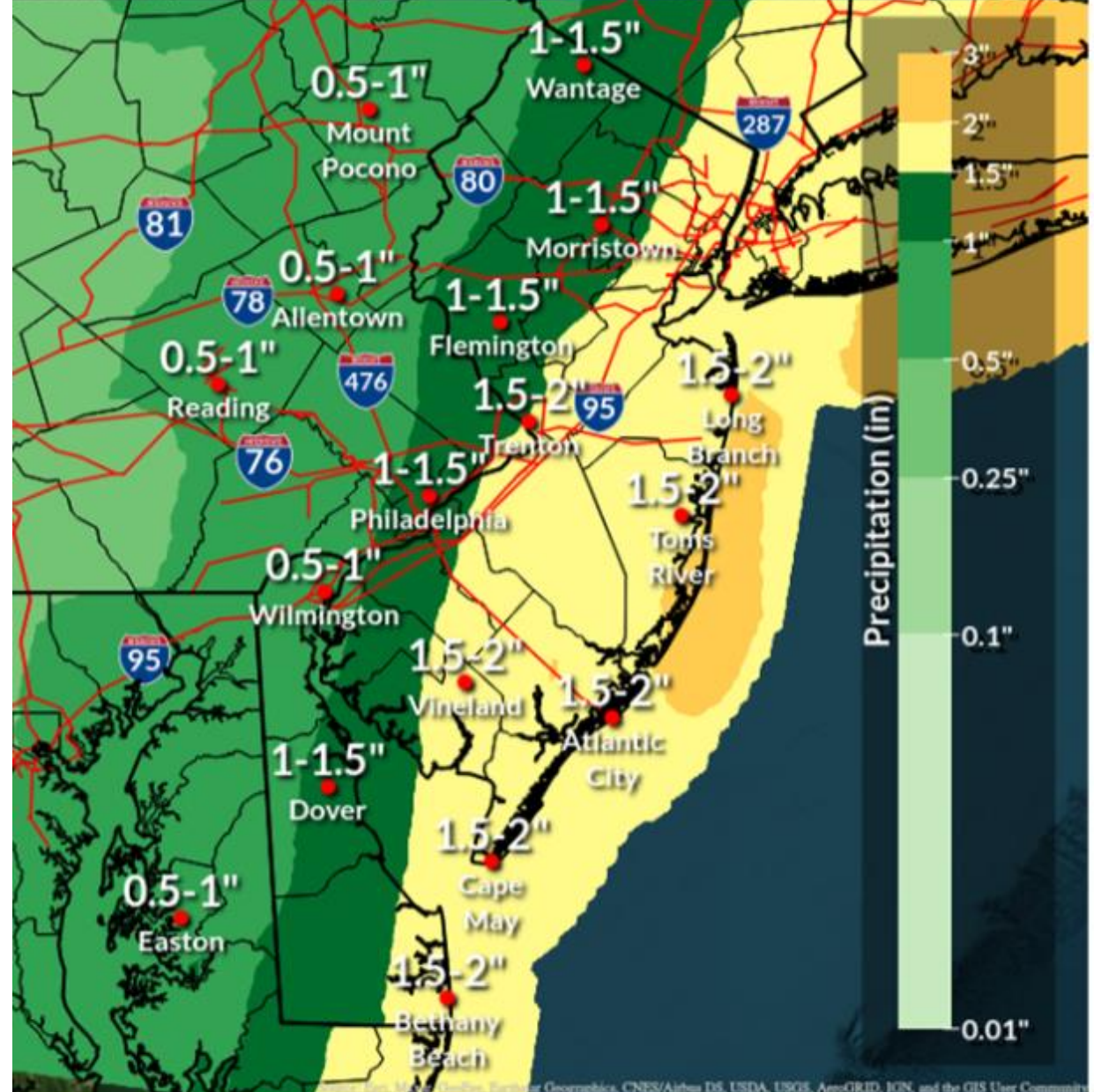
Data source: NOAA

Forecasted Rainfall

Weather Forecast Office
Mount Holly



Wednesday - Thursday Night
Issued Mar 05, 2024 3:12 PM EST

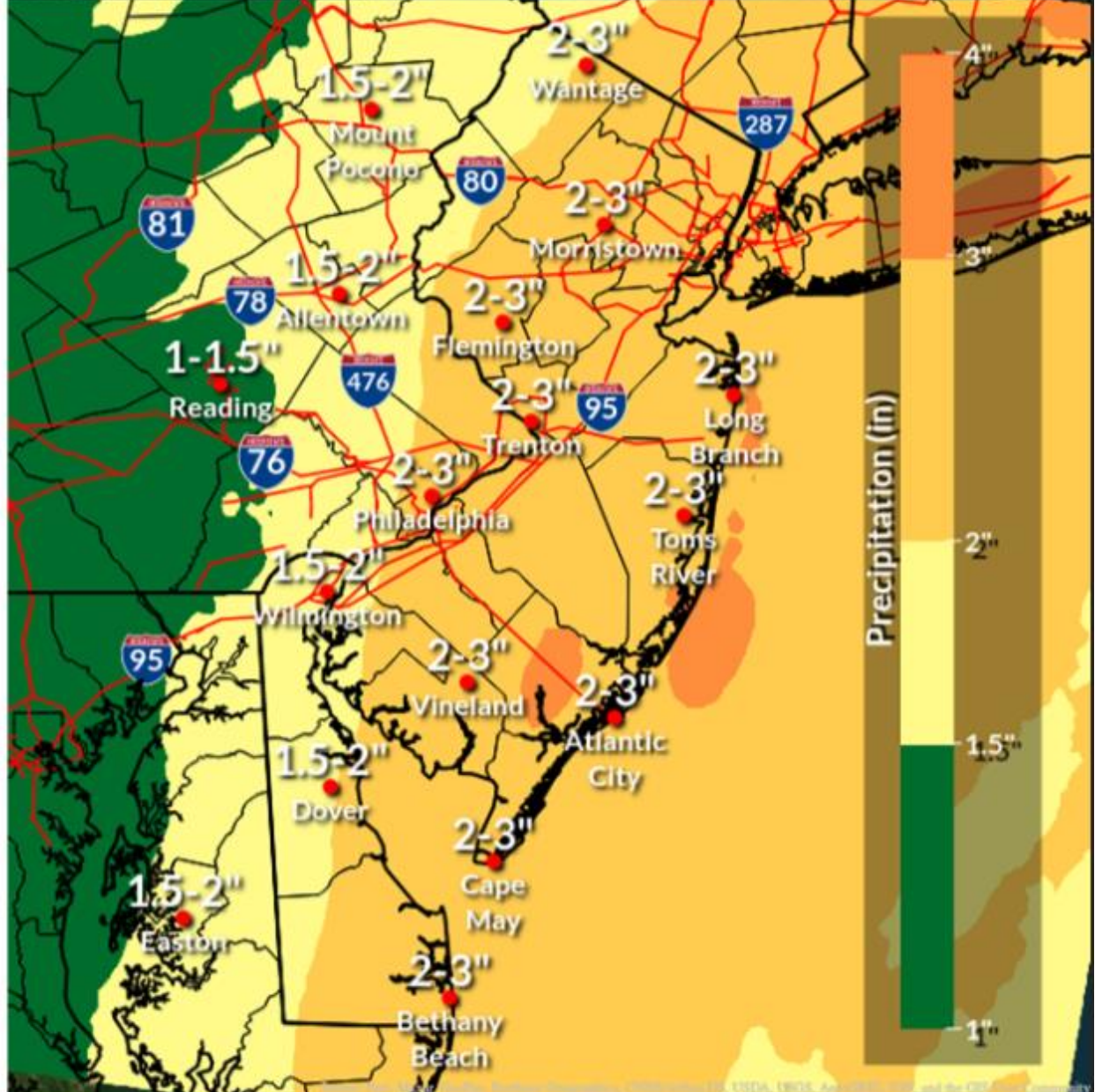


Total Forecasted Rainfall

Weather Forecast Office
Mount Holly



Wednesday - Sunday Night
Issued Mar 05, 2024 3:11 PM EST





Looking Ahead: Next Week March 11-17 (Mon-Sun)

March 4, 2024
11:00 AM

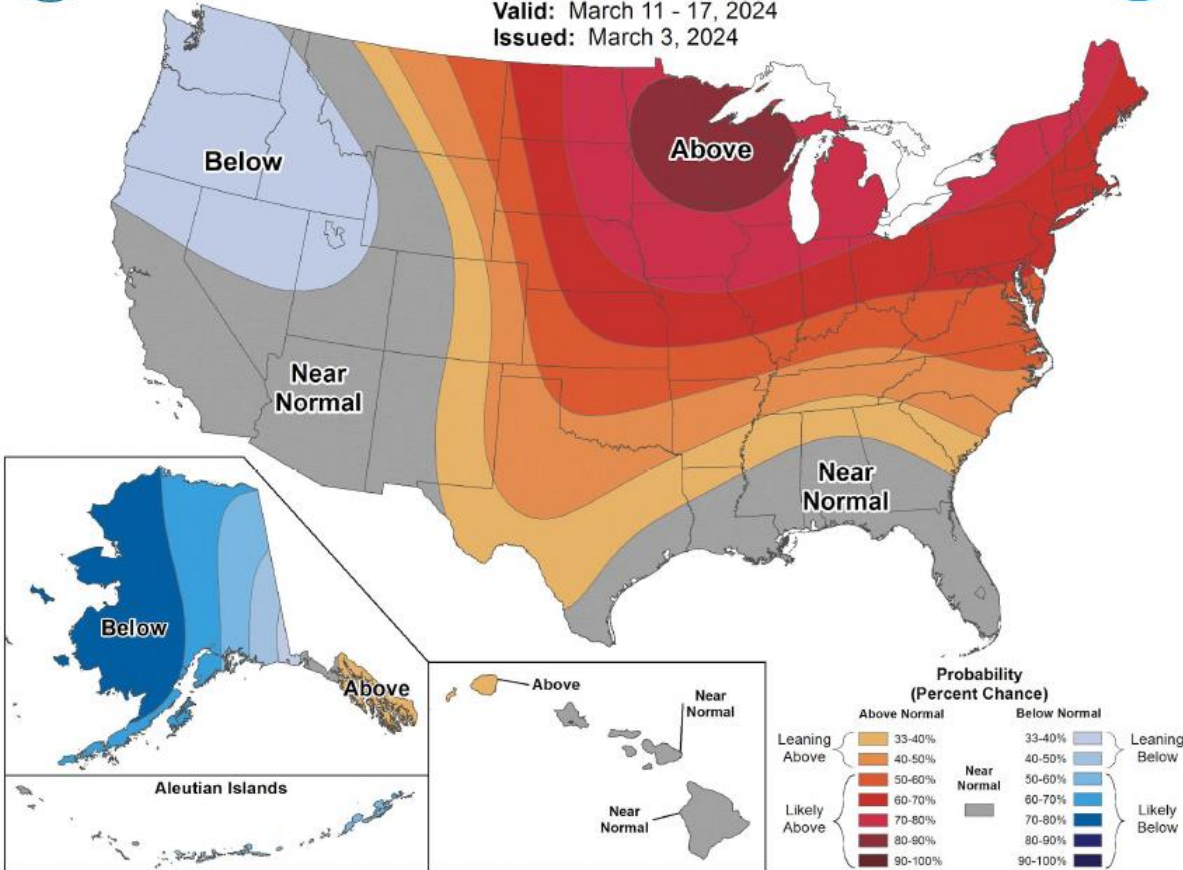
60-80% Probability of Above Normal Temperatures; Precipitation Signal Is Unclear



8-14 Day Temperature Outlook



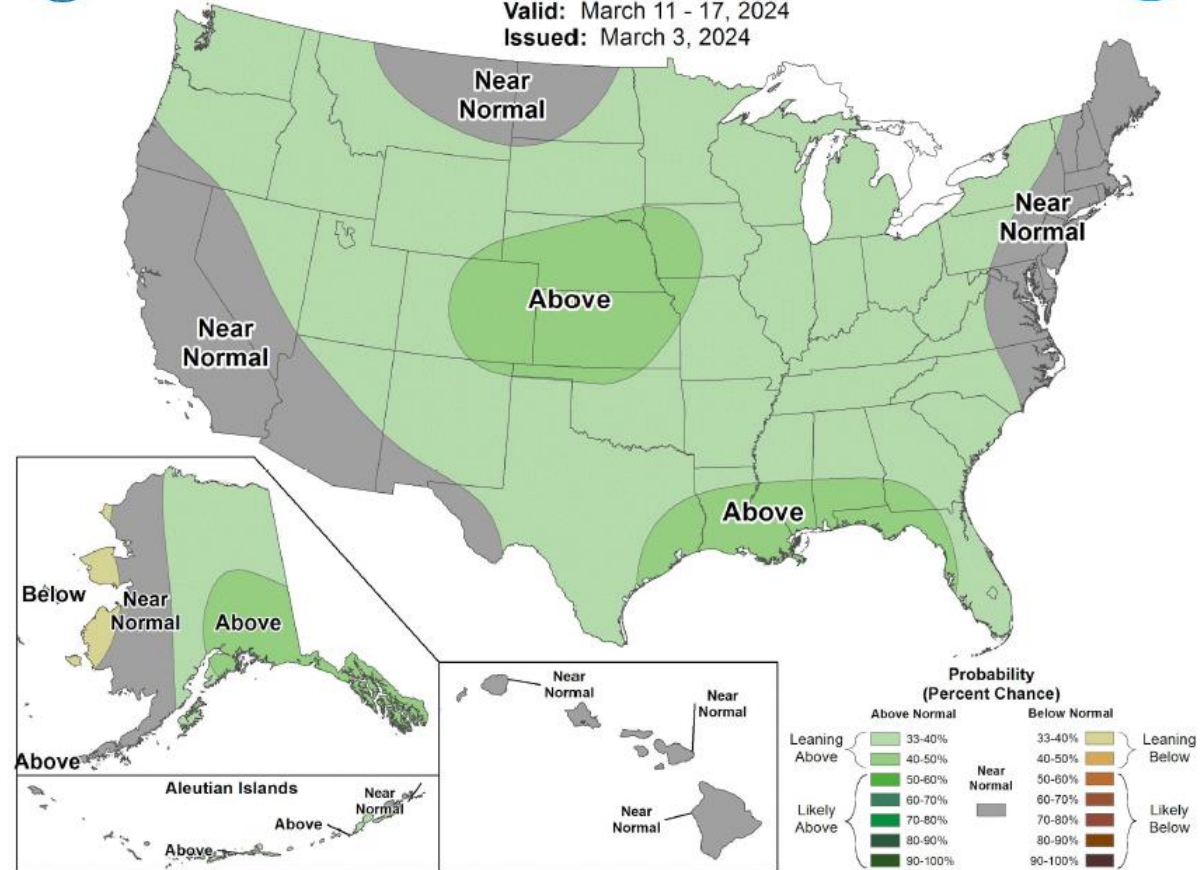
Valid: March 11 - 17, 2024
Issued: March 3, 2024



8-14 Day Precipitation Outlook



Valid: March 11 - 17, 2024
Issued: March 3, 2024



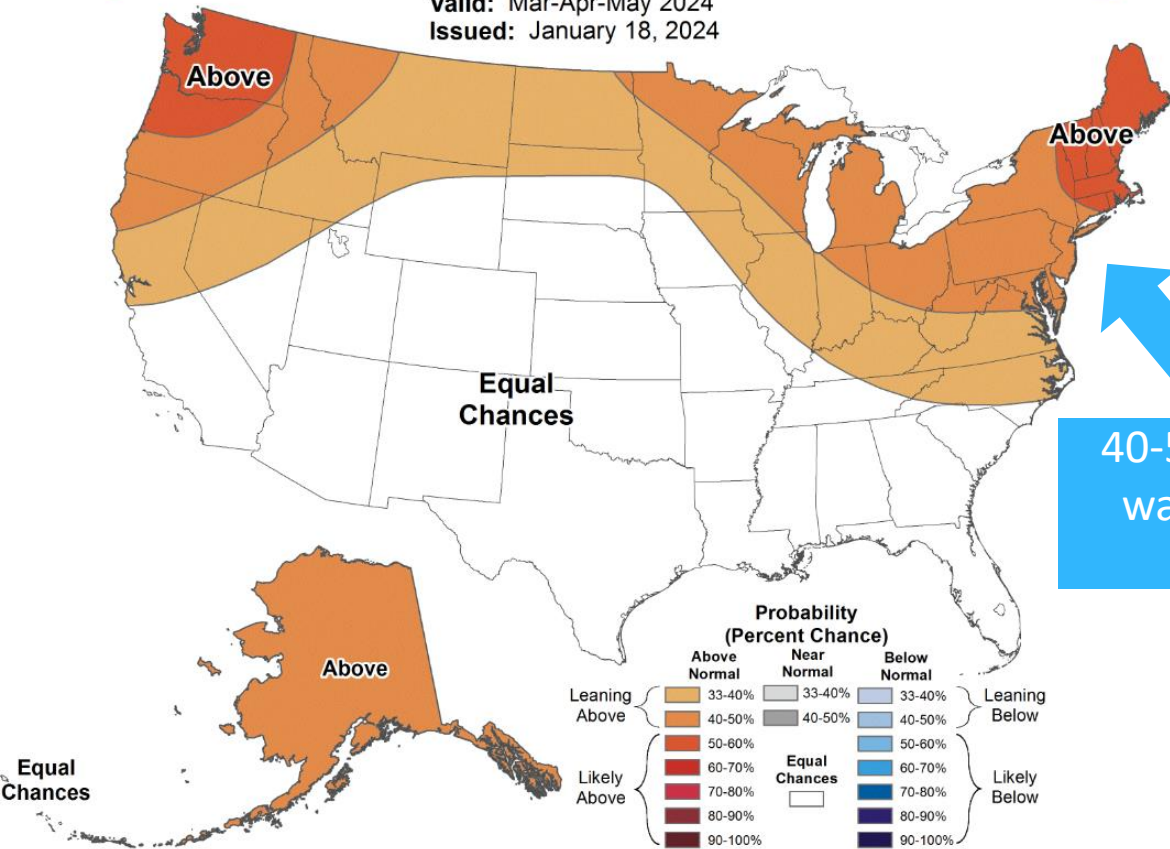
NOAA Seasonal Outlook



Seasonal Temperature Outlook



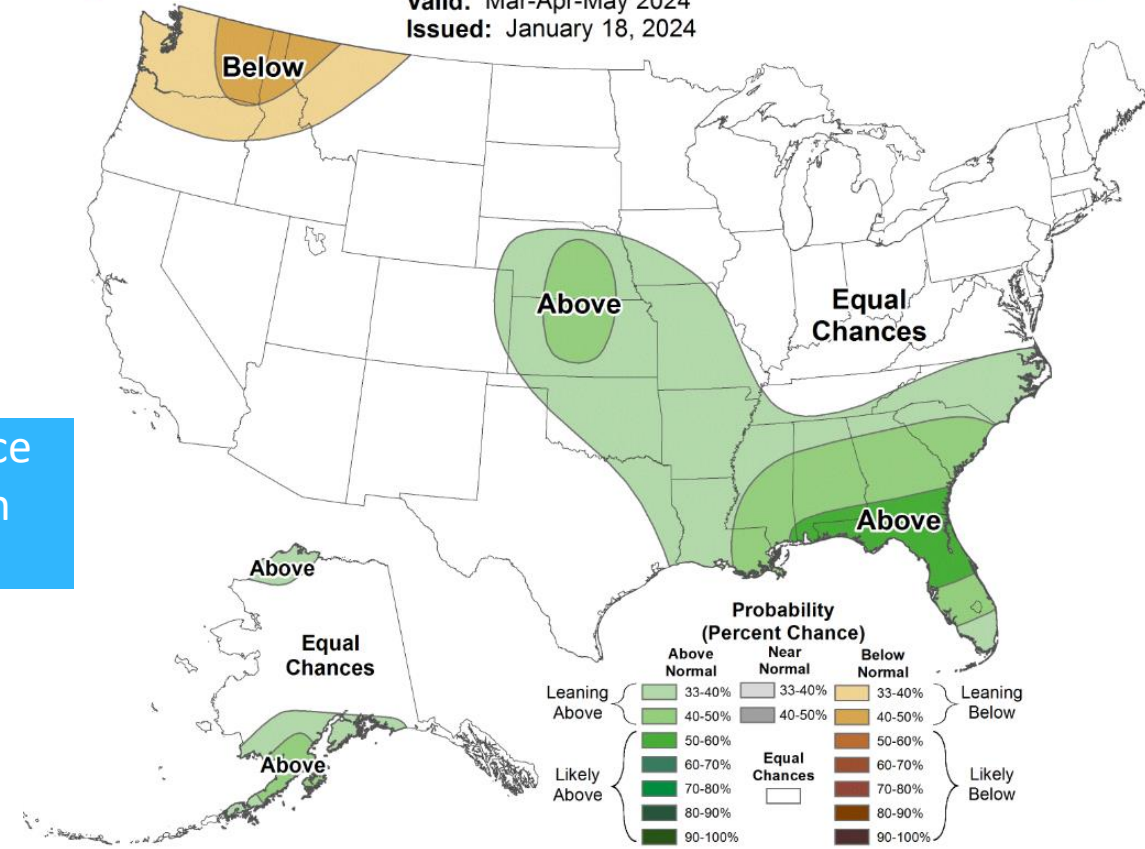
Valid: Mar-Apr-May 2024
Issued: January 18, 2024



Seasonal Precipitation Outlook



Valid: Mar-Apr-May 2024
Issued: January 18, 2024



Probabilities for March, April and May 2024

Thank You!