

## **January 2020**

### **Summary of Precipitation Departures and Other Hydrologic Indicators in the Delaware River Basin**

Below is a summary of precipitation departures and other hydrologic indicators for the Delaware River Basin (DRB).

January continued the decreasing precipitation trend from December, with most counties ending up below normal for the month. Of the 36 counties in the basin, only 2 reported above normal conditions for the January. These locations were in the southern part of the basin, in New Castle, DE and Lancaster, PA. These two counties were only 13 percent and 9 percent above normal respectively. The basin only received one large event on January 24<sup>th</sup> -25<sup>th</sup>, which saved most locations from being the driest January on record.

With the last three month period including the below normal November of 2019, the past 90 day days are also below normal for most of the counties. about 2/3 counties are reporting below normal conditions, with only 11 reporting above normal departures for the period Nov 2019 – Jan 2020. The top surplus is again in New Castle County, DE at only 13% above normal. The trend is similar for the 180 day period Jul 2019 – Jan 2020. Only 3 counties are reporting above normal precipitation, and all are located in the upper basin. The top surplus is in Chenango County, NY which is only 3.3 inches above normal for the period.

Thanks to melting snowpack in the upper basin, the reservoirs have been supplied with a consistent inflow. This has helped to keep the combined storage in the reservoirs between 85 percent and 90 percent full over the entire month. Most groundwater and surface water conditions are reporting Normal levels. Lehigh county is reporting above normal groundwater conditions, and Chester creek is also reporting above average flow over the last 28 days.

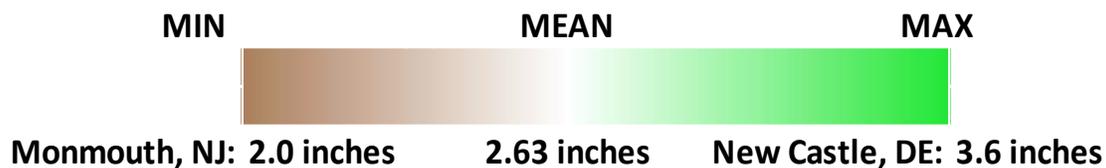
The Climate Prediction Center only has one spot of abnormally dry conditions in the basin, according to the drought monitor released on Thursday, Feb 4<sup>th</sup>, 2020. This is located in the lower basin, which has been persistent through the entire year.

The salt front was quite variable over the month. The beginning of the year started out around river mile 68, 1 mile below average for January's average river mile of 69. There were two large swings throughout the month, with the salt front reaching up to river mile 70 late in the month, before being pushed back downstream with added freshwater into the system from rain. February's average location is near river mile 71.

## Precipitation

December 2019

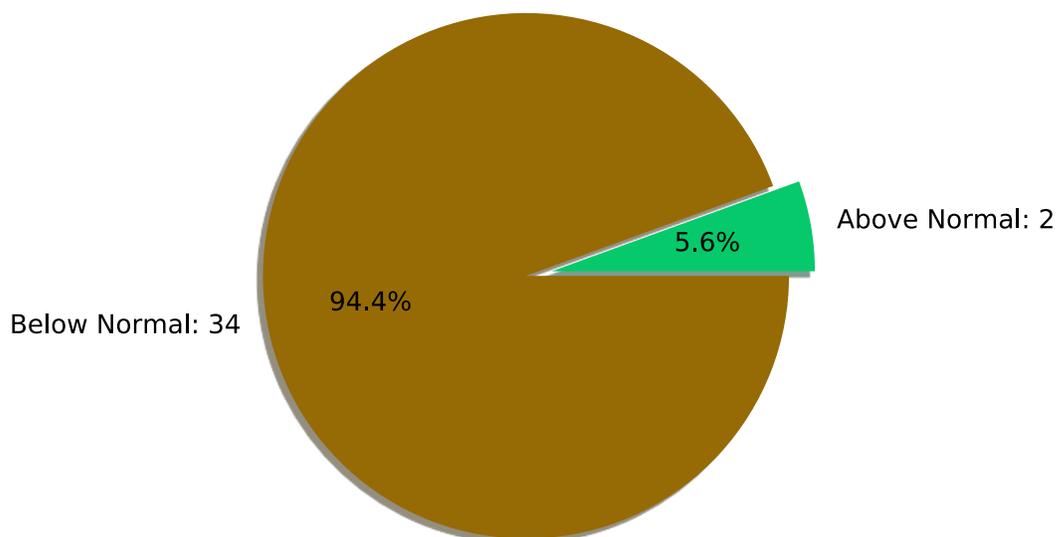
### Range of Monthly Precipitation Totals for Delaware River Basin Counties



### Top 5 Surpluses for Delaware River Basin Counties this month:

County, State	Inches From Normal	% From normal
New Castle, DE	0.4	13
Lancaster, PA	0.3	9
Lebanon, PA	0	1
Chenango, NY	0	2
Salem, NJ	-0.1	4

### Number of counties above and below normal



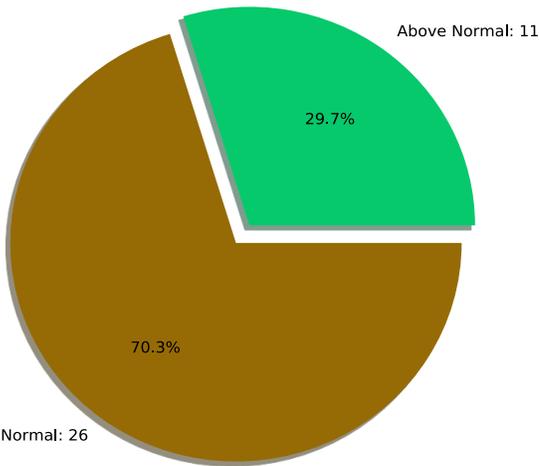
**90-Day Period Ending February 10, 2020**

**Range of 90-Day Precipitation Totals for Delaware River Basin Counties**



**Lackawanna, PA: 7.8 inches      9.68 inches      Monmouth, NJ: 11.4 inches**

Number of counties above and below normal



**Top 5 Surpluses in the past 90 days for DRB counties:**

County, State	Inches From Normal	% From normal
New Castle, DE	1.3	14
Chenango, NY	0.8	8
Monmouth, NJ	0.6	5
Broome, NY	0.5	6
Ocean, NJ	0.4	4

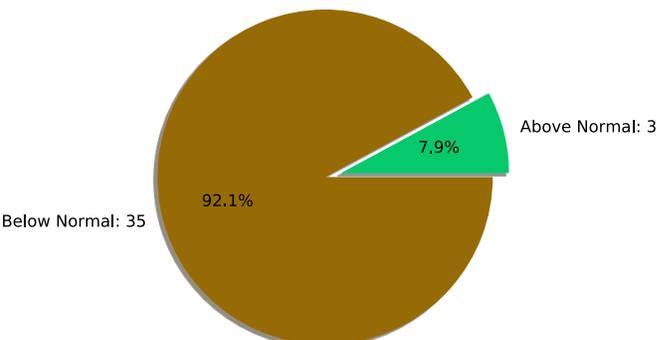
**180-Day Period Ending February 10, 2020**

**Range of 180-Day precipitation totals for DRB Counties**



**Kent, DE: 16.9 inches      20.08 inches      Chenango, NY: 23.9 inches**

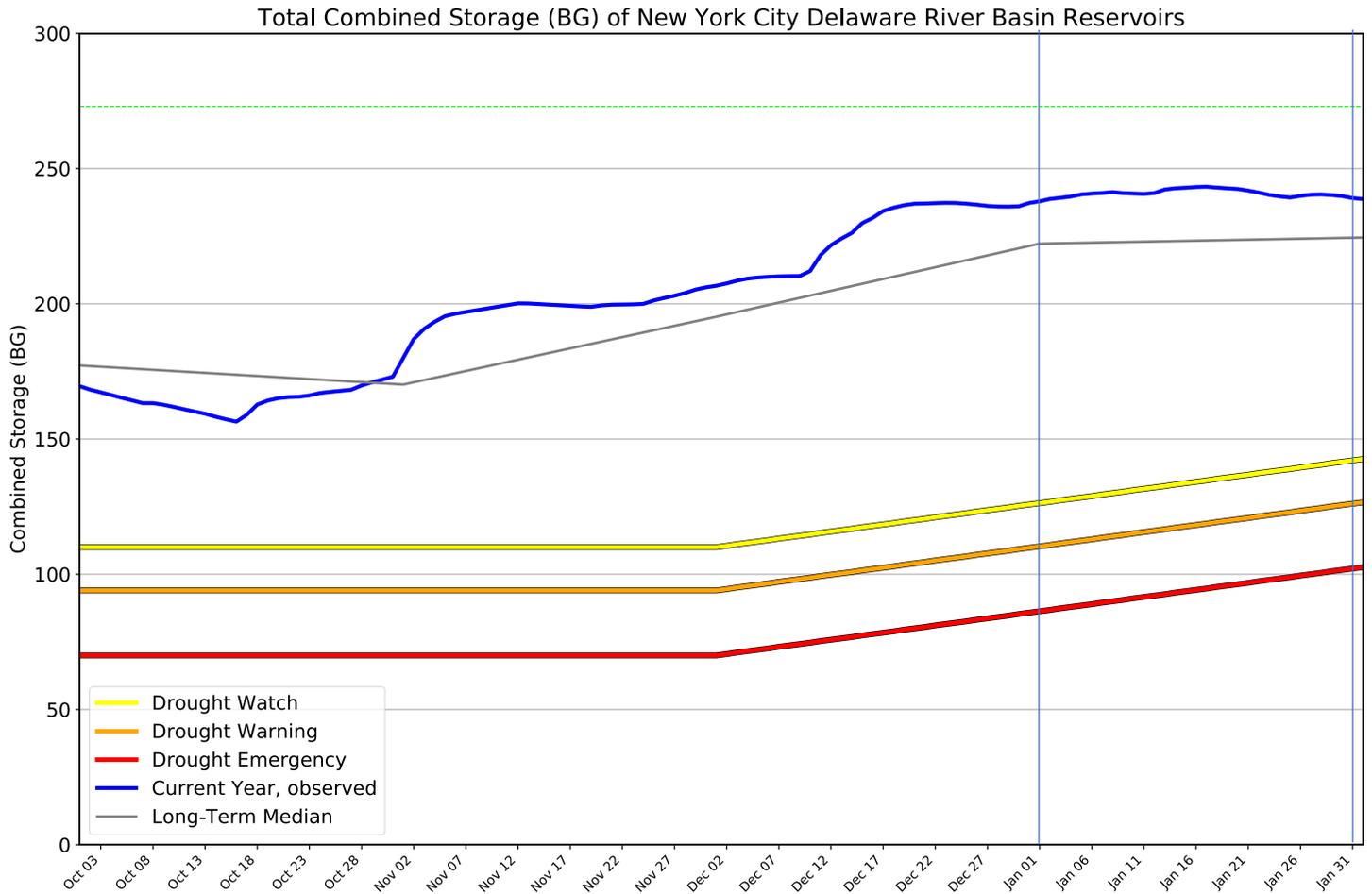
Number of counties above and below normal



**Top 5 Surpluses in the past 180 days for DRB counties:**

County, State	Inches From Normal	% From normal
Chenango, NY	3.3	16
Broome, NY	1.9	10
Lebanon, PA	0.2	1
Delaware, NY	-0.2	1
Warren, NJ	-0.6	2

## Storage (NYC and Lower Basin)



<b>NEW YORK CITY</b>		
	Usable Storage	
	(BG)	(%)
Neversink	31.5	90.7
Pepacton	128.4	92.2
Cannonsville	80.8	86.5
<b>NYC Total</b>	<b>240.7</b>	<b>90.1</b>

<b>LOWER BASIN</b>		
	Usable Storage	
	(BG)	(%)
FE Walter	0.5	7.5
Beltzville	13.6	100.8
Blue Marsh	4.6	79.0

## Surface Water and Groundwater Conditions

### Surface Water

The table below displays the status (February 10, 2020) of 28-day running average streamflow for the index stations. Water levels within the 25% to 75% range are defined as “normal.”

<b>PA COUNTY INDEX STATION</b>	<b>CURRENT STATUS</b>
Dyberry Creek Nr Honesdale	Normal
Bush Kill at Shoemakers	Normal
Brodhead Creek Nr Analomink	Normal
Lehigh River at Stoddardsville	Normal
Pohopoco Creek at Kresgeville	Normal
Little Lehigh Creek Nr Allentown	Normal
Monocacy Creek at Bethlehem	Normal
Lehigh River at Bethlehem	Normal
Neshaminy Creek Nr Langhorne	Not Valid
Pennypack Creek at Lower Rhawn St, Phila.	Normal
Schuylkill River at Landingville	Normal
Schuylkill River at Berne	Normal
Tulpehocken Creek Nr Bernville	Normal
Schuylkill River at Pottstown	Normal
Perkiomen Creek at Graterford	Normal
Schuylkill River at Philadelphia	Normal
Chester Creek Nr Chester	Above Average
Brandywine Creek at Chadds Ford	Normal

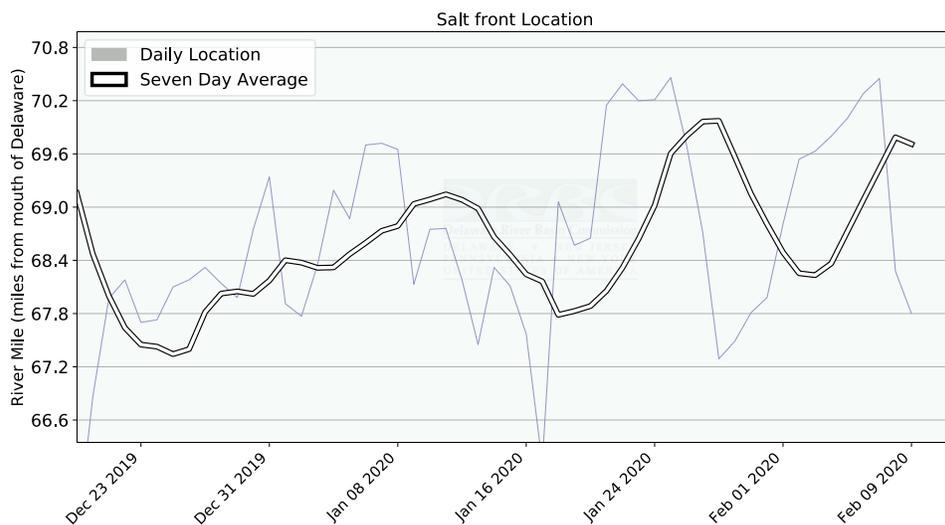
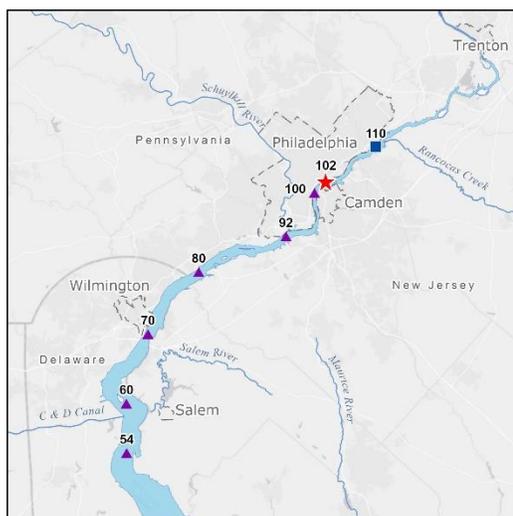
## Groundwater

The table below displays the status (February 10, 2020) of groundwater levels for 12 wells in the Delaware River Basin. Water levels within the 25% to 75% range are defined as “normal.”

COUNTY	STATE	DATA SOURCE	WELL ID	INDICATOR AS OF 2020-02-02
Wayne	PA	USGS	WN 64	Normal
Monroe	PA	USGS	MO 190	Normal
Carbon	PA	USGS	CB 104	Normal
Schuylkill	PA	USGS	SC 296	Normal
Lehigh	PA	USGS	LE 372	Above Normal
Bucks	PA	USGS	BK 1020	Normal
Chester	PA	USGS	CH 10	Normal
Delaware	PA	USGS	DE 723	Normal
Lebanon	PA	USGS	LB 372	Normal
Burlington	NJ	USGS	050689	Normal
Cumberland	NJ	USGS	110042	Normal

## Delaware River Salt Front Location

The salt front is defined as the 250 parts-per-million isochlor. The seven-day average location of the salt front is used by DRBC as an indicator of salinity intrusion in the Delaware Estuary. The salt front’s location fluctuates along the main stem Delaware River as streamflow increases or decreases in response to changing inflows, diluting or concentrating chlorides in the river.



Note: DRBC does not calculate the location of the saltfront below river mile 54.

Report prepared by DRBC Staff. Acknowledgments: NWS-MARFC; USGS; Delaware Geological Survey (DGS).