

## **Delaware River Flow and Storage Data -September 2018**

|  | Delaware at Montague<br>Flow (cfs) |               | Lehigh River |                                  | Delaware at Trenton |         | Schuylkill River |              | Salt                            | Front                          | New York City  |                  |       |  |
|--|------------------------------------|---------------|--------------|----------------------------------|---------------------|---------|------------------|--------------|---------------------------------|--------------------------------|----------------|------------------|-------|--|
|  |                                    |               | Flow (cfs)   |                                  | Flow (cfs)          |         | Flow (cfs)       |              |                                 |                                | Delaware Rive  | er Basin Storage | •     |  |
| DAY  | 8:00 AM                            | Mean          | Lehighton    | Bethlehem                        | 8:00 AM             | Mean    | Pottstown        | Philadelphia | River                           | Mile                           | (BG)*          | Сара             | city  |  |
| 9/1/2018                                       | 5,270                              | 5,020         | 1,890        | 3,210                            | 10,800              | 10,800  | 8,320            | 7,800        |                                 | 66                             | 259.5          |                  | 97.0% |  |
| 9/2/2018                                       | 5,350                              | 5,440         | 1,710        | 3,370                            | 10,900              | 11,000  | 6,630            | 8,010        |                                 | 66                             | 258.1          |                  | 96.5% |  |
| 9/3/2018                                       | 5,030                              | 5,010         | 1,230        | 2,750                            | 10,700              | 10,600  | 4,140            | 6,050        |                                 | 66                             | 256.8          |                  | 96.0% |  |
| 9/4/2018                                       | 4,850                              | 4,850         | 1,160        | 2,510                            | 9,820               | 9,700   | 3,560            | 4,580        |                                 | 67                             | 255.2          |                  | 95.4% |  |
| 9/5/2018                                       | 4,510                              | 4,450         | 1,470        | 2,410                            | 9,440               | 9,180   | 3,230            | 3,930        |                                 | 67                             | 253.7          |                  | 94.85 |  |
| 9/6/2018                                       | 4,440                              | 4,460         | 2,570        | 3,650                            | 9,010               | 8,930   | 3,730            | 4,080        |                                 | 67                             | 252.1          |                  | 94.35 |  |
| 9/7/2018                                       | 4,360                              | 4,270         | 2,660        | 3,960                            | 9,710               | 9,830   | 4,380            | 4,840        |                                 | 67                             | 250.9          |                  | 93.89 |  |
| 9/8/2018                                       | 4,560                              | 4,480         | 2,470        | 3,850                            | 10,700              | 10,300  | 5,720            | 10,700       |                                 | 67                             | 249.5          |                  | 93.39 |  |
| 9/9/2018                                       | 4,240                              | 4,170         | 2,550        | 3,860                            | 10,200              | 10,100  | 4,640            | 7,370        |                                 | 67                             | 248.1          |                  | 92.85 |  |
| 9/10/2018                                      | 4,170                              | 4,870         | 4,300        | 6,910                            | 11,200              | 11,800  | 8,080            | 13,500       |                                 | 68                             | 246.8          |                  | 92.39 |  |
| 9/11/2018                                      | 17,400                             | 16,900        | 4,670        | 8,060                            | 20,700              | 20,000  | 10,100           | 12,300       |                                 | 68                             |                |                  | 92.4  |  |
| 9/12/2018                                      | 14,700                             | 13,700        | 6,170        | 8,530                            | 30,800              | 30,600  | 9,100            | 11,300       |                                 | 68                             | 246.7          |                  | 92.25 |  |
| 9/13/2018                                      | 10,600                             | 10,800        | 5,000        | 7,650                            | 29,800              | 28,100  | 7,040            | 11,200       |                                 | 67                             | 246.0          |                  | 92.05 |  |
| 9/14/2018                                      | 10,100                             | 10,500        | 3,160        | 5,670                            | 23,300              | 22,100  | 5,350            | 7,610        |                                 | 67                             | 245.6          |                  | 91.8% |  |
| 9/15/2018                                      | 10,100                             | 9,990         | 2,320        | 4,520                            | 19,600              | 19,300  | 4,260            | 6,050        |                                 | 66                             | 244.7          |                  | 91.5% |  |
| 9/16/2018                                      | 9,110                              | 8,900         | 2,120        | 4,070                            | 17,800              | 17,500  | 3,740            | 5,180        |                                 | 66                             | 243.6          |                  | 91.19 |  |
| 9/17/2018                                      | 8,170                              | 8,490         | 2,090        | 3,960                            | 16,100              | 15,900  | 3,430            | 4,720        |                                 | 64                             | 242.3          |                  | 90.6% |  |
| 9/18/2018                                      | 8,230                              | 10,400        | 6,150        | 7,720                            | 16,300              | 18,900  | 4,040            | 9,320        |                                 | 63                             | 241.9          |                  | 90.5% |  |
| 9/19/2018                                      | 15,300                             | 14,900        | 4,110        | 7,830                            | 30,700              | 29,700  | 4,850            | 7,190        |                                 | 62                             | 243.6          |                  | 91.19 |  |
| 9/20/2018                                      | 12,600                             | 11,900        | 3,840        | 6,720                            | 28,800              | 28,100  | 3,930            | 5,850        |                                 | 63                             | 243.4          |                  | 91.0% |  |
| 9/21/2018                                      | 10,000                             | 9,840         | 3,380        | 5,820                            | 24,200              | 23,200  | 3,500            | 5,020        |                                 | 63                             | 242.8          |                  | 90.8% |  |
| 9/22/2018                                      | 8,230                              | 8,140         | 2,650        | 4,930                            | 20,100              | 19,600  | 3,210            | 4,550        |                                 | 63                             | 243.0          |                  | 90.9% |  |
| 9/23/2018                                      | 10,300                             | 9,520         | 2,420        | 4,440                            | 17,200              | 16,700  | 2,970            | 4,290        |                                 | 63                             |                |                  | 91.0% |  |
| 9/24/2018                                      | 8,130                              | 7,900         | 2,250        | 4,120                            | 17,800              | 16,900  | 2,750            | 3,970        |                                 | 64                             |                |                  | 90.99 |  |
| 9/25/2018                                      | 8,270                              | 9,980         | 2,840        | 5,370                            | 15,400              | 17,800  | 4,010            | 6,890        |                                 | 65                             | 243.2          |                  | 90.99 |  |
| 9/26/2018                                      | 26,700                             | 25,800        | 3,260        | 6,730                            | 27,600              | 29,900  | 5,340            | 10,000       |                                 | 65                             | 246.5          |                  | 92.25 |  |
| 9/27/2018                                      | 22,600                             | 24,300        | 3,560        | 6,480                            | 44,100              | 41,900  | 4,780            | 7,180        |                                 | 64                             | 249.7          |                  | 93.49 |  |
| 9/28/2018                                      | 20,800                             | 23,900        | 4,760        | 9,840                            | 57,000              | 52,800  | 7,960            | 19,600       |                                 | 63                             |                |                  | 94.3  |  |
| 9/29/2018                                      | 26,900                             | 24,800        | 4,250        | 8,680                            | 47,800              | 48,700  | 6,660            | 10,700       |                                 | 62                             |                |                  | 95.55 |  |
| 9/30/2018                                      | 18,700                             | 18,100        | 3,890        | 7,230                            | 43,400              | 40,900  | 5,440            | 7,820        |                                 | 61                             | 257.0          |                  | 96.19 |  |
|  |                                    |               |              |                                  |                     |         |                  |              |                                 |                                |                |                  |       |  |
| Observed Av                                    | Observed Average 10,859            |               | 3,163        | 5,495                            |                     | 21,361  | 5,163            | 7,720        |                                 | 76                             |                |                  |       |  |
| Mean Monthly                                   |                                    | 2,016         | 477          | 1,099                            |                     | 4,439   | 781              | 1,102        |                                 |                                |                |                  |       |  |
| % of Norn                                      | nal                                | 538.8%        | 662.7%       | 500.0%                           |                     | 481.2%  | 661.1%           | 700.5%       |                                 |                                |                |                  |       |  |
| TODAY'S RESERVOIR OBS                          | ODAY'S RESERVOIR OBSERVATIONS: 9/3 |               |              | 0/2018                           |                     |         |                  |              |                                 |                                |                |                  |       |  |
| ower Delaware Basin**:                         |                                    |               |              | New York City 24-hr, as of 8 am: |                     |         |                  |              |                                 | NYC Daily Storage (BG)=        |                | 257.0            | 96.1% |  |
|  |                                    |               | Capacity     |                                  |                     |         |                  |              | Directed                        | NYC Daily Storage Median (BG)= |                | 178.0            | 66.69 |  |
| ilue Marsh                                     |                                    | 5.85          | 101.6%       |                                  | Usable              | Storage |                  |              | BG Above Daily Storage Median = |                                | 79.0           | 44.379           |       |  |
|  |                                    | 13.76         | 102.0%       |                                  | (BG)                | (%)     | (MG)             | (MG)         |                                 | Prought Watch =                | 146.1          |                  |       |  |
| Directed Releases from Basin Reservoirs (cfs): |                                    |               | Neversink    | (inches)<br>3.67                 | 34.9                | 100.7%  | 0                | 0            |                                 | Prought Warning =              | 166.1          |                  |       |  |
| • •  |                                    |               |              |                                  |                     |         | 0                | 0            |                                 |                                |                |                  |       |  |
| Blue Marsh                                     | e Walsh                            |               | 0            | Pepacton                         | 3.10                | 135.1   | 96.9%            | ÷            |                                 | BG Above Drought =             |                | 186.1            |       |  |
| Beltzville                                     | 0                                  | Wallenpaupack | 0            | Cannonsville                     | 3.08                | 87.0    | 93.1%            | 0            | 0                               | BG Above C                     | )ne Year Ago = | 51.2             |       |  |

\* As of June 1, 2018, the NYC Delaware reservoir statistics have been changed to reflect the 2016 USGS bathymetry tables.

\*\*Percent capacity in Blue Marsh Reservoir is based upon the normal SUMMER POOL storage of 5.76 BG. Percent capacity for Beltzville Reservoir is based upon the year-round, normal pool storage of 13.49 BG. Directed Release from NYC Reservoirs is the amount of water needed to meet the Montague Flow Objective.

## DATA SOURCES:

Storage data provided by New York City Department of Environmental Protection, Bureau of Water Supply. http://www.nyc.gov/html/dep/html/drinking\_water/maplevels\_wide.shtml

Flow data provided by U.S. Geological Survey http://waterdata.usgs.gov/nwis/rt

Chloride data for the salt front calcuation provided by U.S. Geological Survey and Kimberly Clark Corporation.

.ower Basin reservoir storage data provided by Philadelphia District Corps of Engineers. See basin summaries at http://www.nap-wc.usace.army.mil/nap/ ALL DATA ARE PROVISIONAL

## NOTES:

The Salt Front is the estimated location of the 7-day average chloride concentration of 250 milligrams/liter (mg/L).

Releases from F.E. Walter are requested from the U.S. Army Corps of Engineers and are made from the reservoir's temporary drought storage.

Directed releases from Lake Wallenpaupack are estimated values supplied by PPL.

Lower Basin reservoir percentages are a percent of allocated storage, not total storage. More than 19.3 billion gallons of flood control is available in Beltzville and Blue Marsh reservoirs.

cfs=Cubic Feet per Second; DO= Dissolved Oxygen; MG= Million Gallons; BG=Billion Gallons

1. During cold weather, ice effects on stage and discharge determinations at some stream-gaging stations are likely. Flow values reported on this report may be significantly higher or lower than actual streamflow. Revisions will be made as

needed when adjusted data becomes available.

2. The location of the salt front is estimated. The salt front river mile location will be updated as chloride data is received. DRBC does not track the salt front below river mile 54. The normal location of the salt front represents the median monthly calculated value based upon values from 1/1998 through 2/28/2013.

3. Normal flow values represent the median of monthly means for the period of record after construction completion of major reservoirs regulating their flow (NYC Reservoirs: Montague 1956-2011; FE Walter and Beltzville: Bethlehem and Trenton 1971-2011, Lehighton 1983-2011; Blue Marsh: Pottstown and Philadelphia 1980-2011). 4. Minimum dissolved oxygen for the Lehigh River at Glendon and the maximum temperature at the Schuylkill River at Vincent Dam will be reported for the period June through September.

5. NYC Storage Median based on beginning of month values reported to the Delaware River Master from June 1967 - May 2013.

. Drought Watch, Warning and Drought are defined by Figure 1 of Article 2 in the Delaware River Basin Water Code 18 CFR Part 410