

## Hydrologic Conditions – March 2017

The Hydrologic Conditions Mapper for New York State has been updated for the month of March 2017 and can be accessed at:

<http://ny.water.usgs.gov/projects/eom/>

As issued by NYS Department of Environmental Conservation (DEC), a Drought Watch has continued in effect for New York through the month of March.

A mix of rain and snow throughout the month produced monthly precipitation quantities that were generally greater than those recorded during recent past months. Fifty percent of the counties in New York reported precipitation totals between 3.4 and 4.5 inches during the month; however, precipitation totals ranged from 2.4 inches in Jefferson County to 5.3 inches in Otsego County. Most counties reported above-normal precipitation quantities for the month; the interquartile range for departures from normal precipitation quantities was 0.28 to 1.35 inches. The largest surplus, 1.97 inches above normal monthly precipitation totals, was reported for Otsego County. The largest deficit, -0.87 inches, was reported for Warren County.

Monthly streamflows at most of the index stations were generally at normal levels across the State. Flows were sustained to varying degrees by snowmelt and rainfall, and, as is typical for this time of year, flows on many streams were periodically affected by ice cover. Despite what might be described as a “wet” month, flows at several index stations in western New York were approaching or, in two cases, exceeded the 75<sup>th</sup>-percentile of flow. Flows in the Allegheny and Chemung Rivers were below normal levels and those in Cattaraugus Creek, Tonawanda Creek, and the upper Genesee River were within 1 to 3 percentage points of being in the same flow condition. Below-normal flows still persist on Long Island where, except for January 2016, monthly streamflows have been below-normal levels since June 2015. Long Island has been severely impacted by the recent drought and monthly precipitation quantities consistently fall short of normal quantities for this time of year. Surface-water hydrology on Long Island is strongly tied to groundwater discharge rates, and if groundwater levels are low, which is and has been the case, then surface flows will remain low. At the other end of the hydrologic spectrum, the upper Hudson River flows were above normal levels, likely fed by the melting of over two feet of snow that fell on March 15.

Rainfall and snowmelt in the Catskill Mountains region continued to replenish the reservoirs in the New York City water-supply system. Reservoirs were collectively at about 96 percent of capacity at the end of the month; slightly more than normal storage (95 percent).

The most significant difference in the hydrologic picture this month compared to February is the dramatic increase in groundwater levels across the State. Fifty-eight percent (up from 36 percent) of all index wells reported water levels in their respective normal ranges. In addition, 14 percent of the wells reported above-normal water levels. Only 28 percent (down from 49 percent during February) of the wells continued to report low-to-very-low water levels. These percentages held true for both water-table and bedrock wells—about 72 percent of each category of wells had water levels at or above normal levels and 28 percent had water levels that were below normal levels. Of the 90 reporting wells, only 6 reported new record low monthly median values for March and 2 reported new record high monthly median levels. Of these 8 wells, which recorded either monthly low or high record levels, four had periods of record that exceeded 15 years. Wells with below-normal water levels appeared to be clustered around the southern Capital District, the northwestern corner of the State, and on Long Island. Otherwise, wells with normal, above-, and below-normal water levels could be found scattered across the State.

Exceedance percentages shown on the Hydrologic Conditions Mapper are calculated for individual USGS sites. This information along with additional information from other Federal, State, and local agencies assist the NYSDEC and the State Drought Management Task Force to evaluate regional conditions for determination of drought classifications.

Let me know if you have any questions.

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