

Hydrologic Conditions – February 2017

The Hydrologic Conditions Mapper for New York State has been updated for the month of February 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 February.

February saw several days of measureable snowfall and 3 to 4 days of rain across most of the State. Fifty percent of the counties in New York reported precipitation totals between 2.3 and 3.0 inches during the month; however, precipitation totals ranged from 1.42 inches in Suffolk County to 4.41 inches in Fulton County. Most counties reported above-normal precipitation quantities for the month; the interquartile range for departures from normal precipitation quantities was 0.0 to 0.54 inches. The largest surplus, 1.49 inches above normal monthly precipitation totals, was reported for Fulton County. The largest deficit, -1.83 inches, was reported for Suffolk County.

Except for a site on Long Island, monthly streamflows at the index stations were generally above-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, especially those in the Adirondack Region, were periodically affected by ice cover. One to 1.5 inches of rain and several inches of snowmelt on February 25 produced near-flood-stage flows and, in some cases, minor flooding on many streams in the Adirondack Mountains region and the eastern half of the State on February 25-27. Monthly flows at a few sites north of the western Finger Lakes and in the southeastern corner of the State were at normal flow levels. These latter two areas of the State suffered more severe drought conditions than most other areas of the State during the late summer and early fall of 2016. The “normal”—rather than above-normal—flow levels likely reflect the lag in groundwater recovery that is ongoing in these areas. With regards to the Long Island site, 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.

Rainfall and subsequent runoff in the Catskill Mountains region on February 25 recharged many of the reservoirs in the New York City water-supply system. Reservoirs were collectively at about 89 percent of capacity at the end of the month; slightly more than normal storage (87 percent).

Thirty-six percent of groundwater levels at index sites across the State were at or near normal levels. Fourteen wells (15 percent) reported above-normal water levels and 49 percent (down from 57 percent during January) continued to report low-to-very-low water levels. Fifty-four percent of the reporting water-table wells, and 41 percent of the reporting bedrock wells, had water levels that were below normal levels. Of the 90 reporting wells, 27 reported new record low monthly median values for February and many of these had also reported record low monthly median values for one or more months from August to January. Record high monthly median levels were reported at five wells. Of these 32 wells, which recorded either monthly low or high record levels, only five had periods of record that exceeded 15 years.

Although wells with below-normal water levels appeared to be clustered in the northwestern and southeastern corners of the State, no other discernible pattern among the reporting wells was identified; 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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