

Hydrologic Conditions – November 2016

The Hydrologic Conditions Mapper for New York State has been updated for the month of November 2016 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 been in place for New York through the month of November.

Fifty percent of the counties in New York reported precipitation totals between 1.35 and 2.00 inches during November; however, precipitation totals ranged from 0.81 inches in Genesee County to 3.47 inches in Delaware County. All counties reported precipitation deficits that ranged from 0.38 inches below normal monthly precipitation totals in Delaware County to 2.98 inches below normal in Oswego County. Year-to-date precipitation quantities are generally 5 to 15 inches below normal across the State, and are more than 15 inches below normal on Long Island (NOAA Northeast River Forecast Center).

Streamflow conditions across the State have generally remained the same since October. With two exceptions, index sites that were at normal or above-normal flow levels in October were in their respective normal flow ranges during November. Those sites that were below-normal levels during October, continued to be in that flow range through November. Sites in this latter category, that is, with below-normal streamflows, were generally found in the Catskill Mountains area and southeastern New York, including Long Island. Streamflows at two index sites in the upper Hudson River basin and one in western New York, south of Rochester, were also below normal.

New York City reservoirs were collectively at about 57-percent capacity at the end of the month, less than the 81-percent capacity that is normal for the end of November.

Thirty-three percent of groundwater levels at index sites across the State were at or near normal levels; up from 18 percent during October. Only three wells reported above-normal water levels. The majority of wells (64 percent) continued to report low-to-very-low water levels; down from 81 percent during October. Sixty-seven and 63 percent of the reporting bedrock wells and water-table wells, respectively, had water levels that were below normal levels. Of the 77 reporting wells, 27 reported new record low monthly median values for November and most of these had also reported record low monthly median values for one or more months from August to October. Also, of these 27 wells, only two had periods of record that exceeded 14 years. Although wells with normal and above-normal water levels could be found scattered across the State, wells with below-normal water levels appeared to be clustered in a band north of the western Finger Lakes in Monroe, Wayne, and Ontario Counties, south of the central Finger Lakes region, around the northern perimeter of the Adirondack Mountains, and from the Capital District south to the southeastern corner of the State, including Long Island.

Groundwater response to rainfall, which depends on the depth and type of the aquifer in which a well is finished, may not mimic surface-water response. High-intensity, short-duration rainfall will have a noticeable effect on streamflows, especially in urban areas, but quick runoff from the land surface will not facilitate infiltration of water to replenish low groundwater levels. Groundwater levels typically will rise in response to medium-intensity long-duration rainfall that will permit infiltration and to a decrease in evapotranspiration under leaf-off conditions through the Fall season. This seasonal rise in groundwater levels has occurred in some wells, but was not evident at most of the index sites.

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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