

Hydrologic Conditions – November 2017

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

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

November was marked by a wide range in hydrologic conditions. Monthly precipitation totals averaged 2.6 inches and precipitation deficits averaged about 1 inch below normal quantities across most of the State. However, precipitation quantities ranged from over 6 inches (and more than 2 inches above normal quantities) in Cattaraugus and Erie Counties in western New York to 1 inch or less (and 2.8 to more than 3 inches below normal quantities) in Rockland, Orange, and Putnam Counties in southeastern New York.

Just over half (53 percent) of the index streamflow sites recorded monthly streamflows in their respective normal ranges. Thirty-four percent of the sites recorded above-normal streamflows; these sites were clustered in western NY and scattered in the Adirondack Mountains region. Of these, three sites—Tonawanda Creek at Batavia, Oatka Creek at Garbutt, and West Branch Oswegatchie River near Harrisville—exceeded their respective period-of-record monthly maximum flows for November. In addition, flows at 10 USGS streamgages in western NY exceeded their respective National Weather Service minor flood stages during November 6-7. At the other hydrologic extreme, four sites recorded below-normal monthly streamflows. These sites were generally in the southeastern part of the State and included the site on Long Island, where, except for January 2016, monthly streamflows have been below-normal levels since July 2015. A Drought Watch designation, as issued by NYS Department of Environmental Conservation (DEC), has continued in effect for Nassau and Suffolk Counties since July 2016.

Water levels along the Lake Ontario shoreline continued to recede and were about 3.1 feet below the record high water level that occurred during the last week of May 2017. However, average lake levels during November were still about 1.1 feet above the long-term monthly average water level (<https://www.glerl.noaa.gov/data/dashboard/GLWLD.html>).

New York City reservoirs were collectively at about 77 percent of capacity at the end of the month; less than the normal storage capacity of about 82 percent (http://www.nyc.gov/html/dep/html/drinking_water/maplevels_wide.shtml). This discrepancy reflects the below-normal precipitation quantities that were recorded in the Catskill Mountains region during November.

Most groundwater wells (48 percent) reported normal water levels for the month. Thirty-four percent reported above-normal water levels and 13 percent reported low-to-very-low water levels. Although wells in each classification could be found across the State, it appeared that wells with above-normal levels were clustered in western NY and the western and southern Adirondacks Region; whereas wells with below-normal levels were found north to south along the eastern part of the State. Water-table wells recorded higher percentages of both above-normal (36 percent) and below-normal (16 percent) levels than bedrock wells. A higher percentage of bedrock wells (53 percent) had water levels in their respective normal ranges than did water-table wells. Of the 91 reporting wells, 14 wells reported new record high monthly median levels and three reported new record low monthly median levels for November; all of these wells have periods of record less than 19 years. Although the Hydrologic Conditions Mapper showed only four reporting wells on Long Island—two of which reported below-normal water levels—the USGS Groundwater Watch (at <https://groundwaterwatch.usgs.gov/>) showed that the majority of wells in central and western Suffolk County reported below-normal water levels at the end of November.

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.

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