

Hydrologic Conditions – July 2017

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

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

Since January 2017, monthly precipitation totals across most of the State have exceeded normal monthly quantities. This pattern has resulted in very wet soil conditions that, along with intense localized storms, have produced frequent flash floods in many areas of the State during the month. The exception to this pattern has been the southeastern corner of the State where below-normal monthly precipitation has been recorded during the past two months. Most dry of all the areas is Long Island where a Drought Watch for Nassau and Suffolk Counties, as issued by NYS Department of Environmental Conservation (DEC), has continued in effect since July 2016.

During July, over 75 percent of the counties in New York reported precipitation totals of at least 4 inches; however, precipitation totals ranged from less than 2.5 inches in Chautauqua and Suffolk Counties to over 7 inches in Broome and Cortland Counties. The largest negative departures from normal precipitation quantities were recorded in Chautauqua County (-2.2 inches) and New York City, Nassau, and Suffolk Counties (about -1.3 inches). The largest positive departures from normal precipitation quantities were recorded in Broome and Cortland Counties (about +3.0 inches). In general, the Central, Niagara, and Adirondack Regions of the State were wettest and the southwestern and southeastern corners were driest.

Monthly streamflows were above normal levels in western New York and in a band from the Susquehanna River basin, northward through the Mohawk River basin and into the Adirondack Region. New period-of-record monthly mean flows were recorded at four index sites, including Tonawanda Creek at Batavia, Little Salmon River at Bombay, and two sites on the Hudson River near Newcomb and at Hadley. Elsewhere streamflows were at normal levels, except for the index site on Long Island, where, except for January 2016, monthly streamflows have been below-normal levels since July 2015. Intense rainstorms caused flash flooding in many basins on July 1 in the Finger Lakes Region and parts of the Mohawk River basin and on July 13-14 in western New York and again in the Finger Lakes Region. Some basins in the Finger Lakes Region experienced devastating floods during both storm events.

High-water levels along the Lake Ontario shoreline continue to recede and are about 1.2 ft below the peak level that occurred during the last week of May (<https://www.glerl.noaa.gov/data/dashboard/GLWLD.html>). Current levels are still about 2 ft higher than the long-term monthly average water level (<https://www.glerl.noaa.gov/data/dashboard/GLWLD.html>).

New York City reservoirs were collectively at about 93 percent of capacity at the end of the month; more than the normal storage capacity of about 87 percent.

With few exceptions, groundwater levels were at or above normal levels across the State. Forty-nine percent of all index wells reported above-normal water levels for the month. An additional 44 percent reported water levels in their respective normal ranges. Only six index wells, or 7 percent, reported low-to-very-low water levels, and four of these wells were located in the southeastern part of the State. A slightly higher percentage of water-table wells (50 percent) recorded above-normal levels compared to bedrock wells (47 percent). Water-table wells (9 percent) were more likely to record below-normal levels than bedrock wells (3 percent). Of the 91 reporting wells, 16 wells reported new record high monthly median levels for July. Thirteen of these wells have periods of record less than 15 years. The remaining wells, found in Niagara, St. Lawrence, and Wyoming Counties, have periods of record between 43 and 64 years. Although the Hydrologic Conditions Mapper showed only four reporting wells on Long Island, 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 July.

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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