

Hydrologic Conditions – October 2016

The Hydrologic Conditions Mapper for New York State has been updated for the month of October 2016 and can be accessed at:

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

As issued by NYS Department of Environmental Conservation (DEC), a Drought Warning for western New York and a Drought Watch for the rest of the State have continued through the month of October. However, rainfall on the 21st and 22nd brought relief to some parts of the State.

Fifty percent of the counties in New York reported precipitation totals between 3.3 and 6.5 inches during October; however, precipitation totals ranged from 2.34 inches in Orange County to 8 inches in Oswego County. Departures from normal monthly precipitation totals ranged from 2.0 inches below normal in Sullivan and Ulster Counties to 4.3 inches above normal in Steuben, Seneca, Schuyler, and Ontario Counties. Year-to-date precipitation quantities are generally 5 to 10 inches below normal across the State, but are more than 15 inches below normal on Long Island (NOAA Northeast River Forecast Center).

Streamflows were below-normal levels at most sites in the State through the first half of the month. Rainfall during the third week of the month increased streamflows in the Southern Tier, the central part of the State, and in the Adirondack Mountain area, and resulted in normal or above-normal monthly flows in these areas. Although over 4 inches of rain fell in a swath across west-central New York during October 21-22 and some streams rose to near-bankfull levels, no flooding was reported. Streamflows remained below-normal levels in the Catskill Mountains area and on Long Island.

New York City reservoirs were collectively at about 62-percent capacity at the end of the month, less than the 75-percent capacity that is normal for the end of October.

Only about 18 percent of groundwater levels at index sites across the State were at or near normal levels. Only one well reported above-normal water levels, whereas 81 percent of the wells reported low-to-very-low water levels. Seventy-two and 87 percent of the reporting bedrock wells and water-table wells, respectively, had water levels that were below normal levels. Of the 79 reporting wells, 34 reported new record low monthly median values for October; and, of these, 22 had also reported record low monthly median values for September. Also, of these 34 wells, only four 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, across the central Finger Lakes region, around the perimeter of the Adirondack Mountains, and in 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 should respond to medium-intensity long-duration rainfall that will permit infiltration and to a decrease in evapotranspiration under leaf-off conditions as the Fall season approaches.

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.