

Hydrologic Conditions – July 2021

The Hydrologic Conditions Mapper for New York State has been updated for the month of July 2021 and can be accessed at:

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

During July, monthly precipitation totals averaged 7.6 inches, and 3.6 inches above normal quantities across the State. The highest precipitation amount (11.3 inches) and the largest positive departure from normal quantities (7.0 inches) were recorded in Columbia County. The lowest precipitation amount (3.9 inches) and largest negative departure from normal quantities (0.1 inches) were recorded in Clinton County.

Of the 32 index streamflow sites, 3 recorded normal levels, 29 recorded wet levels, and none of the sites recorded dry or very dry levels. At 1 of the 32 index streamflow sites, Cattaraugus Creek at Gowanda, NY (04213500), the National Weather Service (NWS) flood stage was exceeded on July 17th. The respective NWS flood stages at seven non-index streamflow sites located in the central, southwestern, and southern parts of New York State were also exceeded during mid-July. A Drought Watch designation, as issued by New York State Department of Environmental Conservation (NYSDEC), continues in effect for five of the nine drought regions (Long Island, Mohawk/Upper Hudson, Adirondack, Great Lakes, and Southern Tier).

Average lake levels of Lake Ontario during July were about 0.7 feet below long-term monthly average water levels (<https://www.glerl.noaa.gov/data/wlevels/>).

New York City reservoirs were collectively at about 97.6 percent of capacity at the end of the month; about 8.1 percent more than the normal storage capacity of about 89.5 percent (<https://www1.nyc.gov/site/dep/water/reservoir-levels.page>).

Thirty-seven percent of the index groundwater wells with sufficient data for the month and period of record (92 in total) reported normal water levels for the month. Forty-seven percent reported above-normal water levels and 16 percent reported low to very-low water levels. There was no discernible strong geographical distribution of wells that fell into normal or dry classifications; however, very dry wells were confined to the northwestern, northern and central parts of the State, and no wet index wells were found on Long Island or in the northwestern or northern parts of the state. Bedrock and water-table wells had similar percentages of wells reporting water levels in their respective below-normal ranges (17 percent and 16 percent, respectively). However, bedrock wells recorded a slightly greater percentage (40 percent) of wells with water levels in their respective above-normal ranges compared to water-table wells (34 percent).

Of the 92 wells with sufficient data, 3 reported new record low monthly median levels for July; all 3 wells have periods of record of 18 years or less. Nine of the 92 wells reported a new record high monthly median level, and 7 of those 9 wells have periods of record of 19 years or less. One of the two other wells that reported new record low monthly median levels, a water-table well located in Chenango County, has records dating back to 1975. The other well, a water-table well in Dutchess County, has records dating back to 1965, but records do not exist for this well for a total of about 10 years between 1969 and 1999.

Although the Hydrologic Conditions Mapper showed only four reporting wells with sufficient data on Long Island—all of which reported normal water levels—the USGS Groundwater Watch (at <https://groundwaterwatch.usgs.gov/>) showed that many wells in Nassau and Suffolk Counties continue to indicate 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, assists the NYSDEC and the State Drought Management Task Force with evaluating regional conditions for determination of drought classifications.

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