

Hydrologic Conditions – December 2021

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

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

During December, monthly precipitation totals averaged 2.6 inches, and 0.7 inches below normal quantities across the State. The highest precipitation amount (4.0 inches) and largest positive departure from normal quantities (0.1 inches) were recorded in Oneida County. The lowest precipitation amount (1.2 inches) and the largest negative departure from normal quantities (2.7 inches) were recorded in New York City.

Of the 32 index streamflow sites, 24 recorded normal levels, 7 recorded wet levels, 1 recorded dry levels, and none of the sites recorded very dry levels during December. The National Weather Service (NWS) flood stage was not exceeded at any streamflow sites during December in New York State.

The New York State Department of Environmental Conservation (NYSDEC) reported that all drought regions in New York State were in normal status at the end of December.

Average lake levels of Lake Ontario during December were about 1.1 feet above long-term monthly average water levels (<https://www.glerl.noaa.gov/data/wlevels/>).

New York City reservoirs were collectively at about 88.7 percent of capacity at the end of the month; about 0.9 percent less than the normal storage capacity of about 89.6 percent (<https://www1.nyc.gov/site/dep/water/reservoir-levels.page>).

Fifty-eight percent of the index groundwater wells with sufficient data for the month and period of record (93 in total) reported normal water levels for the month. Thirty-one percent reported above-normal water levels, eleven percent reported low water levels, and none of the index groundwater wells reported very-low water levels. In the southeastern part of the state, only normal and above-normal water levels were reported, and in the northernmost part of the state, only normal and low water levels were reported. For the rest of the wells, there was no discernible strong geographical distribution of the different water level classifications. Bedrock and water-table wells both had low percentages of wells reporting water levels in their respective below-normal ranges (19 and 5 percent, respectively) and high percentages of wells reporting water levels in their respective above-normal ranges (35 and 29 percent, respectively).

None of the 92 wells with sufficient data reported new record low monthly median levels for December. Seven of the 92 wells reported new record high monthly median levels. All of those wells have periods of record of 20 years or less.

Although the Hydrologic Conditions Mapper showed only three 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 December.

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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