

Hydrologic Conditions – September 2021

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

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

During September, monthly precipitation totals averaged 5.0 inches, and 1.0 inches above normal quantities across the State. The highest precipitation amount (9.6 inches) and largest positive departure from normal quantities (5.6 inches) were recorded in New York City. The lowest precipitation amount (2.6 inches) was recorded in St. Lawrence County and the largest negative departure from normal quantities (1.8 inches) was recorded in Lewis County.

Of the 32 index streamflow sites, 4 recorded normal levels, 28 recorded wet levels, and none of the sites recorded dry or very dry levels during September. The National Weather Service (NWS) flood stage was exceeded at 1 of the 32 index streamflow sites, Wappinger Creek near Wappingers Falls, NY (01372500), due to heavy rainfall from remnants of Hurricane Ida. On September 2, 2021, at Wappinger Creek near Wappingers Falls, NY (01372500), gage height exceeded the NWS flood stage of 8 ft for about 17 hours and reached a peak of 9.74 ft. The respective NWS flood stages at three non-index streamflow sites located in southeastern New York State were also exceeded at the start of September due to remnants of Hurricane Ida. Further, the NWS major flood stage was exceeded at one of those streamflow sites, Bronx River at NY Botanical Garden at Bronx, NY (01302020).

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 September.

Average lake levels of Lake Ontario during September were about 0.1 feet above long-term monthly average water levels (<https://www.glerl.noaa.gov/data/wlevels/>).

New York City reservoirs were collectively at about 93.2 percent of capacity at the end of the month; about 16.6 percent more than the normal storage capacity of about 76.6 percent (<https://www1.nyc.gov/site/dep/water/reservoir-levels.page>).

Twenty-eight 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. Sixty-one percent reported above-normal water levels and 11 percent reported low to very-low water levels. Low to very-low water levels were confined to the northwestern, central and northernmost parts of the state. Only above normal water levels were observed in the southeastern part of the state (excluding Long Island, where only normal water levels were observed); otherwise, there was no discernible strong geographical distribution of the rest of the wells that fell into the normal and above normal classifications. Bedrock and water-table wells had similar percentages of wells reporting water levels in their respective below-normal ranges (9 and 12 percent, respectively) and above-normal ranges (61 and 60 percent, respectively).

Of the 92 wells with sufficient data, 3 reported new record low monthly median levels for September; all 3 of those wells have periods of record of 18 years or less. Ten of the 92 wells reported a new record high monthly median level, and 7 of those wells have periods of record of 18 years or less. The other three wells that reported new high monthly median levels are a bedrock well located in Allegheny

County that has records dating back to 1994, a water-table well located in Niagara County that has records dating back to 1973, and a water-table well located in Oneida County that has records dating back to 1926.

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 September.

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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