

## Hydrologic Conditions – January 2018

The Hydrologic Conditions Mapper for New York State has been updated for the month of January 2018 and can be accessed at:

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

During January, monthly precipitation totals averaged 3.1 inches and 0.2 inches below normal quantities across the State. For the second month in a row, the highest precipitation amount (this month, 4.7 inches and 0.8 inches above normal quantities) was recorded in Lewis County in the Tug Hill Plateau region of northern New York. The lowest precipitation amount was recorded in New York City (1.7 inch and 1.8 inches below normal quantities). The largest positive departure from normal quantities was recorded in Cayuga County where the total precipitation, 3.9 inches, was 1.5 inches above normal quantities. As was the case during December, the largest monthly deficits were in the southeastern corner of the State.

All index streamflow sites, except the one on Long Island, recorded flows at normal and above-normal levels. On Jan 11-13, unseasonably warm temperatures (including a few record high temperatures) caused rapid snowmelt that, along with 1 to 2 inches of rain, resulted in minor flooding throughout New York. Most of the flooding was caused by ice jams that produced large and erratic fluctuations in stage at many USGS streamgages. Water levels at 20 sites rose above the NWS-defined flood stages; of those, 6 sites exceeded their respective moderate flood stages and one site—East Branch Ausable River at Au Sable Forks—exceeded its major flood stage for at least brief periods. A second warm period with associated snowmelt and light to moderate rain caused ice jams and flooding during January 22-24; however, the flooding this time was not as widespread as the earlier thaw period and most of the flooding occurred in the southern and western areas of New York. Below-normal flows existed at the index streamflow site on Long Island where, except for January 2016, monthly streamflows have been below-normal levels since July 2015. A Drought Watch designation, as issued by NYS Department of Environmental Conservation (DEC), has continued in effect for Nassau and Suffolk Counties since July 2016.

Water levels along the Lake Ontario shoreline reached winter-time lows during December. Average lake levels during January were about 0.9 ft above long-term monthly average water levels (<https://www.glerl.noaa.gov/data/dashboard/GLWLD.html>).

New York City reservoirs were collectively at about 86 percent of capacity at the end of the month; just slightly less than the normal storage capacity of about 88 percent ([http://www.nyc.gov/html/dep/html/drinking\\_water/maplevels\\_wide.shtml](http://www.nyc.gov/html/dep/html/drinking_water/maplevels_wide.shtml)). The storage volume has recovered from the deficit that existed at the end of December.

Thirty-two percent of the index groundwater wells reported normal water levels for the month. Thirty-six percent reported above-normal water levels and 32 percent reported low-to-very-low water levels. Although wells in each classification could be found across the State, it appeared that wells with normal and above-normal levels were clustered in west-central and northern NY; whereas wells with below-normal levels were found in the east-central and southeastern parts of the State. This pattern is similar to that which existed during December. Bedrock wells (41 percent) recorded a higher percentage of wells with water levels in their respective above-normal ranges compared to water-table wells (34 percent). However, a higher percentage of bedrock wells (38 percent) also had water levels in their respective below-normal ranges than did water-table wells (29 percent). Of the 91 reporting wells, 9 wells reported new record high monthly median levels and 6 reported new record low monthly median levels for January; most of these wells (14) have periods of record less than 16 years. Although the Hydrologic Conditions Mapper showed only four reporting wells on Long Island—two of which reported below-normal water levels—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 January.

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.

William F. Coon, Surface-Water Specialist, New York Water Science Center  
Phone: 607-266-0217, ext. 3019

Email: [wcoon@usgs.gov](mailto:wcoon@usgs.gov)