Brief summary of the flood of Oct. 1, 2010 in Eastern New York

By: Thomas P. Suro US Geological Survey, New York WSC

Heavy rain from the remnants of Tropical Storm Nichole moved northward into New York on September 30 and October 1, 2010. Wide spread rainfall totals ranged from 3 inches to 6 inches with localized amounts of as much as 9 inches reported in areas of eastern New York and over 10 inches in Pennsylvania. The National Weather Service (NWS) reported minor to major flooding in parts of eastern New York. A graphic illustration of NWS Multisensor Precipitation Estimates (MPE) data for this event can be viewed here. Additional MPE graphics of daily rainfall estimates are available here. Major flooding was reported on the Esopus Creek at Coldbrook and Schoharie Creek at Prattsville, and the West Branch Delaware River near Delhi, NY. Generally, the peak discharges at most streamgages in the region had a recurrence interval of about 10 years or less with several exceptions. The following US Geological Survey (USGS) streamgages recorded new period of record maximum discharges on October 1, 2010 as a result of this storm: Hollow Tree Brook near Lanesville (01362342), Rondout Creek above Red Brook near Peekamoose (01364959), Tremper Kill near Andes (01415000), West Branch Delaware River upstream from Delhi (01421900), and East Branch Neversink River near Claryville (01434017), NY. The recurrence intervals of the peak discharges at these streamgages ranged from 25 years at the West Branch Delaware River upstream from Delhi (01421900) streamgage to greater than 100 years at the Tremper Kill near Andes streamgage (01415000).

USGS

Oct. 12, 2010

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Photo of USGS streamgage Tremper Kill near Andes, NY on Oct. 1, 2010 at about 12:30 pm EDT. Photo taken by B.J. Zatorsky (USGS, Troy WSC)

The NWS reported a rainfall total of 6.65 inches at Andes, NY and 5.16 inches at Walton, approximately 18 miles west of Andes. The USGS New York Water Science Center made more than 50 flood measurements in a two day period to verify and calibrate the stage-discharge relationships at many streamgages in New York. Part of the mission of the Water Resources Division of the USGS is to provide reliable, timely and impartial streamflow information to minimize the loss of life and property as a result of water-related natural hazards such as flooding. USGS water data is used by the NWS for flood forecasting and flood warnings, while flood frequencies computed by the USGS are widely used for road and bridge design as well as for flood insurance studies. A table of flood peaks from the October 1, 2010 storm at selected USGS streamgages and estimated flood frequencies are available here.

Photo of Delhi, NY on Oct. 1, 2010. Photo courtesy of the NWS Binghamton forecast office.