

## Floods Caused by Tropical Systems: Swatara Creek at Harper Tavern

Latitude: 40.403

Period of Record: 1877-Present

Longitude: -76.578

Flood Stage: 9 ft

Last Flood: 2/25/2016

Number of Floods: 155

Date of Crest	Crest (ft)	Streamflow (cfs)	Remarks
9/8/2011	24.46	74,800	The remnants of tropical storm (TS) Lee moved up the Appalachian Mountains and interacted with a quasi-stationary east-west frontal boundary. 10 to 15 inches fell at numerous locations in Central PA and NY.
6/23/1972	23.72	66,700	Hurricane Agnes made landfall again over southeastern New York on June 22 and moved westward into Pennsylvania. Rainfall totals from June 20-25 range from 2-3 inches in the Upper Potomac to 18 inches near Shamokin, Pennsylvania.
8/24/1933	17.53	25,300	A strong Category 1 storm, the Chesapeake-Potomac Hurricane brought more than 10 inches of rain to Maryland, Delaware and Southern New Jersey. Other locations throughout the Mid-Atlantic measured more than 4 inches of rain.
9/19/2004	17.36	25,000	The remnants of Hurricane Ivan, combined with a cold front, produced an average rainfall amount of 2-4 inches in NY, 3-7 inches in PA, 1-3.5 inches in NJ and 2 inches in WV.
9/27/1975	17.24	24,700	The remnants of Hurricane Eloise combined with a cold front and produced very heavy rainfall in the Mid-Atlantic. Washington, D.C. reported 9.08" of rainfall. Total damage for Virginia was estimated to be \$17.2 million.
10/1/1924	13.20	14,200	Tropical Storm Eight made landfall in the Panhandle of Florida before moving northward along the Atlantic Coast. The storm intensified over NC and became an extratropical storm. Several locations in VA set new records for 24-hour rainfall totals.
8/19/1955	12.35	12,700	Hurricane Diane made landfall 5 days after Hurricane Connie. Hurricane Diane produced several inches of rain with locally heavier amounts of 10 to 20 inches.

Drainage Area: 337 sq mi

Gage Datum: 356.68 ft MSL

Tropical information before 1940 is limited.

Lower Main Stem Susquehanna Basin

County of Gage: Lebanon

County of Forecast Point: Lebanon

Date of Crest	Crest (ft)	Streamflow (cfs)	Remarks
10/1/2010	11.75	11,300	Tropical moisture ahead of a north-south frontal boundary interacted with the remnants of tropical storm Nicole to produce heavy rainfall throughout the Mid-Atlantic. Rainfall amounts of 4"-5" were common, with locally heavier amounts of up to 10".
9/1/1940	11.51	11,500	The outer rainbands from Hurricane Four caused minor and moderate flooding at three MARFC forecast points.
9/1/1952	11.39	11,000	Remnants of Hurricane Able produced up to 2.00 inches of rainfall across the region.
10/3/1929	11.20	9,800	Rainfall from the most powerful hurricane of the 1929 season measured 1 to 4 inches across the Mid-Atlantic states and led to minor flooding across parts of Pennsylvania and Maryland.
9/6/1979	10.18	8,820	Hurricane David dumped 3-7 inches of rainfall across Virginia, Maryland and Pennsylvania.
9/29/2004	10.09	8,690	Hurricane Jeanne stalled a cold front and supplied the front with much-needed moisture. As a result, 1-day rainfall totals ranged from 1 - 6 inches throughout the Mid-Atlantic region.
10/30/2012	9.28	7,510	Hurricane Sandy moved across NJ through PA producing 3 to 7 inches of rain with locally higher amounts in areas that saw flooding. The hurricane rapidly lost its tropical characteristics as it moved northwest.

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