

Spanning the Gap

Ivan Causes Region's Third Worst Flood



U.S. Dept. of the Interior
National Park Service

Spanning the Gap
The newsletter of
Delaware Water Gap National
Recreation Area
Vol. 26 No. 2 Winter 2004



(Left) Kittatinny Point Visitor Center seen across the Delaware River from Pennsylvania. The river entered the building.

(Below) The same view in October 2004.



The aftermath of Hurricane Ivan reached the park on Friday, September 17, 2004. Much of the Delaware River basin north of Trenton received 3 to 5 inches of rainfall in a 12-

hour period, and some areas received as much as 7 inches. This rain fell on soil that had already been saturated by a wet summer.

The Delaware River at Montague NJ rose quickly, from 8 feet at 8 a.m. on September 18 to nearly 28 feet by 8 p.m. (Flood stage at that location is 25 feet.) In the 6 hours between 8 a.m. and 2 p.m., the river rose 14 feet. Tributaries overflowed their banks

(Above) Bushkill Access PA.



(Left) Depew Recreation Site NJ.

early Saturday morning. The volume of flow at the Montague gauge, which averages 8000 cubic feet per second (cfs) at this time of year, reached 175,000 cfs in the early hours of Sunday morning, September 19 -- more than 20 times the average.



(Above) An island in the river.



(Left) The boardwalk trail at Dingmans Falls, leading to the observation platform at the base of the falls.

(Right) The same section of trail in October 2004: The platform railing has been rebuilt and many sections of the boardwalk had to be restabilized also.

The result was the third largest flood in recorded history, surpassing the January 1996 flood by about 3 feet, and falling 6 feet short of the historic August 1955 flood caused by Hurricanes Connie and Diane. The 1955 flood, critical in the proposal to build a dam at Tocks Island, killed 100 people in the Delaware River watershed, mostly along tributaries.

During the flooding caused by Ivan, no one perished along the main stem of the river. The economic effect on the area, however, was staggering: Monroe, Pike, and Northampton counties were declared federal disaster areas along with 43 other counties in Pennsylvania.



Cars stranded on Route 209 in Pennsylvania. Several travelers had to be rescued from their vehicles. Paved and dirt roads everywhere in the park were washed out and undercut.



(Left) Manna Site PA, a streambank archeological dig, in 2002, and after the flood in 2004.

The red dot marks the same tree in both photos. The large tree marked with a pink dot in the 2002 photo is gone in the 2004 photo.

Preliminary damage assessments within the recreation area are estimated at \$4.4 million, and another \$2 million in highways and bridge. These amounts will likely rise as sites are inspected more thoroughly.

All park resources were impacted, including natural and cultural resources, archeological sites, visitor use facilities, and infrastructure such as roads, bridges, and utilities in buildings. Damage to the park's natural resources is still being evaluated.

This article was condensed from a flood briefing statement prepared by Park Ranger Kathleen Sandt.