

## **One Year Later: Sept. 28-29, 2004 Tropical Storm Jeanne Again Floods the Christina Basin**

*Contributors: John H. Talley, Director, Delaware Geological Survey, [waterman@udel.edu](mailto:waterman@udel.edu) 302-831-8258, <http://www.udel.edu/dgs> and Dan Leathers, State Climatologist, [leathers@udel.edu](mailto:leathers@udel.edu), 302-831-8764, <http://www.udel.edu/Geography/leathers.htm>  
Photos by John Talley; see <http://ag.udel.edu/dwrc/news.html>*

The remnants of Hurricane Jeanne caused widespread flooding in the Red Clay Creek, White Clay Creek, and Christina River drainage basins in northern New Castle County, Delaware on September 28 – 29, 2004. Recorded rainfall in northern Delaware ranged from 8.2" in Ogletown to 3.52" in east Wilmington. Reported rainfall in the Brandywine, Red Clay, and White Clay creek drainage basins in nearby southeastern Pennsylvania ranged from 8.91" in West Chester to 6.56" near Strickersville. According to Dr. Daniel Leathers, State Climatologist, the precipitation exceeded the 100-year return period for the area. The provisional peak stream discharges of 11,600 cubic feet per second recorded on Red Clay Creek at Wooddale, 10,900 cubic feet per second on Red Clay Creek at Stanton, and 12,200 cubic feet per second on White Clay Creek at Newark were the second highest on record.

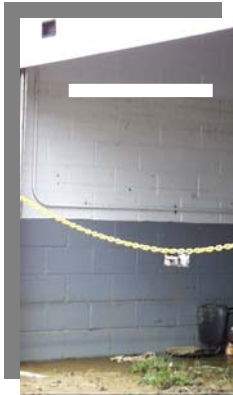
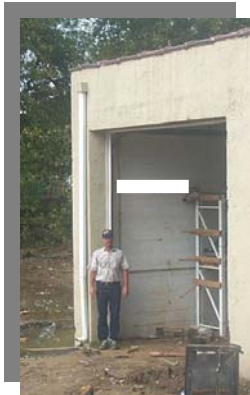
### *Red Clay Creek*

#### *Stanton Area*

*Garages  
high water  
marks  
(white lines):*

*L. "Henri"  
Sept. 15,  
2003  
(12 blocks)*

*R. "Jeanne"  
Sept. 28,  
2004  
(10 blocks)*



Peak gage heights were the third highest of record on Red Clay Creek at Wooddale and Stanton and were exceeded only by those associated with Floyd (1999) and Henri (2003). The calculated recurrence intervals were greater than 100 years. Comparisons of precipitation and peak discharge recurrence intervals for Jeanne (2004) as well as Henri (2003), Floyd (1999), and a severe thunderstorm (1989) are presented with Jeanne charts and photos at <http://ag.udel.edu/dwrc/Forum2004/jeanne.pdf>. All four events involved very intense precipitation (4-10") in a relatively short period of time (4-10 hours).