

Documentation and Analysis of Flash Flood Prone Streams and  
Subwatershed Basins in Pulaski County, Virginia

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**Abstract**

Flash flooding is the number one weather-related killer in the United States, and is a frequent threat in the mountains of southwest Virginia. Additional detailed information about particular high-threat locations along local streams and creeks could help forecasters issue more accurate and precise warnings, which may ultimately help save lives. Using GIS software, streams within twenty-five feet of any state-maintained roadway in Pulaski County, Virginia were identified and selected to be surveyed. Field work at each survey point involved taking measurements to determine the required stream level rise necessary to cause flooding along any nearby roadway(s). Additionally, digital pictures were taken to document the environment upstream and downstream at each survey point. This information has been color-coded based on the degree of threat, mapped, and overlaid in Google Earth for quick access on computers at the National Weather Service Office in Blacksburg, Virginia. It has also been compiled into an operational handbook and DVD for use at the NWS. Additional support has been provided by the Blacksburg NWS to expand the research to include neighboring Montgomery County, Virginia and the potential exists to include additional counties that have high frequencies of flash flooding.