



## Sediment Investigation for Support of the Marlinton Levee Protection Project

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The U.S. Army Corps of Engineers, Huntington District completed a feasibility level investigation to determine viable alternatives for local flood protection for the town of Marlinton and the community of Riverside, West Virginia. The project area is situated along the banks of the Greenbrier River in Pocahontas County. The principle flood problems occur as a result of overflows from the Greenbrier River and Knapp Creek. The flood of record occurred in November 1985. This flood event had a peak discharge of approximately 80,000 cfs and a return period of greater than 100 years.

The U.S. Army Corps of Engineers, Huntington District conducted detailed analyses to determine the necessary maximum elevation for the proposed levee alignments as well as the interior drainage system and other pertinent project features. WEST Consultants conducted both a qualitative and a quantitative sediment transport analysis for the project to determine the aggradation/degradation tendencies that may have adverse impacts on the operation and function of the project as well as assumptions made during the top of protection superiority analyses.

WEST defined both the long-term and short-term aggradation/degradation tendencies associated with the project using the sediment transport computer model HEC-6T, as well as conducting a detailed scour analysis of the project reaches. This information was used as a basis for determining expected channel maintenance and levee toe-down requirements.



### **Project Owner:**

*U.S. Army Corps of Engineers  
Huntington District  
502 Eighth Street  
Huntington, WV 25701  
(304)529-5523*