



## Bader Recovery Project

### Full Mitigation Best Practice Story

#### *Madison County, Virginia*

**Madison County, VA** - During June of 1995, four major, record rainfalls caused flooding and landslides with such velocities that structures in the valley were knocked off their foundations. This 500-year flood event served to change permanently the mountain, the course of the stream below it, and the lives of the Baders.



The Baders, a family with young children, had all of their financial resources tied up in the property. Their 11 acre property is located on an alluvial fan created from a mountain watershed. A survey of the area revealed that only six of these acres are susceptible to continued flooding and erosion. Although a stand of sturdy trees located uphill from the Bader's blocked the brunt of debris from impacting the main structure, the outbuildings were destroyed during the 1995 landslides. The house received some damages, and inspection of the intermittent streams on two sides of the house and the debris above it revealed that it still faced serious perils.

As a mitigation measure, the Baders had a low-profile berm system constructed. Unfortunately, a year after the project was completed, two short-term storm events compromised the berm and nearly destroyed it.

Because the berm did not provide a long-term solution, other options were considered. The Baders sought assistance from their local government who in turn joined with the State and Federal teams in developing and evaluating alternatives. The most cost effective alternative was to relocate the house to higher ground (already owned by them), where it will be at a much lower risk of flood or landslide. Relocating the structure allowed the Baders to remain in the community while acquiring the property would have been more expensive.

#### Activity/Project Location

Geographical Area: **Single County (County-wide)**

FEMA Region: **Region III**

State: **Virginia**

County: **Madison County**

#### Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding**

Activity/Project Type: **Flood Control; Relocation**

Activity/Project Start Date: **12/1996**

Activity/Project End Date: **08/1999**

Funding Source: **Hazard Mitigation Grant Program (HMGP); Homeowner**

Funding Recipient: **Local Government**

Funding Recipient Name: **Madison Government**

### Activity/Project Economic Analysis

Cost: **\$36,625.00 (Actual)**

Non FEMA Cost:

### Activity/Project Disaster Information

Mitigation Resulted From Federal  
Disaster? **Yes**

Federal Disaster #: **1059 , 07/01/1995**

Value Tested By Disaster? **No**

Repetitive Loss Property? **Unknown**

### Reference URLs

Reference URL 1: <http://www.floodsmart.gov/floodsmart/pages/index.jsp>

Reference URL 2: <http://www.virginia.gov/>

### Main Points

- Low-profile berm system constructed
- Relocated home to higher ground after berm was nearly destroyed.
- Since the berm did not provide a long-term solution, other options were considered.