



## Traveling Rake Removes Debris from Filter

### Full Mitigation Best Practice Story

#### Montour County, Pennsylvania

**Danville Borough, PA** - Sitting on the banks of the Susquehanna River, Danville Borough has seen its share of floods. Following heavy rains, the river surges and rushing waters threaten the town.



Sechler Run, a creek running through Danville, causes problems of its own during severe storms as backflow from the Susquehanna fills the creek. In 1988, a pumping station was installed to protect the town from the rising creek. And while the pumping station has been invaluable, it created problems of its own. A filter protects the pumps from debris, but keeping the filter from clogging presented a unique challenge.

“We used to have about 20 volunteers clearing the screen. It’s really physically demanding work, so after three or four pulls, you’d have to hand your rake off to the next guy,” said Danville Borough Secretary Tom Graham. “One year, we couldn’t keep up with the rising water. In seconds the water overflowed onto the street. Cars across the street flooded up to the windows before we could get the screen cleared again.”

“Clearing debris from the filter was very dangerous work. During an ice storm in 1996, the platform where workers stand to clear the debris was covered in ice. With rushing water below,” Graham said, “it was only a matter of time before a serious injury occurred.”

In 1998, with the help of the Pennsylvania Emergency Management Agency, Danville applied for funding from Federal Emergency Management Agency. Danville received \$149,650 from FEMA’s Hazard Mitigation Grants Program to install a traveling rake that pulls debris off the filter and out of the water.

Now during storms, just one man is needed to operate the pumping station, loading collected debris into a truck.

John Hack, who operates the pumping station said, “If it wasn’t for the pumping station and rake during the most recent high water, Danville would have been wiped out. It’s been a godsend.”

#### Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region III**

State: **Pennsylvania**

County: **Montour County**

City/Community: **Danville**

### Key Activity/Project Information

Sector: **Public**  
Hazard Type: **Flooding**  
Activity/Project Type: **Retrofitting, Structural**  
Structure Type: **Concrete, Reinforced**  
Activity/Project Start Date: **06/1998**  
Activity/Project End Date: **08/2000**  
Funding Source: **Hazard Mitigation Grant Program (HMGP)**  
Funding Recipient: **Local Government**  
Funding Recipient Name: **Danville Borough**  
Application/Project Number: **9999**

### Activity/Project Economic Analysis

Cost: **\$199,533.00 (Actual)**

### Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **Yes**  
Federal Disaster #: **1093 , 01/21/1996**  
Federal Disaster Year: **1996**  
Value Tested By Disaster? **Yes**  
Tested By Federal Disaster #: **No Federal Disaster specified**  
Year First Tested: **2004**  
Repetitive Loss Property? **Unknown**

### Reference URLs

Reference URL 1: <http://www.fema.gov/government/grant/hmgp/index.shtm>  
Reference URL 2: <http://www.pema.state.pa.us/>

## Main Points

- The pumping station in Danville Borough, PA clogged frequently requiring it to be cleared many times during storms by hand.
- Clearing debris from the pump filter is dangerous work and luckily no one was hurt
- Danville received \$149,650 to install a traveling rake to automatically remove debris from the filter
- Funds were provided through the HMGP



This is a photo of the Danville Rake