



## Improved Channel Brings Security and Tranquility

### Full Mitigation Best Practice Story

#### *Jayuya Municipio, Puerto Rico*

**Jayuya, PR** - When Hurricane Georges hit Puerto Rico in September 1998, residents of San Felipe’s Interior Street in Jayuya saw the La Zanja Creek turn into a river that ran over the existing protective wall and headed for the road and their properties. The storm caused over \$22,000 in damages due to the overflow of the La Zanja Creek. Portions of the road were washed out and debris was left behind.



“I used to get very nervous during heavy rain events because the creek would pass just a few inches from our house,” said Jaime Roman. The creek runs alongside Roman’s property. And, even though his residence never got flooded, the water used to get so close that they had to evacuate every time. But the situation soon changed for the better.

In 2000, FEMA, through its Hazard Mitigation Grant Program (HMGP), awarded funds for the improvement of the existing canalization of the creek. The project included the addition of 164 feet to an existing 656-foot long channel and the construction and/or reconstruction of a concrete wall. This protective wall was designed to prevent water from overflowing the natural creek and running into the street and homes in La Zanja ward. Overall, the channel was extended to 19 feet wide, six feet high and 820 feet long.

The canalization was completed in March 2003 and has performed successfully during two heavy rain events: the November 2003 floods and Tropical Storm Jeanne (2004). The channel allowed storm water to move downstream without overflows, preventing damages to residential properties as well as to the adjacent road.

“Now, that the canalization is complete, we stay home during a heavy rain event because we do not need to worry about the creek anymore. Now we feel much safer,” said Roman.

David Torres, Municipal Officer in charge of the project, shares Roman’s perception on the results of this improvement. “Communities in Jayuya feel more secure and safer now that some of the canalization projects have been completed, and many others are underway,” said Torres. “Both the community and the municipality benefit from mitigation projects like this.”

#### Activity/Project Location

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

FEMA Region: **Region II**

State: **Puerto Rico**

County: **Jayuya Municipio**

City/Community: **Jayuya**

## Key Activity/Project Information

Sector: **Public**  
Hazard Type: **Flooding**  
Activity/Project Type: **Flood Control**  
Activity/Project Start Date: **01/1999**  
Activity/Project End Date: **03/2003**  
Funding Source: **Hazard Mitigation Grant Program (HMGP)**  
Funding Recipient: **Local Government**  
Funding Recipient Name: **Jayuya, PR**  
Application/Project Number: **9999**

## Activity/Project Economic Analysis

Cost: **\$86,500.00 (Estimated)**  
Non FEMA Cost:

## Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **Unknown**  
Value Tested By Disaster? **Yes**  
Tested By Federal Disaster #: **No Federal Disaster specified**  
Year First Tested: **2003**  
Repetitive Loss Property? **Unknown**

## Reference URLs

Reference URL 1: <http://www.fema.gov/about/divisions/mitigation/mitigation.shtm>  
Reference URL 2: <http://www.nhc.noaa.gov/>

## Main Points

- HMGP funds were awarded La Zanja, PR, for the improvement of the existing canalization of the creek. The project included the addition of 164 feet to an existing 656-foot long channel and the construction and/or reconstruction of a concrete wall.
- This protective wall was designed to prevent water from overflowing the natural creek and running into the street and homes.
- The canalization was completed in March 2003 and has performed successfully during two heavy rain events: the November 2003 floods and Tropical Storm Jeanne (2004).



View of La Zanja Creek canalization.



View of canalization.