



Shelby, Ohio

The Economic Upside to Mitigation

Case Study

December 2012



FEMA

HAZARD MITIGATION

Mitigation professionals promote the fact that for every \$1 spent on mitigation there is \$4 in savings from future disasters. These cost benefits are documented during every project and help to support the national mitigation effort. These savings come from fewer damaged homes to help rebuild or repair, as well as fewer lives lost.

Land purchased through the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance grants are deed restricted into perpetuity, which means no structure that impedes the flow of water can be built on the site. The purchased land will be kept as green space and maintained by the local jurisdiction.

But what happens when a community has bigger things in mind, like repurposing the green space and using it to revitalize a downtown area with hopes to increase economic growth in their community?

Let's take a look at Shelby, Ohio. We'll dig deeper into a recent acquisition project and see what they have in mind for the town's future.

SHELBY, OHIO

In 2007, the Black Fork of the Mohican River, which runs through the center of Shelby, flooded the town. The central business district and a residential area were hard hit.



Downtown



Residential

This wasn't the first time flooding hit the town. The city experienced extreme flooding several times over the past twenty-three years and many homes and businesses experienced repeated flooding. In fact the town flooded again in 2011.



1913



2007



2011



Project Coordinator Joseph Gies and other town officials decided to take advantage of funding available from the Federal Emergency Management Agencies (FEMA) Hazard Mitigation Grant Program (HMGP). The HMGP provides grants to states, local governments and Indian tribes for long-term hazard mitigation projects following a major disaster declaration. The purpose of the program is to reduce the loss of life and property in future disasters by funding mitigation measures during the recovery phase of a natural disaster.

City officials applied for grants through the Ohio Emergency Management Agency (Ohio EMA) and were awarded funding for several acquisition projects. FEMA, Ohio EMA, and the City of Shelby each provided a share of the funding allowing purchase of 46 properties destined for demolition. Through other non-FEMA resources, another five properties were acquired, bringing the total to 51.

The original benefit cost analysis (BCA) estimates were done prior to finalization of the project application reviews. Some alternative projects had to be used, but the BCA figures stayed very much the same, showing that this undertaking more than paid for itself in the cost of current and

future damages. In some cases, the BCA figures were even stronger due to the type and value of the alternate projects. The following figures show the value of good hazard mitigation in high risk areas:

DISASTER EVENT	BENEFIT	COST	BCA
FEMA-DR-1580	3,360,079	258,932	12.98
FEMA-DR-1720	6,468,164	1,324,295	4.88
FEMA-DR-1720	7,677,548	3,140,435	2.44
FEMA-Repetitive Loss Claims Program	2,635,702	338,600	7.78

Beside the anticipated savings related to the acquisitions, there will be expenses that are eliminated or greatly reduced, due to the absence of the original public structures in the high risk areas. The cost of FEMA’s Public Assistance emergency and permanent work done to restore public facilities following floods can be quite high. An example of these costs from the 2007 floods, DR-1720, in Public Assistance services for Shelby are shown below.

POST-DISASTER PA WORK	PROJECTS TOTAL	CATEGORIES	AMOUNTS PER CATEGORY
FEMA – Public Assistance DR – 1720	775,603	A: Debris removal	126,613
		B: Protective Measures	141,494
		C: Roads & Bridges	141,250
		E: Buildings & Equipment	566,246

In addition to FEMA, Ohio EMA and the City of Shelby, acquisition funding was obtained from the Neighborhood Stabilization Program, an arm of the Housing and Urban Development Agency, and Nature Works, part of the Ohio Department of Natural Resources. Through these non-FEMA resources five more properties were removed from harm’s way.

The families that accepted the acquisition projects and left their flooded homes will no longer need to be concerned about elevated flood insurance rates because of the risks of living in a high hazard area. Floods are the most destructive and costly hazard in the U.S. Flood insurance premiums paid by residents in the flood hazard areas can be expensive, but are necessary to protect the property owners’ most significant investment and reduce taxpayer funded disaster assistance. The safety of emergency services personnel is no longer threatened by the need to rescue people in the buyout area, which reduces costs and improves service for city residents, the NFIP itself, the recovery programs, and the list goes on and on.

One of the more valuable benefits of the acquisition project is the reduction of the higher cost flood insurance policies. Two of the acquired properties were eligible for the Repetitive Flood Claims grant program because of the number of times they had been damaged by flood, and the high cost of paying out on the homeowners flood insurance claims. In one case, there had been six claims between 2003 and 2008 for a total of \$118,773 in damages. Another case that qualified for this program had had four claims between 1987 and 2008, for a total of \$173,006 in damages. These, along with other insured properties that were part of the acquisition project, will no longer pay the more expensive flood insurance premiums, nor will they have their homes and possessions in jeopardy every time it rains.

**CITY OF SHELBY, OHIO
FINAL ACQUISITION AND RESTORATION PROJECTS**

FUNDING SOURCE	PROJECT TOTAL	AWARD	COST SHARE	NUMBER OF PROPERTIES
FEMA – HMGP – DR 1580 <i>(Hazard Mitigation Grant Program)</i>	202,783	147,239	55,544.00 State-16% Local-11.4%	7
FEMA – HMGP – DR 1720	764,245	572,720	191,525.00 State-17.8% Local-7.3%	17
FEMA – HMGP – DR 1720	2,292,385	1,529,946	762,439.00 State-26.7% Local-6.6%	20
FEMA – RFC, FY 08 <i>(Repetitive Flood Claims Program)</i>	279,454	279,454	None Required	2
Utz Properties (Park Funds)	29,965	0	29,965	2
Patton Bldg (NSP Funds) <i>(Neighborhood Stabilization Program)</i>	24,459	18,000	6,459	2
Pavilion (Nature Works) <i>(Ohio Dept. of Natural Resources)</i>	45,000	24,000	21,000	1
TOTAL PROJECT COSTS TO DATE:	3,638,291	2,571,359	1,066,932	51

A total of \$ 3,638,291 was spent on the acquisition portion of the project.

Because of the mitigation work done to reduce flood risks, Shelby, a member of the Community Rating System (CRS), has received a CRS rating of 8, making Shelby property owners eligible for a ten-percent reduction on their flood insurance premiums.

RESIDENTIAL AREA

The much-needed mitigation project pumped up the local economy with acquisition dollars going to the homeowners and funding to local crews to demolish the houses. There were also other financial benefits, for example fees for realtor, movers, and rent for apartment owners just to name a few.

Many of the homeowners remained in the town after their houses were acquired which helped the city maintain the tax base. The city does have tax incentives for remodeling and new construction for both residential and commercial properties; however it's too early to tell how these benefits will increase the city's tax base in the future.

Joseph Gies, project coordinator for the City of Shelby, spearheaded the acquisition and learned a lot during the process. "It was a great deal of work, but I felt satisfaction knowing we took many families out of harm's way," he said.

City Engineer Ray Lenczowski also played a key role in the project. Both he and Joseph will continue to be key players in the future growth of the city.

The green space is still in a special flood hazard area and flooding will still occur, but removing the impacted structures will reduce future major impact in the area. Two homes in this area were not purchased because of local ordinances, so future flooding to those homes might still occur, but there are flood protection measures that could be applied to reduce damages when flooding does occur.



Before



After

Mr. Norris Baker and his wife Susan didn't know about flood insurance or the flooding problem in Shelby when they purchased their house in 1970. After experiencing flooding in 1987, 2007, and 2011, plus worrying every time it rained, they were happy to qualify for the acquisition program.

“Although we hated to lose our house after 41 years we both feel much better now when it rains,” said Mr. Norris. The Norris’ continue to live in the area.

DOWNTOWN

The central business area was also hard hit and after removing several damaged buildings the city was faced with vacant lots in the downtown area.

Understanding that the chance of downtown flooding is very high, the city searched for ways to improve the area under current hazard mitigation and floodplain guidelines.

With limited redevelopment opportunities, city leaders were searching for a way to increase foot traffic near downtown businesses. The concept of a park soon arose, and city leaders began looking for funding. Officials thought a park could be created which would function as both a recreational space and a venue for community events, which they hoped would bring visitors downtown.

The Central Park Master Plan Steering Committee was created, and funding for a Master Plan was provided by the Shelby Park Board, the Friends of the Black Fork, and the Richland County Foundation. The plan included input from the whole community including local residents, city officials, the park board, and others. An engineering company was also consulted to ensure the proposed design would not cause additional flooding.



Current



Proposed park

Phase I, the park, is a Main Street facing square, designed to be a welcoming meeting place, with a fountain, landscaping that provides a relaxing atmosphere, and an area conducive to special events designed to encourage gatherings. A variety of names are being considered, among them, the Black Fork Commons, Shelby Central Park, and others.



Current



Proposed River walk

Future phases will include the Black Fork Corridor, where river edge walking paths, a pedestrian bridge, and reforestation along the waterway will encourage people to enjoy their river.

The Great Lawn will contain amphitheater seating against the upward slope of the area, a stage pad to allow flood waters to flow freely, and more walking and biking paths that tie into the Black Fork Corridor pathways.



Before



Proposed amphitheater

The final stage in the design will be the park road that meanders around the area, with roundabouts, handicapped parking areas, an attractive streetscape, and reforestation of the ridge that elevates the property above the floodplain. While areas of the park that were funded with Federal mitigation dollars are restricted to open space, the park was designed to limit paved areas. The design accommodates this restriction by limiting the paved areas, using permeable materials, and placing them in those portions of the properties that were purchased with non-federal funds.

The \$1 million dollar project design is complete. Work on the park should begin in 2013. The community development director wants to generate interest in the park which should bring in additional tourism dollars to the area. With the help of a local marketing firm, Mayor John hopes to brand the city into a place of positive vibrations.

“We wanted to turn the Blackfork River area from an area that was a source of devastation into a positive resource for our community,” said Mayor Marilyn John.

Flooding in the downtown area is still possible, and all aspects of the park will be built to be “flood resistant.” All structures will comply with the City’s floodplain regulations as well as the deed restrictions for the properties. The idea is to build the features so when a flood event occurs, it is easily cleaned up and they can start moving ahead again.

Some flood resistant elements include 19 retention basins that are located outside the proposed park, in various areas of the town. Within the park, permeable surfaces have been included in the design wherever possible. Every effort has been made to move flood waters quickly through the area, while controlling flood damage downstream by using tactics that allow absorption into the water table rather than having massive amounts of water racing across the surface and further swelling the river.

To further the risk reduction, Shelby officials are working with the Muskingum Watershed Conservancy District (MWCD) to develop additional long-term solutions to mitigate the effects of future flood events. The MWCD, a political subdivision of the State of Ohio, is tasked to develop and implement a plan for flood reduction and water conservation in the 8,000-square-mile Muskingum River Watershed, in which the City of Shelby is located. In 2011, the long-dormant Blackfork Subdistrict was revitalized through a unanimous vote of the MWCD Board of Directors with a focus on development of a plan to control flooding along the Blackfork and the communities in its watershed. This ongoing effort has led to the installation of a high-tech stream gauge in the downtown area in the Blackfork as well as additional stream and precipitation gauges in the area. United States Geological Survey’s (USGS), Ohio Water Science Center, that designed and installed the system, will investigate and develop potential solutions to further mitigate future flood events for the citizens of Shelby and surrounding communities along the Blackfork.

While manufacturing is still the foundation of Shelby’s economy, the support of the downtown businesses has increased residents’ desire to buy locally and has been enhanced by the promise of many events that will be offered at the park.

THE ECONOMICS

This is a town that works together to achieve their goal. The new concept of “whole community” is already engrained into the citizens of Shelby.

By working together, they expect to improve the quality of life in Shelby and experience an upswing in economic growth.

According to the Central Park Master Plan Steering Committee executive summary, “The conceptual design for this park and its subsequent construction is key to the larger issue of the revitalization of Shelby’s downtown. People coming downtown are what the existing businesses need, and are needed to attract future private investment there. We see the creation of a renewed civic space in the Shelby downtown area, with amenities including a walking/biking trail, event pavilion, and amphitheater as the engine that can do it.”

Working with a local marketing firm, Lantz Star Graphics, the city is hoping to rebrand downtown Shelby to reflect a more purposeful environment. New banners, street signs, and other materials are being developed that will carry the message throughout the county and beyond.

What will be the economic outcome for the city? According to Christina Thompson, the newly appointed community and economic development coordinator, the city will build a place for new businesses to thrive and will also increase tourism in the area.

Shelby’s new park will not only enhance the Downtown curb appeal, but the park will provide a multitude of benefits to the community. With the inclusion of the arts and wellness in Shelby’s new park, research has shown that the enhancements will be beneficial in four areas:

- 1) **Social** – Using the open space for community events will build social capital by allowing people of all ages to interact as well as connecting organizations to the community.
- 2) **Wellness** – The open green space, bike trail, and ice rink will encourage wellness in the community. With that, Shelby’s recently restructured Health Department will be focusing more on community wellness activities.
- 3) **Cultural/Cognitive** – Summer concerts, which are held weekly, will be more visible in the new park amphitheater, compared to where the concerts are currently held. This will cultivate the minds of community members.
- 4) **Economic** – Events in the Downtown Shelby park will offer convenience to residents and visitors, so they can easily access and patronize Downtown businesses.

Although unable to put a dollar figure on the anticipated economic growth for the city, Christina and other city officials hope to bring revenue into the city through increased tourism and small business growth and development.

The long-term outcome of the city’s mitigation efforts will definitely be a boost to the economy in Shelby, Ohio, and its citizens for years to come.

SUMMARY

FEMA's hazard mitigation efforts in Ohio and around the country are the cornerstone to helping communities avoid future disasters. Cities such as Shelby can benefit in many ways from hazard mitigation efforts. They can reduce future damage to homes and businesses and they can help grow their economy by being creative in building parks and recreational areas that attract tourism.

Their efforts are to be commended and should be a vision for other communities across the country experiencing reoccurring disasters.

REFERENCES:

Shelby Downtown Park report

Central Park Master Plan Steering Committee report

Photos provided by the City of Shelby

Ohio Emergency Management Agency

Princeton study, "How the Arts Impact Communities": The arts revitalize neighborhoods and promote economic prosperity (Costello 1998; SCDCAC 2001; Stanziola 1999; Walesh 2001).

Participation in the arts improves physical and psychological well-being (Baklien 2000; Ball and Keating 2002; Bygren, Konlaan and Johansson 1996; Turner and Senior 2000).

The arts provide a catalyst for the creation of social capital and the attainment of important community goals (Goss 2000; Matarasso 1997; Williams 1995).

CASE STUDY TEAM:

Leo Skinner, FEMA, DR-4077-OH, External Affairs Officer: Harry.Skinner@fema.dhs.gov

Helen R. DuBois, FEMA, DR-4077-OH, Hazard Mitigation Director: Helen.dubois@fema.dhs.gov

Karen L. Townley, FEMA, DR-4077-OH, Hazard Mitigation Specialist: Karen.townley@fema.dhs.gov

Steven Ferryman, CFM, State Hazard Mitigation Officer - Ohio Emergency Management Agency, saferryman@dps.state.oh.us

Sharon Rolf, Mitigation Specialist, Ohio Emergency Management Agency, srolf@dps.state.oh.us

THANKS TO:

Marilyn S. John, Mayor, City of Shelby, marilynjohn@shelbyohio.org

Joseph C. Gies, Project Coordinator, City of Shelby, joegies@shelbyohio.org

Ray Lenczowski, City Engineer, City of Shelby, raylenczowski@shelbyohio.org

Christina Thompson, Community & Economic Development Coordinator, City of Shelby, christinathompson@shelbyohio.org