FLOODPLAIN BUYOUTS TO HELP ACHIEVE RESILIENCE

Steve Ferryman, CFM
Mitigation Branch Chief
Ohio Emergency Management Agency

September 20-21, 2017
Ohio EMA Mitigation Branch

The mission of the Mitigation Branch is to integrate hazard mitigation principles in a variety of ways to make Ohio communities more sustainable and citizens more resilient in the face of future disaster events.

- Develop and maintain the SHMP
- Assist Ohio communities in local mitigation planning efforts
- Administer FEMAs Hazard Mitigation Assistance grant programs
- Chair the State Hazard Mitigation Team
Disaster Response

Damage-Repair Cycle

DAMAGE → REPAIR

DAMAGE → REPAIR
A Solution: Hazard Mitigation

Break-the-Cycle
What is Hazard Mitigation?

- Any sustained action taken to reduce long-term risk to people and property from hazards and their effects.
- Acquisition/demolition
- Elevation
- Storm water infrastructure
- Flood insurance
- Tornado safe rooms
- Building, zoning and floodplain management codes
- Wetland and riparian area protection
Current Local Hazard Mitigation Plan Status

• Foundation of mitigation
• Hazard Identification and Risk Assessment
• Identifies and evaluates mitigations actions
• Must be updated and approved by FEMA every 5 years
Unified Hazard Mitigation Assistance

- Pre-disaster mitigation grant programs:
  - Pre-Disaster Mitigation (PDM)
  - Flood Mitigation Assistance (FMA)
- Post-disaster mitigation grant:
  - Hazard Mitigation Grant Program (HMGP)
Pre-Disaster Mitigation (PDM)

- $90 million
- Cost share – 75% Federal/25% non-Federal
- Priority - mitigation planning and non-flood projects
- Nationally competitive
- Local mitigation plan update applications are priority
- State can submit a maximum of 9 competitive project applications
  - Project priorities are: 1) non-flood hazard mitigation projects, 2) storm water and 3) acquisition/demolition and elevation projects
Flood Mitigation Assistance (FMA)

- $160 million
- Cost share – SRL (100%), RL (90%), (75/25)
- Properties must be insured
- FEMA priorities for funding:
  - Advance Assistance
  - Community Flood Mitigation Projects
  - SRL and RL
- Nationally competitive
• Cost effective
• EHP review
• 0 – 25% non-Federal cost share requirement
• Projects must be consistent with local and state mitigation plans
• Community must participate and be in good standing with NFIP
2017 HMA Application Timeline

• July – HMA Notice of Funding Opportunity issued by FEMA
• August 4 – Letters of Intent to Ohio EMA
• September 29 – Applications due to Ohio EMA through eGrants
• November 1 – Applications due to FEMA through eGrants
• January 30 – FEMA notifies states of projects selected for further review
• April 2018 – FEMA begins to award projects
Open Space Deed Restrictions

• Section 404 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act
  – Dedicated and maintained in perpetuity for a use that is compatible with open space, recreational, or wetlands management
  – No new structures except: 1) a public facility open on all sides, 2) a rest room, or 3) a structure approved by the Director in writing, prior to construction
  – Future application for disaster assistance from any Federal entity is prohibited
Code of Federal Regulations

- 44 CFR Part 80 – Property Acquisition and Relocation for Open Space
  - Section 80.13
    - Signed model deed restrictions
    - Voluntary participation form
    - Assurance that property is not part of planned project that is not consistent with open space
    - Documentation of consultation with USACE and ODOT
GENERAL WARRANTY DEED

This deed is made this 22\textsuperscript{nd} day of July, 2009, by and between Mary E. Croy, unmarried, (Grantor) and the Village of Ottawa, Putnam County, Ohio, whose tax mailing address is 136 N. Oak Street, Ottawa, Ohio 45875, its successors and permitted assigns (Grantee), for the following described real property:

Situated in the Village of Ottawa, County of Putnam and State of Ohio:
The South two-thirds (2/3) of Inlot Number Four Hundred Forty One (441) in said Village.

Tax Parcel No. 32-030090
Prior: Deed Volume 216 Page 40 and Official Record Volume 155 Page 217

The Grantor releases and quitclaims unto the Grantee, all right, title and interest which the Grantor may have in the banks, bed and waters opposite to or fronting upon said land, and in any alleys, roads, streets, way, strips, gores and railroad rights-of-way abutting or adjoining land, and in any means of egress appurtenant thereto.

This conveyance is expressly subject to rights outstanding in third parties for existing easements for public roads and highways, public utilities, railroads and pipelines.

In reference to the property or properties ("Property") conveyed by the Deed between Mary E. Croy participating in the federally-assisted acquisition project ("the Grantor") and the Village of Ottawa, Putnam County, its successors and assigns ("the Grantee").

WHEREAS, the Robert T. Stafford Disaster Relief and Emergency Assistance Act ("The Stafford Act"), 42 USC § 5121 et seq., identifies the use of disaster relief funds under § 5170c, the Hazard Mitigation Grant Program ("HMGP"), for community based hazard mitigation activities, including funding for the acquisition of property in the floodplain and removal of associated structures from the floodplain;

WHEREAS, 42 USC 5170c provides a process for a Community, through the State, to apply for federal funds to be used to acquire interests in property, including the purchase of structures in the floodplain, to demolish and/or remove the buildings, and to maintain the use of the Property as open space in perpetuity;
• 44 CFR Part 80
  – Section 80.19 Land Use and Oversight
    • (a) Open space requirements. The property shall be dedicated and maintained in perpetuity as open space for the conservation of natural floodplain functions.
    • (1) These uses may include: Parks for outdoor recreational activities; wetlands management; nature reserves, cultivation; grazing; camping (except where adequate warning time is not available to allow evacuation); unimproved, unpaved parking lots; buffer zones; and other uses FEMA determines compatible
Code of Federal Regulations

• 44 CFR Part 80
  – Section 80.19 Land Use and Oversight
    • (a)(1)(i) Allowable uses generally do not include: Walled buildings, levees, dikes, or floodwalls, paved roads, highways, bridges, cemeteries, landfills, storage of hazardous or toxic materials, above or below ground pumping and switching stations, above or below ground storage tanks, paved parking, off-site fill or other uses that obstruct the natural and beneficial functions of the floodplain.
    • (b) Subsequent transfer.
      – Requires written approval of FEMA Region V Administrator
      – Only to public entity or qualified conservation organization
Code of Federal Regulations

• 44 CFR Part 80
  – Section 80.19 Land Use and Oversight
    • (c) Inspection.
    • (d) Monitoring and reporting.
    • (e) Enforcement.
      – 60 days to achieve compliance
      – Failure to do so could result in:
        » Court action
        » Withholding FEMA mitigation assistance from the state and sub-grantee
        » Requiring transfer of title
Ohio EMA Home | Contacts | Register | Login

Ohio.gov Department of Public Safety

Mitigation Home | Grants | Hazards | Planning | Mitigation Projects | Reports | FAQ's | Links

ODPS Ohio Emergency Management Agency Mitigation Branch

**Properties Mitigated: 1,461 | Damages Prevented Through Mitigation: $17,735,535.00**

The mission of the Mitigation Branch is to integrate hazard mitigation principles in a variety of ways to make Ohio communities more sustainable and citizens more resilient in the face of future disaster events. This mission is implemented through projects and planning efforts to reduce the cost of damage caused by disasters and minimize the impact on citizens, businesses, and properties. The Mitigation Branch maintains the State’s All Hazard Mitigation Plan, coordinates the State Hazard Mitigation Team (SHMT), is the state entity responsible for implementing FEMA’s hazard mitigation programs, and assists Ohio communities in their mitigation planning efforts.

State Hazard Analysis Resource and Planning Portal

**SHARPP Login**

User Name: 
Password: 
Log In

**Mitigation News**

01.11.2017 | Ohio EMA Now Accepting Safe Room Applications
02.22.2016 | Hazard Mitigation Assistance Grant Funding Available
01.07.2015 | Ohio Safe Room Rebate Program Accepting Applications!
01.01.2014 | Ohio Safe Room Rebate Program Open!

https://sharpp.dps.ohio.gov/ohiosharpmp/
# Open Space Monitoring

## Ohio Emergency Management Agency

**Acquired Structures Monitored by County:** 9/18/2017 1:44:34 PM

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The City of North Royalton – Riparian Restoration & Riffle Pool

2 Structures acquired and demolished under HMGP 1580.
The City of North Royalton – Riparian Restoration & Riffle Pool
The City of North Royalton – Riparian Restoration & Riffle Pool
The City of North Royalton – Riparian Restoration & Riffle Pool

Plantings done by the West Creek Conservancy and Cuyahoga Soil and Water.
The City of North Royalton – Riparian Restoration & Riffle Pool

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Plantings done by the West Creek Conservancy and Cuyahoga Soil and Water.
The City of Painesville - Gristmill & Millstone Condos
The City of Painesville - Gristmill & Millstone Condos

The condos were acquired and demolished under HMGP 1656 and FMA 2007

Record Flooding from the Grand River in 2006
The City of Painesville - Gristmill & Millstone Condos
The City of Painesville - Gristmill & Millstone Condos
The City of Painesville - Gristmill & Millstone Condos

“We took something that was pretty much a natural disaster — (the housing) probably never should have been built and we created a place where people can enjoy nature and learn about floodplain management.” - Painesville Recreation and Public Lands Director Lee J. Homyock.
The park offers close to a mile of trails, between a hardened path and wood-chip walkways meandering among wetlands.
The City of Fairfield - Creekside Park

21 structures were acquired and demolished under PDM 2003 to create Creekside Park.
The City of Fairfield - Creekside Park

Honor Grove & Boys
Scout’s Overlook
The City of Fairfield - Creekside Park

Honor Grove planned at Creekside Park

The City of Fairfield and the Fairfield City Council have approved the concept of a "Honor Grove" at Creekside Park. The honor grove will feature 20 trees, each dedicated to a veteran of the military or law enforcement. The trees will be planted in a circle, creating a peaceful and solemn landscape. The grove will be a tribute to the sacrifices made by these heroes.

Fun is one app away!

Download the Community Arts Center App and scan this QR code on your smartphone to go directly to the instructions page on the City’s website or go to www.fairfieildcity.org/arts/cac for more information. The app is available for most devices.

Inside:
- Creeks ready for winter. You can try: 3
- Flea markets now open until January 1: 2
- Livingston Park now open: 2
- New police calls taking the streets: 3
- Look for the Firefighter of the Year: 3

Ohio Department of Public Safety
The Village of Kimbolton – Tractor Pull

6 structures acquired and demolished under HMGP 1580.
The Village of Kimbolton – Tractor Pull
The City of Cuyahoga Falls – Rain Garden

3 structures acquired and demolished under HMGP 1519.
The City of Cuyahoga Falls – Rain Garden

A Cuyahoga Falls Community Conservation Rainscape

The Problem

Impervious Surfaces

Impervious surfaces such as streets, sidewalks, and parking areas do not allow water to infiltrate into the ground. As the land surface becomes more urban, the amount of “runoff” or water flowing over land increases. Rainfall flows quickly across impervious surfaces, picking up pollutants such as lawn and grass clippings, pesticides, fertilizers, and other types of residue. In most urban settings, this rain-off flows into storm drains and eventually reaches wetlands, rivers, or lakes. Rapid runoff also increases the potential for flooding and erosion.

Rain Garden

In general, a Rain Garden is an infiltration technique – water is captured in a depression that features native plantings, and the water has a chance to slowly filter into the ground rather than going into the storm sewer. It is an accepted way to reduce runoff source pollution and protect biota and streams.

In specific, there are 2 types of Rain Gardens. The first is a home-grown Rain Garden. This type is small in scale (typically under 100 Square Feet), uses native soils, and utilizes only the rain runoff from a single family home or driveway. The depression depth is only 6”, and usually doesn’t need an overflow drain.

The second type of Rain Garden involves creating a flood retention BMP (Best Management Practice) for multiple home or parking lots. This engineered solution involves soil amendments, overflow drainage, and can be much larger (over 800 Square Feet) or be a complex of small gardens. The Cuyahoga Falls Rain Garden is this second type.

This over 6,000 Square Foot complex of rain gardens helps to soak feeding for a drainage area that is over 3 acres. Two feet of specially formulated soil was placed along with a variety of specifically chosen plant material.

The Benefits

- Rain Gardens, pervious concrete and native vegetation techniques improve water quality.
- Rain Gardens, pervious concrete and native vegetation techniques reduce erosion and remove pollutants.
- Rain Gardens provide flood water storage.
- Native plants provide habitat for wildlife.
- Solar powered floodlights use renewable energy that cuts down on carbon CO2 emissions.
- Pervious concrete can be used for driveways and parking lots.
- Rain Gardens, pervious concrete and native vegetation techniques reduce runoff that could otherwise contaminate our streams, lakes and rivers.

The Toolbox of Solutions

Pervious Concrete

It looks like a nice puffy and looks like a sea. In pervious concrete, carefully controlled amounts of water and cementitious materials are used to create a paste that forms a thick coating around aggregate particles. A pervious concrete mixture contains little or no sand, creating a substantial void content.

Using sufficient paste to cast and bind the aggregate particles together creates a system of highly permeable, interconnected voids that drain quickly. The path is designed with sections of permeable concrete absorbing typical concrete. This illustrates the differences in texture, color, and how the different materials need to rain-off.

To find more on Rain Gardens, or how to create your own, please contact the Office of the Service Director at (330) 971-8240.

Plant Selection

Native or adaptable plant material also has the potential to improve water quality. These varieties require fewer nutrients (commercial fertilizers that leach into the groundwater) than hybrid plants and non-native species. They can also improve wildlife habitat as they have evolved with the native bird and butterfly species. This project uses mostly native or adaptable plant material.

Solar Powered Lighting

With the high cost of fossil fuels rising everyday, alternative energy sources are always being sought. Not only do solar-powered outdoor lights save energy, but they also save the hassle of digging ditches, laying wires, and connecting them to an electric grid. Solar lights use photovoltaic cells that harness the power of the sun to create energy, which is then stored by rechargeable batteries until it’s called upon to power the LED bulbs at night.
The City of Cuyahoga Falls – Rain Garden
The City of Shelby - Black Fork Commons

7 structures were acquired and demolished under HMGP 1850.
The City of Shelby - Black Fork Commons
“We wanted to turn the Black Fork River area from an area that was a source of devastation into a positive resource for our community,” said Mayor Marilyn John.
The City of Shelby - Black Fork Commons
The City of Shelby - Black Fork Commons
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Questions?