



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 FEMA's Hazard Mitigation Assistance grant programs
- Chair the State Hazard Mitigation Team

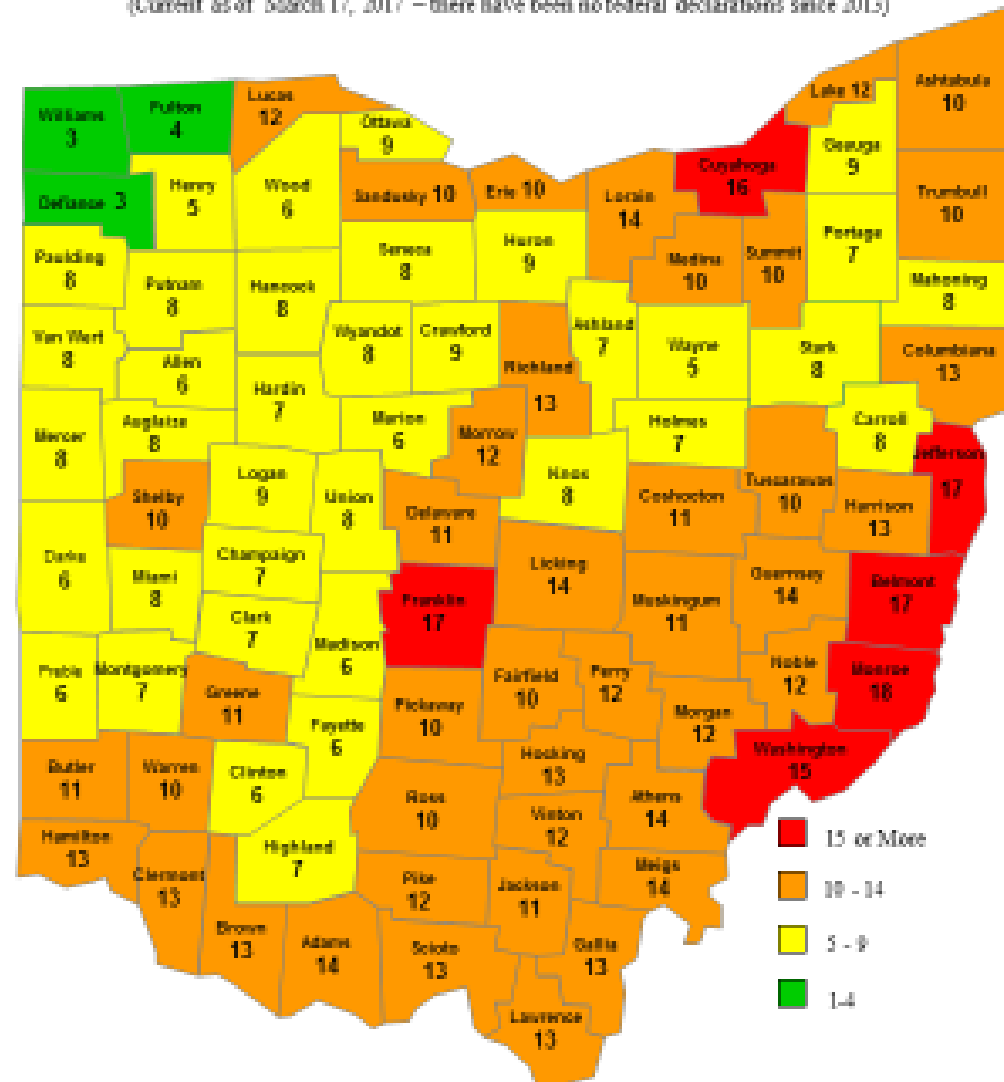


OHIO is Disaster Prone!

OHIO PRESIDENTIAL DISASTER DECLARATIONS

(Includes all FEMA Major and Emergency Declarations from 1964 – 2013)

(Current as of March 17, 2017 – there have been no federal declarations since 2013)





Disaster Response

Damage-Repair Cycle

DAMAGE

REPAIR

A Solution: Hazard Mitigation

Break-the-Cycle



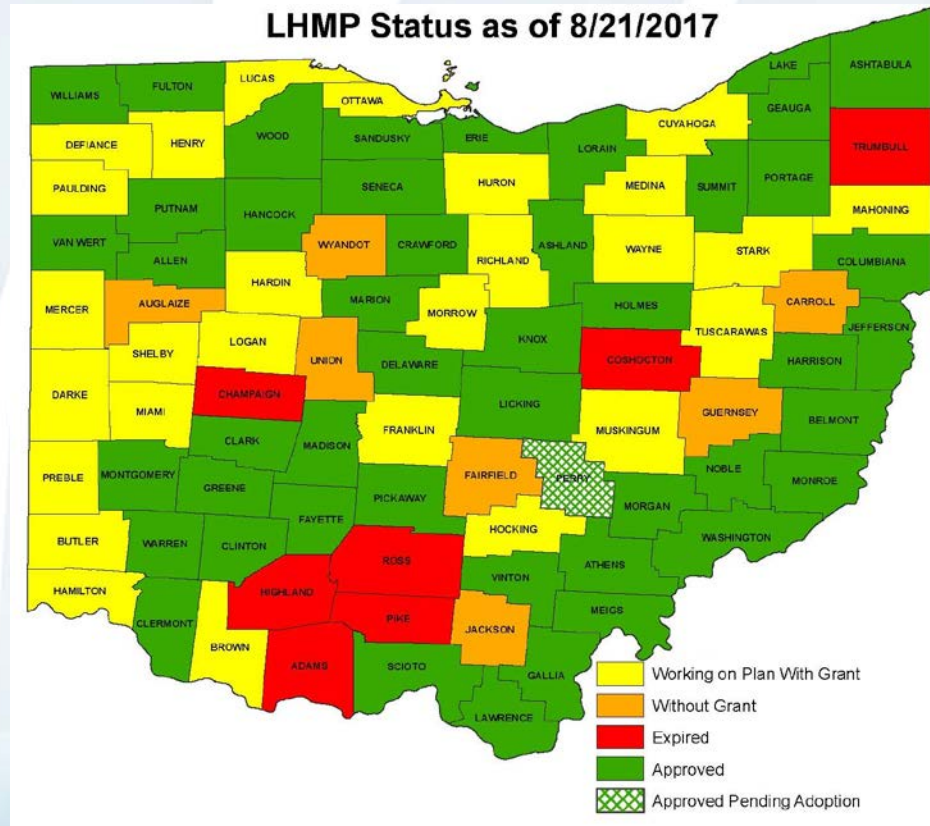


What is Hazard Mitigation?

- 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)



Hazard Mitigation Assistance Guidance

Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program

February 27, 2015



FEMA

Federal Emergency Management Agency
Department of Homeland Security
500 C Street, S.W.
Washington, DC 20472



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



FEMA HMA Programs

- 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



PUTNAM COUNTY, OHIO
TRANSFERRED

DATE July 23 2009
Robert L. Bosworth, Auditor
By RL Deputy

This Conveyance has been
examined and the Grantor has
complied with Section 319.202
of the Revised Code.
FEE \$ 0
EXEMPT 304.00
Robert L. Bosworth, County Auditor

INSTRUMENT # 200900005009
OR BOOK 606 PAGES 470-474
FILED FOR RECORD IN
PUTNAM COUNTY, OHIO
CATHY RECKER, RECORDER
RECORDED 07/23/09 AT 11:23:10 AM
WARRANTY DEED, \$62.00

GENERAL WARRANTY DEED

This deed is made this 22nd 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;

Code of Federal Regulations

- 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



State Hazard Analysis Resource and Planning Portal (SHARPP)

[Ohio EMA Home](#) | [Contacts](#) | [Register](#) | [Login](#)

☒ search

[Mitigation Home](#) | [Grants](#) | [Hazards](#) | [Planning](#) | [Mitigation Projects](#) | [Reports](#) | [FAQ's](#) | [Links](#)



ODPS Ohio Emergency Management Agency **Mitigation Branch**

Properties Mitigated: 1461 | 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!

Steel Room



<https://sharpp.dps.ohio.gov/ohiosharpp/>



Open Space Monitoring

Browser address bar: <https://sharpp.dps.ohio.gov/sharppreports>

Page title: The Gateway

Page URL: sharpp.dps.ohio.gov

Page Content: Ohio EMA SHARPP Reports

File Edit View Favorites Tools Help



OHIO EMERGENCY MANAGEMENT AGENCY

ACQUIRED STRUCTURES MONITORED BY COUNTY : 9/18/2017 1:44:34 PM

County: **Cuyahoga**

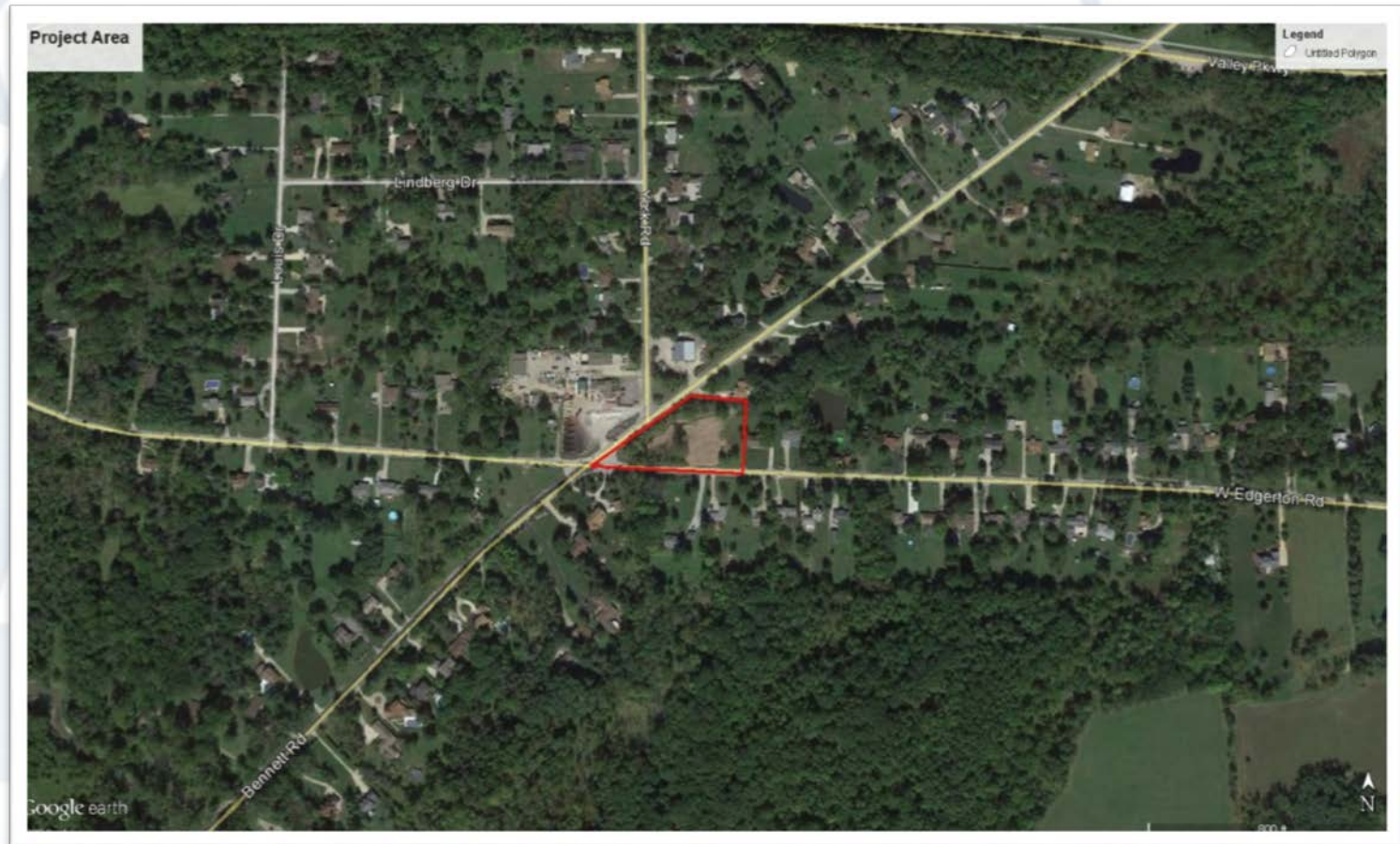
Project No.	County	Name	Address	Parcel Number	City	State	Zip	Lat	Long	Final Inspection Date	Final Inspection By
1519.14R	Cuyahoga	North Royalton Acquisition	7912 Abbey Rd	481-02-029	North Royalton	OH	44133	41.35055	-81.776798	10/28/2015	Mark Schmitzer, City Engineer, North Royalton
1519.14R	Cuyahoga	North Royalton Acquisition	7936 Abbey Rd	481-02-030	North Royalton	OH	44133	41.34992	-81.776923	10/28/2015	Mark Schmitzer, City Engineer, North Royalton
1519.14R	Cuyahoga	North Royalton Acquisition	7924 Abbey Rd	481-02-031	North Royalton	OH	44133	41.350231	-81.776862	10/28/2015	Mark Schmitzer, City Engineer, North Royalton
1519.14R	Cuyahoga	North Royalton Acquisition	5212 Akins Rd	481-02-029	North Royalton	OH	44133	41.35055	-81.776798	10/28/2015	Mark Schmitzer, City Engineer, North Royalton

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Taskbar icons: File Explorer, Internet Explorer, Microsoft Word, Outlook, Synchro, PowerPoint, etc.

The City of North Royalton – Riparian Restoration & Riffle Pool

2 Structures
acquired and
demolished
under HMGP
1580.

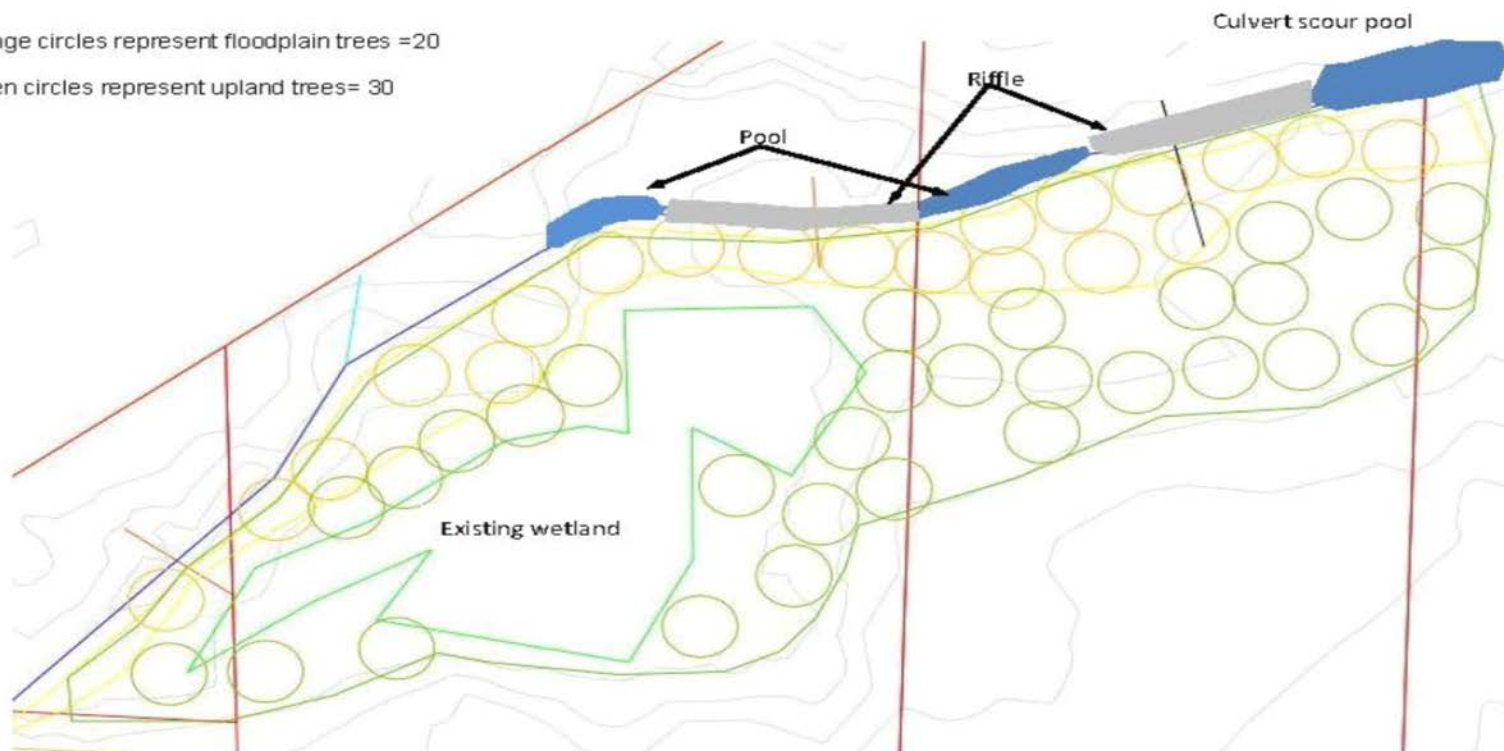


The City of North Royalton – Riparian Restoration & Riffle Pool

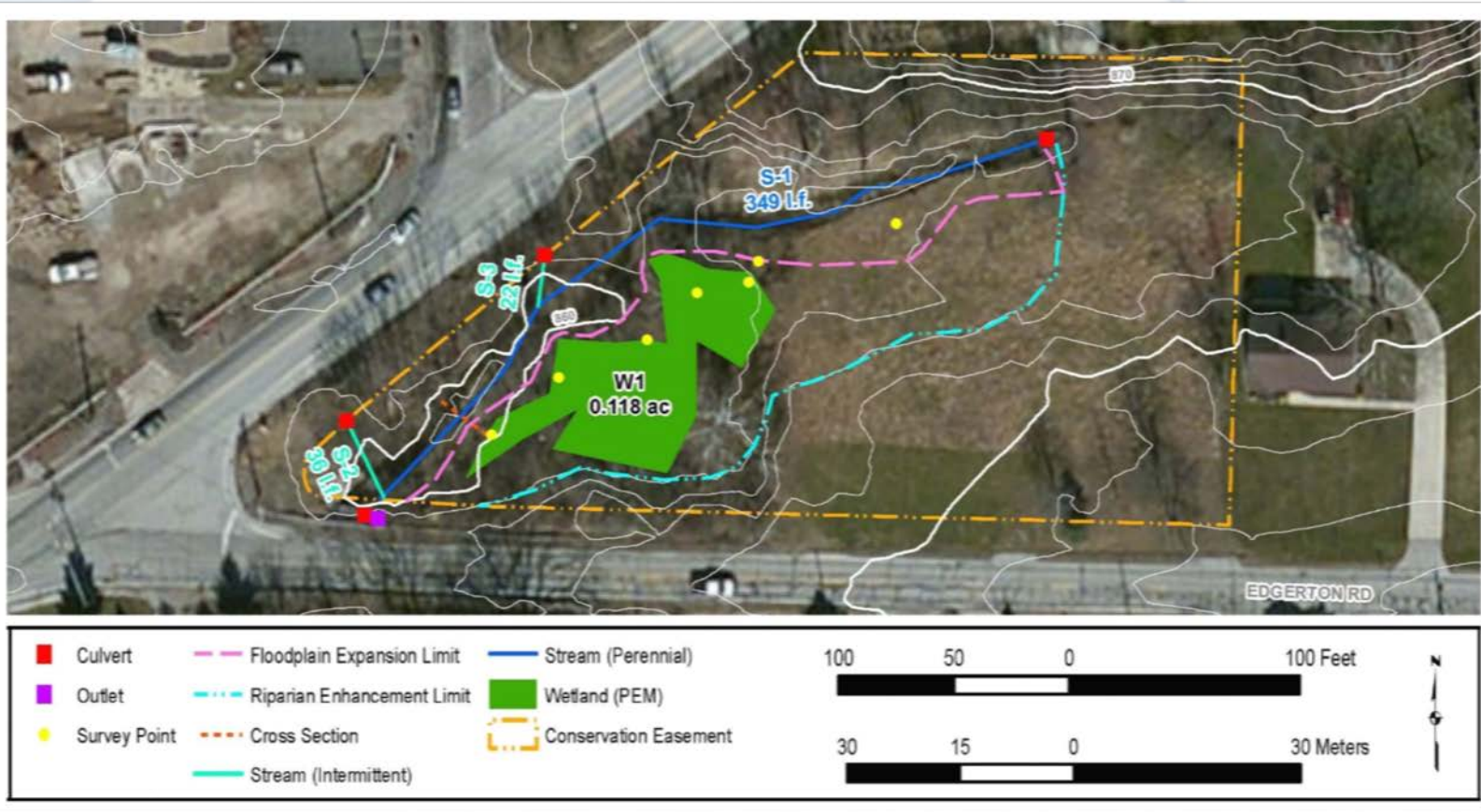
Conceptual Tree Planting and Riffle-Pool Restoration

Orange circles represent floodplain trees = 20

Green circles represent upland trees = 30



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



Plantings done by the West Creek Conservancy and Cuyahoga
Soil and Water.



The City of North Royalton – Riparian Restoration & Riffle Pool



Plantings done by the West Creek Conservancy and Cuyahoga Soil and Water.



The City of Painesville - Gristmill & Millstone Condos

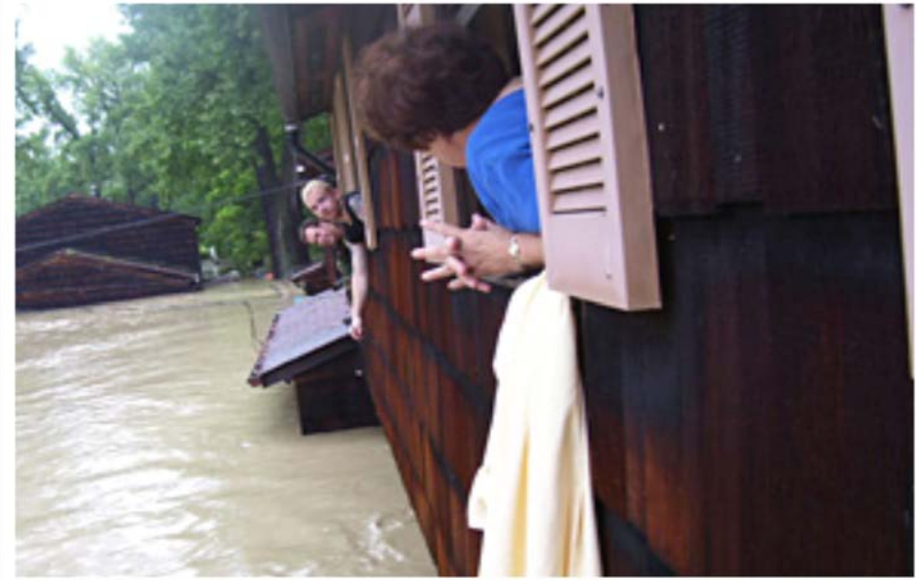


The City of Painesville - Gristmill & Millstone Condos

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



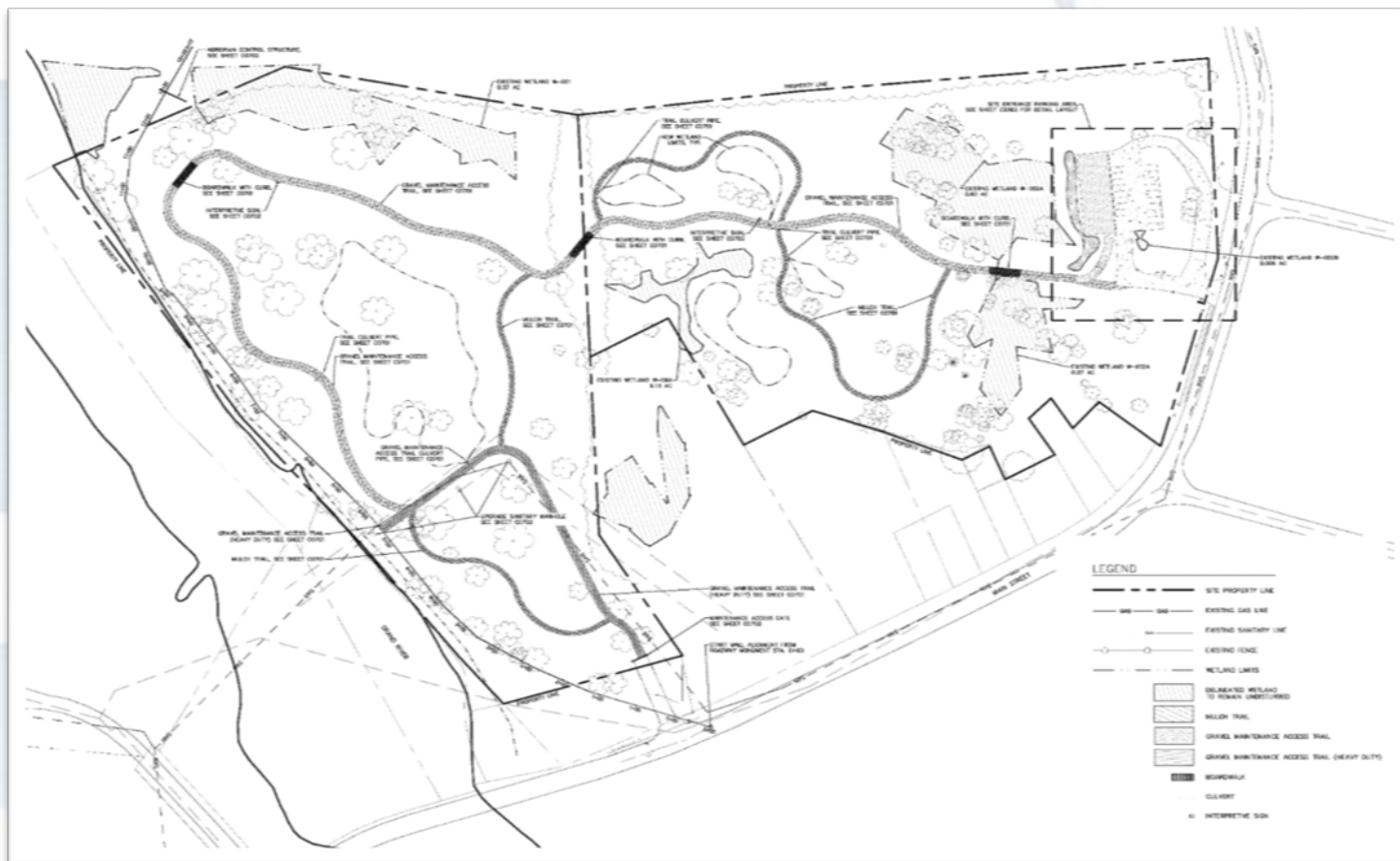
The City of Painesville - Gristmill & Millstone Condos



“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.

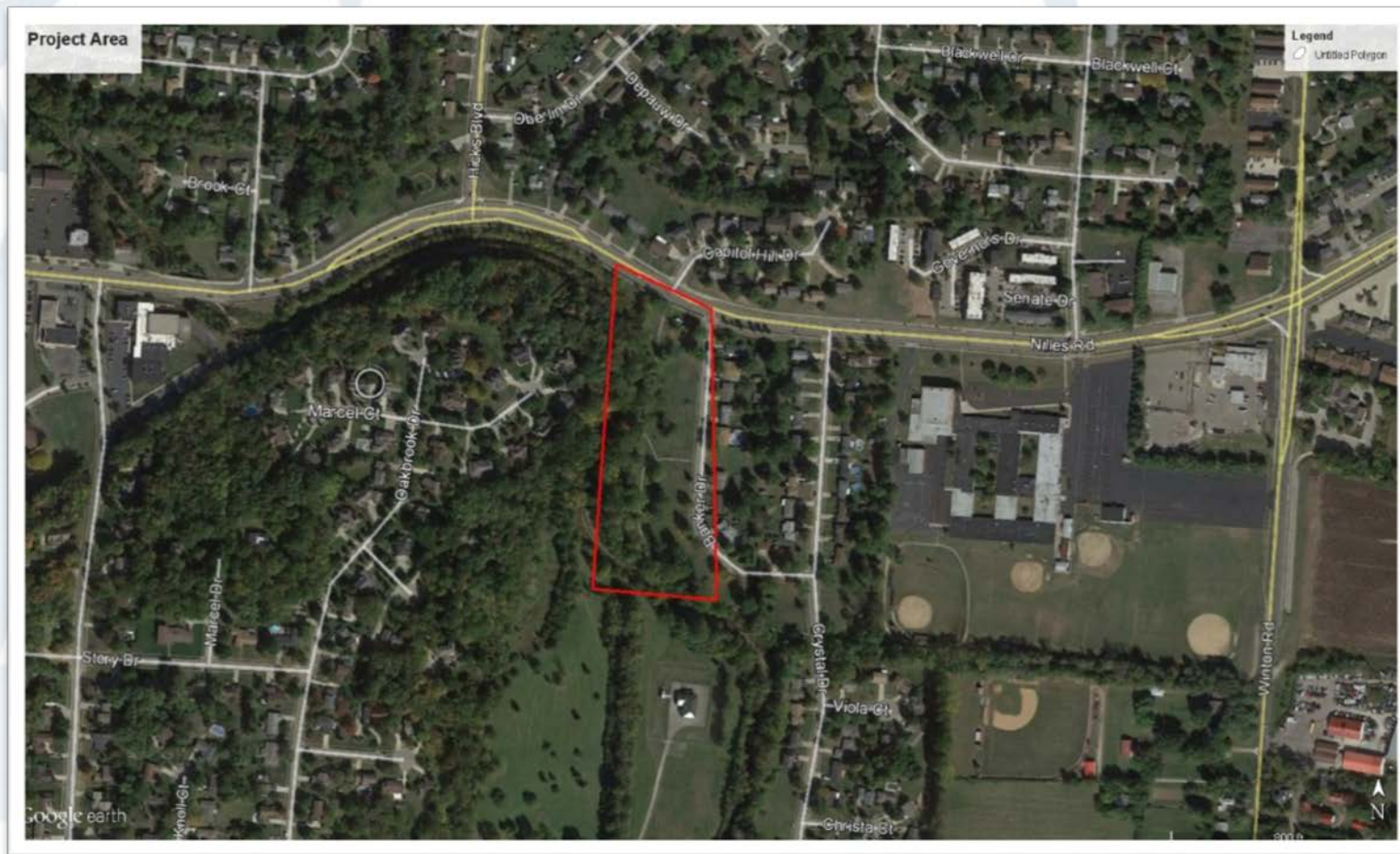
The City of Painesville - Gristmill & Millstone Condos

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

December 2013
Business Booster
Recreation Programs

FAIRFIELD FLYER
A Publication of the City of Fairfield, Ohio
www.fairfield-city.org

Honor Grove planned at Creekside Park

Fairfield's newest park at Pleasant Drive and Niles Road will soon host a grove of trees that can be purchased and planted to honor a loved one, living or deceased. The future arboretum, to be known as Honor Grove at Creekside Park, was created when federal and state grants allowed homes to be removed from flood-prone areas along Pleasant Run Creek.

Honor Grove will evolve over time into a professionally designed and horticulturally superior park, according to David Coltrane, President of Fairfield's Environmental Commission, which has planned the development. As many as 116 trees will become part of the arboretum, which will receive new plantings each spring and fall as trees are purchased. Families will be notified when a planting will occur so that they may participate.

The purchases can be arranged through the Parks and Recreation Department's Living Legacy Tree Program, which offers three levels of contributions, depending on the tree species and size selected. Contribution levels will be \$300, \$450 and \$600. If desired, donors can designate an amount and allow the Parks Department to select an appropriate tree for its future location.

A centrally located 30-inch by 24-inch cast bronze plaque will list the tree's species and the person in whose honor the tree was planted.

Honor Grove at Creekside Park already offers a serene setting, including an overlook of Pleasant Run Creek and a walkway designed with porous materials to aid drainage.

In making the announcement of the Honor Grove at Creekside Park, the Fairfield Environmental Commission provided special recognition to Jim Monag of Lakeview Nurseries for his volunteer efforts in planning the landscape design and designating the tree selections that would date in the future arboretum.

For information about purchasing a tree for the Honor Grove, call the Fairfield Parks and Recreation Department at 867-5348.

The Fairfield Environmental Commission is comprised of seven volunteer members: Sherita Craig, Greg Lofgren, Betty Moritz, Tom Mack, Mike Thomas and Bruce Ulrich. David Coltrane is the Commission's chairperson.

Fun is one app away!

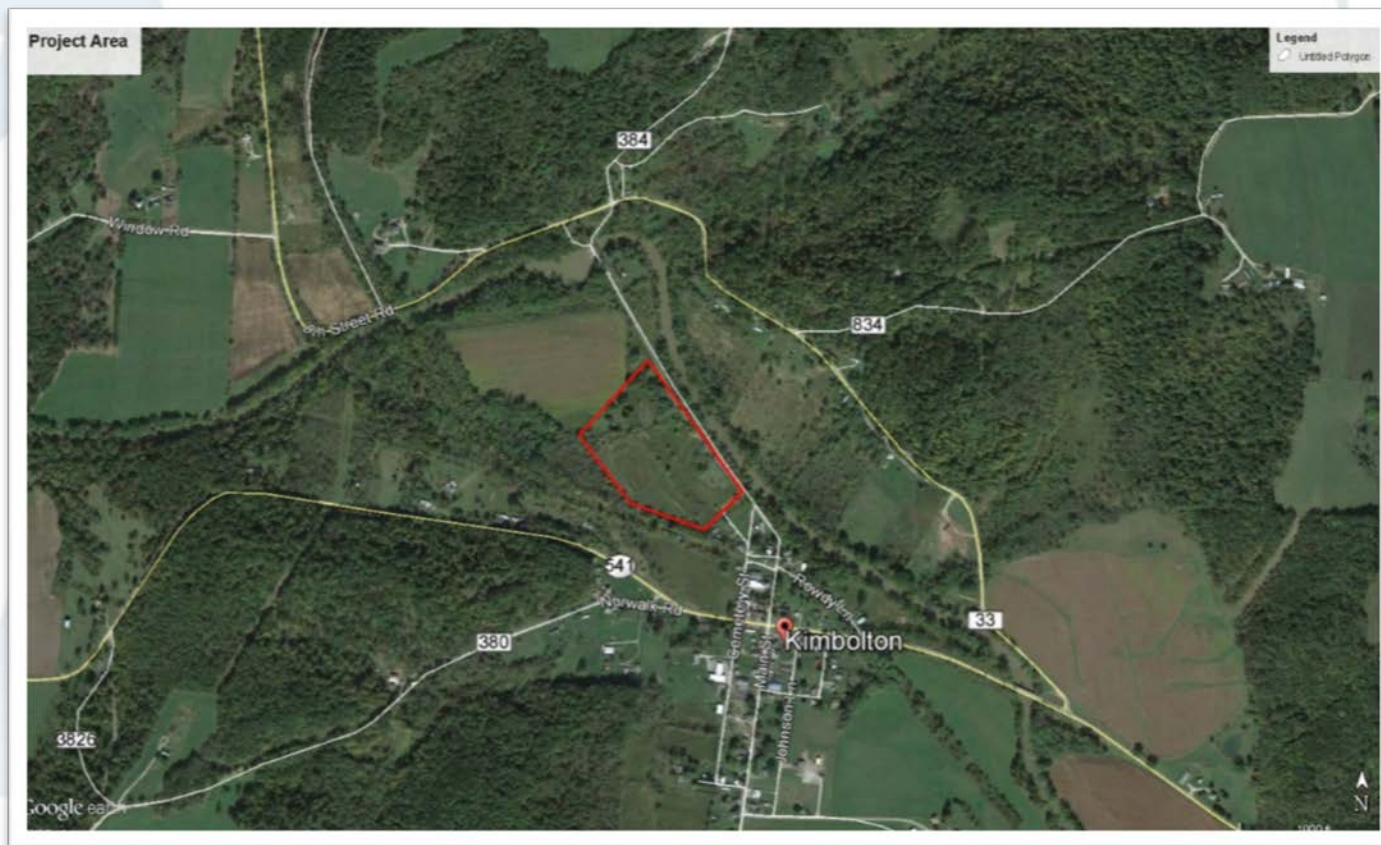
Download the Community Arts Center App, just scan this QR code on your smartphone to go directly to the instructions page on the City's website, or go to www.fairfield-city.org/cac/mobile.cfm on your phone's browser. Download links or instructions are available for most devices.

Inside

Crews ready for winter. You can help 2
Leaf pick-ups continue until January 3 2
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New police units hitting the streets 33
Look who is the Firefighter of the Year 35



The Village of Kimbolton – Tractor Pull

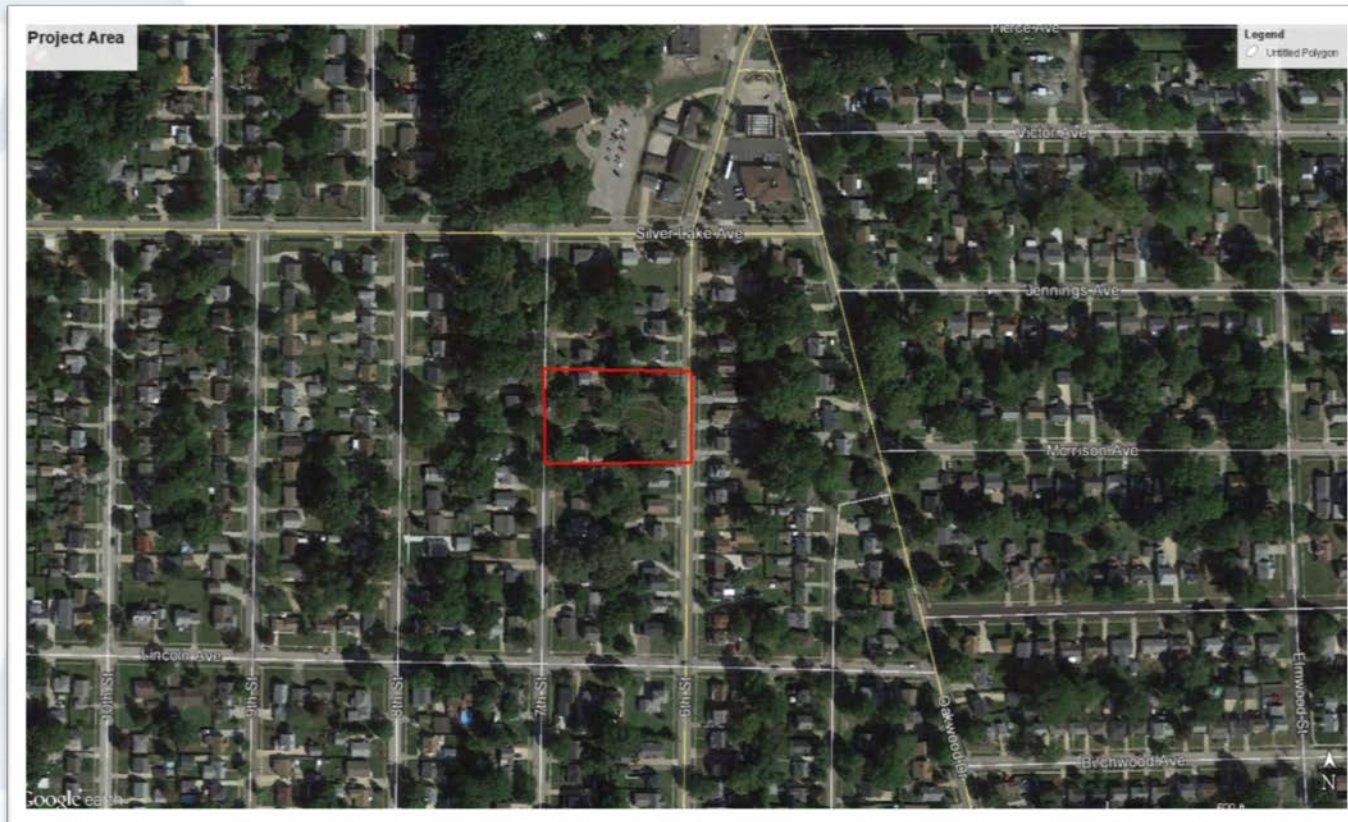


6 structures
acquired and
demolished
under HMGP
1580.

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

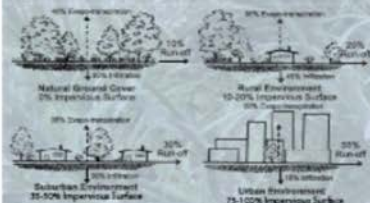
A Cuyahoga Falls Community Conservation Rainscape

The Problem

Impervious Surfaces

Impervious surfaces such as streets, sidewalks and parking areas do not allow water to infiltrate into the ground. The figure below shows that as the land surface becomes more urban, the amount of "runoff" or "water flowing over land" increases.

Runoff flows quickly across impervious surfaces, picking up pollutants such as leaves and grass clippings, pesticides, fertilizers, gas, oil, and other types of residue. In most urban settings, this runoff flows into storm drains and eventually reaches wetlands, rivers, or lakes. Rapid runoff also increases the potential for flooding and erosion.



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 lighted bollards use renewable energy that cuts down on costly 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.



Don L. Bower, Mayor
2008
Partnership of State, County, Multisector, Municipal, National, and International Organizations of Conservation and Water Programs

The Toolbox of Solutions

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 nonpoint source pollution and protect our lakes and streams.

In specific, there are 2 types of Rain Gardens. The first is a homeowner's Rain Garden. This type is small in scale (typically under 800 Square Feet), uses on-site soils, and absorbs only the 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 reduction BMP (Best Management Practice) for multiple homes or parking lots. This engineered solution involves soil amendments, over flow 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 solve flooding 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.

Plant Selection

Native or adaptive 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 adaptive 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 you 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.



Pervious Concrete

It looks like a rice crispy treat and looks like a sieve. 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 coat and bind the aggregate particles together creates a system of highly permeable, interconnected voids that drains quickly. The path is designed with sections of pervious concrete abutting typical concrete. This illustrates the difference in texture, color, and how the different material types react to runoff.

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



The City of Cuyahoga Falls – Rain Garden



The City of Shelby - Black Fork Commons









7 structures
were acquired
and
demolished
under HMGP
1850.

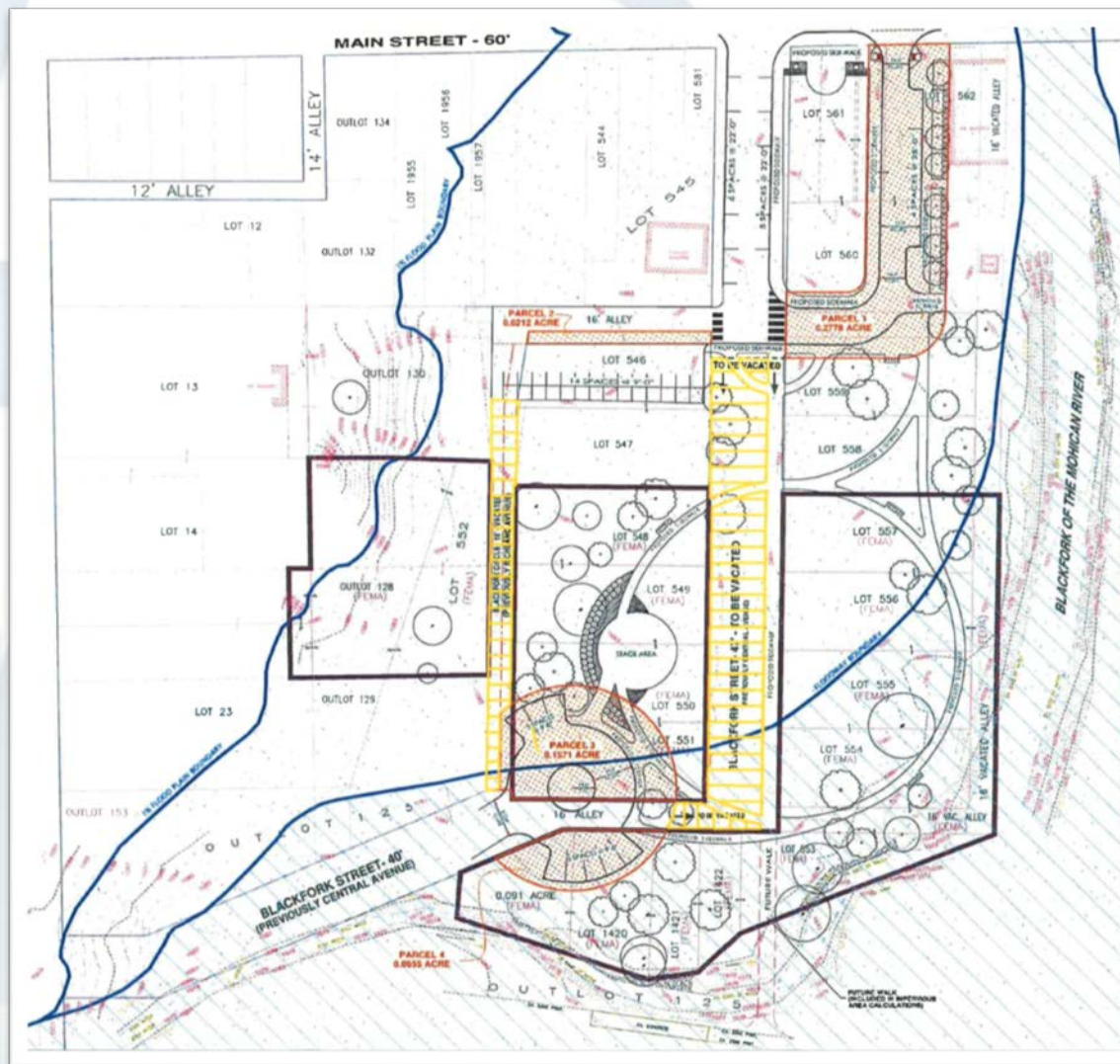
The City of Shelby - Black Fork Commons

IMPERVIOUS AREAS WITHIN LOTS PURCHASED WITH MITIGATION GRANTS

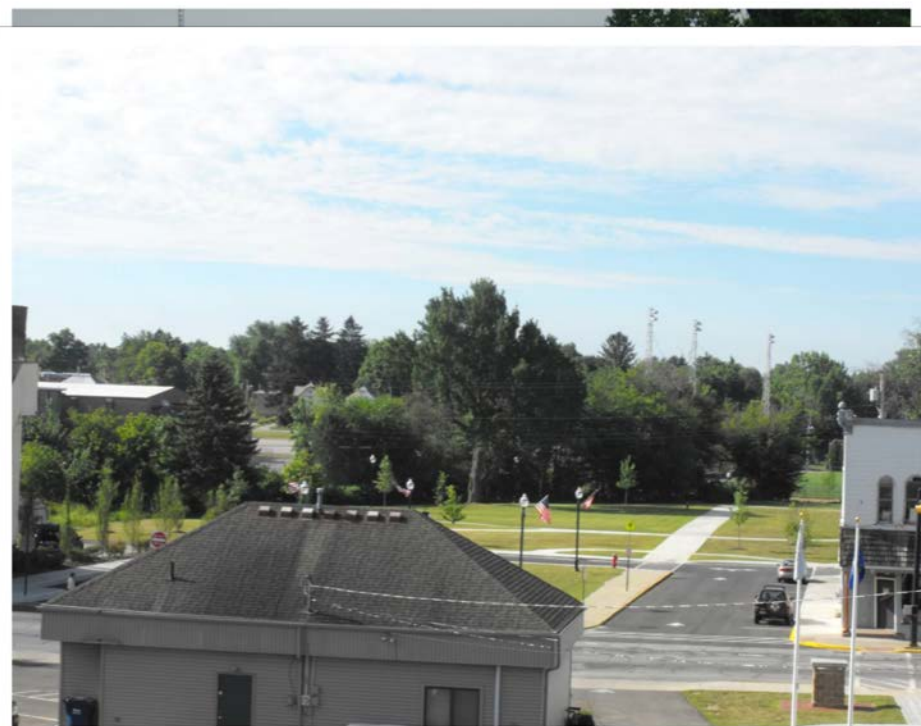
FEMA LOTS ONLY PAVEMENT	4927 SF
SIDEWALKS	5371 SF
STAGE	1964 SF
TOTAL IMPERVIOUS TOTAL AREA	12,262 SF
% IMPERVIOUS	2.03 ACRES
	13.8%

	AREAS GOING FROM HARD SURFACE TO NON-HARD SURFACE
	BOUNDARY OF FEMA LOTS
	PORTION OF LOTS TO BE DEDICATED AS PUBLIC RIGHT-OF-WAY
	FLOOD PLAIN ZONE X
	FLOOD PLAIN ZONE AE
	FLOODWAY

FLOOD PLAIN & FLOODWAY SHOWN PER FIRM DATED APRIL 4, 2011



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





OEMA Mitigation Branch Contacts

Web: <https://sharpp.dps.ohio.gov/ohiosharpp/>

FAX 614 799 3526

Steve Ferryman, CFM
State Hazard Mitigation Officer
Tel. (614) 799-3539
saferryman@dps.ohio.gov

Jacob Hoover, AICP, CFM
Mitigation Supervisor
Tel. (614) 799-3538
jmhoover@dps.ohio.gov

Luan Nguyen
Mitigation Planner
Tel. (614) 799-3531
lknguyen@dps.ohio.gov

Sharon Rolf
Mitigation Specialist
Tel. (614) 799-3530
srolf@dps.ohio.gov

Daniel Clevidence
Mitigation Specialist
Tel. (614) 799-3533
dtclevidence@dps.ohio.gov

Keven Clouse
Mitigation Specialist
Tel. (614) 889-7163
kclouse@dps.ohio.gov

Alex Strawser
Mitigation Intern
Tel. (614) 799-3681
ajstrawser@dps.ohio.gov



Questions?