

# FLOODPLAIN MANAGEMENT PROGRAMS

**US Army Corps** of Engineers®

Buffalo District Pittsburgh District Crawford County Workshop September 14, 2023



Please sign in!











## **U.S. ARMY CORPS OF ENGINEERS**

Jen Brancho, Biologist / Planner, Buffalo District
Laura Ortiz, Emergency Manager / Planner / Floodplain Manager, Buffalo District
Anthony Schneider, Planner, Pittsburgh District
Patricia Usher, Planner, Pittsburgh District



## **USACE FLOOD RISK MANAGEMENT PROGRAMS**



## **Technical Assistance Programs**

- Planning Assistance to States (PAS)
- Floodplain Management Services (FPMS)
  - Base Program (Special Studies)
  - Interagency Nonstructural

## **Civil Works Design/Construction Programs**

Continuing Authorities Program

## **Emergency Management**









## PLANNING ASSISTANCE TO STATES (PAS)



- **Authorization:** Section 22 of the Water Resources Development Act of 1974 (PL 93-251), as amended
- Potential Partners: States, Tribes, U.S. Territories, Local governments, Nonprofit organizations, Tribal organizations, and Regional coalitions of government
- **Purpose:** To assist in preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources
  - Detailed design and/or construction is not authorized under the program
- **Funding:** Cost share 50% federal, 50% nonfederal
  - Individual studies range from \$25,000 to \$100,000+
- **Process:** Letter of Intent must be received by USACE to initiate scoping process
  - Projects are started on a rolling basis
  - Typical study duration is between 12 and 24 months

#### **Points of Contact PAS Program Manager**

**Buffalo District** 

Jennie Brancho (216) 598-3463 Jennie.M.Brancho@usace.army.mil Pittsburgh District

Jennifer Cristobal (412) 395-7164

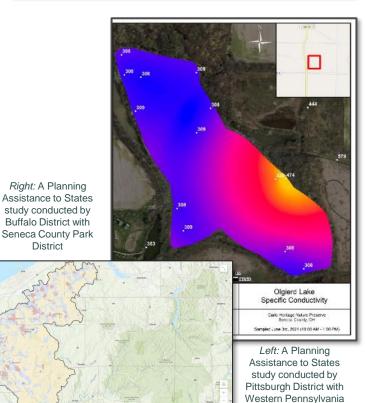
Jennifer.M.Cristobal@usace.army.mil

#### Types of Studies

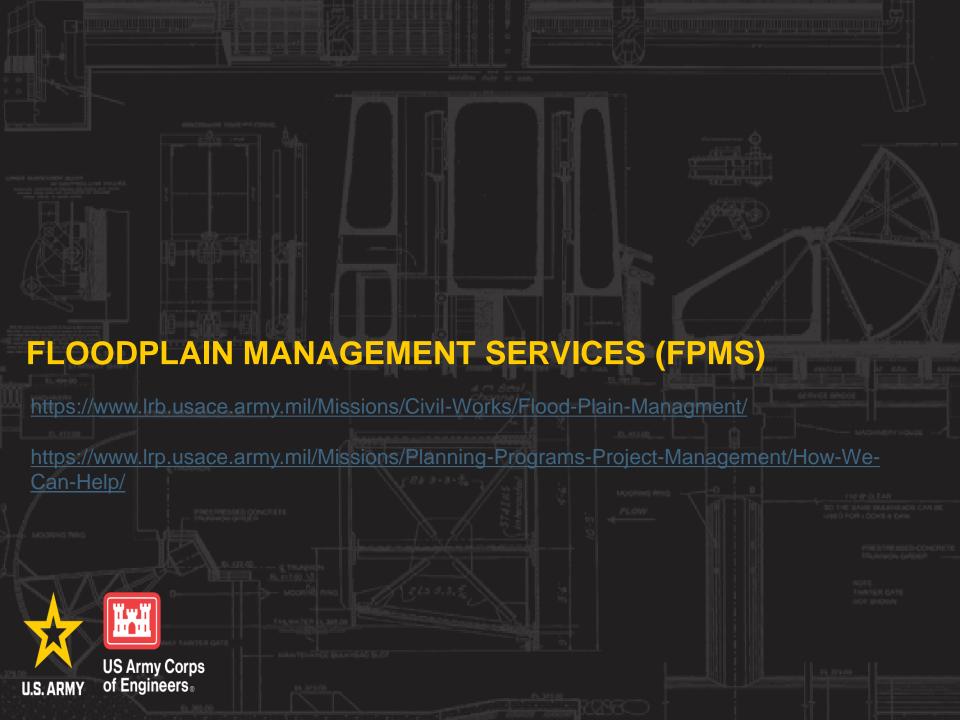
- Flood damage reduction
- Water conservation and quality
- Environmental conservation
- Infrastructure asset management plans
- Hazard mitigation

District

Water supply & demand



Conservancy





## FPMS, BASE PROGRAM PROJECTS



Authorization: Section 206 of the 1960 Flood Control Act (PL 86-645), as amended

**Overview:** Support effective floodplain management by providing a wide range of technical services and planning guidance

### **Types of Projects**

- Nonstructural flood proofing assessments
- Flood inundation tools and mapping
- Risk communication
- Flood risk assessments
- Mitigation planning

## **Funding/Cost Sharing**

- 100% federal funding
  - For state, regional, local government, or Native American Indian tribe

#### **Points of Contact FPMS Program Manager**

**Buffalo District** 

Pittsburgh District

Madeleine Dewey

(716) 327-8677

Madeleine.B.Dewey@usace.army.mil

Jennifer Cristobal (412) 395-7164 Jennifer.M.Cristobal@usace.army.mil



#### Note

- Does not involve completion of detailed final designs or construction
- Proposals are accepted annually and compete for funding

## FPMS, INTERAGENCY NONSTRUCTURAL PROJECTS



Below: Vermillion, OH Table Top Exercise

**Authorization:** Section 206 of the 1960 Flood Control Act (PL 86-645), as amended

**Overview:** Focus on flood risk reduction activities with a collaborative lens between the Corps, at least two governmental partners, and additional nongovernmental/private partners.

### Types of Projects

- Nonstructural flood proofing assessments
- Flood inundation tools and mapping
- Flood risk communication and assessments
- Mitigation planning
- Emergency tabletop exercises

## Funding/Cost Sharing

- USACE submits proposals annually to compete for funding
- To participate and complete project tasks, agencies obtain their own funds



## Points of Contact FPMS Interagency Program Manager

**Buffalo District** 

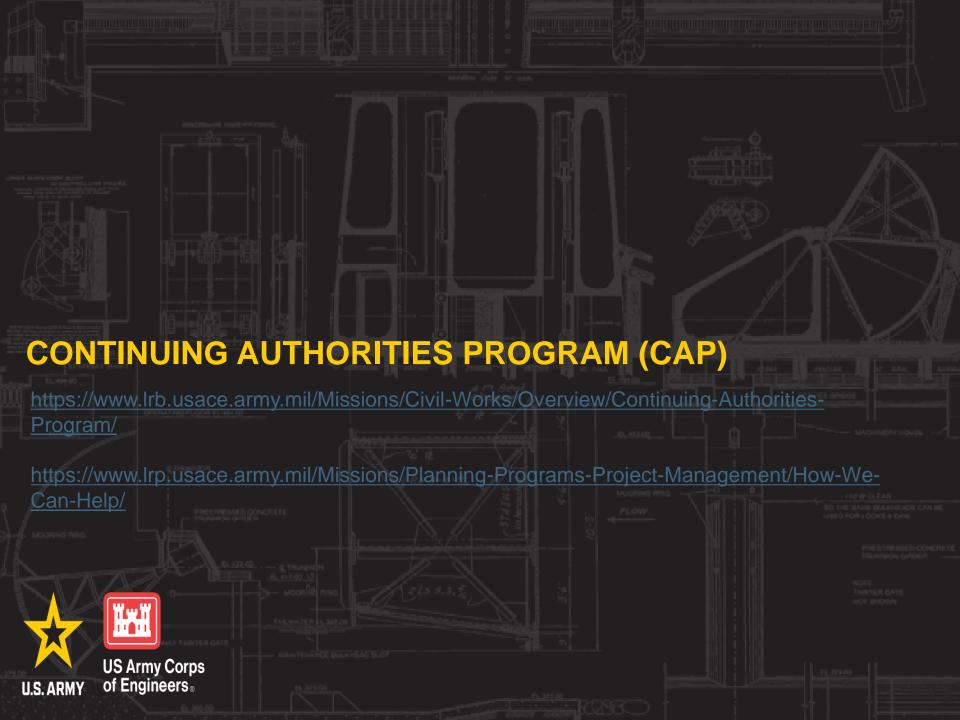
Laura Ortiz (716) 879-4407

Laura.V.Ortiz@usace.army.mil

Pittsburgh District

Jennifer Cristobal

Jennifer.M.Cristobal@usace.army.mil





## **CONTINUING AUTHORITIES PROGRAM (CAP)**



#### **Overview:**

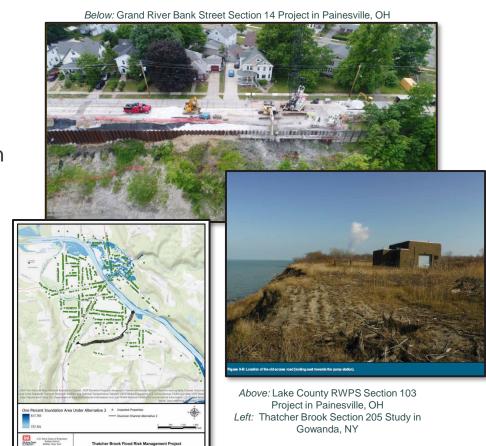
- Support smaller community projects without lengthy study and authorization process.
- Allows for planning, design, and construction of projects within the Great Lakes and Ohio Division generally less than \$15M.

## **Funding/Cost Share:**

- Nonfederal cost share required but varies by authority
- \$10M federal spending limit

#### **Examples:**

- Section 14: Emergency Streambank and Shoreline Protection
- Section 103: Hurricane and Storm Damage Reduction (Beach Erosion)
- Section 205: Flood Damage Reduction



## Points of Contact CAP Program Manager

**Buffalo District** 

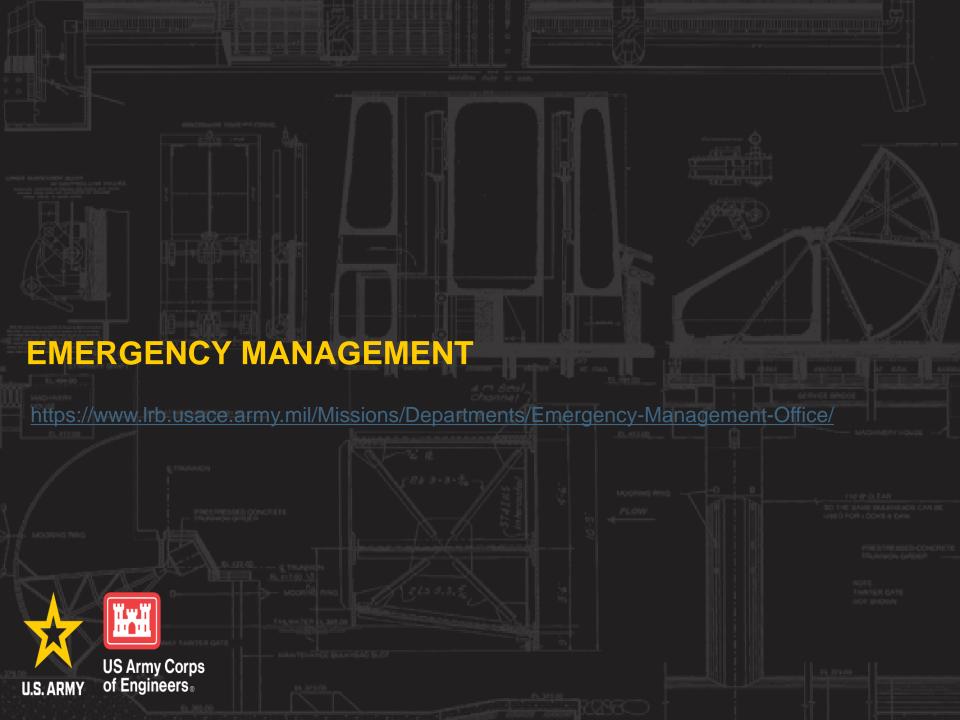
Craig Forgette

Craig.M.Forgette@usace.army.mil

Pittsburgh District

Jennifer Cristobal

(412) 395-7164 Jennifer.M.Cristobal@usace.army.mil





## PUBLIC LAW 84-99 (PL 84-99)

**EMERGENCY RESPONSE TO NATURAL DISASTERS** 



#### Note:

To obtain USACE assistance in emergency response, resources must be exhausted at the local, county, and state levels. To obtain assistance, coordinate with OEMA.







#### **Point of Contact**

**Emergency Management** 

Laura Ortiz/Phil Stitzinger 716-863-3747 (EM PHONE) 716-208-9387 (CELL PHONE)

<u>Laura.V.Ortiz@usace.army.mil</u> Phillip.c.stitzginer@usace.army.mil





## PUBLIC LAW 84-99 (PL 84-99) EMERGENCY RESPONSE TO NATURAL DISASTERS



#### LWILKGENGT KESTONSE TO NATOKAL DISASTEKS

#### Overview:

- Gives authority for the USACE to provide for emergency activities before, during, and after a flood event to assist State and Local governments.
  - Provide emergency technical and direct assistance

### Types of Projects

- Disaster Preparedness
  - · Coordination, inspections, planning, training
  - Equipment for flood fighting efforts
  - The Rehabilitation Program
  - The Restoration Program
- Emergency Operations
  - · Technical and direct assistance for flood fighting
  - Conduct rescue operations
- Advance Measures
  - Prevent or reduce damage during unusual, imminent flooding threats
- Emergency Water Assistance Due to Contaminated Water Source
- RESOURCES MUST BE EXHAUSTED and REQUEST MUST COME FROM GOVERNOR's OFFICE

#### Funding/Cost Sharing

 Authorized PL 84-99 activities are funded by the Flood Control and Coastal Emergencies (FCCE) appropriation.









Compacts and Commissions Office

## Pennsylvania Department of Environmental Protection

## **Shelby Clark**

Coastal Resources Coordinator

Lake Erie Coastal Zone







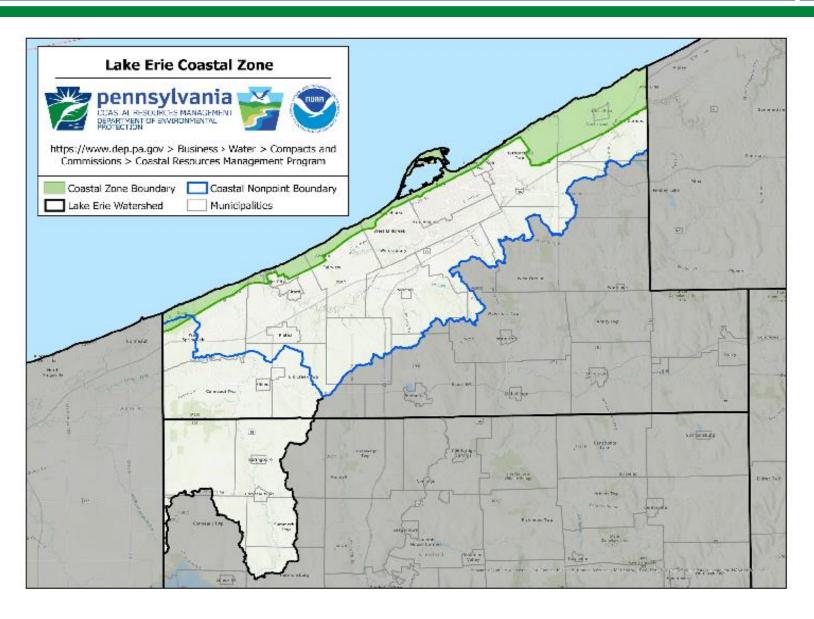


Compacts and Commissions Office

# Coastal Resources Management Program Grants Overview

Flood Plain Management Programs Overview Pennsylvania Silver Jackets Team September 13 and 14

## Watershed & Coastal Zone Boundary



## Coastal Management Grants

Funding Agencies - NOAA through PA's Coastal
 Zone Management Program

- Focus One of 11 focus areas, including
  - Coastal Hazards
  - Public Access
  - Polluted Runoff

•Grant Round - August 28 to October 16, 2023



## **Growing Greener Plus Grants**

- Funding Mechanism Environmental Stewardship Fund (Landfill tipping fees)
  - Watershed Restoration and Protection

Focus-Watershed restoration, including construction

Grant Round - Typically Mid-April (Earth Day)
 to Mid-June



## **GLSNRP**

 Funding Agencies - USDA/NRCS and Great Lakes Restoration Initiative

- Focus Improving agricultural practices and riparian buffer restoration
- Restrictions Lake Erie watershed and tributaries in Erie and Crawford Counties

 Grant Round - Typically mid-February to mid-April

## Targeting, Leveraging and Impact

## McDannell Run, McLelland Park, City of Erie

- Focus Streambank Restoration + Public Access for an Environmental Justice Community
  - CZM Planning Grant
  - Growing Greener Implementation Grant











Compacts and Commissions Office

## **Coastal Resources Management Program**

Shelby Clark, Coastal Resources Coordinator, Lake Erie Coastal Zone 814.217.9634

shelclark@pa.gov

## **Erie County Dep. of Planning & Community Development**

Joy Fronzoli, Planning Program Administrator 814.451.7332

ifronzoli@eriecountypa.gov

## **Great Lakes Sedimentation Nutrient Reduction Program (GLSNRP)**

Nicole Zacharda, Program Manager 734.396.6084

nzacharda@glc.org

## **Growing Greener Grant Program**

Jake Moore, Watershed Manager and Program Administrator 814.332.6139

jacmoore@pa.gov



## Crawford County Conservation District

Tracey J. Crawford District Manager



# Floodplain Management Programs Crawford County Workshop

Tracey J. Crawford District Manager

## Areas of Potential Assistance

- Dirt, Gravel, Low Volume Roads Program
- Riparian plantings
- Stream habitat improvement
- Ordinance assistance, map interpretation
- Support other local organizations



## Conservation District Staff

- Tracey Crawford, District Manager
- Breann Curry, Agricultural Conservation Specialist
- Laura Dengler, Administrative Assist
- Sydney Holler, Nutrient Management Technician
- Jennifer Kellogg, Dirt, Gravel, Low Volume Rd Specialist
- Maille Larmon, Resource Conservation Technician
- Brian Pilarcik, Watershed Specialist
- Kathy Uglow, Environmental Educator

**Crawford County Conservation District** 

21742 German Road

Meadville PA 16335

814-763-5269



## Pennsylvania Emergency Management Agency

Emily Houdeshell
Acting State NFIP Manager





pennsylvania

GENCY MANAGEMENT AGENCY

## Floodplain Management

- Floodplain management is a decision-making process to increase resiliency by reducing flood damages and protecting natural function of floodplains.
- According to <u>FEMA</u>, floodplain management is "the operation of a community program of preventive and corrective measures to reduce the risk of current and future flooding, resulting in a more resilient community. These measures take a variety of forms, are carried out by multiple stakeholders with a vested interest in responsible floodplain management, and generally include requirements for zoning, subdivision or building, building codes and special-purpose floodplain ordinances."





## Floodplain Management

- Floodplain management regulations in Pennsylvania are administered at the local <u>municipal</u> level through ordinances. These ordinances intend to reduce damages associated with flooding and retain natural floodplain functions.
- Floodplain management requires that people work together to prevent and mitigate flooding damage including but not limited to federal/state/local employees, developers, realtors, emergency management, businesses, insurance agents, and residents.







## Floodplain Management

- Floodplain management focuses on hazard mitigation to limit loss before it occurs.
- Becoming educated about flood prevention measures, implementing proper disaster procedures, developing ordinances that encourage higher standards such as floodresilient development, enforcing local ordinances, and following state/federal regulations and mitigation measures can all be beneficial for your community.







# What are key floodplain manager responsibilities?

## The Community Role

A community is a governmental body with the statutory authority to enact and enforce development regulations. These governmental bodies include cities, towns, boroughs, special districts and tribal nations. The role includes but is not limited to:

- Enacts and implements the floodplain regulations required for participation in the NFIP. The community's enacted floodplain measures must meet or exceed the regulations set by the NFIP, or state standards if more restrictive.
- Commits itself to: Issuing or denying floodplain development or building permits. Inspecting all floodplain development to assure compliance with the local ordinance or regulation.
- Maintaining records of floodplain development.
- Assisting in the preparation and revision of floodplain maps.
- Helping residents obtain information on flood hazards, floodplain map data, flood insurance and proper construction methods in the floodplain.

#### The State Role

PA Emergency Management Agency has been designated as the State NFIP Coordinating Agency. The role includes but is not limited to:

- Establishes minimum state regulatory requirements consistent with the NFIP as standards for state actions in the floodplain.
- Coordinates activities of various state agencies that affect the floodplains and/or the NFIP.
- Provides NFIP technical assistance and training to local government officials and design professionals.
- Conducts community assistance visits (CAV) and ordinance/regulation reviews to ensure that communities are complying with NFIP requirements





## **National Flood Insurance Program (NFIP)**

- FEMA is the primary agency charged with the prevention and recovery of flooding in the United States. Through the National Flood Insurance Program (NFIP), participating municipalities are required to adopt ordinances that reflect minimum standards for flooding protection for development in the floodplain.
- PEMA's NFIP Coordinator can assist you in navigating ordinance and permitting requirements in your municipality. In addition, the Federal NFIP Insurance Specialist from FEMA's Region III can also provide guidance.
- Since October 1, 2018, PEMA has been charged with the implementation of the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP) and floodplain management technical assistance needs in Pennsylvania.







pennsylvania

EMERGENCY MANAGEMENT AGENCY

## **NFIP** Requirements and Administration

## Mapping

 One of the key elements to successful floodplain management is the mapping of the flood hazard areas. For each NFIP community, FEMA creates a Flood Profile, Flood Hazard Boundary Map (FHBM), and a Flood Insurance Rate Map (FIRM). Detailed study areas will also have a Flood Insurance Study (FIS).

## Regulations

• The community is required, under the NFIP, to create and enforce a floodplain ordinance that meets or exceeds the requirements of <u>44 CFR 60.3</u>. This ordinance is used to regulate development in the floodplain to reduce the risk of flood damage. The FIRM is used to determine where the floodplain is, and therefore, what buildings should have higher flood protection. Compliance is regulated by FEMA through Community Assistance Visits (CAVs).





## NFIP Requirements and Administration

## Insurance

 Under the NFIP, FEMA requires insurance companies to require property owners with a federally-backed mortgage in the floodplain to obtain flood insurance. Residents do not have to live in the floodplain to obtain flood insurance, though (as long as the community participates in the NFIP). The FIRM is used to determine insurance rates, based on the floodplain boundary.







## **National Flood Insurance Program (NFIP)**

- Per federal regulations [44 CFR § 60.25], the state has the responsibility of serving as the link between federal, other state, and local governments for all things related to the NFIP.
- Key responsibilities for the State NFIP Coordinator include:
  - Encourage and assist communities to participate in the NFIP
  - Assist communities to develop, implement, and maintain floodplain management regulations
  - Provide technical assistance to communities; and to participate in training opportunities
  - Provide training and outreach opportunities for local municipalities







## **National Flood Insurance Program (NFIP)**

 Proper administration and enforcement of floodplain management activities, in accordance with the NFIP requirements, is a municipality's responsibility; the state's NFIP Coordinator administers the program in accordance with the "Flood Plain Management Act 166 of 1978 which complies with FEMA NFIP's regulations. All municipalities with a FEMA identified Special Flood Hazard Area (SFHA) must participate in the NFIP per Chapter 2 of this act.







## **Community Assistance and Training**

- Community Assistance Visits (CAV)
- Community Assistance Contacts (CAC)
- General Technical Assistance (GTA)
- Various Training Options
  - NFIP Best Practices Webinars
  - Floodplain Administrator Duties and Responsibilities
  - Floodplain Management Courses (L0273, L0194, L0282, L0284)
- Floodplain Management Activities Annual Report Form
- Municipality Floodplain Ordinance Updates/Webinars
- Floodplain Management Technical and Mapping Assistance
- Flood Insurance Roundtable Discussions







#### **Public Assistance Grant Program**

- The Public Assistance Grant Program makes grants available to state agencies, local government organizations, and certain private nonprofit organizations that incurred costs or damage as a direct result of a federally declared disaster.
- In the event of a Presidential Declaration of Major Disaster, the Individual Assistance Grant Program provides help for individuals, businesses, homeowners, and renters as they recover from disasters.







### Hazard Mitigation Assistance (HMA)

#### Consists of 3 Core Programs:

1. Hazard Mitigation Grant Program (HMGP)



#### **Non-Disaster**

- 2. Building Resilient Infrastructure and Communities (BRIC) Grant Program
- 3. Flood Mitigation Assistance (FMA)



BRIC

DRRA Change: PDM will be replaced by the Building Resilient Infrastructure and Communities (BRIC) Grant Program



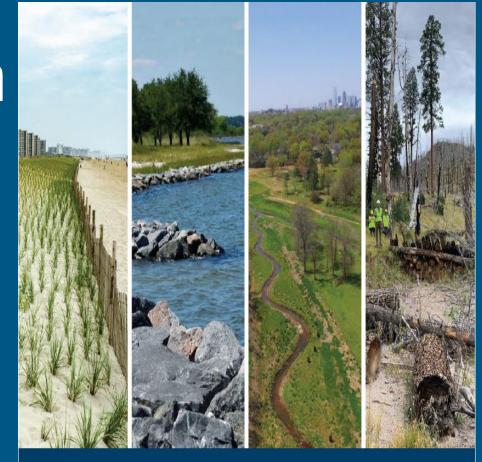
## Federal Emergency Management Agency

Matthew McCullough Community Planner FEMA Region III



## Hazard Mitigation Planning & Projects

Matt McCullough FEMA Region 3



**Hazard Mitigation Assistance** 





### Hazard Mitigation Planning



USING YOUR HAZARD MITIGATION PLAN



THAT AFFECT YOUR
COMMUNITY



**CAPABILITIES** 



MITIGATION STRATEGIES



## Using your Hazard Mitigation Plan

A Hazard Mitigation Plan (HMP) helps communities know and assess risk from natural hazards.

It helps identify long-term strategies to reduce the impacts of disasters on people, property and the environment.

These strategies can be used to develop grant funded projects.

Per the Federal Emergency Management Agency (FEMA), communities must have an HMP to receive certain types of non-emergency disaster assistance. This includes funding for mitigation projects.



## Identifying Hazards that affect your Community

1) What natural hazards affect your community?

2) What community vulnerabilities did you identify that could benefit from mitigation actions?





- Erie County Hazard Mitigation Plan, Appendix D, Shows at-risk structures in relation to the Special Flood Hazard Area (1% Chance Area)
- Erie County Hazard Mitigation Plan, Pg. 115, Table 4.3.5.1-5,

Displays the Reported Stormwater Problem Areas

Erie County Hazard Mitigation Plan (2023 Update) 4.0 Risk Assessment

REPORTED STORMWATER PROBLEM AREAS Spring St-Euclid St area. Upstream gravel road robably contributes to sediment in pipe netwo EO019 E0021 maintenance for 30 years. Approval for mitigation E0022 Corry City FP047 cleaned out and widened but the site continues t need regular maintenance mildly sloped roadway appears to be inadequate EP049 Corry City EP050 Corry City EP007 Temple Creek @ Joh rosby Circle & Joh Williams Ave along Crosby Cr floods and is likely located in a regulatory Flooding occurs near the floodplain, parti capacity. Outlet is obstructed by utility line





- Crawford County Hazard Mitigation Plan, Pg. 72, Table 4.3.1-8, Shows at-risk critical facilities within the Special Flood Hazard Area (1% Chance Area)
- Crawford County Hazard Mitigation Plan, Pg. 68, Table 4.3.1-7, Shows the number of at-risk structures within the Special Flood Hazard Area (1% Chance Area)

Municipality	Total structures within Municipality	Total structures within SFHA	Percent of structures in SFHA	Total Critical facilities within Municipality	Total Critical facilities within SFHA	Percent of Critical facilities within SFHA
Athens Township	385	42	10.91%	0	0	0.00%
Beaver Township	422	6	1.42%	31	1	3.23%
Bloomfield Township	1,642	399	24.30%	2	0	0.00%
Blooming Valley Borough	164	1	0.61%	2	0	0.00%
Cambridge Springs Borough	641	35	5.46%	11	1	9.09%
Cambridge Township	743	60	8.08%	5	0	0.00%
Centerville Borough	126	10	7.94%	2	0	0.00%
Cochranton Borough	514	99	19.26%	3	1	33.33%
Conneaut Lake Borough	350	3	0.86%	6	0	0.00%
Conneaut Township	877	2	0.23%	32	0	0.00%
Conneautville Borough	351	19	5.41%	1	0	0.00%
Cussewago Township	734	3	0.41%	35	3	8.57%
East Fairfield Township	452	42	9.29%	1	0	0.00%
East Fallowfield Township	619	2	0.32%	11	1	9.09%
East Mead Township	687	4	0.58%	7	0	0.00%
Fairfield Township	638	155	24.29%	5	0	0.00%
Greenwood Township	722	6	0.83%	3	1	33.33%
Hayfield Township	1,418	44	3.10%	31	1	3.23%
Hydetown Borough	286	38	13.29%	1	0	0.00%
Linesville Borough	558	8	1.43%	1	0	0.00%
Meadville City	4,851	503	10.37%	41	3	7.32%
North Shenango Township	1,904	6	0.32%	1	0	0.00%
Oil Creek Township	992	43	4.33%	7	1	14.29%
Pine Township	422	7	1.66%	5	0	0.00%
Randolph Township	793	0	0.00%	5	0	0.00%

Table 4.3.1-7 Community Flood Vulnerability for Crawford County



## Review your community's capability assessment

The capability assessment lets communities assess the resources they have to reduce the impacts of hazards.

These capabilities provide the means to achieve the mitigation outcomes they want.

Assessing capabilities determines the framework needed to carry out mitigation actions.



# Review your community's capability assessment

1) What resources do you have that could help you carry out the projects you have identified?

2) Are there any limitations that could prevent your community from applying for funds? Are there limitations that could prevent you from carrying out or administering the project?





# Review your community's mitigation strategy

This section of a plan lets communities set priorities and create long-term strategies and actions to reduce the impacts of disasters.

These priorities should fall within the categories of Structure/Infrastructure; Natural Systems Protection; Local Plans and Regulations; or Education and Outreach.

The Mitigation Strategy addresses how the mitigation actions will be carried out and overseen



# Review your community's mitigation strategy

- 1) What mitigation actions did you identify as priority projects?
- 2) Do these projects address the highest-risk hazards?
- 3) Are any of these projects a priority for your community now? If so, which one(s)?
- 4) Are you thinking of any new projects that fall within the HMP categories described above?
- 5) Are you thinking of applying for FEMA funding for any of these projects?



### **Hazard Mitigation Funding**

		Dam Safety			
Funding Cycle	Annual Grants Cycle		Disaster Gra		
Mitigation Funding	FMA	PDM BRIC	HMGP	HMPG Post Fire	High Hazard Potential Dam
When is the Notice of Funding Opportunity (NOFO) released?	NLT August	NLT August	N/A	N/A	NLT June
When can applicants apply?	Annually: September — January	Annually: September — January	Following the presidential declaration of a major disaster for up to 12 months	Following the declaration of a Fire Management Assistance Grant for up to 12 months	Annually: June August





### Mitigation Funding



#### Flood Mitigation Assistance (FMA) Grant Program

- Competitive grant program that provides funding to states, local communities, federally recognized tribes and territories
- Funds can be used for projects that reduce or eliminate the risk of repetitive flood damage to buildings insured by the National Flood Insurance Program
- Funded by an annual congressional appropriation
- Program strength: 90-100% funding for repetitively flood damaged buildings insured under the National Flood Insurance Program



#### Building Resilient Infrastructure and Communities (BRIC) Program

- Competitive grant program that provides funding to states, local communities, federally recognized tribes and territories
- Funds can be used to support communities through capability- and capacity-building; encouraging and enabling innovation; promoting partnerships; enabling large projects; maintaining flexibility; and providing consistency
- Funded by 6% set-aside of the assistance FEMA provides following a presidentially declared disaster through their Public and Individual Assistance programs
- Program strengths: National capabilityand capacity-building for mitigation;
   Program funds infrastructure projects



#### Congressionally Directed Spending (CDS) Pre-Disaster Mitigation (PDM)

- Pre-Selected, non-competitive grant funding to help plan and direct hazard mitigation projects
- Funds to be used for plans and projects that reduce overall risk to the population and structures
- Program strength: Supports SLTTs with implementation of mitigation projects before a disaster strikes to build stronger, more resilient communities





#### **Mitigation Funding**



- HMGP provides funding to state, local, tribal and territorial governments so they can rebuild in a way that mitigates future disaster losses in their communities
- Funding is based on the estimated federal assistance provided
- Program strength: All-hazard grant program with significant funding for states/tribes/territories to mitigate following a major disaster



#### **HMGP Post Fire**

- HMGP Post Fire provides funding to state, local, tribal and territorial governments to help communities implement hazard mitigation measures after wildfire disasters
- HMGP Post Fire funds are available after a Fire Management Assistance Grant is declared
- Funding is based on a FEMA calculation that factors in historical Fire Management Assistance Grant (FMAG) declarations from the last 10 years, reassessed every fiscal year
- Program strength: All-hazard grant program with significant funding for states/tribes/territories to mitigate following wildfires

### High Hazard Potential Dam (HHPD)

- The High Hazard Potential Dam Grant (HHPD) awards provide technical, planning, design and construction assistance in the form of grants for rehabilitation of eligible high hazard potential dams.
- A state or territory with an enacted dam safety program, the State Administrative Agency, or an equivalent state agency, is eligible for the grant.





#### **Mitigation Funding**

#### Direct Technical Assistance

 This Program Support Material (PSM) provides detailed information about the nonfinancial Direct Technical Assistance (DTA) offered through the Building Resilient Infrastructure and Communities (BRIC) program. The Federal Emergency Management Agency (FEMA) is expanding its ability to provide non-financial DTA to selected communities to support mitigation activities.





### **Identifying Priority Projects**









Pulling it all together...

Based on your communities Risks, Hazards, Strategies what potential Mitigation Actions did you identify?

Does your Community have the Capability to carry out these mitigation actions?

Please let us know if you have interest in reviewing your risk assessment further, developing a project application, or improving your capabilities please let us know.



## **Crawford County**

Allen W. Clark, BS, CEM
Emergency Management Coordinator
Crawford County Department of Public Safety



## HAZARD MITIGATION (HM) PLANNING PROCESS STEPS

Step 1: Organize the planning process and engage stakeholders

Step 2: Risk assessment

Step 3: Develop mitigation strategy – solutions to meet needs

Step 4: Plan adoption, maintenance, and implementation

### **THANK YOU!**

#### **U.S. Army Corps of Engineers**

Jen Brancho – <u>jennie.m.brancho@usace.army.mil</u>
Laura Ortiz – <u>laura.v.ortiz@usace.army.mil</u>
Anthony Schneider – <u>anthony.l.schneider@usace.army.mil</u>
Patricia Usher – patricia.usher@usace.army.mil



#### **Crawford County Conservation District**

Tracey Crawford – <u>tracey@crawfordconservation.com</u>

#### Pennsylvania Emergency Management Agency

Emily Houdeshell – <a href="mailto:ehoudeshel@pa.gov">ehoudeshel@pa.gov</a>

#### **Federal Emergency Management Agency**

Matthew McCullough - matthew.mccullough@fema.dhs.gov

#### **Crawford County Emergency Management**

Allen Clark – aclark@co.crawford.pa.us

