



Erie County Soil & Water Conservation District

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December 10, 2014

Brian Gazda, Village Administrator
Village Hall
571 Main Street
East Aurora, NY 14052

Re: Tannery Brook Visual Inspection

Mr. Gazda:

In September of 2014 I completed a visual inspection along Tannery Brook in the Village of East Aurora. The inspection included the section of stream from Main Street through to Pine Street. The inspection was in direct response to the ice jam flooding that occurred in December of 2013 and was to include any and all observations that may exacerbate future flood events and to provide recommendations that could be implemented to alleviate and/or mitigate future flood events. In addition to the visual inspection I was also able to make a visual assessment during two additional "ice out" events. One was in February of 2014 and the other was just this past November from the large snow fall and subsequent melt with minimal ice formation.

Site observations:

- Eight primary road stream crossings are located in this reach. All primary crossings are concrete box culverts of various sizes and most seemed to be relatively new and in good condition. One exception is the North Grove box culvert which is in very poor condition. All box culverts seemed to be of sufficient size for the stream location in which they were encountered; however no hydraulic analysis was completed for this assessment.
- Three private crossings are located in this reach. One is a corrugated metal pipe (cmp) and another an enclosed brick arch bridged structure located just upstream of Main Street. The third is a private steel beam foot bridge located slightly downstream of Whaley Street. The CMP has minor scour at the outlet with minor channel incision/down-cutting in the stream reach just below the culvert. The steel beam foot bridge has moderate undercutting of its concrete footers and minor failure of concrete retaining wall bank protection.
- One railroad stream crossing exists in the reach. It consists of a concrete box culvert with a 45 degree bend to the north inside the culvert while the stream channel meanders 45 degree to the south at the inlet of the culvert. This is a poor stream/culvert alignment and increases the potential for debris to be collected at the site. The concrete box culvert itself seemed to be in relatively good shape and have adequate capacity.
- The top of bank areas throughout are mowed lawn to the edge of bank as this is the side and backyard of residences or consist of a thin row of trees/shrubs that are typically undercut. Numerous homes and other buildings are in very close proximity to the stream channel throughout as is expected in a historic village setting.
- Two trees were downed lying across the channel upstream of Riley Street at the top of the bank (not reducing capacity). A small amount of brush/ grape vine and two trees with severe lean are located upstream of North Grove street (not reducing capacity). One large tree was still standing but dead just downstream of Maple Street and one small tree was down in the channel just upstream of Shearer Street. (see map)
- In general the streams banks were 1:1 (horizontal to vertical) to vertical throughout the entire reach inspected. Stream geometry was trapezoidal with a 12-15 foot bottom width and 4-6 foot high banks. Light to moderate streambank erosion was visible throughout. Various sections of the upper banks have sloughed off into the channel as the soils along the toe are eroded by stream flows.
- The exposed banks soils appear to be silty-loam in the upper profile and a more gravelly-loam textured layer along the lower portions down to the base of the bank. No visible silty-clay sections were encountered.
- Numerous drainage outlet pipes from homes and roads were visible along both banks throughout the reach.

- Numerous landowners have implemented various techniques in an effort to stabilize eroding streambanks. All have varying degrees of success and age. Techniques encountered included timber cribbing, stacked rock riprap and rock riprap, but by far, the majority was the haphazard dumping of concrete rubble.

After review of all relevant data and conducting the stream inspection there are limited options for controlling future flood events within the Village. As the Village is aware, portions of this section of Tannery Brook are included in the 100 year floodplain and future flooding will likely occur. In an effort to mitigate these floods there are several measures that I believe the Village should concentrate on to decrease future impacts. They include the following:

- **North Grove box culvert-** The box culvert is old and in poor condition. It should and may already be scheduled for replacement. Relevant hydraulic engineering studies will be conducted for its replacement and I believe should include analysis of the areas just upstream. Area landowners, in an effort to stabilize the streambank and protect two buildings on both sides of the stream, have been dumping and staking rock and concrete debris. In this area there is a visible difference in channel geometry or what appears to be a channel constriction. A constriction at this location could catch debris and ice moving through the system and increase the potential for or exacerbate localized flooding. It would be money well spent to include this section in any hydraulic analysis conducted in an effort to increase channel capacity.
- **Ice production-** Upstream and downstream of this constriction the channel geometry has a wide flat bottom (just downstream of Maple St to Whaley St). During periods of prolonged cold weather flat sheet ice will likely be produced. Equipment access points at these areas should be maintained in case weather conditions are conducive for the formation of thick ice and subsequent rapid melting in conjunction with rain similar to what occurred in December 2013 and to a limited extent in February 2014.
- **Tree maintenance and debris-** If possible the Village could assist or encourage landowners to remove any vegetative debris snags that could obstruct stream flow and increase localized flooding while potentially worsen bank erosion conditions. Removal of any severely leaning trees 30 degrees or more from along the bank edge is recommended. Leaning or fallen trees should be cut at the base and the roots left in place as they can still help hold the bank soils in place. Landowners should be discouraged from placing any vegetative (lawn cuttings, leaves etc.) debris along the banks as this practice typically increases the potential for erosion. Similarly, the storage of anything that could cause a debris jam during a flood event should be discouraged from placement along the stream such as the stacking of firewood along the top of the bank. The four tree sites identified on the inspection map should continue to be monitored or addressed as funding or time allows.
- **Haphazard erosion control practices/ built structures-** The Village should better regulate what private landowners along the stream are placing along the banks to protect against erosion. If left unchecked landowners will continue to fill the channel with rock and concrete rubble which changes geometry and may create other constrictions. Poorly built structures could collapse and obstruct the channel. Tannery Brook is a Class C waterbody. Disturbance to the bed or banks of the stream do not require a stream disturbance permit from the NYS Department of Environmental Conservation (851-7165), provided they occur when the stream is dry and do not cause a visible contrast to the water. Although it may not be required I would still recommend the submission of a permit to this agency for all stabilization and debris removal activities as a U.S. Army Corps of Engineers (879-4330) permit would still be required. In addition the Village stormwater and floodplain regulations apply to construction and stream activities. The Village should review established floodplain ordinances to ensure they meet current needs. Permit application and additional information can be found at the NYS DEC website at <http://www.dec.ny.gov/permits/6042.html>.

As we have discussed at previous meetings, funding assistance that might apply the measures described above is limited. The Federal Emergency Management Agency (FEMA) grants program is one avenue the village may want to research. These grants can assist with full engineering assessments and pre-disaster mitigation construction. My understanding of the program is that they are highly competitive and the cost benefit ratio necessary for funding is sometimes difficult to reach. Information on the grants offered can be found at <http://www.fema.gov/grants>. Another avenue that should be researched is with the US Army Corps of Engineers Section 14- streambank protection, Section 205-flood damage reduction and Section 22 – planning assistance programs. Mrs. Laura Ortiz at the Buffalo office (879-4407) would be able to provide information on the various programs offered. In addition the District reviews requests for grant proposals on a number of funding opportunities throughout the year. If I encounter one in the near

future that I believe may be able to address any of the issues in Tannery Brook I will make sure to forward them to your attention.

Finally, I hope this assessment proves helpful toward addressing Village and resident concerns for Tannery Brook. The District stands ready to assist the Village or individual landowners were possible and as funding allows in addressing the issues outlined in this letter.

Please do not hesitate to contact me should you require any additional information or have any questions.

Sincerely,



Mark C. Gaston
District Field Manager

Cc: ECSWCD Board of Directors
John Whitney, USDA-NRCS





Flood Mitigation Assistance Program

Flood Mitigation Assistance Program Overview

The Flood Mitigation Assistance (FMA) program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the [National Flood Insurance Program](#) (NFIP).

FEMA provides FMA funds to assist States and communities implement measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insured under NFIP.

Eligible Applicants and/or Subapplicants:

- State
- Local governments
- Indian tribes or other tribal organizations

Individual homeowners and businesses may not apply directly to the program; however an eligible Applicant or Subapplicant may apply on their behalf.

***FMA New Updates

10/19/2013 - The FMA application period is now closed.

07/2013 - The updated [Fiscal Year 2013 Unified Hazard Mitigation Assistance Guidance](#) is now available.

FEMA will open the PDM and FMA application period on **July 19, 2013** and close the application period on **October 18, 2013**.

Please go to www.grants.gov for the PDM and FMA Funding Opportunity Announcements.

[Funding Opportunity Announcement - FY2013 FMA Program:](#)

1. FMA funding for mitigation planning will be limited to \$100,000 for States and Territories.
2. Subapplications containing higher ratios of SRL properties will receive priority over other projects.

Types of FMA Grants



Three types of FMA grants are available to States and communities:

- **Planning Grants** *to prepare Flood Mitigation Plans*
- **Project Grants** *to implement measures to reduce flood losses, such as elevation, acquisition, or relocation of NFIP-insured structures*
- **Management Cost Grants** *for the State to help administer the FMA program and activities*

Please refer to the guiding documents below or contact your [State Hazard Mitigation Officer](#) for more information on the FMA program.

FMA Guiding Documents

- For disasters declared on or after June 1, 2010, please refer to the [FY 2011 HMA Unified Guidance](#).
- For disasters declared on or after June 1, 2009 and prior to June 1, 2010 please refer to the [FY 2010 HMA Unified Guidance](#).

Last Updated: 10/25/2013 - 12:11



Pre-Disaster Mitigation Grant Program

Program Overview

The Pre-Disaster Mitigation (PDM) program provides funds to states, territories, Indian tribal governments, communities, and universities for hazard mitigation planning and the implementation of mitigation projects prior to a disaster event.

Funding these plans and projects reduces overall risks to the population and structures, while also reducing reliance on funding from actual disaster declarations. PDM grants are to be awarded on a competitive basis and without reference to state allocations, quotas, or other formula-based allocation of funds.

Eligible Applicants and/or Subapplicants:

- State
- Local governments
- Indian tribes or other tribal organizations

Individual homeowners and businesses may not apply directly to the program; however an eligible Applicant or Subapplicant may apply on their behalf.

***PDM New Updates

10/19/13 - The PDM application period is now closed.

07/2013 - The updated [Fiscal Year 2013 Unified Hazard Mitigation Assistance Guidance](#) is now available.

FEMA will open the PDM and FMA application period on **July 19, 2013** and close the application period on **October 18, 2013**.

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[Funding Opportunity Announcement - FY2013 PDM Program:](#)

Applicants will be limited to 5 subapplications (project and planning) plus a management costs subapplication



- Funding Agency priorities for funding will be used for PDM selections:
1. #1 ranked subapplication in each State and Territory if the subapplication is within the 1% set-aside or \$250,000. If the #1 ranked subapplication is greater than \$250,000 that subapplication will be considered after all other State and Territory set-asides are selected.
 2. Planning Subapplications
 3. Indian Tribal Government Subapplications
 4. Non flood projects from Applicants with no open HMGP declaration
 5. Non-flood projects from Applicants with an open HMGP declaration
 6. Flood mitigation projects

Additional PDM Resources

[Pre-Disaster Mitigation Archives](#)

Last Updated: 10/23/2013 - 16:16



Program Fact Sheet

EMERGENCY STREAMBANK AND SHORELINE PROTECTION

Section 14 of the 1946 Flood Control Act, as amended

Authority and Scope: Section 14 of the 1946 Flood Control Act, as amended, authorized the U.S. Army Corps of Engineers to develop and construct streambank and shoreline protection projects to protect endangered highways, highway bridge approaches, public works facilities such as water and sewer lines, churches, public and private nonprofit public facilities. Each project is limited to a Federal cost of \$1,500,000, and must be economically justified, environmentally sound and engineeringly feasible.

Project Phases and Funding: Section 14 projects have two phases: Feasibility (study phase) and Design and Implementation Phase (detailed project design and construction). The first \$100,000 of Feasibility Phase costs are financed at 100% Federal costs. All Feasibility phase costs above \$100,000 are cost-shared 50% Federal and 50% non-Federal, in accordance with a Feasibility Cost-Sharing Agreement (FCSA). If the project advances to the Implementation Phase all costs are shared 65% Federal and 35% non-Federal in accordance with a Project Cooperation Agreement (PCA) prepared for the project.

The sponsor must contribute in cash a minimum of 5 percent of the total project cost. The sponsor must also pay for and obtain all lands, easements, rights of way and relocations (LERR) for the project. If the value of LERR plus the cash contribution does not equal or exceed 35 percent of the project cost, the sponsor must pay the additional amount necessary so that the sponsor's total contribution equals 35 percent of the project cost. Total Federal project funding is limited to \$1,500,000. All project costs above this limit are 100% non-Federal.

Non-Federal Responsibilities: Formal assurance of local cooperation must be furnished by a local sponsoring agency. The local sponsor must be a municipality or public agency, fully authorized under state laws to give such assurances and must be financially capable of fulfilling all measures of local cooperation. The sponsoring agency must normally agree to:

- a. Provide without cost to the United States all necessary lands, easements, rights-of-way, access routes and relocation of utilities necessary for project construction and subsequent operation and maintenance of the project. Costs associated with these items may be creditable towards the non-Federal cash contribution for the project.
- b. Provide cash contribution of not less than 5 percent of the project cost. If the value of the sponsor's total contribution (5% cash and LERR) does not exceed 35 percent of the total project cost, the sponsor must provide an additional cash contribution to make the sponsor's total contributions equal to 35 percent of the project cost.
- c. Assume the full responsibility for all project costs in excess of the Federal cost limitation of \$1,500,000.
- d. Hold and save the United States free from claims for damages which may result from construction and subsequent maintenance of the project, except damages due to the fault or negligence of the United States or its Contractors.
- e. Assume all responsibilities and costs for operation and maintenance of the project.

How to Request Assistance: A study of a prospective small streambank or shoreline erosion project under Section 14 will be initiated after receipt of a written request (see sample below), from an authorized sponsoring agency (see Non-Federal Responsibilities above) and provided Federal funds are available.

For Further Information, Contact:

Mr. David A. Schulenberg
Continuing Authorities Program Manager
Planning Branch
David.A.Schulenberg@usace.army.mil
716-879-4263



Program Fact Sheet

FLOOD DAMAGE REDUCTION

Section 205 of the 1948 Flood Control Act, as amended

Authority and Scope: Section 205 of the 1948 Flood Control Act, as amended, authorizes the U.S. Army Corps of Engineers to develop and construct small flood damage reduction projects. Each project is limited to a Federal cost of \$7,000,000, and must be economically justified, environmentally sound, and engineeringly feasible.

Project Phases and Funding: Section 205 projects have two phases: Feasibility (study phase) and Design and Implementation Phase (detailed project design and construction). The first \$100,000 of Feasibility Phase costs are financed at 100% Federal costs. All Feasibility phase costs above \$100,000 are cost-shared 50% Federal and 50% non-Federal in accordance with a Feasibility Cost-Sharing Agreement (FCSA). If the project advances to the Implementation Phase all costs are shared 65% Federal and 35% non-Federal in accordance with a Project Partnership Agreement (PPA) prepared for the project.

The sponsor must contribute in cash a minimum of 5 percent of the total project cost. The sponsor must also pay for and obtain all lands, easements, rights of way and relocations (LERR) for the project. If the value of LERR plus the cash contribution does not equal or exceed 35 percent of the project cost, the sponsor must pay the additional amount necessary so that the sponsor's total contribution equals 35 percent of the project cost. Total Federal project funding is limited to \$7,000,000. All project costs above this limit are 100% non-Federal.

Non-Federal Responsibilities: Formal assurance of local cooperation must be furnished by a local sponsoring agency. The local sponsor must be a tribe, municipality or public agency, fully authorized under applicable laws to give such assurances and must be financially capable of fulfilling all measures of local cooperation. In New York State, if a state or local governmental body wants to pursue a Section 205 Project, by state law, the New York State Department of Environmental Conservation acts as the non-Federal sponsor. The sponsoring agency must normally agree to:

- a. Provide without cost to the United States all necessary lands, easements, rights-of-way, access routes and relocation of utilities necessary for project construction and subsequent operation and maintenance of the project. Costs associated with these items may be creditable towards the non-Federal cash contribution for the project.
- b. Provide cash contribution of not less than 5 percent of the project cost.
- c. Assume the full responsibility for all project costs in excess of the Federal cost limitation of \$7,000,000.
- d. Hold and save the United States free from claims for damages which may result from construction and subsequent maintenance of the project, except damages due to the fault or negligence of the United States or its contractors.
- e. Assume all responsibilities and costs for operation and maintenance of the project.

How to Request Assistance: A study of a prospective small flood damage reduction project under Section 205 will be initiated after receipt of a written request (see sample below), from an authorized sponsoring agency (see Non-Federal Responsibilities above), and provided Federal funds are available.

For Further Information, Contact:

Mr. David A. Schulenberg
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716-879-4263



**US Army Corps
of Engineers**

Buffalo District

BUILDING STRONG

October 2012

Program Fact Sheet
PLANNING ASSISTANCE TO STATES AND INDIAN TRIBES
Section 22 of the Water Resources Development Act of 1974, As Amended

Authority and Scope: Section 22 of the 1974 Water Resources Development Act provides authority for the U.S. Army Corps of Engineers Planning Assistance to the States (PAS) and Indian Nations. The program is used to prepare plans to manage water and related land resources. Federal appropriations vary from year to year; there is a maximum of \$2,000,000 which is allocated to each State or Indian Nation per year to work on PAS studies.

Cost-Sharing

- Costs are shared 50% Federal and 50% non-Federal.

Types of Work That Can Be Done

- Water Quality Studies
- Wetland Evaluation Studies
- Flood Plain Management Studies
- Coastal Zone Management/Protection Studies
- Harbor/Port Studies
- Or other water resource planning investigations are valid

General

- A Study Scope of Work, Cost Estimate, and Agreement must be developed and executed before the study can proceed.
- In-Kind Services can be used as the non-Federal cost share and must be agreed to prior to initiation of the study.
- Both non-Federal and Federal Section 22 funds must be secured before the study can proceed.
- The study can be funded on a Federal and non-Federal basis from year to year (Federal fiscal years run from October 1st to September 30th).
- Construction cannot be done under the Section 22 authority.
- Site-specific structural designs and design specifications are not valid study types.

For further information contact:

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