





# Town of Shandaken Flood Mitigation Plan



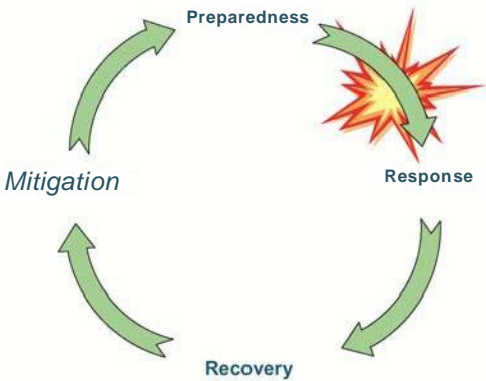
Presented by Tetra Tech EM Inc.

 **Town of Shandaken Flood Mitigation Plan** 

## What is Hazard Mitigation?

**“Mitigation” -**  
*Sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event*

**-Or-**  
*Any action taken to reduce future disaster losses*



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graph TD; Preparedness --> Response; Response --> Recovery; Recovery --> Mitigation; Mitigation --> Preparedness;
```



## Town of Shandaken Flood Mitigation Plan



### Why are we Preparing this Plan?

- An increased understanding of flooding that the Town faces.
- Reduced long-term impacts and damages (human health and structures)
- Development of a more sustainable and disaster-resistant community
- Reduced flood insurance premiums. [Community Rating System (CRS) compliant]

**A *Local Flood Mitigation Plan* demonstrates a commitment to reducing risks from flooding and serves as a guide for decision makers as they commit resources to minimize the effects of flood hazards.**



## Town of Shandaken Flood Mitigation Plan



### What does the Flood Mitigation Plan provide?

- A detailed action plan the Town will implement to reduce risk to floods

**“provides the blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and local ability...” (CFR).**

- A comprehensive, factual assessment of risk to support why proposed mitigation strategies are appropriate
- Better coordination of mitigation efforts with other local, county, regional, state and federal entities



## Town of Shandaken Flood Mitigation Plan



### The Shandaken Flood Mitigation Plan

- A Flood Mitigation Plan (FMP) is a living document that communities use to reduce their vulnerability to flooding.
- An FMP is a “subset” of a Hazard Mitigation Plan (HMP).
- As part of the 2009 Ulster County HMP, the Town of Shandaken has an approved plan so it is eligible for mitigation funding.



## Town of Shandaken Flood Mitigation Plan



### Purpose

- The Town wishes to re-examine its vulnerability to the flood hazard, create more detailed flood hazard analyses, evaluate progress on the mitigation strategies identified in the original plan.
- The Town will add new mitigation actions/projects/initiatives so that it can continue to lower its flood hazard risk.



## Town of Shandaken Flood Mitigation Plan



### Purpose, continued

- The Town will use this plan to garner points in the National Flood Insurance Program (NFIP) Community Rating System (CRS)
- Participation and ranking in CRS will improve ability to lower flood damages (higher regulatory standards, enforcement of regulations, increased knowledge of floodplain issues)
- CRS ranking will reduce NFIP Flood Insurance Premiums





## Town of Shandaken Flood Mitigation Plan



### CRS Benefits

- The CRS is a part of the NFIP
- Provides incentive to participating communities to exceed the minimum NFIP criteria .
- Incentive is a reduction in the cost of flood insurance in participating Communities.
- Can reduce the cost of flood insurance from 5% up to 45%
- Participation is voluntary



 **Town of Shandaken Flood Mitigation Plan** 

**The Planning Committee**


- The Office of the Supervisor of the Town of Shandaken is managing this effort.
- It is supported by the Shandaken Area Flood Assessment and Remediation Initiative (SAFARI).
- Members of the committee include representatives from
  - Town of Shandaken
  - NYDEC
  - Cornell Cooperative Extension
  - USDA NRCS
  - of Ulster County
  - Ulster County Soil and Water Conservation District
  - RCAP Solutions
  - Landowners
  - Ulster County Emergency Management
  - S.O.S (Save our Shandaken) Representative
  - NYS DOT
  - NYCDEP

 **Town of Shandaken Flood Mitigation Plan** 

**Project Schedule**

Tasks	Submittal Date
Flood Emergency Response Plan	2/28/12
Draft Risk Assessment CRS Summary	5/31/12
Complete Risk Assessment Draft FloodMitigation Plan	8/31/12
Complete FloodMitigation Plan CRS Application	10/31/12





 **Town of Shandaken Flood Mitigation Plan** 

Plan Update Process Steps

- Organize Resources
- Re-Assess the Risk
- Review and Update the Mitigation Plan
- Develop Procedures for Plan Implementation, Monitoring and Update
- Adopt the Plan

*Engage a Wide Range of "Stakeholders"*

- Federal, State, Regional and Local Agencies
- Business and Civic Groups
- Academic Institutions
- Other "local governments"
- The Public

 **Town of Shandaken Flood Mitigation Plan** 

Assess the Risk – Flood Hazard Profiling

- Flood Hazards will be profiled (characterized) according to:
  - Background and local conditions
  - Historic frequency and probability of occurrence
  - Severity
  - Historic losses and impacts
  - Designated hazard areas
- What Flood events have occurred since the 2009 Plan?
- What Losses/Damages have occurred as a result of these events?



## Town of Shandaken Flood Mitigation Plan



### Assess the Risk - Inventory of Assets

What is at risk? People, Property, Economy, Environment

- Population and Demographics – Has this changed since 2009?
- Building Stock (Residential, Commercial, Industrial, Educational, etc.)
- Critical Facilities (essential facilities, utilities, transportation features, high-potential loss facilities and user-defined facilities)
  - Police, Fire, Emergency Services
  - Hospitals and Medical Care Facilities
  - Schools and Care Facilities
  - Sheltering Facilities
  - Infrastructure (Transportation Systems, Utilities)
  - High-Potential Loss Facilities (Dams, Military Installations, Haz-Mat)

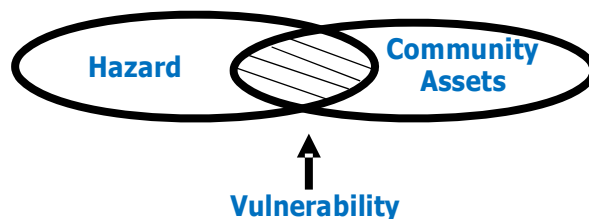


## Town of Shandaken Flood Mitigation Plan



### Assess the Risk – Vulnerability Assessment

- Vulnerability Assessment - What do we predict our suffering to be if we do nothing to mitigate our risk:
  - Given current conditions, which have changed since 2009?
  - Given our improved understanding of risk, and tools to assess that risk, which have changed since 2009?





## Town of Shandaken Flood Mitigation Plan



### Sample Mission Statement

- *The mission of the Town of Shandaken Flood Mitigation Plan is to*

*-identify and reduce the Town's vulnerability to floods and to implement actions to reduce the risk of floods to residents and businesses.*

*-and seek to create a well-informed and prepared community while protecting the quality of life of the community.*



## Town of Shandaken Flood Mitigation Plan



### Goals and Objectives

**Goals:** General guidelines that state what we want to achieve. Should be consistent with the State goals and other local goals.

Example: "Protect existing properties."

**Objectives:** Define strategies or implementation steps to attain a stated goal.

Example: "Enact or enforce regulatory measures that ensure new development will not increase flood threats to existing properties."

**Actions:** Specific activities that will achieve our goals and objectives and manage natural hazard risk





## Town of Shandaken Flood Mitigation Plan



### Capability Assessments

- **What resources do we have at our disposal to Mitigate Risk?**

“Proposed mitigation actions will be evaluated against the backdrop of what is feasible in terms of your government’s legal, administrative, fiscal and technical capacities” (FEMA 386-3)

- Serve to identify legal authority and administrative, technical and fiscal capabilities in the state, county and jurisdictions that will facilitate or hinder hazard mitigation goals and objectives.
- Part of this Planning Process is to build Local Mitigation Capabilities
- Training, Workshops and Seminars



## Town of Shandaken Flood Mitigation Plan



### Identification and Analysis of Mitigation Actions

- Mitigation actions need to be realistic, achievable and action-oriented.
- Will include both regional actions, as well as jurisdiction-specific.
- Will address both public and private property.
- For each proposed mitigation strategy, the following will be identified:
  - Implementation timeline
  - Estimated cost
  - Estimated benefits (avoided losses)
  - Potential funding sources
  - Lead agency or department
  - Supporting agencies



## Town of Shandaken Flood Mitigation Plan



### Mitigation Actions? Like What?

- **Prevention.** Measures such as planning and zoning, open space preservation, land development regulations, building codes, storm water management.
- **Property Protection.** Measures such as acquisition, relocation, storm shutters, rebuilding, barriers, floodproofing, insurance, and structural retrofits for high winds.
- **Public Education and Awareness.** Measures such as outreach projects, real estate disclosure, hazard information centers, technical assistance.
- **Natural Resource Protection.** Measures such as erosion and sediment control, stream corridor protection, vegetative management, and wetlands preservation.
- **Emergency Services.** Measures such as hazard threat recognition, hazard warning systems, emergency response, protection of critical facilities, and health and safety maintenance.
- **Structural Projects.** Measures such as dams, levees, seawalls, bulkheads, retaining walls, channel modifications, storm sewers, and retrofitted buildings and elevated roadways.



## Town of Shandaken Flood Mitigation Plan



### Other Planning Tasks

- **Assuring wide involvement and public participation**
  - Notices and new releases on planning effort
  - FMP Webpage detailing effort, providing downloadable drafts of the plan, and providing a way for public input (local contact information and email link)
  - Public presentations and meetings
  - Public access to draft and final plan documents (incl. libraries, town halls)
  - Questionnaire (on-line and/or hard copy)
- **Documentation of the Planning Process**
- **Plan implementation and maintenance procedures**
- **Adoption by local governments**



## Town of Shandaken Flood Mitigation Plan



### Plan Implementation

- Your mitigation strategy section provides a “blueprint” to follow for progressively reducing your community’s natural hazard risk.
- It will include two types of initiatives/projects – those that your community can “self fund”, and those that will require outside (e.g. grant) funding.
- Mitigation grant opportunities open regularly:
  - The annual HMA grant window opens in June of each year.
  - HMGP funding comes in the wake of Declared Disasters in the State.



## Town of Shandaken Flood Mitigation Plan



### **Why do I want to do this again? ...show me the money**

- Grant applications across all mitigation programs are similar (almost identical) and can be submitted through e-Grants to more than one program (with the exception of HMGP), and re-submitted if not awarded the first time.
- The grant process starts with a simple “Letter Of Intent” (LOI). SOEM will review the LOI and advise the community whether they should move forward with their application.
- Projects often address private property (e.g. residential, commercial), however the town or county must apply on their behalf as the “sub-applicant”.
- Grants typically require a 25% local match...for private property projects, the property owner is typically responsible for fronting the 75% reimbursable portion, along with providing the 25% local match.



## Town of Shandaken Flood Mitigation Plan



Here's how it works...

Example: Consider a \$200,000 storm water improvement project in your 5-year Capital Budget for FY13

	<u>No Grant</u>	<u>With Grant</u>
Base Project Cost:	\$ 200,000	
Project cost with grant support:		\$ 220,000
Less 75% FEMA reimbursement:		<u>(\$ 165,000)</u>
Net Project cost to Town:	\$ 200,000	\$ 55,000
Savings:		\$ 145,000 (73%)

...and this doesn't consider long term cost benefits



## Town of Shandaken Flood Mitigation Plan



**General Questions,  
Issues and Concerns**

