

## SECTION 1: INTRODUCTION

### WHY PREPARE THIS PLAN?

Flood hazard mitigation is a way to reduce or alleviate the loss of life, personal injury, and property damage that can result from flooding through long- and short-term strategies. It involves strategies such as planning, policy changes, programs, projects, and other activities that can mitigate the impacts of floods. The responsibility for flood hazard mitigation lies with many, including private property owners, business, industry, and local, state and federal government.

Numerous state and federal programs and regulations promote flood hazard mitigation planning. Notable among these are two programs of the Federal Emergency Management Agency (FEMA): the National Flood Insurance Program (NFIP) and the Community Rating System (CRS). These programs provide benefits in the form of reduced flood insurance costs for communities that meet minimum requirements for floodplain management. The Town of Shandaken participates in the NFIP and is preparing to participate in the CRS.

The Town of Shandaken participated in the 2009 Ulster County all-hazard mitigation plan but based on the flood history of the town and recent major flooding events, the Town supported the development of a town-specific flood management plan to more clearly address reducing its flood vulnerability. The town has prepared this new flood hazard mitigation plan as an up-to-date tool for flood preparedness and flood hazard mitigation. Elements and strategies in this plan were selected because they meet various state or federal program requirements as well as the needs of the Town of Shandaken and its citizens.

This plan identifies resources, information, and strategies for reducing risk from flood hazards. It will help guide and coordinate mitigation activities. The plan was developed to meet the following objectives:

- Meet the needs of the Town of Shandaken as well as state and federal requirements.
- Meet planning requirements allowing the Town of Shandaken to join CRS with an enhanced classification.
- Coordinate existing plans and programs so that high-priority initiatives and projects to mitigate possible disaster impacts are funded and implemented.
- Create a linkage between the flood hazard mitigation plan and established plans of the Town of Shandaken, Ulster County, and the Ashoken Stream Management Program to ensure they can work together in achieving successful mitigation.

All citizens, businesses, and visitors of the Town of Shandaken are the ultimate beneficiaries of this plan. Participation in development of the plan by key stakeholders helped ensure that outcomes will be mutually beneficial. The plan's goals and recommendations can lay groundwork for the development and implementation of local mitigation activities and partnerships.

### GUIDELINES FOR FLOOD PLANNING

The first priority for this plan is to benefit the citizens of the Town of Shandaken by providing the greatest possible protection against the hazard posed by potential flooding. In addition, the plan has been developed to follow as closely as feasible the guidelines for flood planning presented by FEMA for the CRS program.

### CRS STEPS FOR COMPREHENSIVE FLOODPLAIN MANAGEMENT PLAN

Developing a comprehensive floodplain management plan is among the activities that earn CRS credits toward reduced flood insurance rates. To earn CRS credit for a floodplain management plan, the



community’s process for developing the plan must include at least one item from each of 10 steps (see Appendix B for details):

Planning process steps:

- Step 1, Organize
- Step 2, Involve the public
- Step 3, Coordinate

Risk assessment steps:

- Step 4, Assess the hazard
- Step 5, Assess the problem

Mitigation strategy steps:

- Step 6, Set goals
- Step 7, Review possible activities
- Step 8, Draft an action plan

Plan maintenance steps:

- Step 9, Adopt the plan
- Step 10, Implement, evaluate and revise.

## BACKGROUND

The Town of Shandaken is vulnerable to flooding and has experienced devastating losses over the years. The Town has developed this Flood Mitigation Plan to identify the Town’s known flood problem areas; establish goals, objectives, policies and implementation programs to reduce flooding and flood-related hazards; and to ensure the natural and beneficial functions of the floodplains are protected.

The Town of Shandaken is vulnerable to flooding events and has experienced devastating losses over the years. Since 1978, residents have submitted \$5,603,540.93 in flood insurance claims (FEMA NFIP Statistics, 2012).

The Town intends to apply for the National Flood Insurance (NFIP) Community Rating System (CRS) as a way to help strengthen floodplain management in the Town and to reduce flood insurance premiums for residents

The Town has an approved hazard mitigation plan (2009 Ulster County Hazard Mitigation Plan) but recognizes that a more focused and detailed plan would benefit the community by having a focused mitigation strategy and to maximize CRS credits and provide discounts for flood insurance.

## CRS ORIGINS

The NFIP provides federally backed flood insurance to encourage communities to enact and enforce floodplain regulations. The NFIP's CRS was implemented in 1990 as a mechanism for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP

**Hazard Mitigation** is any sustained action taken to reduce or eliminate the long term risk and effects that can result from specific hazards.

FEMA defines the Community Rating System as A program developed by FEMA to provide incentives for those communities in the Regular Program that have gone beyond the minimum floodplain management requirements to develop extra measures to provide protection from flooding.



standards. The National Flood Insurance Reform Act of 1994 codified the CRS in the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance.

There are 10 CRS classes: class 1 requires the most credit points and gives the largest premium reduction; class 10 receives no premium reduction. A community that does not apply for the CRS or that does not obtain the minimum number of credit points is a class 10 community. The CRS recognizes 18 creditable activities, organized under four categories numbered 300 through 600: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness (An Evaluation of the National Flood Insurance Program's Community Rating System, Federal Emergency Management Agency, October 1998).

The Town of Shandaken is a Category "C" community (more than 10 properties on the updated list of repetitive loss properties). As a Category "C" community, in order for the Town of Shandaken to join the CRS program, must first adopt this Plan and then submit an application for the CRS program. Once the Town is accepted into the program, the Town will receive credit for this Plan. Enrolling in the CRS program will help the Town receive a reduction in flood insurance premium for performing activities that reduce the impacts of flooding. Joining the CRS program will also encourage the Town to carry out flood mitigation actions on a regular basis.

### **ORGANIZATIONS INVOLVED IN THE MITIGATION PLANNING EFFORT**

The Town of Shandaken intends to implement this Plan with the participation of its various departments, organizations and governing body, as well as by coordinating with relevant Federal and state entities. Coordination helps to ensure that stakeholders have established communication channels and relationships necessary to support mitigation planning and mitigation actions included in Section 6.

### **MULTIPLE AGENCY SUPPORT FOR HAZARD MITIGATION**

Primary responsibility for the development and implementation of mitigation strategies and policies lies with local governments. However, local governments are not alone; various partners and resources at the regional, state and federal levels are available to assist communities in the development and implementation of mitigation strategies. Within New York State, the New York State Department of Environmental Protection and the Ashoken Watershed Stream Management Program provided hazard mitigation planning assistance to the Town.

Additional input and support for this planning effort was obtained from a range of agencies and through public involvement (as discussed in Section 3). Oversight for the preparation of this plan was provided by the SAFARI Planning Committee (the Flood Management Planning (FMP) Committee), which includes representatives from:

- Town Building Department
- Town Supervisor's Office
- The Town Planning Board and Zoning Board of Appeals
- Town Clerk's Office
- County Engineering
- Town Police Department
- Town Fire Department

- Town Public Works Department

The Shandaken Planning Board provides oversight on land use and comprehensive planning. Additionally the Shandaken Building Inspector/Zoning and Code Enforcement Office is responsible for enforcing codes within the Town limits. Finally, the floodplain administrator is one and the same with the Town Code Officer in the Building Department and provides oversight for all floodplain related issues.

In addition, New York State Department of Transportation, New York City Department of Environmental Protection, New York State Department of Environmental Conservation, United States Department of Agriculture-National Resources Conservation Service, Ulster County Soil and Water Conservation District, Ulster County Department of Public Works, Cornell Cooperative Extension attended committee meetings and provided plan support.

This Flood Mitigation Plan was prepared in accordance with the following regulations and guidance:

- 44 Code of Federal Regulations part 78.5 - Flood Mitigation Plan Development in accordance with the National Flood Insurance Act of 1968 (42 U.S.C. 4104c et seq.
- CRS Coordinator's Manual (FIA-////)
- DMA 2000 (Public Law 106-390, October 30, 2000).
- 44 Code of Federal Regulations (CFR) Parts 201 and 206 (including: Feb. 26, 2002, Oct. 1, 2002, Oct. 28, 2003, and Sept. 13, 2004 Interim Final Rules).
- FEMA. 2004. "How-To Guide for Using HAZUS-MH for Risk Assessment." FEMA Document No. 433. February.
- FEMA Mitigation Planning How-to Series (FEMA 386-1 through 4, 2002), available at: <http://www.fema.gov/fima/planhowto.shtm>.

## **IMPLEMENTATION OF THE PLANNING PROCESS**

To support the planning process to develop this Flood Mitigation Plan (FMP), the Town of Shandaken has accomplished the following:

- Developed a FMP Committee
- Profiled the Flood Hazard
- Estimated the inventory at risk and potential losses from flood hazards
- Perform a comprehensive review of mitigation alternatives
- Developed mitigation actions and goals that address the various hazards that impact the area
- Developed mitigation plan maintenance procedures to be executed after adoption of plan.

To address the requirements of CRS and better understand their potential vulnerability to and losses associated with hazards of concern, the Town of Shandaken used the Hazards U.S. – Multi-Hazard (HAZUS-MH) software package (discussed in greater detail later in this Plan) supplemented by local data, as feasible, to support the risk assessment and vulnerability evaluation. HAZUS-MH assesses risk and estimates potential losses for natural hazards. It produces outputs that will assist state and local governments, communities, and the private sector in implementing emergency response, recovery, and mitigation programs, including the development of FMPs.

As required by CRS, the planning process has engaged the public throughout providing opportunities for public comment and input. In addition, numerous agencies and stakeholders have participated as core or support members, providing input and expertise throughout the planning process.

This Flood Mitigation Plan documents the process and outcomes of the Town's efforts. Additional information on the planning process is included in Section 3, Planning Process. Documentation that the prerequisites for plan approval have been met is included in Section 2, Plan Adoption.

## **BENEFITS OF MITIGATION PLANNING**

The planning process will help prepare citizens and government agencies to better respond when disasters occur. Also, mitigation planning allows the Town of Shandaken to remain eligible for mitigation grant funding for mitigation projects that will reduce the impact of future disaster events. The long-term benefits of mitigation planning include:

- An increased understanding of flood hazards faced by the Town of Shandaken
- A more sustainable and disaster-resistant community
- Financial savings through partnerships that support planning and mitigation efforts
- Focused use of limited resources on hazards that have the biggest impact on the community
- Reduced long-term impacts and damages to human health and structures and reduced repair costs

## **BENEFITS OF PARTICIPATING IN THE COMMUNITY RATING SYSTEM**

The objective of the CRS is to support the goals of the NFIP. To do this, the CRS provides insurance premium rate discounts to policy holders in recognition that their communities implement activities that work toward its three goals of reducing flood damage, supporting the insurance part of the NFIP, and pursuing a broad approach to floodplain management.



In this process, the “community” part of the Community Rating System includes state and regional agencies and private organizations that support and assist city, county, and tribal governments that are participants in the NFIP. A closer look at how communities can implement these three goals is as follows:

1. Reduce flood damage to insurable property. Communities are encouraged to map and provide regulatory flood data for all their flood hazards. The data should be used in their regulatory programs and shared with all users and inquirers. New buildings in mapped floodplains should be protected from the known local flood hazards, which may require setting standards higher than the minimum national criteria of the NFIP. Communities are encouraged to reduce the exposure of existing buildings to flood damage, especially repetitive loss properties.
2. Strengthen and support the insurance aspects of the NFIP. Communities should encourage their residents to be aware of their flood risk and to purchase and maintain a flood insurance policy to protect themselves from the financial impacts of flooding. Communities should also help make the program more financially sound by implementing mapping and information programs that help to evaluate accurately the individual property risk for flood insurance rating purposes, expand the policy base, and reduce repetitive losses.
3. Encourage a comprehensive approach to floodplain management. Insurable property is not the only floodplain management concern of communities, so the CRS recognizes efforts that protect lives; further public health, safety, and welfare; and protect natural floodplain functions. The community staff should understand the physical and biological processes that form and change floodplains and watersheds and take steps to deal with flooding, erosion, habitat loss, water quality, and special flood-related hazards. Floodplain management programs need to protect buildings, infrastructure, critical facilities, and natural functions and ensure that new development does not cause adverse impacts on others. A comprehensive approach uses all tools, including public information, planning, regulatory authorities, financial support, public works activities, and emergency management (CRS Coordinator’s Manual, FIA-15/2007).

## **HOW TO USE THIS PLAN**

This flood hazard mitigation plan is organized into the following primary parts, which follow the organization of the CRS steps for floodplain planning.

- Part 1—Planning Process and Project Background
  - **Section 1**, Introduction: Overview and summary of the Town of Shandaken Flood Mitigation Plan
  - **Section 2**, Plan Adoption: Information regarding the adoption of the Plan by the Town of Shandaken.
  - **Section 3**, Planning Process: A description of the Plan methodology and development process, HMP Committee and stakeholder involvement efforts, and a description of how this Plan will be incorporated into existing programs.
- Part 2—Risk Assessment
  - **Section 4**, Town Profile: An overview of the Town of Shandaken, including: (1) general information, (2) population and demographics, (3) general building stock inventory, (4) land use trends, (5) future growth and development, and (6) critical facilities.



- **Section 5**, Risk Assessment: Documentation of the hazard identification and ranking process, hazard profiles, and results of the vulnerability assessment (estimates of the impact of hazard events on life, safety and health, general building stock, critical facilities, the economy and future growth and development). Description of the status of local data and planned steps to improve local data to support mitigation planning.
- Part 3—Mitigation Strategy
  - **Section 6**, Mitigation Strategy: Information regarding the mission statement, mitigation goals, objectives, capability assessment and mitigation action items identified by the Town in response to priority hazards of concern. Also under this section is a comprehensive review of alternatives considered with and emphasis on strengths, weaknesses, obstacles and opportunities within the community.
- Part 4—Plan Maintenance
  - **Section 7**, Plan Maintenance Procedures: The system established by the Town of Shandaken to monitor, evaluate, maintain and update the Plan.

Each part includes elements identified in the CRS’s 10 steps. These steps are often cited within each subsection to illustrate compliance with the requirement.

The following appendices provided at the end of the plan include information or explanations to support the main content of the plan:

- Appendix A—A glossary of acronyms and definitions
- Appendix B—Description of CRS Planning Requirements
- Appendix C—Public outreach information, including the questionnaire and summary and documentation of public meetings
- Appendix D—A template for progress reports to be completed as this plan is implemented



## SECTION 2: PLAN ADOPTION

### OVERVIEW

This section contains information regarding adoption of the Plan by the Town of Shandaken.

### PLAN ADOPTION BY LOCAL GOVERNING BODY

Adoption by the local governing body demonstrates the commitment of the Town to fulfill the mitigation goals and objectives outlined in the Plan. Adoption legitimizes the Plan and authorizes responsible agencies to execute their responsibilities. In order for the Plan to be approved, the Town's governing body must adopt the Plan before its submission for application to the CRS to its ISO/CRS Specialist.

Adoption of the plan is necessary because:

- It lends authority to the plan to serve as a guiding document for all local and state government officials;
- It gives legal status to the plan in the event it is challenged in court;
- It certifies to program and grant administrators that the plan's recommendations have been properly considered and approved by the governing authority and jurisdictions' citizens; and
- It helps to ensure the continuity of mitigation programs and policies over time because elected officials, staff, and other community decision-makers can refer to the official document when making decisions about the community's future.

Source: FEMA. 2003. "How to Series"-*Bringing the Plan to Life* (FEMA 386-4). August.