

This section provides acronym descriptions and definitions to terms used within the Town of Shandaken Flood Mitigation Plan.

**ACRONYMS AND DEFINITIONS**

<b>AMSL</b>	Above mean sea level
<b>ASFPM</b>	Association of State Floodplain Managers
<b>B</b>	Billion (\$)
<b>BCA</b>	Benefit Cost Analysis
<b>BCEGS</b>	Building Code Effectiveness Grading Schedule
<b>BFE</b>	Base Flood Elevation
<b>BGR</b>	Federal Institute of Geosciences and Natural Resources
<b>BOCA</b>	Building Officials Code Administration
<b>CEMP</b>	Comprehensive Emergency Management Plan
<b>CFS</b>	Cubic Feet Per Second
<b>CPC</b>	Climate Prediction Center
<b>CRREL</b>	Cold Regions Research and Engineering Laboratory
<b>CRS</b>	Community Rating System
<b>DEM</b>	Digital Elevation Model
<b>DFIRMs</b>	Digital Flood Insurance Rate Maps
<b>DI</b> s	Damage Indicators
<b>DMA 2000</b>	Disaster Mitigation Act of 2000
<b>DOD</b>	Degrees of Damage
<b>DPW</b>	Department of Public Works
<b>DR</b>	Disaster Declarations
<b>EM</b>	Emergency Management
<b>EMS</b>	Emergency Medical Services
<b>EOC</b>	Emergency Operation Center
<b>FD</b>	Fire Department
<b>FEMA</b>	Federal Emergency Management Agency
<b>FHMP</b>	Flood Hazard Mitigation Program
<b>FIA</b>	Flood Insurance Administration
<b>FIRM</b>	Flood Insurance Rate Map
<b>FIS</b>	Flood Insurance Study
<b>FMPs</b>	Flood Mitigation Plans
<b>FMA</b>	Flood Mitigation Assistance



<b>GeoMAC</b>	Geospatial Multi-Agency Coordination
<b>GIS</b>	Geographic Information System
<b>GPM</b>	Gallons Per Minute
<b>HA</b>	Housing Program (FEMA)
<b>HAZUS</b>	Hazards U.S.
<b>HAZUS-MH</b>	Hazards U.S. Multi-Hazard
<b>HAZMAT</b>	Hazardous Material
<b>HAZNY</b>	Hazards New York
<b>HMGP</b>	Hazard Mitigation Grant Program
<b>HMP</b>	Hazard Mitigation Plan
<b>HPC</b>	Hydrometeorological Prediction center
<b>HPDE</b>	Earth Dam (HAZUS Defined)
<b>HPDG</b>	Gravity Dam (HAZUS Defined)
<b>HPDM</b>	Masonry Dam (HAZUS Defined)
<b>HPDR</b>	Rockfill Dam (HAZUS Defined)
<b>HQ</b>	Headquarters
<b>HS</b>	High School
<b>HVCD</b>	Hudson Valley Climate Division
<b>IA</b>	Individual Assistance (FEMA grant)
<b>IFG</b>	Individual and Family Grants
<b>IPCC</b>	Intergovernmental Panel of Climate Change
<b>K</b>	Thousands (\$)
<b>LIDAR</b>	Light Detection and Ranging
<b>M</b>	Million (\$)
<b>MARFC</b>	Middle Atlantic River Forecast Center
<b>MESO</b>	Multi-County Environmental Storm Observatory
<b>MGD</b>	Million Gallons per Day
<b>MMI</b>	Modified Mercalli Scale
<b>MPC</b>	Mitigation Planning Community
<b>Mph</b>	Miles per Hour
<b>MS</b>	Middle School
<b>MRP</b>	Mean Return Period
<b>NA</b>	Not Available/Not Applicable
<b>NCDC</b>	National Climate Data Center

<b>NFIP</b>	National Flood Insurance Program
<b>NID</b>	National Inventory of Dams
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NPDP</b>	National Performance of Dams Program
<b>NR</b>	Not Required
<b>NRCC</b>	Northeast Regional Climate Center
<b>NRCS</b>	Natural Resource Conservation Service
<b>NSF</b>	National Science Foundation
<b>NSSL</b>	National Severe Storms Laboratory
<b>NWIS</b>	National Water Information System
<b>NWS</b>	National Weather Service
<b>NY</b>	New York
<b>NYS</b>	New York State
<b>NYSC</b>	New York State Climate
<b>NYSDEC</b>	New York State Department of Environmental Conservation
<b>NYSDOT</b>	New York State Department of Transportation
<b>NYSDPC</b>	New York State Disaster Preparedness Commission
<b>NYSOEM</b>	New York State Office of Emergency Management
<b>PA</b>	Public Assistance (FEMA grant)
<b>PD</b>	Police Department
<b>PDM</b>	Pre-Disaster Mitigation Program
<b>RL(P)</b>	Repetitive Loss (Property)
<b>RCV</b>	Replacement Cost Value
<b>RR</b>	Railroad
<b>RV</b>	Replacement Value
<b>SAFARI</b>	Shandaken Area Flood Assessment and Remediation Initiative
<b>SBA</b>	Small Business Association
<b>SFHA</b>	Special Flood Hazard Area
<b>SHELDUS</b>	Spatial Hazard Events and Losses Database for United States
<b>SPI</b>	Standard Precipitation Index
<b>SRL(P)</b>	Severe Repetitive Loss (Property)
<b>SWOO</b>	Strengths, Weaknesses, Obstacles and Opportunities
<b>SWSI</b>	Surface Water Supply Index
<b>TBA</b>	To Be Announced

<b>TBD</b>	To Be Determined
<b>TSTM</b>	Thunderstorm
<b>U.S.</b>	United States
<b>USACE</b>	U.S. Army Corps of Engineers
<b>USD</b>	U.S. Dollar
<b>USEPA</b>	U.S. Environmental Protection Agency
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>USGS</b>	U.S. Geological Survey
<b>WWPS</b>	Wastewater Pump Station
<b>WWTP</b>	Wastewater Treatment Plant

**DEFINITIONS**

**100-Year Flood:** The term “100-year flood” can be misleading. The 100-year flood does not necessarily occur once every 100 years. Rather, it is the flood that has a 1 percent chance of being equaled or exceeded in any given year. Thus, the 100-year flood could occur more than once in a relatively short period of time. The Federal Emergency Management Agency (FEMA) defines it as the 1 percent annual chance flood, which is now the standard definition used by most federal and state agencies and by the National Flood Insurance Program.

**Acre-Foot:** An acre-foot is the amount of water it takes to cover 1 acre to a depth of 1 foot. This measure is used to describe the quantity of storage in a water reservoir. An acre-foot is a unit of volume. One acre foot equals 7,758 barrels; 325,829 gallons; or 43,560 cubic feet. An average household of four will use approximately 1 acre-foot of water per year.

**Asset:** An asset is any man-made or natural feature that has value, including, but not limited to, people; buildings; infrastructure, such as bridges, roads, sewers, and water systems; lifelines, such as electricity and communication resources; and environmental, cultural, or recreational features such as parks, wetlands, and landmarks.

**Base Flood:** The flood having a 1% chance of being equaled or exceeded in any given year, also known as the “100-year” or “1% chance” flood. The base flood is a statistical concept used to ensure that all properties subject to the National Flood Insurance Program are protected to the same degree against flooding.

**Basin:** A basin is the area within which all surface water—whether from rainfall, snowmelt, springs, or other sources—flows to a single water body or watercourse. The boundary of a river basin is defined by natural topography, such as hills, mountains, and ridges. Basins are also referred to as “watersheds” and “drainage basins.”

**Benefit:** A benefit is a net project outcome and is usually defined in monetary terms. Benefits may include direct and indirect effects. For the purposes of benefit-cost analysis of proposed



mitigation initiatives, benefits are limited to specific, measurable, risk reduction factors, including reduction in expected property losses (buildings, contents, and functions) and protection of human life.

**Benefit/Cost Analysis:** A benefit/cost analysis is a systematic, quantitative method of comparing projected benefits to projected costs of a project or policy. It is used as a measure of cost effectiveness.

**Building:** A building is defined as a structure that is walled and roofed, principally aboveground, and permanently fixed to a site. The term includes manufactured homes on permanent foundations on which the wheels and axles carry no weight.

**Capability Assessment:** A capability assessment provides a description and analysis of a community's current capacity to address threats associated with flooding. The assessment includes two components: an inventory of an agency's mission, programs, and policies, and an analysis of its capacity to carry them out. A capability assessment is an integral part of the planning process in which a community's actions to reduce losses are identified, reviewed, and analyzed, and the framework for implementation is identified. The following capabilities were reviewed under this assessment:

- Legal and regulatory capability
- Administrative and technical capability
- Fiscal capability

**Community Rating System (CRS):** The CRS is a voluntary program under the NFIP that rewards participating communities (provides incentives) for exceeding the minimum requirements of the NFIP and completing activities that reduce flood hazard risk by providing flood insurance premium discounts.

**Critical Area:** An area defined by state or local regulations as deserving special protection because of unique natural features or its value as habitat for a wide range of species of flora and fauna. A sensitive/critical area is usually subject to more restrictive development regulations.

**Critical Facility:** A critical facility is one that is deemed vital to the Thurston County planning area's ability to provide essential services while protecting life and property. A critical facility may be a system or an asset, either physical or virtual, the loss of which would have a profound impact on the security, economy, public health or safety, environment, or any combination of thereof, across the planning area. For the purposes of the Thurston County Flood Hazard Mitigation Plan, the following types of systems and assets are defined as critical facilities:

- Police stations, fire stations, paramedic stations, emergency vehicle and equipment storage facilities, and emergency operations and communications centers needed for disaster response before, during, and after hazard events.
- Public and private utilities and infrastructure vital to maintaining or restoring normal services to areas damaged by hazard events. These include water (potable, wastewater, storm water, drainage and irrigation), utilities (transmission and distribution facilities for natural gas, power, geothermal) and communications (land-based telephone, cell phone, the internet emergency broadcast facilities and emergency radios).

- Public gathering places that could be utilized as evacuation centers during large scale disasters.
- Hospitals, extended care facilities, urgent care facilities and housing that may contain occupants not sufficiently mobile to avoid death or injury during a hazard event
- Transportation systems that convey vital supplies and services to, through and throughout the community. These include roads, bridges, railways, airports and pipelines
- Government and educational facilities central to governance and quality of life along with response and recovery actions taken as a result of a hazard event
- Structures or facilities that produce, use, or store highly volatile, flammable, explosive, toxic, and/or water-reactive materials.
- Infrastructure designed to help safely convey high water events from the event source to the perimeter of the planning area including but not limited to; dams, revetments and stormwater drainage facilities.
- Debris management and solid waste facilities

**Drainage Basin:** A basin is the area within which all surface water—whether from rainfall, snowmelt, springs or other sources—flows to a single water body or watercourse. The boundary of a river basin is defined by natural topography, such as hills, mountains and ridges. Drainage basins are also referred to as **watersheds** or **basins**.

**Economically Disadvantaged Populations:** Households with household incomes of \$15,000 or less.

**Exposure:** Exposure is defined as the number and dollar value of assets considered to be at risk during the occurrence of a specific hazard.

**Extent:** The extent is the size of an area affected by a hazard.

**Flash Flood:** A flash flood occurs with little or no warning when water levels rise at an extremely fast rate

**Flood Insurance Rate Map (FIRM):** FIRMs are the official maps on which the Federal Emergency Management Agency (FEMA) has delineated the Special Flood Hazard Area.

**Flood Insurance Study:** A report published by the Federal Insurance and Mitigation Administration for a community in conjunction with the community's Flood Insurance rate Map. The study contains such background data as the base flood discharges and water surface elevations that were used to prepare the FIRM. In most cases, a community FIRM with detailed mapping will have a corresponding flood insurance study.

**Floodplain:** Any land area susceptible to being inundated by flood waters from any source. A flood insurance rate map identifies most, but not necessarily all, of a community's floodplain as the Special Flood Hazard Area.

**Floodway:** Floodways are areas within a floodplain that are reserved for the purpose of conveying flood discharge without increasing the base flood elevation more than 1 foot.

Generally speaking, no development is allowed in floodways, as any structures located there would block the flow of floodwaters.

**Floodway Fringe:** Floodway fringe areas are located in the floodplain but outside of the floodway. Some development is generally allowed in these areas, with a variety of restrictions. On maps that have identified and delineated a floodway, this would be the area beyond the floodway boundary that can be subject to different regulations.

**Freeboard:** Freeboard is the margin of safety added to the base flood elevation.

**Frequency:** For the purposes of this plan, frequency refers to how often a hazard of specific magnitude, duration, and/or extent is expected to occur on average. Statistically, a hazard with a 100-year frequency is expected to occur about once every 100 years on average and has a 1 percent chance of occurring any given year. Frequency reliability varies depending on the type of hazard considered.

**Goal:** A goal is a general guideline that explains what is to be achieved. Goals are usually broad-based, long-term, policy-type statements and represent global visions. Goals help define the benefits that a plan is trying to achieve. The success of a flood hazard mitigation plan is measured by the degree to which its goals have been met (that is, by the actual benefits in terms of actual hazard mitigation).

**Geographic Information System (GIS):** GIS is a computer software application that relates data regarding physical and other features on the earth to a database for mapping and analysis.

**Hazard:** A hazard is a source of potential danger or adverse condition that could harm people and/or cause property damage.

**Hazard Mitigation Grant Program (HMGP):** Authorized under Section 202 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, the HMGP is administered by FEMA and provides grants to states, tribes, and local governments to implement hazard mitigation initiatives after a major disaster declaration. The purpose of the program is to reduce the loss of life and property due to disasters and to enable mitigation activities to be implemented as a community recovers from a disaster

**Hazards U.S. Multi-Hazard (HAZUS-MH) Loss Estimation Program:** HAZUS-MH is a GIS-based program used to support the development of risk assessments as required under the DMA. The HAZUS-MH software program assesses risk in a quantitative manner to estimate damage and losses associated with natural hazards. HAZUS-MH is FEMA's nationally applicable, standardized methodology and software program and contains modules for estimating potential losses from earthquakes, floods, and wind hazards. HAZUS-MH has also been used to assess vulnerability (exposure) for other hazards.

**Hydraulics:** Hydraulics is the branch of science or engineering that addresses fluids (especially water) in motion in rivers or canals, works and machinery for conducting or raising water, the use of water as a prime mover, and other fluid-related areas.

**Hydrology:** Hydrology is the analysis of waters of the earth. For example, a flood discharge estimate is developed by conducting a hydrologic study.

**Intensity:** For the purposes of this plan, intensity refers to the measure of the effects of a hazard.

**Inventory:** The assets identified in a study region comprise an inventory. Inventories include assets that could be lost when a disaster occurs and community resources are at risk. Assets include people, buildings, transportation, and other valued community resources.

**Local Government:** Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.

**Mitigation:** A preventive action that can be taken in advance of an event that will reduce or eliminate the risk to life or property.

**Mitigation Initiatives:** Mitigation initiatives are specific actions to achieve goals and objectives that minimize the effects from a disaster and reduce the loss of life and property.

**Objective:** For the purposes of this plan, an objective is defined as a short-term aim that, when combined with other objectives, forms a strategy or course of action to meet a goal. Unlike goals, objectives are specific and measurable.

**Preparedness:** Preparedness refers to actions that strengthen the capability of government, citizens, and communities to respond to disasters.

**Presidential Disaster Declaration:** These declarations are typically made for events that cause more damage than state and local governments and resources can handle without federal government assistance. Generally, no specific dollar loss threshold has been established for such declarations. A Presidential Disaster Declaration puts into motion long-term federal recovery programs, some of which are matched by state programs, designed to help disaster victims, businesses, and public entities.

**Probability of Occurrence:** The probability of occurrence is a statistical measure or estimate of the likelihood that a hazard will occur. This probability is generally based on past hazard events in the area and a forecast of events that could occur in the future. A probability factor based on yearly values of occurrence is used to estimate probability of occurrence.

**Repetitive Loss Property:** Any NFIP-insured property that, since 1978 and regardless of any changes of ownership during that period, has experienced:

- Four or more paid flood losses in excess of \$1000.00; or
- Two paid flood losses in excess of \$1000.00 within any 10-year period since 1978 or

- Three or more paid losses that equal or exceed the current value of the insured property.

**Return Period (or Mean Return Period):** This term refers to the average period of time in years between occurrences of a particular hazard (equal to the inverse of the annual frequency of occurrence).

**Riverine:** Of or produced by a river. Riverine floodplains have readily identifiable channels. Floodway maps can only be prepared for riverine floodplains.

**Risk:** Risk is the estimated impact that a hazard would have on people, services, facilities, and structures in a community. Risk measures the likelihood of a hazard occurring and resulting in an adverse condition that causes injury or damage. Risk is often expressed in relative terms such as a high, moderate, or low likelihood of sustaining damage above a particular threshold due to occurrence of a specific type of hazard. Risk also can be expressed in terms of potential monetary losses associated with the intensity of the hazard.

**Risk Assessment:** Risk assessment is the process of measuring potential loss of life, personal injury, economic injury, and property damage resulting from hazards. This process assesses the vulnerability of people, buildings, and infrastructure to hazards and focuses on (1) hazard identification; (2) impacts of hazards on physical, social, and economic assets; (3) vulnerability identification; and (4) estimates of the cost of damage or costs that could be avoided through mitigation.

**Robert T. Stafford Act:** The Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 100-107, was signed into law on November 23, 1988. This law amended the Disaster Relief Act of 1974, Public Law 93-288. The Stafford Act is the statutory authority for most federal disaster response activities, especially as they pertain to FEMA and its programs.

**Special Flood Hazard Area:** The base floodplain delineated on a Flood Insurance Rate Map. The SFHA is mapped as a Zone A in riverine situations and zone V in coastal situations. The SFHA may or may not encompass all of a community's flood problems

**Stakeholder:** Business leaders, civic groups, academia, non-profit organizations, major employers, managers of critical facilities, farmers, developers, special purpose districts, and others whose actions could impact hazard mitigation.

**Stream Bank Erosion:** Stream bank erosion is common along rivers, streams and drains where banks have been eroded, sloughed or undercut. However, it is important to remember that a stream is a dynamic and constantly changing system. It is natural for a stream to want to meander, so not all eroding banks are "bad" and in need of repair. Generally, stream bank erosion becomes a problem where development has limited the meandering nature of streams, where streams have been channelized, or where stream bank structures (like bridges, culverts, etc.) are located in places where they can actually cause damage to downstream areas. Stabilizing these areas can help protect watercourses from continued sedimentation, damage to adjacent land uses, control unwanted meander, and improvement of habitat for fish and wildlife.

**Steep Slope:** Different communities and agencies define it differently, depending on what it is being applied to, but generally a steep slope is a slope in which the percent slope equals or exceeds 25%. For this study, steep slope is defined as slopes greater than 33%.

**Vulnerability:** Vulnerability describes how exposed or susceptible an asset is to damage. Vulnerability depends on an asset's construction, contents, and the economic value of its functions. Like indirect damage, the vulnerability of one element of the community is often related to the vulnerability of another. For example, many businesses depend on uninterrupted electrical power. Flooding of an electric substation would affect not only the substation itself but businesses as well. Often, indirect effects can be much more widespread and damaging than direct effects.

**Watershed:** A watershed is an area that drains down-gradient from areas of higher land to areas of lower land to the lowest point, a common drainage basin.

**Zoning Ordinance:** The zoning ordinance designates allowable land use and intensities for a local jurisdiction. Zoning ordinances consist of two components: a zoning text and a zoning map.

This appendix includes the CRS Guidelines for Flood Planning, including the following:

- Community Rating System Planning Process Guidelines
- Repetitive Loss Area Analysis
- Habitat Conservation Plan

DRAFT

**COMMUNITY RATING SYSTEM PLANNING PROCESS GUIDELINES**

**A. FLOODPLAIN MANAGEMENT PLANNING**

**1. Organize to prepare the plan (Maximum credit: 10 points). The credit for this step is the total of the following points, which are based on how the community organizes to prepare its floodplain management plan:**

- (a) if the planning process is under the supervision or direction of a professional planner;
- (b) if the planning process is conducted through a committee composed of staff from those community departments that will be implementing the majority of the plan’s recommendations;
- (c) if the planning process and/or the committee are formally created or recognized by action of the community’s governing board.

The plan document must discuss how it was prepared, who was involved in the planning process, and how the public was involved during the planning process. (REQUIRED) When a multi-jurisdictional plan is prepared, at least one representative from each community seeking CRS credit must be involved on the planning committee that is credited under item (b).

**2. Involve the public (Maximum credit: 85 points). The planning process must include an opportunity for the public to comment on the plan during the drafting stage and before plan approval (REQUIRED). The term “public” includes residents, businesses, property owners, and tenants in the floodplain and other known hazard areas as well as other stakeholders in the community, such as business leaders, civic groups, academia, non-profit organizations, and major employers. The credit for this step is the total of the following points based on how the community involves the public during the planning process.**

- (a) if the planning process is conducted through a planning committee that includes members of the public. If this is the same planning committee credited under step 1, items (b) and (c), at least one half of the members must be representatives of the public, including residents, businesses, or property owners from the flood-prone areas. The committee must hold a sufficient number of meetings that involve the members in planning steps 4 through 9 (e.g., at least one meeting on each step).
- (b) if one or more public information meetings are held in the affected area(s) at the beginning of the planning process to obtain public input on the natural hazards, problems, and possible solutions. At least one meeting must be held separate from the planning committee meetings in item (a).
- (c) for holding at least one public meeting to obtain input on the draft plan. The meeting must be at the end of the planning process, at least two weeks before submittal of the recommended plan to the community’s governing body.
- (d) if questionnaires are distributed asking the public for information on their natural hazards, problems, and possible solutions. The questionnaires must be distributed to at least 90% of the floodplain residents.
- (e) if written comments and recommendations are solicited from neighborhood advisory groups, homeowners’ associations, parent-teacher organizations, the Chamber of Commerce, or similar organizations that represent the public in the affected area(s).

- (f) if other public information activities are implemented to explain the planning process and encourage input to the planner or planning committee.
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**3. Coordinate (Maximum credit: 25 points). Other agencies and organizations must be contacted to see if they are doing anything that may affect the community’s program and to see if they could support the community’s efforts.**

Examples of “other agencies and organizations” include neighboring communities; local, regional, state, and federal agencies; and businesses, academia, and other private and non-profit organizations affected by the hazards or involved in hazard mitigation or floodplain management. The credit for this step is the total of the following points. To receive credit for this step, the coordination must include items (a) and (b).

- (a) if the planning includes a review of existing studies, reports, and technical information and of the community’s needs, goals, and plans for the area. (REQUIRED)
  - (b) if neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-profit interests are given an opportunity to be involved in the planning process. (REQUIRED)
  - (c) if neighboring communities, the state NFIP Coordinator, the state water resources agency, the county and state emergency management agency, the FEMA Regional Office, and (where appropriate) the state’s coastal zone management agency are contacted at the beginning of the planning process to see if they are doing anything that may affect the community's program and to see how they can support the community's efforts.
  - (d) if other governmental and nongovernmental organizations, such as the National Weather Service, Red Cross, homebuilders association, and environmental groups are contacted at the beginning of the planning process to see if they are doing anything that may affect the community's program and to see how they can support the community's efforts.
  - (e) if the coordination effort includes holding meetings with representatives of the other agencies and organizations to review common problems, development policies, mitigation strategies, inconsistencies, and conflicts in policies, plans, programs, and regulations.
  - (f) for sending the draft action plan to the other agencies and organizations contacted under items (b), (c), (d), and (e) and asking them to comment by a certain date.
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**4. Assess the hazard (Maximum credit: 20 points). The credit for this step is the total of the following points based on what the community includes in its assessment of the hazard. To receive CRS credit for this step, the assessment must include item (a). If the community wants the plan to also qualify as a FEMA multi-hazard mitigation plan, item (b) must also be completed.**

- (a) for including an assessment of the flood hazard in the plan. If the community is a Category B or C repetitive loss community, this step must cover all of its repetitive loss areas (REQUIRED). The assessment must include at least one of the following items:
  - (1) a map of the known flood hazards. “Known flood hazards” means the floodplain shown on the Flood Insurance Rate Map (FIRM), repetitive loss areas, areas not mapped on the FIRM that have flooded in the past, and surface flooding identified in existing studies. No new studies need to be conducted for this assessment.

- (2) a description of the known flood hazards, including source of water, depth of flooding, velocities, and warning time.
  - (3) a discussion of past floods.
  - (b) if the plan includes a map, description of the magnitude or severity, history, and probability of future events for other natural hazards, such as erosion, tsunamis, earthquakes, and hurricanes. The plan should include all natural hazards that affect the community. At a minimum, it should include those hazards identified by the state’s hazard mitigation plan. (REQUIRED FOR PLANS TO BE CREDITED UNDER THE DISASTER MITIGATION ACT OF 2000)
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**5. Assess the problem (Maximum credit: 35 points) The credit for this step is the total of the following points, based on what is included in the assessment of the vulnerability of the community to the hazards identified in the previous hazard assessment step. To receive credit for this step, the assessment must include item (a) and must evaluate the hazard data in light of their impact on the community. Simply listing data, such as the names of the critical facilities or the number of flood insurance claims, will not suffice for credit.**

- (a) if the plan includes an overall summary of the jurisdiction’s vulnerability to each hazard identified in the hazard assessment (step 4) and the impact on the community. (required)
- (b) if the plan includes a description of the impact that the hazards identified in the hazard assessment (step 4) have on: (1) life, safety, and health and the need and procedures for warning and evacuating residents and visitors. (5 points) (2) critical facilities and infrastructure. (5 points) (3) the community’s economy and tax base. (5 points)
- (c) for including the number and types of buildings subject to the hazards identified in the hazard assessment.
- (d) if the assessment includes a review of all properties that have received flood insurance claims (in addition to the repetitive loss properties) or an estimate of the potential dollar losses to vulnerable structures.
- (e) if the plan describes areas that provide natural and beneficial functions, such as wetlands, riparian areas, sensitive areas, and habitat for rare or endangered species.
- (f) if the plan includes a description of development, redevelopment, and population trends and a discussion of what the future brings for development and redevelopment in the community, the watershed, and natural resource areas.

When a multi-jurisdictional plan is prepared, the critical facilities, building counts, and similar data must be presented for each community.

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**6. Set goals (Maximum credit: 2 points). The two credit points for this step are provided if the plan includes a statement of the goals of the community’s floodplain management or hazard mitigation program. (REQUIRED)**

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**7. Review possible activities (Maximum credit: 30 points) The plan must describe those activities that were considered and note why they were or were not recommended (e.g., they were not cost-effective or they did not support the community’s goals). (REQUIRED)** If an activity is currently being implemented, the plan must note whether it should be modified. The discussion of each activity needs to be detailed enough to be useful to the lay reader. The

credit for this step is the total of the following points based on which floodplain management or hazard mitigation activities are reviewed in the plan.

- (a) if the plan reviews preventive activities, such as zoning, stormwater management regulations, building codes, and preservation of open space and the effectiveness of current regulatory and preventive standards and programs;
  - (b) if the plan reviews property protection activities, such as acquisition, retrofitting, and flood insurance;
  - (c) if the plan reviews activities to protect the natural and beneficial functions of the floodplain, such as wetlands protection;
  - (d) if the plan reviews emergency services activities, such as warning and sandbagging;
  - (e) if the plan reviews structural projects, such as reservoirs and channel modifications; and
  - (f) if the plan reviews public information activities, such as outreach projects and environmental education programs.
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**8. Draft an action plan (Maximum credit: 70 points). The action plan specifies those activities appropriate to the community's resources, hazards, and vulnerable properties.**

For each recommendation, the action plan must identify who does what, when it will be done, and how it will be financed. The actions must be prioritized and include a review of the benefits of the proposed projects and their associated costs. (REQUIRED) A multi-hazard mitigation plan must identify actions that address both existing and new infrastructure and buildings. The credit for this step is based on what is included in the action plan. Credit is provided for a recommendation on floodplain regulations, provided it recommends a regulatory standard that exceeds the minimum requirements of the NFIP.

- (a) if the action plan includes flood-related recommendations for activities from two of the six categories credited in step 7, Review possible activities.
- (b) if the action plan includes flood-related recommendations for activities from three of the six categories credited in step 7, Review possible activities.
- (c) if the action plan includes flood-related recommendations for activities from four of the six categories credited in step 7, Review possible activities.
- (d) if the action plan includes flood-related recommendations for activities from five of the six categories credited in step 7, Review possible activities.
- (e) additional points are provided if the action plan establishes post-disaster mitigation policies and procedures.
- (f) additional points are provided if the action plan's recommended natural resource protection activities include recommendations from a Regional Habitat Conservation Plan as credited under Section 511.c.
- (g) additional points are provided if the plan includes action items (other than public information activities) to mitigate the effects of the other natural hazards identified in the hazard assessment (step 4, item (b)).

If the plan calls for acquiring properties, there must be a discussion of how the project(s) will be managed and how the land will be reused. When a multi-jurisdictional plan is prepared, it must have action items from at least two of the six categories that directly benefit each community seeking CRS credit.

**9. Adopt the plan (Maximum credit: 2 points) The 2 credit points for this step are provided if the plan and later amendments are officially adopted by the community’s governing body. (REQUIRED)**

When a multi-jurisdictional plan is prepared, it must be adopted by the governing board of each community seeking CRS or multi-hazard mitigation plan credit.

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**10. Implement, evaluate, and revise (Maximum credit: 15 points) The credit for this step is the total of the following points based on how the community monitors and evaluates its plan.**

- (a) if the community has procedures for monitoring implementation, reviewing progress, and recommending revisions to the plan in an annual evaluation report. The report must be submitted to the governing body, released to the media and made available to the public. (REQUIRED)
- (b) if the evaluation report is prepared by the same planning committee that prepared the plan that is credited in step 2(a) or by a successor committee with a similar membership that was created to replace the planning committee and charged with monitoring and evaluating implementation of the plan.

To maintain this credit, the community must submit a copy of its annual evaluation report with its recertification each year and update the plan at least every five years.

**B. REPETITIVE LOSS AREA ANALYSIS**

Up to 50 points are provided for conducting area analyses of all of the community’s repetitive loss areas. An area analysis is prepared according to the following criteria:

- 1. All repetitive loss areas must be mapped as described in Section 503.b. If the community does not conduct an analysis of all the areas, it will be reflected through the impact adjustment in Section 512.
- 2. Data must be collected on each building in the area(s) using the “limited data view” of the National Flood Mitigation Data Collection Tool. The database file created by the National Flood Mitigation Data Collection Tool must be made available to FEMA and the state, upon request.
- 3. A five-step process must be followed. The steps do not have to be done in the order listed.
  - Step 1. Advise all the property owners in the repetitive loss areas that the analysis will be conducted. This must be sent directly to each property owner and cannot be done via a newspaper or newsletter notice or article.
  - Step 2. Collect data on each building and determine the cause(s) of the repetitive damage.
  - Step 3. Review alternative approaches and determine whether any property protection measures or drainage improvements are feasible. The review must look at all of the property protection measures listed in Figure 510-2 that are appropriate for the types of buildings affected.

- Step 4. Contact agencies or organizations that may have plans that could affect the cause or impacts of the flooding.
- Step 5. Document the findings, including a map showing all parcels in the area, recommendations, and how the recommendations will be funded.
- 4. Each area analysis document must be approved by the head of the appropriate community department. It does not have to be circulated to or adopted by the community's governing board, but it does have to be made available to any inquirer, including residents of the repetitive loss area(s).
- 5. The community must prepare an annual report on progress toward implementing the recommendations.

### **C. HABITAT CONSERVATION PLAN**

If the community has adopted a regional Habitat Conservation Plan or other plan that explains and recommends actions to protect rare, threatened, or endangered aquatic or riparian species. The plan must have been adopted by the community's governing board and there must be documentation that the plan is being implemented. The plan must identify:

- the species in need of protection,
- the impact of new development on their habitat,
- alternative actions that could be taken to protect that habitat,
- what actions are recommended to protect that habitat and why they were selected from the alternatives, and
- how the recommendations will be funded.
- If the plan has also been accepted as a Habitat Conservation Plan by the U.S. Fish and Wildlife Service or the National Marine Fisheries Service.

## **APPENDIX C: PUBLIC OUTREACH INFORMATION**

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This appendix provides public outreach information including the questionnaire responses and documentation of meetings as available for the Town of Shandaken Flood Mitigation Plan.



# Town of Shandaken Flood Preparedness and Planning Survey



## 1. Please indicate your age range:

		Response Percent	Response Count
18 to 30		2.5%	2
31 to 40		5.0%	4
41 to 50		16.3%	13
51 to 60		33.8%	27
<b>60 or over</b>		<b>42.5%</b>	<b>34</b>
<b>answered question</b>			<b>80</b>
<b>skipped question</b>			<b>8</b>

## 2. Please indicate the hamlet in the Town of Shandaken in which you live:

		Response Percent	Response Count
Mt. Tremper		6.8%	6
Mt. Pleasant		4.5%	4
<b>Phoenicia</b>		<b>27.3%</b>	<b>24</b>
Chichester		4.5%	4
Woodland Valley		4.5%	4
Allaben		4.5%	4
Shandaken		8.0%	7
Bushnellsville		0.0%	0
Big Indian		9.1%	8
Oliveria		22.7%	20
Pine Hill		5.7%	5
Highmount		2.3%	2
<b>answered question</b>			<b>88</b>
<b>skipped question</b>			<b>0</b>

### 3. How long have you lived in the Town of Shandaken?

		Response Percent	Response Count
Less than 1 year		7.4%	6
1 to 5 years		8.6%	7
6 to 9 years		8.6%	7
10 to 19 years		29.6%	24
20 years or more		45.7%	37
answered question			81
skipped question			7

### 4. Do you currently own or rent your home in Shandaken?

		Response Percent	Response Count
Own		94.9%	75
Rent		5.1%	4
answered question			79
skipped question			9

### 5. What is your Shandaken address? (optional, will be kept confidential - only used to identify homes in flood-prone areas)

	Response Count
	55
answered question	55
skipped question	33

**6. Is this your home in Shandaken your primary home or your second home?**

		Response Percent	Response Count
Primary Home		68.8%	55
Second Home		31.3%	25
		answered question	80
		skipped question	8

**7. Are you or any member of your family on medications which must be taken daily?**

		Response Percent	Response Count
Yes		70.1%	54
No		29.9%	23
		answered question	77
		skipped question	11

**8. Do you have an additional supply of that medication on hand if a disaster event occurred and you were unable to fill your prescription?**

		Response Percent	Response Count
Yes		41.7%	30
No		58.3%	42
		answered question	72
		skipped question	16

**9. Do you have an elderly person or person with disabilities residing in your residence (or for whom you are responsible) that requires assistance should an evacuation occur?**

		Response Percent	Response Count
Yes		12.0%	9
No		88.0%	66
answered question			75
skipped question			13

**10. Have arrangements been made for assistance for that individual if evacuation is necessary?**

		Response Percent	Response Count
Yes		8.2%	4
No		91.8%	45
answered question			49
skipped question			39

**11. Do you know where your closest shelter is to your home if an evacuation occurs?**

		Response Percent	Response Count
Yes		46.8%	36
No		53.2%	41
answered question			77
skipped question			11

**12. If the answer to question 11 is "yes", which location?**

	Response Count
	35
answered question	35
skipped question	53

**13. If the answer to question 11 is "yes", do you know if that shelter has mechanisms in place to address the access and functional needs of the individual(s) who has disabilities for whom you are responsible?**

		Response Percent	Response Count
Yes		50.0%	15
No		50.0%	15
answered question			30
skipped question			58

**14. What type of assistance is needed to address the access and functional needs of the individual(s) with disabilities living within your household or for whom you have responsibility?**

	Response Count
	26
answered question	26
skipped question	62

**15. Please rank how prepared you think you and those who live with you are for the floods that are likely to occur within the Town of Shandaken. Rank on a scale of 1 to 5, with 5 representing the most prepared.**

		<b>Response Percent</b>	<b>Response Count</b>
1 (Not Prepared)		8.6%	6
2		14.3%	10
3		<b>31.4%</b>	<b>22</b>
4		<b>31.4%</b>	<b>22</b>
5 (Fully Prepared)		14.3%	10
<b>answered question</b>			<b>70</b>
<b>skipped question</b>			<b>18</b>

## 16. In what ways do you believe you are prepared for floods? (Please check all that apply)

		Response Percent	Response Count
I have protected my property by either building my home or repairing my home to be safer from floods.		45.5%	30
I have an an emergency kit with non-perishable food, water and supplies for my family and myself.		53.0%	35
I know the location of the nearest emergency shelter.		45.5%	30
I have a personal family emergency preparedness plan, and have discussed it with my family and others for whom I have responsibility.		39.4%	26
I have at least two methods for receiving emergency notifications and for information during severe weather or other potential emergency situations.		42.4%	28
Emergency preparedness information from a government source (e.g., federal, state, or local emergency management).		34.8%	23
<b>I have read articles in the paper or other news sources.</b>		<b>65.2%</b>	<b>43</b>
I have attended meetings that have dealt with disaster preparedness.		34.8%	23
Other (please specify)		22.7%	15
		<b>answered question</b>	<b>66</b>
		<b>skipped question</b>	<b>22</b>

**17. In the past 10 years, which of the following types of events have you or someone in your household experienced? How concerned are you about each type of flooding?**

	<b>Have Experienced</b>	<b>Not Concerned</b>	<b>Somewhat Concerned</b>	<b>Very Concerned</b>	<b>Extremely Concerned</b>	<b>Rating Count</b>
Flooding - Property	<b>64.6% (42)</b>	15.4% (10)	9.2% (6)	13.8% (9)	26.2% (17)	65
Flooding - Basement	<b>52.6% (30)</b>	26.3% (15)	24.6% (14)	10.5% (6)	19.3% (11)	57
Flooding - 1st Floor	16.0% (8)	<b>40.0% (20)</b>	16.0% (8)	14.0% (7)	24.0% (12)	50
Flooding - Above 1st Floor	0.0% (0)	<b>78.4% (29)</b>	10.8% (4)	0.0% (0)	10.8% (4)	37
Flooding - Street	<b>60.7% (34)</b>	10.7% (6)	16.1% (9)	16.1% (9)	26.8% (15)	56
Dam Failure	15.2% (5)	<b>51.5% (17)</b>	18.2% (6)	12.1% (4)	6.1% (2)	33
Beaver Dam	3.3% (1)	<b>80.0% (24)</b>	10.0% (3)	3.3% (1)	3.3% (1)	30
Other	<b>56.5% (13)</b>	17.4% (4)	0.0% (0)	4.3% (1)	43.5% (10)	23
<b>answered question</b>						<b>70</b>
<b>skipped question</b>						<b>18</b>

**18. Information on how to prepare for floods can be given to the public in various ways. Of the information sources below, please identify the top three (3) that are MOST EFFECTIVE in providing you with information to make your home safer and better able to withstand the impact of floods.**

		Response Percent	Response Count
Newspaper		22.4%	15
Newspaper -		7.5%	5
County and/or Local Gov't. Websites		41.8%	28
Local Government E-Mail		23.9%	16
Police, Fire, EMS, 9-1-1		17.9%	12
Telephone Book		3.0%	2
Informational Brochures		14.9%	10
Public Meetings		17.9%	12
Workshops		9.0%	6
Schools		4.5%	3
TV News		28.4%	19
TV Advertising		1.5%	1
Radio News		13.4%	9
Radio Advertisements		1.5%	1
Outdoor Advertisements		3.0%	2
<b>Internet</b>		<b>52.2%</b>	<b>35</b>
Chamber of Commerce		3.0%	2
Fire Department/EMS Agency		22.4%	15
Academic Institutions		1.5%	1
Public Awareness Event		10.4%	7

Books		1.5%	1
Public Library		7.5%	5
Other (please specify)		14.9%	10
<b>answered question</b>			<b>67</b>
<b>skipped question</b>			<b>21</b>

### 19. To the best of your knowledge is your property located in a floodplain?

		Response Percent	Response Count
Yes		41.4%	29
No		42.9%	30
Not Sure		15.7%	11
<b>answered question</b>			<b>70</b>
<b>skipped question</b>			<b>18</b>

### 20. Do you have flood insurance?

		Response Percent	Response Count
Yes		30.4%	21
No		69.6%	48
<b>answered question</b>			<b>69</b>
<b>skipped question</b>			<b>19</b>

## 21. If you do NOT have flood insurance, what is the primary reason?

		Response Percent	Response Count
I don't need it/my property has never flooded		15.6%	7
<b>Don't need it/located on high ground</b>		<b>35.6%</b>	<b>16</b>
It is too expensive		26.7%	12
Not familiar with it/don't know about it		13.3%	6
Insurance company will not provide		4.4%	2
My homeowners insurance will cover me		2.2%	1
It is not worth it		2.2%	1
<b>answered question</b>			<b>45</b>
<b>skipped question</b>			<b>43</b>

## 22. Do you or did you have problems getting homeowners/renters insurance due to floods?

		Response Percent	Response Count
Yes		6.7%	4
<b>No</b>		<b>93.3%</b>	<b>56</b>
<b>answered question</b>			<b>60</b>
<b>skipped question</b>			<b>28</b>

**23. Did you consider the impact a flood could have on your home before you purchased/moved into your home?**

		Response Percent	Response Count
Yes		43.5%	27
No		56.5%	35
answered question			62
skipped question			26

**24. Was the presence of a flood hazard risk zone disclosed to you by a real estate agent, seller, or landlord before you purchased/moved into your home?**

		Response Percent	Response Count
Yes		28.1%	16
No		71.9%	41
answered question			57
skipped question			31

**25. Would the disclosure of this type of information have influenced your decision to purchase/move into a home?**

		Response Percent	Response Count
Yes		67.3%	37
No		32.7%	18
answered question			55
skipped question			33

**26. How much money would you be willing to spend on your current home to make changes to it that would reduce the impacts of potential future flood disasters? Examples of improvements are: Elevating a flood-prone home (above the base flood elevation) and elevating utilities in flood-prone basements.**

		Response Percent	Response Count
\$5,000 or above		11.7%	7
\$2,500 to \$4,999		6.7%	4
\$1,000 to \$2,499		11.7%	7
\$500 to \$999		6.7%	4
\$100 to \$499		5.0%	3
Less than \$100		0.0%	0
Nothing		11.7%	7
<b>Don't know</b>		<b>46.7%</b>	<b>28</b>
<b>answered question</b>			<b>60</b>
<b>skipped question</b>			<b>28</b>

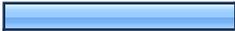
**27. If your property is located in a floodplain area, or had received repeated damages from flooding events, would you consider a "buyout" (selling your property and moving), elevation of the structure (above the base flood height), or relocation offered by a public agency should it be made available?**

		Response Percent	Response Count
Yes		60.9%	28
No		39.1%	18
<b>answered question</b>			<b>46</b>
<b>skipped question</b>			<b>42</b>

**28. Have you made any changes to your property in the past to reduce the damage from floods? What have you done to your home or business to prevent future damages?**

	Response Count
	36
<b>answered question</b>	<b>36</b>
<b>skipped question</b>	<b>52</b>

**29. If you have been flooded and have had damages to your home or business and you have not done anything to reduce future damages, why have you not done anything?**

	Response Percent	Response Count
I cannot get a loan to do this. 	8.7%	2
It is too expensive. 	34.8%	8
It is too much trouble. 	8.7%	2
I do not plan to stay in the house long enough to justify the expense. 	8.7%	2
<b>There are not any bchanges that can be made to reduce my risk.</b> 	<b>43.5%</b>	<b>10</b>
I do not know what changes to make. 	26.1%	6
Other (please specify)		16
<b>answered question</b>		<b>23</b>
<b>skipped question</b>		<b>65</b>

**30. What incentives would help to encourage you to spend money to retrofit your home to avoid flood damages?**

	<b>Response Count</b>
	36
<b>answered question</b>	<b>36</b>
<b>skipped question</b>	<b>52</b>

**31. What types of projects do you believe local, county, state or federal government agencies should be doing in order to reduce the damage and disruption from flooding in the Town of Shandaken? Rate these by importance on a scale of H (high), M (medium), or L (low):**

	H	M	L	Rating Count
Retrofit and strengthen essential facilities such as police, schools, hospitals	<b>37.7% (20)</b>	32.1% (17)	30.2% (16)	53
Retrofit infrastructure, such as elevating roadways and improving drainage systems	<b>77.2% (44)</b>	17.5% (10)	5.3% (3)	57
Work on improving the damage resistance of utilities (electricity, communications, etc.)	<b>68.4% (39)</b>	24.6% (14)	7.0% (4)	57
Install or improve protective structures, such as floodwalls or levees	<b>78.9% (45)</b>	5.3% (3)	15.8% (9)	57
Replace inadequate or vulnerable bridges and culverts	<b>87.5% (49)</b>	12.5% (7)	0.0% (0)	56
Strengthen codes, ordinances and plans to require higher flood risk management standards and/or provide greater control over development in high flood areas	<b>45.6% (26)</b>	38.6% (22)	15.8% (9)	57
Acquire vulnerable properties and maintain as open-space	36.2% (21)	<b>43.1% (25)</b>	20.7% (12)	58
Inform property owners of ways they can reduce flood damage to their properties	<b>53.6% (30)</b>	32.1% (18)	14.3% (8)	56
Provide better information about flood risks and high flood hazard areas	<b>56.4% (31)</b>	32.7% (18)	10.9% (6)	55
Assist vulnerable property owners with securing funding to fix their properties	<b>72.7% (40)</b>	25.5% (14)	1.8% (1)	55

Other (please specify) 16

**answered question 61**

**skipped question 27**

**32. Please use the space below to include any other comments that you may have.**

**Response  
Count**

37

**answered question 37**

**skipped question 51**

**Page 2, Q5. What is your Shandaken address? (optional, will be kept confidential - only used to identify homes in flood-prone areas)**

55      when are the homeowners along 28 and 212 in mt tremper going to pick up their trash and garbage on their lawns and tear down damaged buildings?      Apr 10, 2012 8:11 PM

**Page 3, Q12. If the answer to question 11 is "yes", which location?**

1	MT TREMPER FIRE HOUSE	May 5, 2013 10:57 PM
2	the firehouse and bellayre	Apr 26, 2013 11:12 AM
3	Belleayre	Feb 18, 2013 12:49 PM
4	Shandaken fire station?	Dec 8, 2012 11:07 PM
5	Bellaryre	Oct 30, 2012 8:06 AM
6	Bellayre Mt	Oct 29, 2012 10:05 PM
7	Mt. Tremper Fire House	Sep 27, 2012 8:24 PM
8	Bellayre	Sep 21, 2012 11:01 AM
9	Belleayre?	Sep 19, 2012 10:22 AM
10	Bellyaire Mountain	Jul 8, 2012 6:56 AM
11	Bellarye	Jul 1, 2012 9:06 PM
12	Belleayre (they take dogs)	Jun 28, 2012 9:48 AM
13	have never had to evacuate	Jun 28, 2012 9:43 AM
14	Fire house	Jun 28, 2012 9:35 AM
15	Belleayre	Jun 28, 2012 9:28 AM
16	Belleayre Mountain	Jun 21, 2012 6:06 PM
17	Zen Monastery	Jun 20, 2012 9:15 AM
18	Belleayre Mountain	Jun 18, 2012 1:58 PM
19	Bellayre	Jun 14, 2012 12:56 PM
20	Fire House; Belleayre	Jun 14, 2012 12:16 PM
21	Firehouse on Rte 214	Jun 14, 2012 12:03 PM
22	Belleayre	Jun 6, 2012 10:30 AM
23	Zen monastery! South plank	Jun 5, 2012 5:56 PM
24	Big Indian-Oliverea Fire House	Jun 5, 2012 5:28 PM
25	BIOFD	Jun 5, 2012 2:10 PM
26	My guess is the Fire Station up on Main Street in Pine Hill.	Jun 5, 2012 1:13 PM
27	belleayre mountain?	Jun 3, 2012 2:57 PM

**Page 3, Q12. If the answer to question 11 is "yes", which location?**

28	Belleayre	May 31, 2012 10:29 PM
29	Belleayre	May 31, 2012 7:14 PM
30	big indian olivera fire house	May 7, 2012 12:30 PM
31	BELLYAIRE MOUNTAIN SKI RESORT	Apr 19, 2012 3:05 PM
32	Phoenicia School	Apr 16, 2012 11:34 AM
33	mt tremper looks like hell with all the trash in people's yards. They got insurance money they should be made to tear down and clean up	Apr 10, 2012 8:13 PM
34	firehouse that has no supplies	Apr 10, 2012 8:03 PM
35	Pine Hill Firehouse or Belleayre Mountain Ski Center	Apr 10, 2012 1:01 PM

**Page 3, Q14. What type of assistance is needed to address the access and functional needs of the individual(s) with disabilities living within your household or for whom you have responsibility?**

1	N/A	May 5, 2013 10:57 PM
2	NA	Oct 30, 2012 8:06 AM
3	Does not apply	Oct 29, 2012 10:05 PM
4	Bridge may be down.	Oct 17, 2012 8:04 PM
5	No one is disabled but takes blood pressure medicine and insurance will not pay for extra in case of emergency.	Sep 19, 2012 10:22 AM
6	none	Aug 22, 2012 8:24 PM
7	none	Jul 24, 2012 7:39 AM
8	Occasionally 88-year-old mother joins us there. No particular disability (except Alzheimer's). She's frail, though. In severe weather I'd not have her there.	Jul 10, 2012 8:31 PM
9	Not sure.	Jul 8, 2012 6:56 AM
10	na	Jun 28, 2012 9:48 AM
11	Blood pressure and other monitoring; mobility assistance	Jun 28, 2012 9:35 AM
12	NA	Jun 28, 2012 9:28 AM
13	medical doctor. housing	Jun 20, 2012 9:15 AM
14	NA	Jun 14, 2012 12:56 PM
15	NA	Jun 14, 2012 12:16 PM
16	NA	Jun 14, 2012 12:03 PM
17	None	Jun 6, 2012 7:50 AM
18	Needs meds Handicap toilet	Jun 5, 2012 5:56 PM
19	Wheelchair, medications cane blankets books glasses adult diapers way to get her up the stairs or out the back door - need people to assist. Thanks for making me think about this.	Jun 5, 2012 1:13 PM
20	evacuation and transportation	Jun 1, 2012 8:48 AM
21	Special toileting facilities	May 31, 2012 10:29 PM
22	N/A	May 31, 2012 7:14 PM
23	ADVANCE WARNING TO POSSIBLE FLOODS	Apr 19, 2012 3:05 PM
24	n/a	Apr 16, 2012 8:09 PM
25	What is the town doing about cleaning up the mess in mount tremper?????	Apr 10, 2012 8:13 PM

**Page 3, Q14. What type of assistance is needed to address the access and functional needs of the individual(s) with disabilities living within your household or for whom you have responsibility?**

26 food, water, bed

Apr 10, 2012 8:03 PM

**Page 4, Q16. In what ways do you believe you are prepared for floods? (Please check all that apply)**

1	PREVIOUS EXPERIENCE	Sep 27, 2012 8:28 PM
2	you must be kidding	Sep 21, 2012 11:04 AM
3	my home does not flood and I have a generator	Jul 24, 2012 7:43 AM
4	OK, so I'll back down to (2).	Jul 10, 2012 8:34 PM
5	I have a primary residence	Jul 2, 2012 11:26 AM
6	I'm not an idiot from NYC, I know this a WILDERNESS (not the suburbs) and I am always prepared with proper clothing, gear, and knowledge about trails, animals, and nature.	Jul 1, 2012 9:09 PM
7	pay attention to weather reports	Jun 28, 2012 9:50 AM
8	try to keep fuel tank anchored down with enough fuel during flood risk times	Jun 14, 2012 12:18 PM
9	If given enough notice, will leave for Florida (home) which is what we did during Irene.	Jun 6, 2012 7:54 AM
10	I need to prepare, the next time I am offered this quiz I hope to pass. I can help my aunt fine day to day but in a disaster I would lose precious time trying to assemble a plan and a kit.,I just moved here in November, from San Diego where I lived alone.	Jun 5, 2012 1:18 PM
11	Have emergency equipment and resources (generator, spring)	May 31, 2012 7:16 PM
12	PHOENICIA FIRE DEPT	Apr 19, 2012 3:09 PM
13	have not used property since Irene damaged it	Apr 16, 2012 8:13 PM
14	Generator	Apr 16, 2012 11:37 AM
15	I bought a house on the side of a mountain	Apr 10, 2012 1:08 PM

**Page 4, Q18. Information on how to prepare for floods can be given to the public in various ways. Of the information sources below, please identify the top three (3) that are MOST EFFECTIVE in providing you with information to make your home safer and better able to withstand the impact of floods.**

1	door to door	Nov 2, 2012 6:24 AM
2	Cold Brook gage and weather radio provided by Town	Jun 28, 2012 9:50 AM
3	Check Stream gage at Cold Brook	Jun 28, 2012 9:36 AM
4	flood risk awareness	Jun 28, 2012 9:29 AM
5	top3 are Fire House; TV news and EMS	Jun 14, 2012 12:58 PM
6	experience living here	Jun 14, 2012 12:18 PM
7	Emergency call alert	Jun 1, 2012 1:31 AM
8	There is no way to prepare for what happened here	May 31, 2012 10:50 PM
9	why is mount tremper full of trash and garbage? this town is a sham	Apr 10, 2012 8:14 PM
10	no power no news other than radio which gave false info	Apr 10, 2012 8:06 PM

**Page 5, Q28. Have you made any changes to your property in the past to reduce the damage from floods? What have you done to your home or business to prevent future damages?**

1	YES. RAISE ELEVATION OF HOME.	May 5, 2013 11:14 PM
2	Raised storage items off the garage floor.	Feb 18, 2013 12:53 PM
3	Installed French drain and swales to divert hillside runoff; stream-side plantings to stabilize banks; avoiding stream-side flooding areas on property (not near buildings); slab design-no basement	Feb 15, 2013 3:13 PM
4	Added more soil	Jan 28, 2013 4:39 PM
5	The areas that got flooded in Irene were leisure structures. I rebuilt with some mitigation in mind, am prepared to reinforce and rebuild if needed. Residence is well above sub-Biblical flood plain.	Dec 8, 2012 11:19 PM
6	Our primary problem is the flooding and compromise of our roads and bridges, both our private road and the town roads of rte 47 and Burnham Hollow Rd.	Oct 29, 2012 10:13 PM
7	I've installed riprap walls along the stream side and upstream side of my home	Oct 17, 2012 8:42 PM
8	Can't afford to	Oct 17, 2012 8:11 PM
9	Removed debris from culvert under road, starting to build berm to protect house from road flooding, improved drainage around house	Oct 5, 2012 12:20 PM
10	Our property, not our homes, have flooded several times; and we have tried to get the DEC to repair the channel blocker to prevent future flooding. So far they have refused.,	Sep 27, 2012 8:35 PM
11	Reinforced basement walls	Sep 21, 2012 11:07 AM
12	Elevated the driveway and made a stone wall to elevate the ground on the upstream side.	Sep 19, 2012 10:30 AM
13	Uphill swales; substantial drainage piping to remove water runoff from high rain events; minor landscaping/plantings along streamside areas to make them more flood resistant	Sep 12, 2012 9:43 PM
14	added two pumps..now have three	Aug 22, 2012 8:28 PM
15	Installed propane fired generator --totally updated house--windows, metal roof, new oil burner--am in flood plain but do not flood	Jul 24, 2012 7:50 AM
16	Rip-rap along stream. Will do same further upstream this summer.	Jul 10, 2012 8:39 PM
17	Applied for a DEP permit to remove rocks that are creating a berm between our property and the creek we are up against.	Jul 8, 2012 7:02 AM
18	Not What I did its what the DEP/DEC should have done/do to maintain the Creek bed from building up to an ineffective elevation vs the dike elevation.	Jul 2, 2012 11:33 AM
19	retaining wale, swale (curtain drain), berm, spray foam instead of batting in crawl space.	Jul 1, 2012 9:13 PM

**Page 5, Q28. Have you made any changes to your property in the past to reduce the damage from floods? What have you done to your home or business to prevent future damages?**

20	no	Jun 28, 2012 9:51 AM
21	no	Jun 28, 2012 9:45 AM
22	No. would not help.	Jun 28, 2012 9:39 AM
23	moved utilities out of basement, poured concrete to replace cinderblock foundation; mildew and mold-resistant drywall throughout; raise hot tub and pool equipment	Jun 28, 2012 9:31 AM
24	yes	Jun 21, 2012 6:10 PM
25	no	Jun 20, 2012 9:19 AM
26	bought generator; upgraded electric to increase amperage;	Jun 14, 2012 1:00 PM
27	i rent	Jun 14, 2012 12:06 PM
28	Yes, upgraded culverts on my property. This prevented water from getting in my garage.	Jun 8, 2012 10:07 PM
29	We replaced a culvert with a larger one. We replaced the entire private road from mountain gate to our driveway at an extreme cost. Very upsetting as the army core of engineers replaced the road below the mountain gate and all culverts but we had to pay our own. We don't pay less in taxes but were given no support for this.	Jun 6, 2012 8:00 AM
30	none	Jun 3, 2012 3:12 PM
31	no	Jun 1, 2012 8:54 AM
32	I repaired my home ,but you do not get money to fix your property and with insurance deduct. an the things they do not pay for it is limited as to what one can do.	Jun 1, 2012 1:56 AM
33	Paid \$35,000 to build a rock wall	May 31, 2012 11:02 PM
34	IRENE WAS THE FIRST FLOOD TO ENTER MY HOME.	Apr 19, 2012 3:14 PM
35	2007 - elevated furnace and mechanical systems above basement floor	Apr 16, 2012 8:24 PM
36	tear them down and attach the cost to the properties	Apr 10, 2012 8:16 PM

**Page 5, Q29. If you have been flooded and have had damages to your home or business and you have not done anything to reduce future damages, why have you not done anything?**

1	We are restricted by the DEP.	Jan 28, 2013 4:39 PM
2	NA	Oct 30, 2012 8:14 AM
3	..if something isn't done to shore the banks below McKenley Hollow Bridge	Sep 19, 2012 10:30 AM
4	flooding on property is far from structures and is nuisance only	Sep 12, 2012 9:43 PM
5	I do not flood	Jul 24, 2012 7:50 AM
6	House has not been flooded.	Jul 10, 2012 8:39 PM
7	I paid \$240,000 in 07 for my house now worth \$78,000. Im bankrupt and the storm left me in debt to contractors	Jul 1, 2012 9:13 PM
8	would have to elevate at least 12 feet - can't afford	Jun 28, 2012 9:51 AM
9	only basement has been flooded	Jun 28, 2012 9:45 AM
10	NA	Jun 28, 2012 9:31 AM
11	management strategies sufficient	Jun 14, 2012 12:20 PM
12	i rent	Jun 14, 2012 12:06 PM
13	house already washed away	Jun 5, 2012 6:27 PM
14	EXTREMELY LIMITED INCOME-RETIRED	Apr 19, 2012 3:14 PM
15	Floodplain code compliance not practical for my property	Apr 16, 2012 8:24 PM
16	clean it up	Apr 10, 2012 8:16 PM

**Page 5, Q30. What incentives would help to encourage you to spend money to retrofit your home to avoid flood damages?**

1	FINANCIAL AND TECHNICAL ASSISTANCE	May 5, 2013 11:14 PM
2	Help figuring how to elevate my house and money to contribute towards doing it.	Feb 18, 2013 12:53 PM
3	low interest loan; tax incentives; expedited permitting	Feb 15, 2013 3:13 PM
4	Grants, tax breaks, inexpensive reputable help.	Jan 28, 2013 4:39 PM
5	help from govt to pay for improvements; grants or low interest/no interest loans	Nov 26, 2012 10:30 AM
6	NA	Oct 30, 2012 8:14 AM
7	Tax breaks/ rebates	Oct 17, 2012 8:42 PM
8	Significant rebates	Oct 17, 2012 8:11 PM
9	Financial aid from a state, county or federal agency.	Sep 27, 2012 8:35 PM
10	Grants for design review and evaluation; free evaluation (e.g. Cornell Extension followup to stream surveys; waiver periods for easy permitting of improvements like landslide mitigation	Sep 12, 2012 9:43 PM
11	Expert advice on how to do it.	Jul 30, 2012 7:38 PM
12	none	Jul 24, 2012 7:50 AM
13	Am spending money on stream; not much can do about home.	Jul 10, 2012 8:39 PM
14	I have no money and maybe soon, no house to worry about.	Jul 1, 2012 9:13 PM
15	full grant for entire cost	Jun 28, 2012 9:51 AM
16	Free money and materials. But, what can i do? town rules prohibit any effective action such as building a wall around my home	Jun 28, 2012 9:39 AM
17	COVER COSTS TO ELEVATE STRUCTURE	Jun 28, 2012 9:31 AM
18	tax breaks, grants, etc	Jun 20, 2012 9:19 AM
19	I would be willing to spend the money if I knew what to do.	Jun 18, 2012 2:07 PM
20	depends on program	Jun 14, 2012 1:00 PM
21	would depend	Jun 14, 2012 12:20 PM
22	i rent	Jun 14, 2012 12:06 PM
23	???	Jun 8, 2012 6:48 AM
24	Grants, tax incentives. Take over our private road and have the town pave it and take care of it.	Jun 6, 2012 8:00 AM
25	Engineer's evaluation	Jun 5, 2012 11:51 PM

**Page 5, Q30. What incentives would help to encourage you to spend money to retrofit your home to avoid flood damages?**

26	Creek realignment	Jun 5, 2012 6:27 PM
27	Grants	Jun 5, 2012 6:01 PM
28	dont know	Jun 1, 2012 8:54 AM
29	If they dredge the stream.The streams have not been dredged since 1994	Jun 1, 2012 1:56 AM
30	Grants	May 31, 2012 11:02 PM
31	better stabilization of creek/bank floodplain	May 31, 2012 7:18 PM
32	govt assistance	Apr 25, 2012 10:58 AM
33	GRANTS	Apr 19, 2012 3:14 PM
34	buyout and relocation	Apr 16, 2012 8:24 PM
35	insurance should not be paid without the guarantee that the damaged building be torn down and hauled away	Apr 10, 2012 8:16 PM
36	FREE MONEY!	Apr 10, 2012 1:11 PM

**Page 5, Q31. What types of projects do you believe local, county, state or federal government agencies should be doing in order to reduce the damage and disruption from flooding in the Town of Shandaken? Rate these by importance on a scale of H (high), M (medium), or L (low):**

1	REQUEST DEC TO REPAIR THEIR CHANNEL BLOCKER LOCATED ON OUR PROPERTY WHICH WAS COMPROMISED AFTER NUMEROUS FLOODS.	May 5, 2013 11:14 PM
2	permit annual removable of cobble at bridges	Feb 15, 2013 3:13 PM
3	Allow property owners to reclaim some of their land taken by the Esopus.	Jan 28, 2013 4:39 PM
4	Restore natural linkages between uninhibited floodplain areas and the stream, so the water has some place to go. This may require buyouts, and an active search for funding (grants) for this. Solutions that pass our problems on to downstream communities should not be adopted.	Dec 8, 2012 11:19 PM
5	remove silt from creek bottom.	Sep 27, 2012 8:35 PM
6	Dredge the creek	Sep 21, 2012 11:07 AM
7	Work to allow dredging of streams and under bridges	Sep 12, 2012 9:43 PM
8	Dredge the streams and brooks regularly	Jul 30, 2012 7:38 PM
9	maintain the Creeks and slopes to avoid siltation and channel changes which change the hydraulic characteristics of the open channels.	Jul 2, 2012 11:33 AM
10	centrally located generators in each hamlet	Jun 28, 2012 9:51 AM
11	dredge the esopus creek	Jun 21, 2012 6:10 PM
12	Clean streams of stone & Debrie	Jun 5, 2012 1:03 PM
13	Create a disaster preparedness plan- coordinate resources and volunteers.	Jun 1, 2012 8:54 AM
14	Dredge the Esopus and other rivers. The riverbeds have become too high, therefore danger of taking out bridges and flodding. I am thinking especially of the McKinley Hollow Bridge.	May 31, 2012 7:24 PM
15	Assist vulnerable property owners with relocation.	Apr 16, 2012 8:24 PM
16	let the dep buy the land, the owners already got insurance money	Apr 10, 2012 8:16 PM

**Page 6, Q32. Please use the space below to include any other comments that you may have.**

1	THERE IS AN URGENT NEED FOR REPAIRS TO THIS CHANNEL BLOCKER!!	May 5, 2013 11:18 PM
2	I filled this survey out a few months ago, but when I clicked "done", I got a message saying it didn't go through. I hope that doesn't happen this time. Thanks for your help.	Feb 18, 2013 12:54 PM
3	Strengthen cell phone coverage for emergency response; advise residents on preparing emergency "bug out bags" with shelter supplies in case of flooding evacuation	Feb 15, 2013 3:15 PM
4	Remove sediment from creek beds so high water has a place to flow. The shallow creeks appear to be the biggest problem and most cost effective. There are contractors willing and ready to remove sediment as they have done many years ago...why did this life/property saving practice stop??? It doesn't cost the city or towns any money...the contractors remove the material to have the material on hand for future projects.	Oct 30, 2012 8:17 AM
5	We now have a chronic flood problem in Oliverea valley. Despite town efforts to repair damaged roads and bridges, it seems that stream engineering strategies should be considered. The town keeps repairing the same washout areas without any real mitigation of flooding streams.	Oct 29, 2012 10:16 PM
6	You should consider re-paving Woodland Valley Rd and reinforcing the stream banks all the way upstream.	Oct 17, 2012 8:43 PM
7	I live on Woodland Valley rd. It may very well be one of the worst maintained roads in the area! It desperately needs to be re paved or re surfaced along the entire upper 2/3 of the road! It's full of potholes and I consider it to be dangerous in storm conditions. I pay a lot of taxes and get unsafe roads for my money. Please consider re paving tis road all the way up, not just where it washed out or by the wealthier houses before the spring melts! Please!	Oct 17, 2012 8:36 PM
8	We were one of four homes each 150 years old, without flood problems until Irene killed two and left us other two damaged. We never had flood problems before they started dredging above the McKenley Hollow Bridge to protect Brown Rd. Now all the stone they've used to reshape south of the bridge has washed down and filled in under the bridge so the water comes up onto and down the road. The creek below the bridge (at the actual McKenley Hollow outlet) used to cut back (west) toward the mountain and away from the homes and road. Now that curve is gone and the water comes straight down the west side of the road and across to threaten what is left of our homes. Noise has been made but nothing is being done to dredge below the bridge and now we flooded again last night (9/18/12.) What a shame to lose these historic houses (and taxpayers) and have to keep putting the road back because no one will fix the stream. Furthermore, acres and acres of land has been lost which will no longer be taxable. Please help save our home.	Sep 19, 2012 10:43 AM
9	Broadstreet Hollow Rd is subject to two flooding problems: rain-induced landslides that increase turbidity or potentially dam the stream, and bridge damming by debris and accumulated stone cobble that should be dredged periodically. Bridge damming has been the cause of road flooding and washouts in most storms. Post-Irene dredging at 2nd bridge was good.	Sep 12, 2012 9:46 PM

**Page 6, Q32. Please use the space below to include any other comments that you may have.**

10	Our road and stream were among the hardest hit and after a year look forgotten and raw. Other towns have been fixed up.	Jul 30, 2012 7:42 PM
11	Flooding is so powerful that we have to learn to adapt to it rather than avoid it-- I've lived here 45 yrs and seen 4 major floods--keep the streams deep enough to carry the excess water away from the town--this must be done every so many years as the streams eventually refill with stone and gravel over time--if the DEC does not understand this and refuses access to the streams then we must go to a higher court or if refused say the hell with it and do it anyway-if not history will repeat itself again and again-----	Jul 24, 2012 7:58 AM
12	Need cell phone service. Town & townspeople did great job in and after emergency. THANK YOU.	Jul 10, 2012 8:41 PM
13	Maintain the creeks gravel deposits and the debri in and around the creeks to the high water marks. Maintain eroision control along the creeks. Steep slopes et.	Jul 2, 2012 11:35 AM
14	Since the flood hikers are lost all over the place. They try to camp on my property on McKinley Hollow where I have a private drive. There needs to be signs! Signs would change my life! Everyday hikers park in the large turnaround at the dead-end of McKinley Hollow instead of parking in the designated parking lot. Today I saw one car in the designated lot, and enough room for four more cars but two cars were parked in the turnaround which is specifically there for firetrucks, trash collection, town trucks and emergencies. This emergency turnaround is abused and blocked constantly. The road I had to pay \$12,000 for with my neighbors PLUS 8,000 for the driveway which is only in front of my house. Every day hikers are on my \$20,00 road speeding, lost, nowhere to turn, almost going over the edge of the driveway/road which is narrow with a sharp drop. I beg the town of Shandaken: we need signs. Signs that say it is a Dead End BEFORE our driveway, signs that say NO PARKING in the emergency turnaround. I pay as much taxes as all the rich weekend city people who got new roads, driveways, culverts, drainage and I got nothing. I owe my contractor \$8,000 or I would be homeless. I understand Shandaken has little funds and can not repave McKinley Hollow. I don't mind. But signs are cheap and desperately needed. My house is ten feet from the driveway. I have two dogs and people with NJ plates drive 50mph past my house while lost. I've been to the cops, they say I can't regulate the speed on a private driveway but this driveway is long, at least 1/4 mile, we paid for it when no one else would and I live in a 500 square foot cabin, I have nothing. The storm completely destroyed me financially and yet today, I had two turn arounds in my front yard and three lost hikers walking through my property. This is annoying and it's dangerous.	Jul 1, 2012 9:27 PM
15	Buy-outs only good if they arre for the full market value, don't want to have to go live in an apt because \$ is not enough to get another house. can't get meds ahead of time because of Medicaid rules and procedures. Cleanup volunteers were absolutely wonderful. you are in such shock and you don't realize it. Bridge Street causes flooding downstream	Jun 28, 2012 9:53 AM
16	dredge the stream; dredge further up Stony Clove. when they put the telephone lines underground it changed the water patterns on the street, folks who didnt get wet basements now do and maybe vice versa	Jun 28, 2012 9:47 AM

**Page 6, Q32. Please use the space below to include any other comments that you may have.**

17	Buy-out and property acquisition good only if receive fair market price. dredge the stream. spend money on solutions instead of lots of studies and plans. fix problem before it turns into a larger problem. city should be contributing money since they are taking the water. 28 years ago this house was not next to the stream. town should fix bank where rr tracks washed out by Bridge Street in 1996. FD announced evacuation but did not stick around to assist - have no car.	Jun 28, 2012 9:42 AM
18	Flood risk was downplayed by realtor; buy-outs would have to be at market value, not useful if offer is very low; town should dredge stream; financial assistance in form of grants or a loan with decent terms; there was an outpouring of help for cleanup from the community, Rotary Club was extremely helpful.	Jun 28, 2012 9:33 AM
19	Climate change; Env Sci teach at HS. Flooded in 2005. Evacuated in 2010, but came back. Left during Irene/ Lee in 2011. leave as soon as water is on South Street. believe in need to move town. how many times can you keep passing the buck? Do not believe Phoenicia will be a community in the coming years, will be flooded due to climate change.	Jun 20, 2012 9:21 AM
20	Thank you for your assistance with this matter. We look forward to seeing certain changes in the future - please do let us know how these changes will be made.	Jun 18, 2012 2:11 PM
21	Do more dredging. in past they used to clear out streams. used to clear gravel out. used gravel for construction. believe in most cases it works (to mitigate flooding). Stream in Oliverea needs to be rechannelized. State is too restrictive in permitting	Jun 14, 2012 1:02 PM
22	These river valley towns have cultural and economic importance to region. they provide amenities, habitation and community centers. People should be very cautious about overreacting to floods and overestimating community impacts. Overreaction to Main Street flooding: certain areas were deeply impacted but much of the Town was not. it was ver manageable. Want to protect our towns not abandon them. "don't throw out the baby with the floodwater"	Jun 14, 2012 12:23 PM
23	i think there should be a better evacuation plan because when it floods it is like an island here, we are trapped from all ways, could not get out for days; no electricity	Jun 14, 2012 12:07 PM
24	The Bridge St bridge in Phoenicia needs to be REPLACED and the Esopus dredged in that location to protect the town.	Jun 8, 2012 10:09 PM
25	Improve emergency communications (cell phone service), & install warning sirens in each hamlet for flooding (or other weather emergencies, such as tornados)	Jun 8, 2012 12:08 PM
26	The town should be responsible for the entire McKinley Hollow road. Not just the lower parts. We replaced our own road but the town has yet to change the trail signs. As a result we have hikers driving up our PRIVATE road and causing wear and tear. In addition, people try to park on our road and hike our property. We need better signage!	Jun 6, 2012 8:02 AM
27	Would like a study showing likelihood of future flooding to my street after repair raised the street level three feet at least.	Jun 5, 2012 11:52 PM

**Page 6, Q32. Please use the space below to include any other comments that you may have.**

28	thanks	Jun 5, 2012 2:15 PM
29	I just wanted to thank you again for this invaluable survey and lesson and reminder. I will go and prepare in the following weeks for future big storms. I'm from So. Calif so I have never lived through a flood before.	Jun 5, 2012 1:25 PM
30	concern about mud slides should be considered and use of the USGS stream flow guages to be a warning system could be helpful	Jun 3, 2012 3:16 PM
31	Because there was no coordination of resources and volunteers in local hamlets in the aftermath of the flooding last August, residents turned to Shandaken Town Hall for help. I know the officials and staff at town hall were inundated with requests but the unprofessional manner in which residents were treated only served to make matters worse and create an atmosphere of fear and uncertainty. Should there ever be another catastrophic event like TS Irene, one person or one team - specifically trained to deal with the fear and stress of victims- should man the phones in order to calm people down and prioritize need.	Jun 1, 2012 9:06 AM
32	Need cell service! Back in Fox Hollow we have poor radio reception and no cell reception. When the utilities cut out we had no way to receive or give information outside of our hollow...it was uncomfortable and not safe.	Jun 1, 2012 8:47 AM
33	The ripp rapp along Oliverea Rd ,past the Mc Kinnly hollow bridge is falling into the Esopus and nothing is being done about it and i have notified the town an highway dept.	Jun 1, 2012 1:56 AM
34	BUY OUTS SHOULD PROVIDE ENOUGH MONIES TO ENABLE A PERSON TO PURCHASE ANOTHER PRIVATE HOME	Apr 19, 2012 3:15 PM
35	Enact mandatory disclosure of flood plain zoning restrictions upon sale or transfer of affected properties.	Apr 16, 2012 8:28 PM
36	decrease property taxes in mount tremper until the mess is cleaned up they are devaluing everybody's property with their trash and boarded up windows	Apr 10, 2012 8:18 PM
37	The Town should be digging the streams and remove the gravel bars that caused the flooding. The DEC should pay for this if they want to save their fish!	Apr 10, 2012 1:12 PM



# 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*



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



## 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
  - Cornell Cooperative Extension
    - of Ulster County
  - RCAP Solutions
  - Ulster County Emergency Management
  - NYS DOT
  - NYCDEP
  - NYDEC
  - USDA NRCS
  - Ulster County Soil and Water Conservation District
  - Landowners
  - S.O.S (Save our Shandaken) Representative



## 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 Flood Mitigation Plan	8/31/12
Complete Flood Mitigation 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)

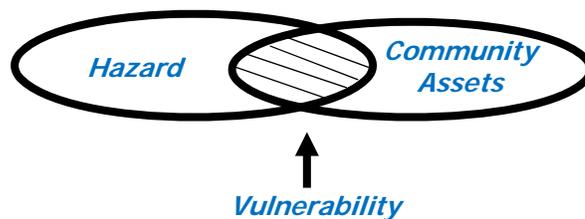


## Town of Shandaken Flood Mitigation Plan



### 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%)

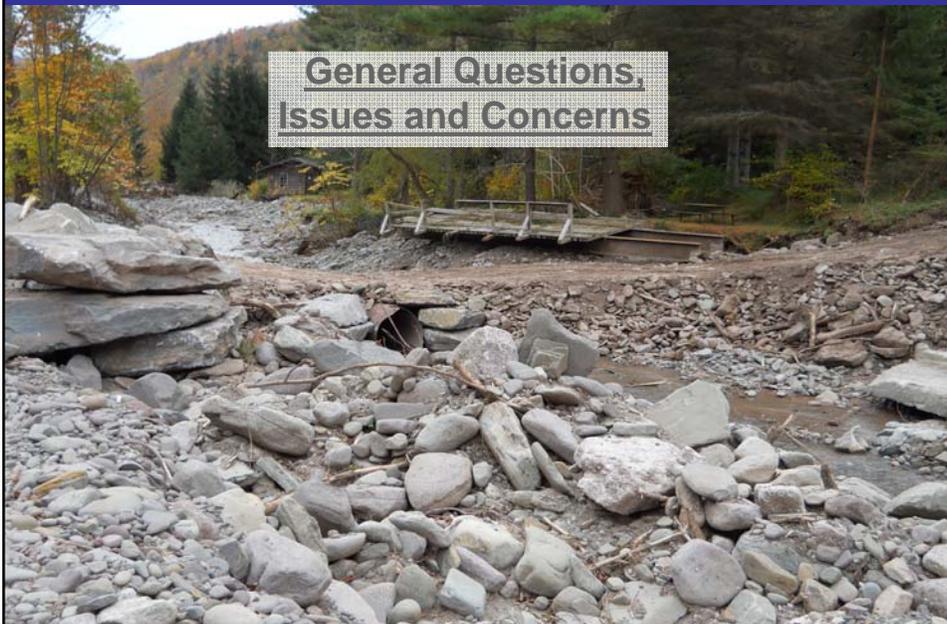
...and this doesn't consider long term cost benefits



## Town of Shandaken Flood Mitigation Plan



General Questions,  
Issues and Concerns





 **Town of Shandaken - Flood Mitigation Plan** 



**PUBLIC MEETING | FEBRUARY 4, 2013**  
*Presented by Tetra Tech, Inc.*

**TOWN OF SHANDAKEN  
FLOOD MITIGATION PLAN**

 **Town of Shandaken - Flood Mitigation Plan** 

**OUR TOPICS TONIGHT**

- The Problem
- Why do a Flood Mitigation Plan?
- The Objectives
- Project Deliverables
- Shandaken Vulnerability Assessment



 **Town of Shandaken - Flood Mitigation Plan** 

### HISTORY OF FLOODING

- Shandaken – “land of rapid waters”
- Riverine and Flash Flooding
- 18 Presidentially Declared Flood Disasters since 1950.
- Massive Damages to homes and infrastructure
- Evacuations

Historic Flood Discharges in Ashokan Reservoir Watershed At Coldbrook Gage)		
Rank	Date	Peak Discharges (cfs)
1	August 28, 2011	75,800 (~24')
2	March 21, 1980	65,300 (~22')
3	March 30, 1951	59,600
4	April, 3, 2005	55,200
5	August 24, 1933	55,000
6	October 15, 1955	54,000
7	January 19, 1996	53,600
8	April 4, 1987	51,700
9	December 21, 1957	46,900
10	March 12, 1936	38,500
11	April 5, 1984	37,400 (~18')

 **Town of Shandaken - Flood Mitigation Plan** 

### WHY??

- Proactive vs. Reactive (Save \$4 for every \$1 in Mitigation)
- Can act as a keyway to funding
- The Community Rating System
- Blueprint for Flood Reduction
- Support other planning mechanisms
- Watershed Plans
- Land Use Plans
- Codes and Ordinances



 **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*



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

 **Town of Shandaken - Flood Mitigation Plan** 

### MISSION STATEMENT

- The mission of the Town of Shandaken Flood Mitigation Plan is to:
  - develop and promote appropriate Town policy and practices
  - to protect the residents, private property, public essential facilities and the environment
  - from probable flood hazards.



 **Town of Shandaken - Flood Mitigation Plan** 

### OVERALL GOAL

The overall goal of the Plan is to improve the Town's capability to prepare for, respond to, recover from, mitigate against and reduce vulnerability to flooding. The plan identifies and encourages partnerships for coordinated implementation, funding, public awareness and the development of strategies for carefully planned mitigation efforts designed to protect the health, safety, quality of life, environment and economy of the Town of Shandaken.

 **Town of Shandaken - Flood Mitigation Plan** 

### COMMUNITY RATING SYSTEM

- 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

- 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** 

### CRS OBJECTIVES

- Three Primary Objectives
  - Reduce losses caused by flood related hazards
  - Support accurate insurance rating
  - Promote awareness of flood insurance



 **Town of Shandaken - Flood Mitigation Plan** 

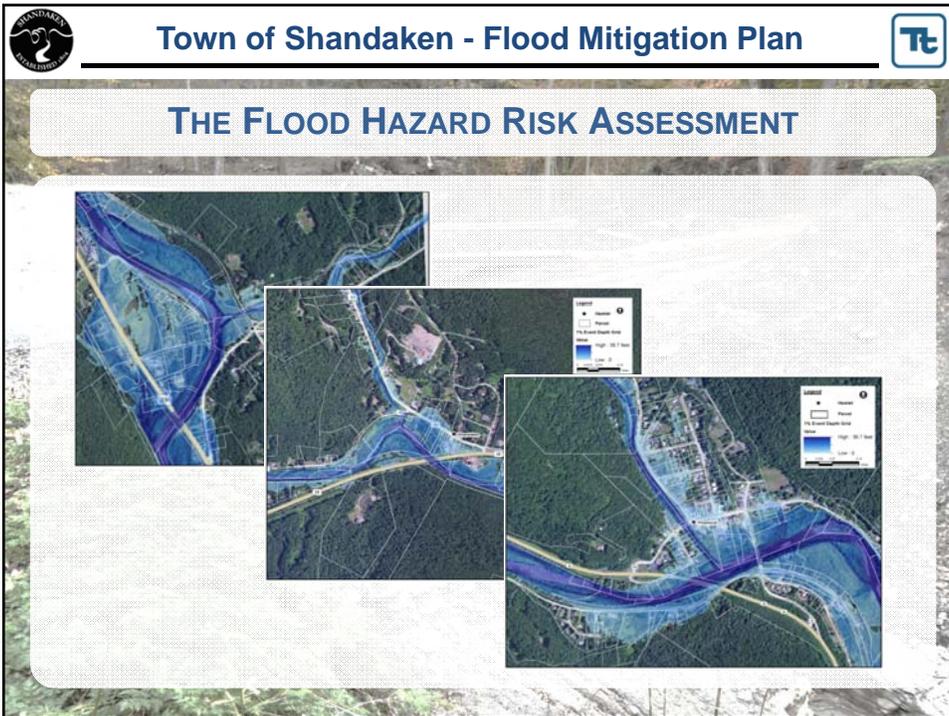
### THE PLANNING COMMITTEE

- 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
  - Cornell Cooperative Extension of Ulster County
  - RCAP Solutions
  - Ulster County Emergency Management
  - NYS DOT
  - NYCDEP
  - NYDEC
  - USDA NRCS
  - Ulster County Soil and Water Conservation District
  - Landowners
  - S.O.S (Save our Shandaken) Representative

 **Town of Shandaken - Flood Mitigation Plan** 

### DELIVERABLES

- Flood Mitigation Plan
- Flood Warning and Response Plan
- CRS Application Support



 **Town of Shandaken - Flood Mitigation Plan** 

### WHAT IS RISK?

**Risk is defined as a function of:**

- Hazard
  - Source of potential danger or adverse condition
- Exposure
  - Manmade or natural features that are exposed to the hazard
- Vulnerability, and
  - Damage susceptibility of the exposed features
- Capability
  - Regulatory Capability
  - Technical Capability
  - Financial Capability





 **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** 

### RISK REDUCTION

**To reduce Risk:**

- Manipulate the Hazard:
  - structural flood control
- Reduce Exposure:
  - property acquisition
- Reduce Vulnerability:
  - retrofitting
- Increase capability:
  - \$, preparation, technical assistance, planning





 **Town of Shandaken - Flood Mitigation Plan** 

## RISK ASSESSMENT METHODOLOGY

- Assess hazard
  - Past events
  - Areas most affected
  - Frequency
  - Severity
  - Warning time for response
- Determine Exposure
- Assess Vulnerability
  - Loss Estimation

 **Town of Shandaken - Flood Mitigation Plan** 

## WHAT IS HAZUS?

- HAZUS-MH is a powerful risk assessment methodology for analyzing potential losses from floods, hurricane winds and earthquakes.
- Current scientific and engineering knowledge is coupled with the latest geographic information systems (GIS) technology to produce estimates of hazard-related damage before, or after, a disaster occurs.





**Town of Shandaken - Flood Mitigation Plan**

### INTRODUCTION TO GIS & HAZUS MH

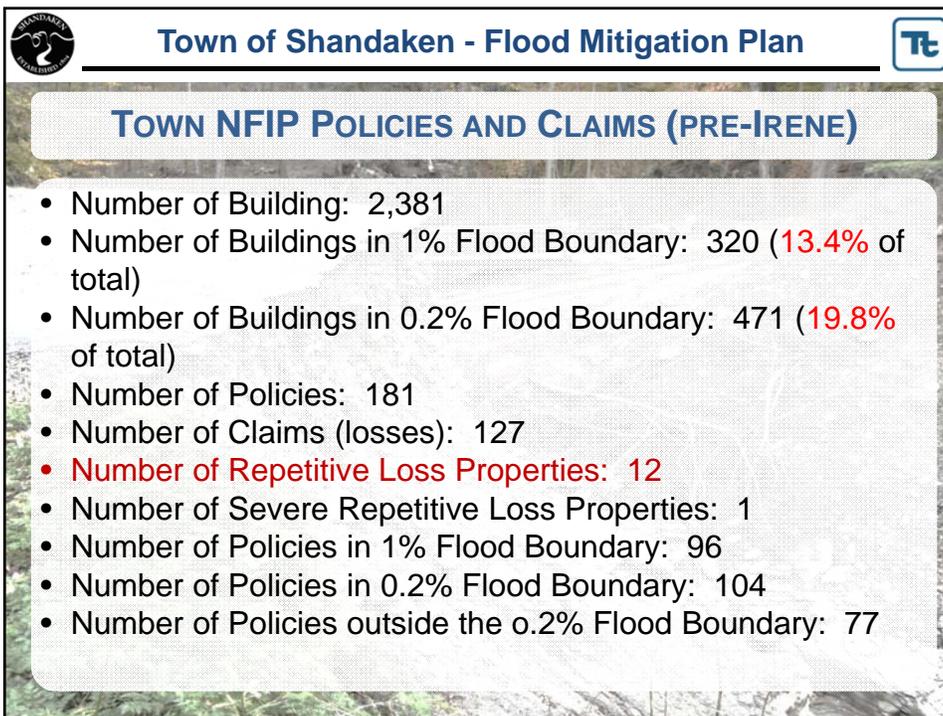
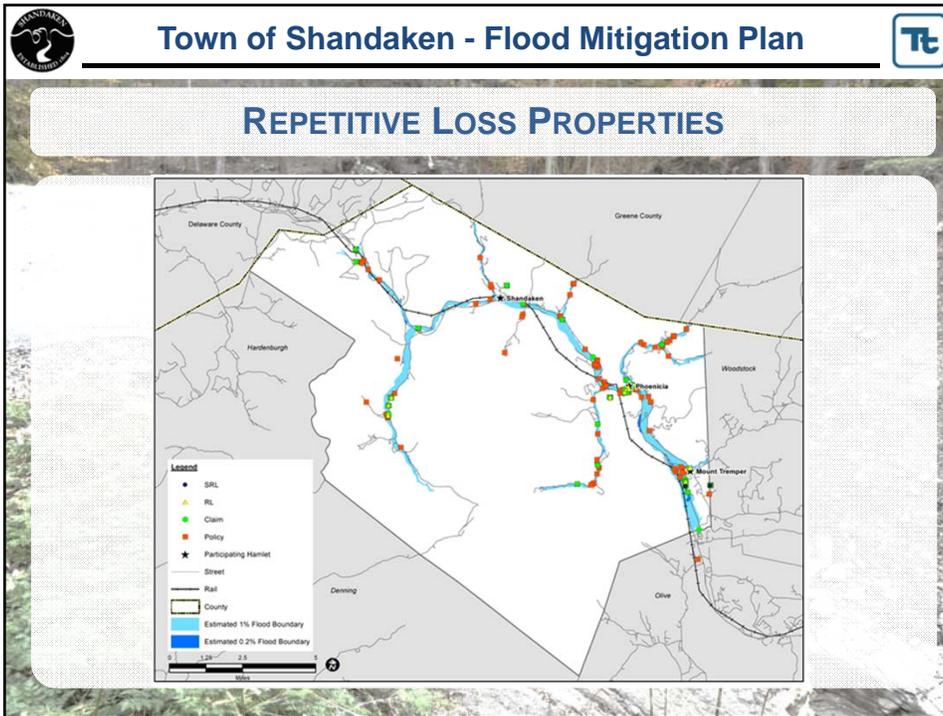
Hazus is an ARC GIS Extension

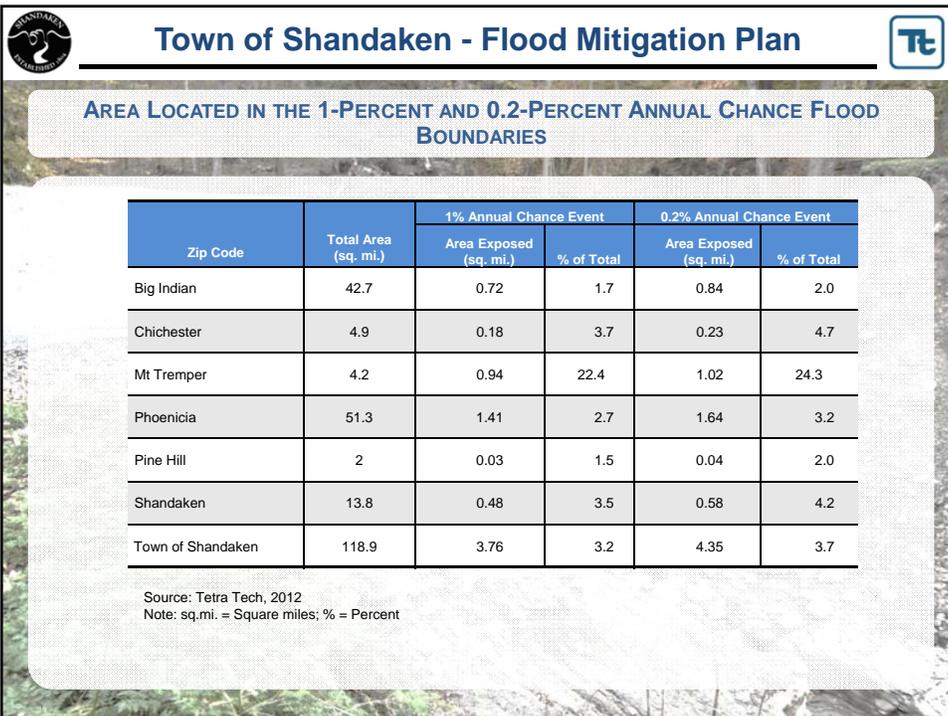
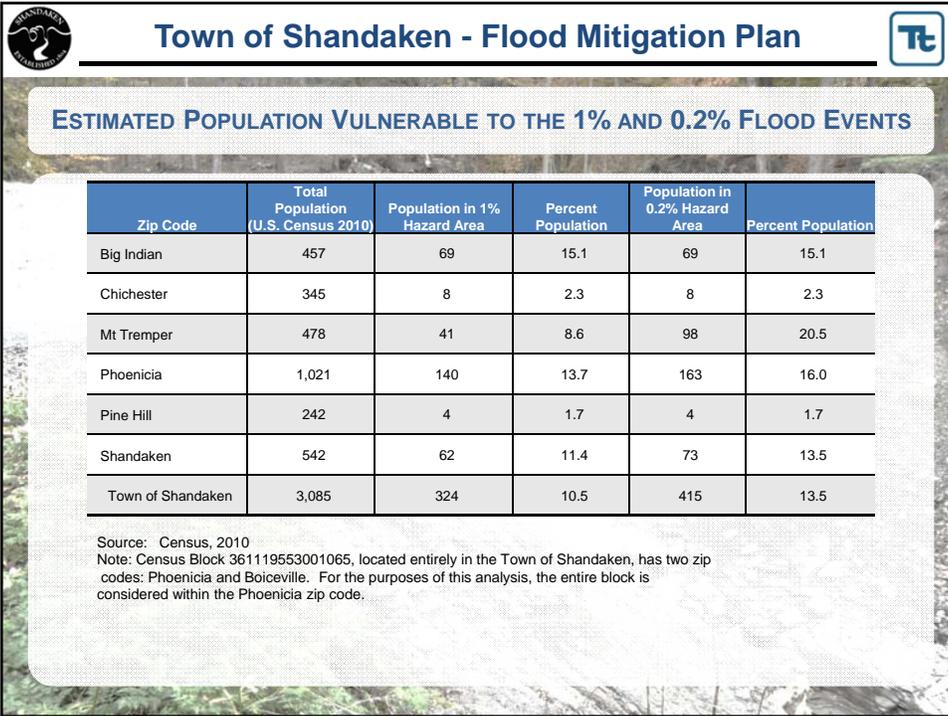
1. Define terrain
2. Define Hazard. Flood surface
3. Define and Overlay Inventory
4. Determine Damage
5. Estimate Losses

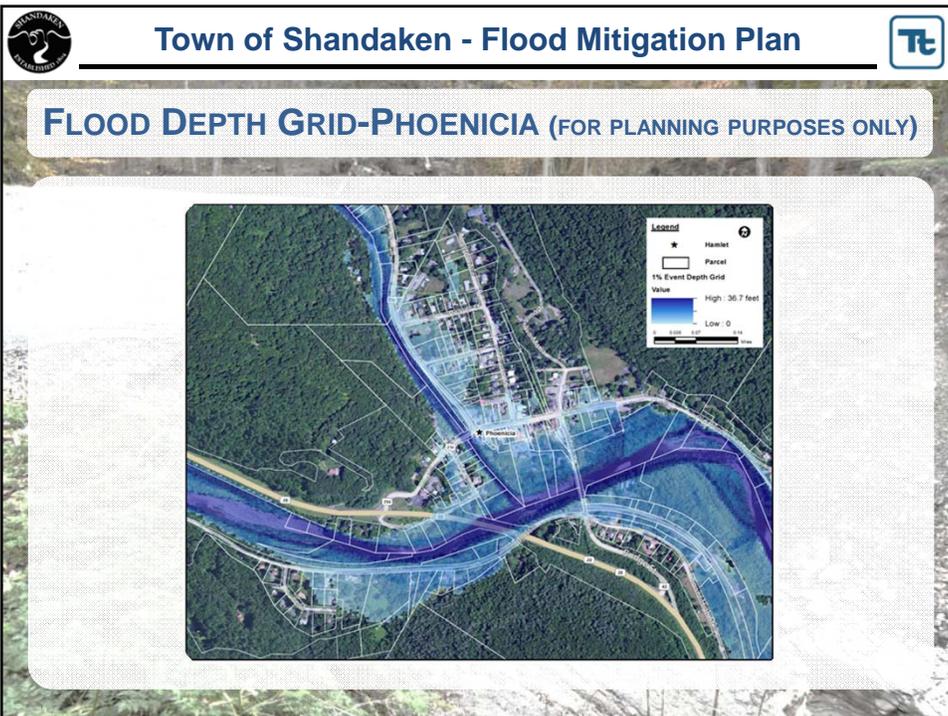
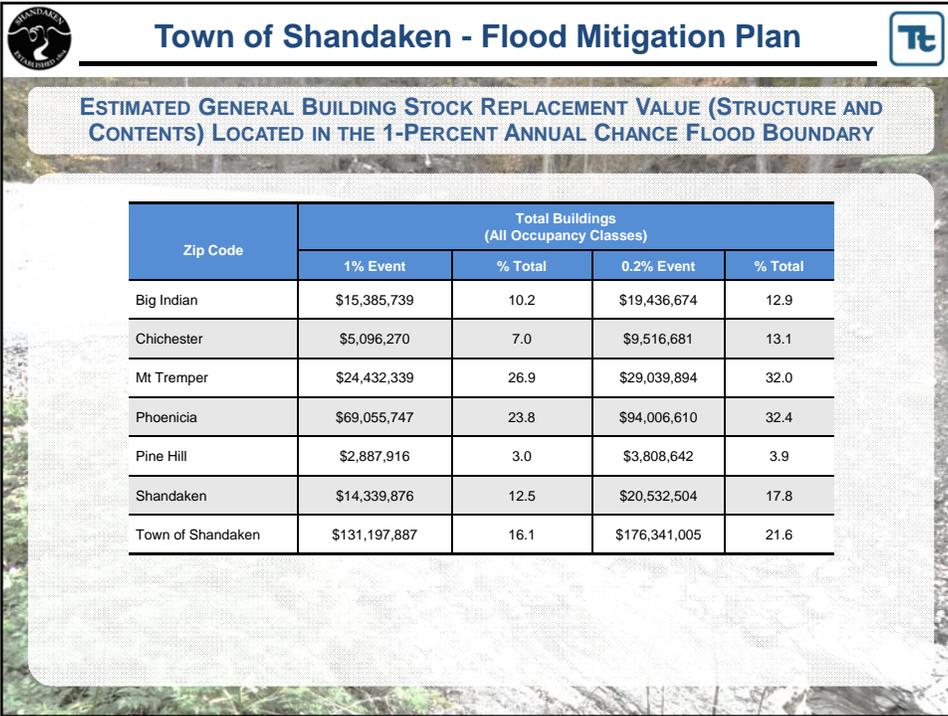
**Town of Shandaken - Flood Mitigation Plan**

### FLOOD MODEL OVERVIEW

Subtract ground surface from flood surface to determine flood depth throughout the study area









 **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.

 **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
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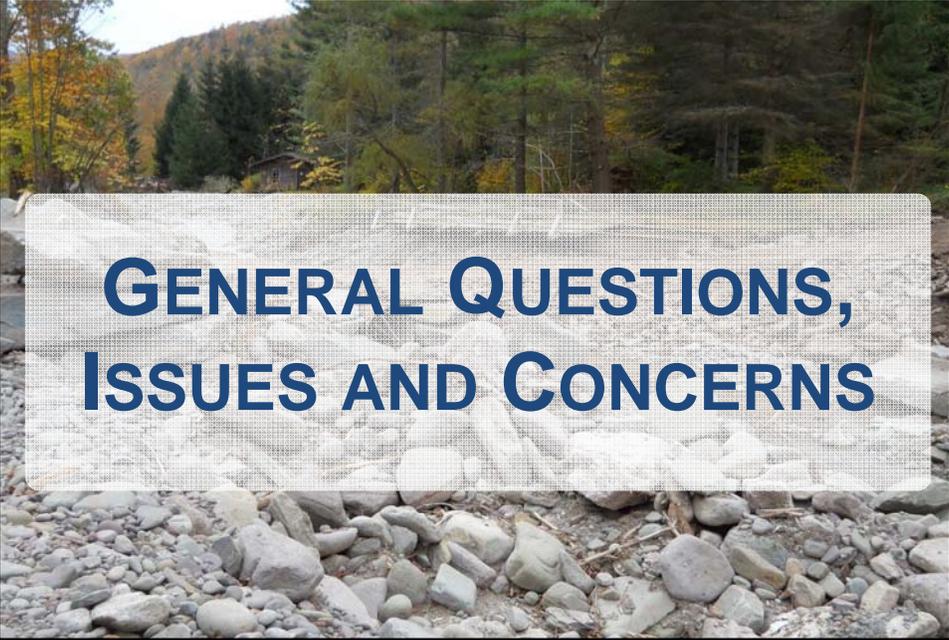
 **Town of Shandaken - Flood Mitigation Plan** 

### MITIGATION ACTIONS? LIKE WHAT?

- **Prevention.** Measures such as planning and zoning, open space preservation, land development regulations, building codes, storm water management.
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- **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** 

### GENERAL QUESTIONS, ISSUES AND CONCERNS





 **Town of Shandaken - Flood Mitigation Plan** 

### How Does CRS WORK?

- Has Application Pre-Requisites
  - Must be in NFIP Compliance
  - Elevation Certificates
  - Address Repetitive Loss Properties
- Community activities are scored
- Performance of activities is verified
- Classification assigned (1 - 10)
- 5% reduction of insurance per class

 **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
- NYSEMO / FEMA Approval
- 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** 

### OTHER PLANNING TASKS

- **Public Participation**
  - Notices 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**
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 **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 includes two type 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.
  - EWP grants
  - Watershed grants



 **Town of Shandaken - Flood Mitigation Plan** 



**Town of Shandaken  
Flood Mitigation Plan**

**PUBLIC MEETING | MAY 23, 2013**

*Presented by Tetra Tech, Inc.*

 **Town of Shandaken - Flood Mitigation Plan** 

**Our Topics Tonight**

- **The Problem**
- **Why do a Flood Mitigation Plan?**
- **The Objectives**
- **Shandaken Vulnerability Assessment**
- **Mitigation Strategy**

• •



**Town of Shandaken - Flood Mitigation Plan**

### History of Flooding

- Riverine and Flash Flooding
- 18 Presidentially Declared Flood Disasters since 1950.
- Massive Damages to homes and infrastructure
- Evacuations

Rank	Date	Peak Discharges (cfs)
1	August 28, 2011	75,800 (-24')
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**Town of Shandaken - Flood Mitigation Plan**

### WHAT IS HAZARD MITIGATION

*“Mitigation” -*

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graph TD; Mitigation --> Preparedness; Preparedness --> Response; Response --> Recovery; Recovery --> Mitigation;
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 **Town of Shandaken - Flood Mitigation Plan** 

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Why??

- **Blueprint for Flood Reduction**
- **Proactive vs. Reactive (Save \$4 for every \$1 in Mitigation)**
- **Can act as a keyway to funding**
- **The NFIP Community Rating System**
- **Support other planning mechanisms**
  - Watershed Plans
  - Land Use Plans
  - Codes and Ordinances

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 **Town of Shandaken - Flood Mitigation Plan** 

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Mission Statement

**The mission of the Town of Shandaken Flood Mitigation Plan is to develop and promote appropriate Town policy and practices to protect the residents, private property, public essential facilities and the environment from probable flood hazards.**

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 **Town of Shandaken - Flood Mitigation Plan** 

### Overall Goal

The overall goal of the Plan is to improve the Town's capability to prepare for, respond to, recover from, mitigate against and reduce vulnerability to flooding.

The plan identifies and encourages partnerships for coordinated implementation, funding, public awareness and the development of strategies for carefully planned mitigation efforts designed to protect the health, safety, quality of life, environment and economy of the Town of Shandaken.

 **Town of Shandaken - Flood Mitigation Plan** 

### Plan Goals

- Goal 1. Protect Life and Property
- Goal 2. Increase Public Awareness and Preparedness
- Goal 3. Enhance Disaster Preparedness, Response and Recovery
- Goal 4. Protect the Environment and Natural Resources
- Goal 5. Promote Mitigation Efforts through Existing Programs and Partnerships



 **Town of Shandaken - Flood Mitigation Plan** 

### PLAN PROCESS STEPS

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

Engage "Stakeholders"

- Federal, State, Regional and Local Agencies
- Business and Civic Groups
- The Public

•

 **Town of Shandaken - Flood Mitigation Plan** 

### Other Planning Tasks

- Public Participation
  - Notices 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)
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  - Public access to draft and final plan documents
  - Questionnaire (on-line and/or hard copy)
- Documentation of the Planning Process
- Plan implementation and maintenance procedures

•



 **Town of Shandaken - Flood Mitigation Plan** 

### Plan Benefit - Community Rating System

- 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** 

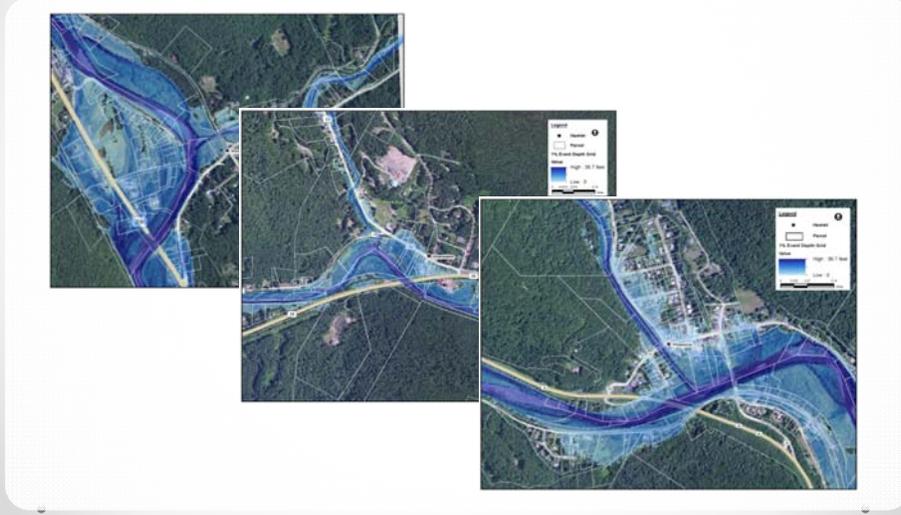
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  - Ulster County Soil and Water Conservation District
  - Landowners
  - S.O.S (Save our Shandaken) Representative



 **Town of Shandaken - Flood Mitigation Plan** 

### The Flood Hazard Risk Assessment



 **Town of Shandaken - Flood Mitigation Plan** 

### What is Risk?

**Risk is defined as a function of:**

- Hazard
  - Source of potential danger or adverse condition
- Exposure
  - Manmade or natural features that are exposed to the hazard
- Vulnerability, and
  - Damage susceptibility of the exposed features
- Capability
  - Regulatory Capability
  - Technical Capability
  - Financial Capability





 **Town of Shandaken - Flood Mitigation Plan** 

### Assess the Risk - Inventory of Assets

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

- Population
- 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
  - Medical Care Facilities
  - Schools and Care Facilities
  - Sheltering Facilities
  - Infrastructure (Transportation Systems, Utilities)
  - High-Potential Loss Facilities (Dams)

 **Town of Shandaken - Flood Mitigation Plan** 

### Risk Assessment Methodology

- Assess hazard
  - Past events
  - Areas most affected
  - Frequency
  - Severity
  - Warning time for response
- Determine Exposure
- Assess Vulnerability, incl. Loss Estimation



**Town of Shandaken - Flood Mitigation Plan**

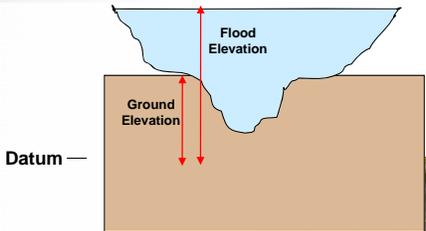
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**Town of Shandaken - Flood Mitigation Plan**

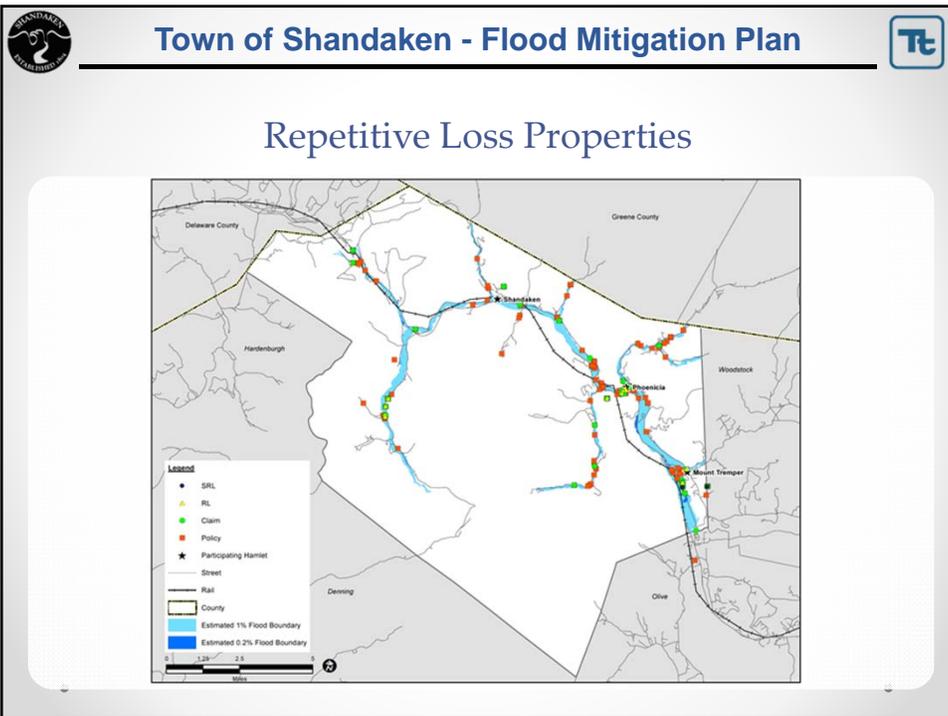
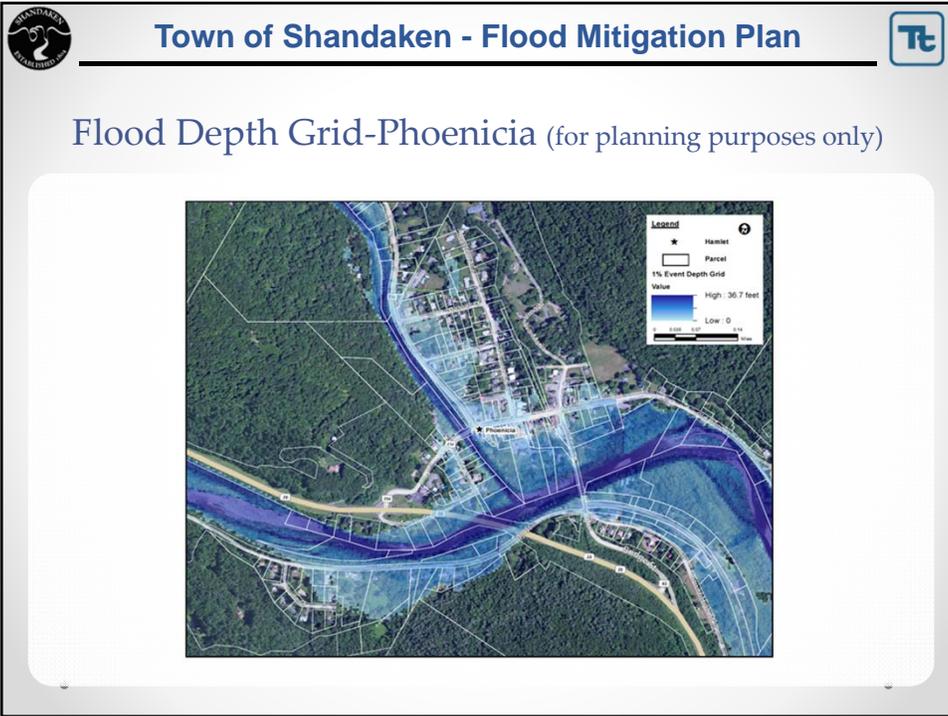
### Flood Model Overview



Subtract ground surface from flood surface to determine flood depth throughout the study area

**WATER DEPTH DAMAGE FUNCTION**







 **Town of Shandaken - Flood Mitigation Plan** 

Town NFIP Policies and Claims (post-Irene)

- % Buildings in 1% Flood Boundary: (16.1%)
- Number of Buildings in 0.2% Flood Boundary: 471 (21.6%)
- Number of Policies: 204
- Number of Claims (losses): 214
- Number of Repetitive Loss Properties: 22
- Number of Severe Repetitive Loss Properties: 2
- Number of Policies in 1% Flood Boundary: 123
- Number of Policies in 0.2% Flood Boundary: 128
- Number of Policies outside the 0.2% Flood Boundary: 76

 **Town of Shandaken - Flood Mitigation Plan** 

% Buildings in 1% Flood Boundary

Hamlet	%
Big Indian	10.2
Chichester	7.0
Mt. Tremper	26.9
Phoenicia	23.8
Pine Hill	3.0
Shandaken	12.5



**Town of Shandaken - Flood Mitigation Plan**

Estimated Population Vulnerable to the 1% and 0.2% Flood Events

Zip Code	Total Population (U.S. Census 2010)	Population in 1% Hazard Area	Percent Population in 1% Hazard Area	Population in 0.2% Hazard Area	Percent Population in 0.2% Hazard Area
Big Indian	457	69	15.1	69	15.1
Chichester	345	8	2.3	8	2.3
Mt Tremper	478	41	8.6	98	20.5
Phoenicia	1,021	140	13.7	163	16.0
Pine Hill	242	4	1.7	4	1.7
Shandaken	542	62	11.4	73	13.5
Town of Shandaken	3,085	324	10.5	415	13.5

Source: Census, 2010  
 Note: Census Block 361119553001065, located entirely in the Town of Shandaken, has two zip codes: Phoenicia and Boiceville. For the purposes of this analysis, the entire block is considered within the Phoenicia zip code.

**Town of Shandaken - Flood Mitigation Plan**

Area Located in the 1-Percent and 0.2-Percent Annual Chance Flood Boundaries

Zip Code	Total Area (sq. mi.)	1% Annual Chance Event		0.2% Annual Chance Event	
		Area Exposed (sq. mi.)	% of Total	Area Exposed (sq. mi.)	% of Total
Big Indian	42.7	0.72	1.7	0.84	2.0
Chichester	4.9	0.18	3.7	0.23	4.7
Mt Tremper	4.2	0.94	22.4	1.02	24.3
Phoenicia	51.3	1.41	2.7	1.64	3.2
Pine Hill	2	0.03	1.5	0.04	2.0
Shandaken	13.8	0.48	3.5	0.58	4.2
Town of Shandaken	118.9	3.76	3.2	4.35	3.7

Source: Tetra Tech, 2012  
 Note: sq.mi. = Square miles; % = Percent



**Town of Shandaken - Flood Mitigation Plan**

Estimated General Building Stock Replacement Value (Structure and Contents) Located in the 1% Annual Chance Flood Boundary

Zip Code	Total Buildings (All Occupancy Classes)			
	1% Event	% Total	0.2% Event	% Total
Big Indian	\$15,385,739	10.2	\$19,436,674	12.9
Chichester	\$5,096,270	7.0	\$9,516,681	13.1
Mt Tremper	\$24,432,339	26.9	\$29,039,894	32.0
Phoenicia	\$69,055,747	23.8	\$94,006,610	32.4
Pine Hill	\$2,887,916	3.0	\$3,808,642	3.9
Shandaken	\$14,339,876	12.5	\$20,532,504	17.8
Town of Shandaken	\$131,197,887	16.1	\$176,341,005	21.6

**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.



 **Town of Shandaken - Flood Mitigation Plan** 

### Risk Reduction

To reduce Risk:

- Manipulate the Hazard:
  - structural flood control
- Reduce Exposure:
  - property acquisition
- Reduce Vulnerability:
  - Retrofitting
- Increase capability:
  - \$, preparation, technical assistance, planning and regulation



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 **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** 

### Mitigation Alternatives

- Use information obtained from the public involvement strategy;
- Use information provided in the risk and vulnerability assessment;
- Seek mitigation actions consistent with the goals and objectives of this local Plan;
- Identify mitigation actions that are within the capabilities of the Town.



 **Town of Shandaken - Flood Mitigation Plan** 

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### Mitigation Initiatives

- 86 Initiatives included in the plan  
Including:
- Expansion and improvement of Flood Warning System-  
locations, automation, precipitation monitoring
- Development of new codes and standards to reduce flood risk
- Develop new codes and standards for bridges and culverts to  
reduce flood risk
- Create an inventory of culverts and prioritize replacement
- Evaluate options to alleviate aggregation of sediment at the  
Bridge Street bridge in Phoenicia. Options to include  
economic impact of loss of bridge to local economy.

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 **Town of Shandaken - Flood Mitigation Plan** 

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### Mitigation Initiatives

- Join CRS
- Undertake a repetitive loss analysis
- Provide increased public outreach and education of available  
flood mitigation programs and alternatives
- Adopt Flood Warning and Response Plan
- Support Property acquisition or elevation of structures for  
interested parties.

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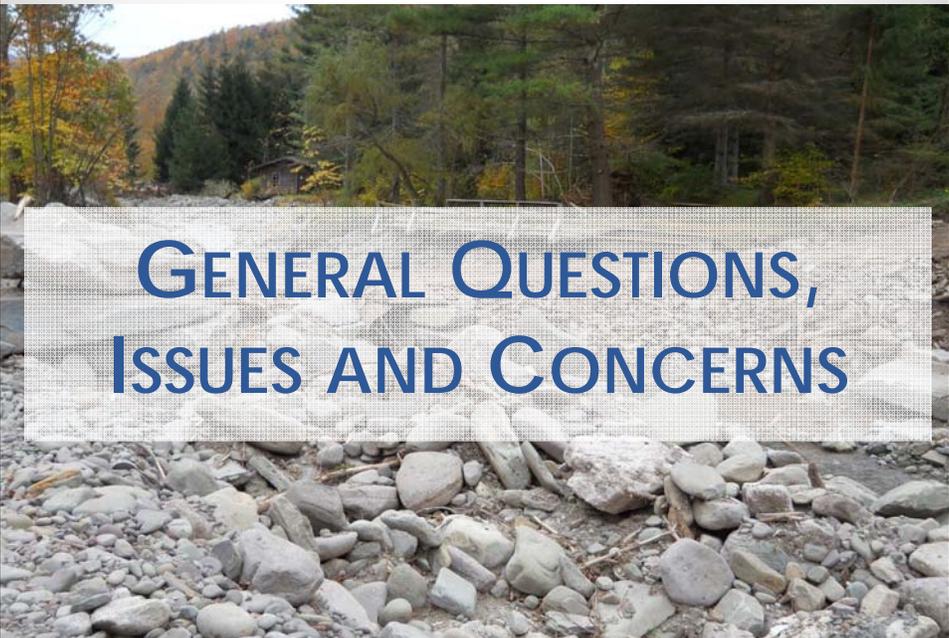


 **Town of Shandaken - Flood Mitigation Plan** 

### Plan Implementation

- Your mitigation strategy section provides a “blueprint” to follow for progressively reducing your community’s natural hazard risk.
- It will includes two type 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.
  - Emergency Watershed Protection grants
  - Watershed grants
  - Homeland Security/Emergency Management grants

 **Town of Shandaken - Flood Mitigation Plan** 



## GENERAL QUESTIONS, ISSUES AND CONCERNS



Cornell University  
Cooperative Extension  
Ulster County



**ASHOKAN WATERSHED STREAM MANAGEMENT PROGRAM**  
**SAFARI GROUP 2012**

AWSMP Program Office, Phoenicia, NY

\*Please initial if in attendance or add your name to the list please:

Group Member:	Association:	E-mail address:	Phone:	Jan. 2012	March 2012	May 2012	July 2012	Sept. 2012	Nov. 2012
Candace Balmer	RCAP Solutions	cbalmer@rcapsolutions.org	845-679-0565	<i>CB</i>					
Vincent Bernstein	Town of Shandaken	councilmanbernstein@shandaken.us	(845) 688-5560						
John Horn	Town of Shandaken	silverhx@hotmail.com	845-688-2072	<i>JH</i>					
David Corrigan	NYS DOT	dcorrigan@dot.state.ny.us	845-340-1723						
Danny Davis	NYC DEP	davidd@dep.nyc.gov	(845) 340-7839						
Deron Davis	USDA NRCS	Deron.davis@ny.usda.gov	845-883-7162 x105						
Doug Dekoskie	DEP	ddekoskie@dep.nyc.gov	(845) 340-7841						
Brian Drumm	NYS DEC Region 3	brdrumm@gw.dec.state.ny.us	(845) 256-3091						
Liz Higgins	CCE	emh56@cornell.edu	845-688-3047 ext. 2#	<i>LH</i>					
Eric Hofmeister	Town of Shandaken	highway@shandaken.us	(845) 688-9901	<i>EH</i>					
Amanda Lavalle	Ulster County DOE	alav@co.ulster.ny.us	(845) 338-7455						
Mark Lewis	DEC	melewis@gw.dec.state.ny.us	845-256-3822						
Elizabeth Reichheld	NYC DEP	reichhelde@dep.nyc.gov	(845) 340-7839	<i>BR</i>					

Rich Stokes	Town of Shandaken	zeoshandaken@yahoo.com	(845) 688-5008	ZCS					
Cory Ritz	UC SWCD	Cory.ritz@ashokanstreams.org	(845)688-3047	CR	- 5 min -	GIS Review -			
Keith Savoury	NYS - DOT	ksavoury@dot.state.ny.us	(845) 331-5533			ACTION ITEM			
Robert Stanley	Town of Shandaken	shandakensupervisor@yahoo.com	(845) 688-7165	RAS.					
Pat Ferracane	DEC	pferrac@gw.dec.state.ny.com	914-428-2505 ext. 359						
Dave Bolles	UC DPW	dbol@co.ulster.ny.us	845-340-3116						
Andrew Emrich	UC DPW	aemr@co.ulster.ny.us	845-340-3125						
Doris Nieves	Mt. Tremper Landowner	doris@nwdworld.com	(212) 594-6046						
Aaron Bennett	Ulster County DOE	aben@co.ulster.ny.us	(845) 340-3522						
Brent Gotsch	CCE	bwg37@cornell.edu	845-688-3047 ext. 511		- took minutes				
POB M <sup>c</sup> Cormack	CCE	rban232@cornell.edu	" x3		- info -				
Cynthia Bianco	Tetra Tech	cynthia.bianco@tetratech.com	973-670-8044						
Faye Storms	S.O.S.	faye.storms.reactor@hotmail.com	688-7290						

\*By initialing here, I agree to allow the AWSMP program to take and use my photograph for publication and media outreach materials.



**Town of Shandaken Town Board Meeting Agenda  
Regular Monthly Meeting  
Monday, March 5, 2012**

- 1. Pledge of Allegiance**
- 2. Roll Call**
- 3. Approval of previous T/B Meeting minutes**
- 4. Supervisor's Financial Report**
- 5. Communications**
  - a. Terry Bernardo, Chair - Ulster County Legislature**
  - b. Cynthia Bianco, Tetra Tech - Shandaken Flood Mitigation Plan**
- 6. Committee Reports:**
  - a. Ambulance*
  - b. Museum*
  - c. Police*
  - d. Phoenicia Water*
  - e. Pine Hill Water*
  - f. Recreation*
- 7. Public Comments on Resolutions**
- 8. Motions:**
- 9. Resolutions:**
  - 70) Pay all Bills**
  - 71) Phoenicia Water** – Adoption of Bylaw Amendments
  - 72) Assessor** – Hire Independent Appraiser – Lawsuit
  - 73) Planning** – Support Pine Hill Historic District Designation
  - 74) Planning** – Appoint Art Christie (term ends 12/31/16)
  - 75) Town Hall Septic** – Advertise for Bids for Electrical/Plumbing Work
  - 76) Supervisor** – Auth. Supervisor as Marriage Officer
  - 77) Highway**- Purchase of Excavator
  - 78) Smart Growth** – Hiring Artist for Kiosk Panels
- 10. Open Public Comment**
- 11. Meeting Adjournment - IN MEMORY OF:**

***Catherine Aspinall - Connie Betz - Ronald Fogelberg - Mary Alice Hummell - Ruth Lindsay- Robert Michko- Eleanor Monachelli - Elizabeth Kerns***



SHANDAKEN FLOOD MITIGATION PLAN UPDATE  
 PUBLIC MEETING SIGN-IN SHEET  
 MEETING DATE: March 5, 2012 7PM



Name	Title	Municipality	Phone Number	E-mail
Kathy Nolan	Resident	Allen - Sandaken	845-688-9170	kathynolan@earthlink.net
Sarah Walker	Resident	Phoenix	845-688-7538	Summerwinds16@aol.com
Belen Morelli	Resident	Phoenix	845-688-9738	f.n.t.329@aol.com
Tina Coughlin	Resident	Phoenix	845-688-5085	911-323@jaboo.com
Tina M. Rice	Resident	Phoenix	845-688-7106	
Robert Hester	Resident	Sandaken	688-55568	
Brian Grant	RESIDENT	CHICHESTER	1088 2221	
GRACE GRANT	RESIDENT	CHICHESTER	1088-7174	
JEFFOME LITWACK	RESIDENT	PHOENIXIA	688 5571	
DAVE CHANNO	RESIDENT	SHANDAKEN	688 2977	Dave@Esopusworks.com
ALFRED PEANY	PRES.	PHOENIXIA	688-7361	ALFANY@HVC.RR.COM

**Town of Shandaken**  
**County of Ulster**  
**State of New York**  
**Monday March 5, 2012**

The Town Board met this date for a Public Hearing -Phoenicia Water District Bylaws - & Regular Monthly meeting, as per Resolution #2. Minutes of the Monthly Regular Town Board Meeting held in Shandaken on Monday, March 5, 2012 at 7:00 pm at the Town Meeting Hall, Rt. 28 Shandaken, NY.

**Pledge of Allegiance**

**Roll Call**

**Members Present:** Robert Stanley, Supervisor  
Doris Bartlett, Board Member  
Vincent Bernstein, Board Member  
Alfred Higley Jr., Board Member

**Members Absent:** Jack Jordan, Board Member  
Recording Secretary: Joyce Grant, Town Clerk

On a Stanley/Bernstein motion the Town Board unanimously approved the minutes of the February meetings as submitted by the Town Clerk.



**PHOENICIA WATER DISTRICT BYLAWS PUBLIC HEARING**

**Water District Bylaws Public Hearing**

Prior to next month's regularly scheduled **Town Board Meeting on Monday, March 5th, 7pm**, the Town Board will hold a public hearing to hear arguments for or against adopting proposed amendments to the Phoenicia Water District Bylaws. The proposed amendment specifically addresses **Article 18-Grievance Procedures**. The Phoenicia Water Committee is proposing these changes in order to clarify procedures for filing disputes over water billing.

**The Public Hearing is scheduled for 6:30pm on March 5th.**



## Town of Shandaken Town Board Meeting Agenda Regular Monthly Meeting Monday, March 5, 2012

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  - a. Terry Bernardo, Chair – Ulster County Legislature
  - b. Cynthia Bianco, Tetra Tech – Shandaken Flood Mitigation Plan
- 6. Committee Reports:**
  - a. *Ambulance*
  - b. *Museum*
  - c. *Police*
  - d. *Phoenicia Water*
  - e. *Pine Hill Water*
  - f. *Recreation*
- 7. Public Comments on Resolutions**
- 8. Motions:**
- 9. Resolutions:**
  - 70) *Pay all Bills*
  - 71) *Phoenicia Water* – Adoption of Bylaw Amendments
  - 72) *Assessor* – Hire Independent Appraiser – Lawsuit
  - 73) *Planning* – Support Pine Hill Historic District Designation
  - 74) *Planning* – Appoint Art Christie (term ends 12/31/16)
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  - 76) *Supervisor* – Auth. Supervisor as Marriage Officer
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- 10. Open Public Comment**
- 11. Meeting Adjournment - *IN MEMORY OF:***

*Catherine Aspinall – Connie Betz – Ronald Fogelberg – Mary Alice Hummell – Ruth Lindsay- Robert Michko- Eleanor Monachelli – Elizabeth Kerns*



## Town of Shandaken

P.O. Box 134, 7209 Rte. 28, Shandaken, NY 12480

*"The Heart of the Park, .. Where the Eagle Soars"*

Supervisor: (845) 688-7165

Police: (845) 688-9902

Town Clerk: (845) 688-5004

Justice Court: (845) 688-5005

Assessor: (845) 688-5003

ZBA/ZEO/Planning: (845) 688-5008

Highway: (845) 688-9901

Fax: (845) 688-2041

## **Upcoming Town Board Topics & Activity**

### **Month OF 3/5/12**

**Flood Recovery:** We have started receiving checks from FEMA to offset the costs of response and recovery efforts. The Town has in excess of \$3.5 million in claims, most of which is due to bridge and highway replacement. So far we have only received the federal portion for some jobs. We are hopeful that the remainder of the funds will be coming shortly as Eric and the Highway Department continue recovery efforts. To that end, tonight we have a resolution to authorize the purchase of an excavator. We had looked at renting the equipment, but looking at the length of time necessary to complete the work and overall cost it is more cost effective to purchase the equipment where it would be useful for other standard highway operations over the coming years to come.

As you may or may not be aware, the Town through its Shandaken Area Flood Assessment and Remediation Initiative (SAFARI) has hired an engineering and planning consultant to assist us in developing a long-term flood remediation plan. Included in this plan is an emergency response plan specific to the Shandaken area. We also hope to have a list of priority projects to address flooding issues in specific portions of the Town. Tonight Cynthia Bianco from Tetra Tech is here to discuss some of the actions they are taking to help us develop this plan, first of which, is a public survey that we will be sending out this month.

**Phoenicia H2O:** Prior to tonight's meeting the Town Board held a public hearing on a proposed amendment to the Phoenicia Water District Bylaws. Specifically, this amendment addresses grievance procedures. Under the proposal water district property owners may file a grievance if they feel they have been billed in error. The procedures lay out specific protocols whereby if the meter is tested and found to be in error, the district pays the amount over the average of three previous billings and replaces the meter at no charge to the customer. If the meter is found to be correct, the

property owner is responsible for the bill, as sent, plus the cost of removal and testing of the meter. We have a resolution tonight to accept this amendment.

**Assessor:** The Town is involved in an ongoing grievance suit with a Town resident. The attorney representing us has requested an independent appraisal consultant to assist in the defense of the Town. We will be hiring Barry Herbold of Kerhonkson, as recommended by the attorney, to assist in this case.

**Planning:** The Town Board, following a meeting in Pine Hill and several discussions with the Office of Historic Preservation the Town Board has a resolution supporting the designation of the Hamlet of Pine Hill as an Historic District. There are no regulations imposed by this action and the Town Hopes this will make grant funds available for the Hamlet as it continues to move forward with Restoration efforts throughout the Hamlet. Eric and I did meet with RETTEW, the firm working on the design plans. We are looking forward to another meeting this week to further those plans.

We also will be appointing Art Christie to the Planning Board following the vacancy recently created through resignation of a member of the board. Mr. Christie's term will end in 2016, as he replaces the seat being vacated.

**Town Hall:** We are asking for bids on the Town Hall Septic electric and plumbing jobs. We hope to have all the work completed before the beginning of the summer, which would alleviate the Town of the Pump and Haul system we have been operating since the septic failure occurred in 2010.

**Marriage Officer:** As the Chief Elected Official of the Town of Shandaken, the Town Board has the authority to appoint the Supervisor as a Marriage Officer. My secretary's daughter is looking to get married and has asked me to perform the ceremony. We have a resolution tonight to make that appointment.

**Smart Growth:** We are prepared to move forward with the contract to hire the artist for the Kiosk Panels. Again, this work is to be paid through the NYS DEC grant for Smart Growth.

**Phoenicia:** I was contacted by the County Executive's office on two notes. One is to announce that they anticipate the Oliveria Rd. Bridge to be opened over the next week or two. Concerning the Phoenicia Bridge St. Bridge, County is telling us that they have gone out to bid and successfully hired an engineering firm and they are awaiting the

report from the firm. Once they have it they will forward it to the town for discussion. Also, I'd like to applaud the Onteora Board of Education for keeping our beloved Phoenicia Elementary School open, but not so much for awarding the administrative raises reported in the Freeman this morning.

**Cell Tower:** We have started receiving rent monies from AT&T for the Glebrook Tower. It is not operational, yet, but it is scheduled. We also received an application for T-Mobile to place their equipment on the Highmount Tower. They are also in negotiation with Mariner's Towers who owns the Glenbrook Tower.

**Computer Classes:** As a reminder The Town along with the Phoenicia Rotary and Phoenicia School will be hosting FREE computer classes for adults. This class will teach you everything from startup to email usage and web surfing. Classes begin Wednesday, April 11<sup>th</sup> at 5:30pm and continue every Wednesday at 5:30 (except May 3<sup>rd</sup>) until June 20<sup>th</sup>. The classes will be held at the Phoenicia Elementary School. In order to sign up please call the Town Clerk's Office at 688-5004.

**Our next regular meeting is scheduled for**

**Monday, April 2, 2012 at 7pm.**

# TOWN OF SHANDAKEN AMBULANCE SERVICE



PO BOX 91 PHOENICIA, NY 12464  
WWW.SHANDAKENAMBULANCE.ORG

## FEBRUARY 2012 REPORT

Total calls received- 63

Total calls Belleayre- 32

Mutual aid given- 0

Mutual aid received- 3 (Secondary to multiple calls in the district)

February was a record breaking month for the Town Ambulance which handled sixty-three calls for service including three serious auto accidents, a cardiac arrest reversal, and yes, even delivered a baby in the field. Kudos to the crews out there who brought exemplary care to our citizens and visitors.

To date the Ambulance Service has been contacted by over 30 individuals and businesses granting use of their Verizon network extenders for emergency access during calls that require transmission of electrocardiographs. This service was already used in the field in the area of the Village of Phoenicia during a critical cardiac call. Much appreciation goes out to the citizens and business owners who stepped it up and are truly making a difference. Currently the Ambulance Department is researching alternative sources of funding through small grants for extenders in the more remote sections of the Town, and has contacted Verizon in regards to possible group or promotional pricing for Town residents and businesses interested in purchasing an extender. We will keep you posted once we hear back from Verizon.

Once again, the Town of Shandaken Ambulance Service would like to thank the citizens of the Town of Shandaken for their ongoing support in our mission to bring the highest level of prehospital care to our area. Please check for updates on the Verizon extenders, as well as other great information on the Ambulance's website at [www.shandakenambulance.org](http://www.shandakenambulance.org).

Stay Safe out there!

Richard W. Muellerleile  
Captain/ Administrator  
Town of Shandaken Ambulance Service

*Committed To Care In The Heart Of The Catskills*

SHANDAKEN POLICE DEPARTMENT MONTHLY REPORT			
Month of February 2012			
CHIEF W.JAMES MCGRATH			
Abandoned Vehicle	0	Mental Health Law	4
Abandoned 911's	8	Motorist Assists	2
Aggravated Harassments	0	Neighbor Disputes	2
Animal Complaints	1	Noise Complaints	0
Assaults	0	Parking Complaints	0
Assist Other Police Agency's	2	Property Disputes	0
Assist Town Ambulance	13	Property Damage Accidents	8
Assist Fire Department	0	Involving DEER	0
Automatic Alarms	3	Involving BEAR	0
Bad Checks	1	Personal Injury Accidents	2
Burglaries	2	Plates Lost M.V.	0
Criminal Mischief's	1	Public Lewdness	1
Criminal Possession Weapons	2	Reckless Endangerments	0
Check the Welfare	2	Robbery	0
Civil Matters	2	Suspicious Persons	5
Drug Possessions	2	Suspicious Vehicles	3
Drug Overdoses	0	Security Checks	18
Disorderly Subjects	2	Shots Fired Complaints	0
Domestic Disputes	3	Suicides Attempted	0
Driving While Intoxicated	2	Suicides	0
Larcenies	6	Traffic Details	7
Fights in Progress	2	Trespassing Complaints	3
General Town Complaints	10	Theft of Service Complaints	0
Grand Larcenies	2	Unattended Deaths	0
Harassment Complaints	5	V&T Complaints	9
Lock-out Assists	2	Water Rescues	0
Land-lord/Tennant disputes	0	Missing Persons	0
Littering/Dumping Complaints	1	Marijuana Possessions	1
Juvenile Complaints	0	Identity Theft	1
Endangering Welfare Complaints	0	<b>TOTAL CALLS HANDLED</b>	<b>140</b>
Violations	3	Uniform Traffic Tickets	43
Misdemeanors	8	Parking Tickets	1
Felonies	1	Warrants	0
Appearance Tickets	11	<b>TOTAL ARRESTS</b>	<b>12</b>
*****POLICE VEHICLE REPORT*****			
83 Patrol Miles	1290	83 Odometer Reading	56010
84 Patrol Miles	3909	84 Odometer Reading	127359
85 Patrol Miles	180	85 Odometer Reading	58390
86 Patrol Miles	1829	86 Odometer Reading	81829
87 Patrol Miles	1427	87 Odometer Reading	137950
<b>TOTAL MILES PATROLLED</b>	<b>8635</b>		

RESOLUTION #70-12

OFFERED BY: Bernstein

RESOLUTION TO PAY ALL BILLS

**WHEREAS**, The Department of Audit and Control require Town Boards to sign and inspect all vouchers coming into the town for payment, to number and total amounts from each fund.

**THEREFORE BE IT RESOLVED**, that the Town Board authorize the following vouchers paid:

**General \$57,784.24**  
**Highway 212,082.95**  
**Phoenicia Water 7,414.63**  
**Pine Hill Water 88.98**  
**Phoenicia Lights 1,109.96**  
**Chichester Lights 149.57**  
**Pine Hill Lights 616.19**

AND MOVES ITS ADOPTION

Seconded by: Higley

**ROLL CALL 4 Ayes, 1 Absent**

Phoenicia Water District By-Laws Amendments - March 2012

## **TOWN OF SHANDAKEN**

### **AMENDMENTS TO THE PHOENICIA WATER DISTRICT BY-LAWS**

**BE IT ENACTED** by the Town Board of the Town of Shandaken as follows:

#### **ARTICLE 18 . GRIEVANCE PROCEDURES**

In the event a property owner disputes the accuracy of a water bill said property owner will have a period of sixty (60) calendar days from the mailing date of the bill to do the following:

A. File a written complaint with the Town Clerk/ Tax Collector requesting an inspection of the relevant parts of the property owner's premises being served by the meter in question. If the property's water system appears to be normal (no leaks, etc.) the investigation will progress to Article 18 Section B.

B. The meter will be removed, by a plumber assigned by the Water District Superintendent, replaced with a temporary meter and sent for testing. Should the meter test "fast," (recording more than designed guidelines/actual flow) the Water District will bear all of the costs incurred for the removal, shipping, testing, and inspection of the meter, and for the installation of a new meter and shall also credit to the property owner the charges incurred by said owner on the challenged bill to the extent that said charges exceed the average of the three billings immediately prior to the date of the water bill that was disputed. Should the meter run "slow" (recording less than designed guidelines/ actual flow) or accurate, the property owner will be responsible for all expenses (removal, shipping, testing, calibration, reinstallation, parts and labor) incurred by the Water District, in addition to the water bill being questioned and any late fees accrued. These charges, if not paid prior to the next bill being sent, will be added to the relevant property's next water bill.

C. In the event that a property owner fails to file a written complaint within sixty (60) days of the date the water bill was mailed, the bill shall be deemed valid and the property owner(s) shall have waived his/her/their right to challenge the bill.

**RESOLUTION #71-12**

**OFFERED BY: Stanley**

### **RESOLUTION APPROVING AMENDMENTS TO PHOENICIA WATER DISTRICT BYLAWS**

**WHEREAS**, the Town of Shandaken Town Board oversees the Phoenicia Water District, and  
**WHEREAS**, the Phoenicia Water District Committee has provided suggested amendments to the existing Phoenicia Water District Bylaws in order to simplify grievance procedures (Article 18), and  
**WHEREAS**, the Town Board of Shandaken held a public hearing on said proposed by laws at 6:30pm on Monday, March 5, 2012 to hear all comments for and against said bylaw amendments;

**THEREFORE, BE IT RESOLVED**, that the **Town Board of the Town of Shandaken** hereby does approve the amendments to Article 18 of the Phoenicia Water District Bylaws.

**AND MOVES ITS ADOPTION**

Seconded by: Bernstein

**ROLL CALL 4 Ayes, 1 Absent**

**RESOLUTION #72 -12**

**OFFERED BY: Higley**

**RESOLUTION APPROVING HIRING OF INDEPENDENT APPRAISAL CONSULTANT**

**WHEREAS**, the Town of Shandaken is involved in litigation pursuant to a property tax grievance, and **WHEREAS**, the Attorneys representing the Town in this matter, Van DeWater and Van DeWater, LLP, are in need of the services of an independent appraisal consultant in order to defend the Town in the case, and **WHEREAS**, the Attorneys have made a recommendation for said appraisal consultant;

**WHEREAS**, the Attorneys have made a recommendation for said appraisal consultant;

**THEREFORE, BE IT RESOLVED**, that Barry M. Herbold, ASA, of Empire State Appraisal Consultants, Inc., Kinderhook, NY is appointed and retained as the Town of Shandaken's appraiser in the case of Jo-Mary Realty Corp. v. Town of Shandaken, Ulster County Index No. 11-3298

**AND MOVES ITS ADOPTION**

Seconded by: Stanley

**ROLL CALL 4 Ayes, 1 Absent**

**RESOLUTION #73 -12**

**OFFERED BY: Bartlett**

**SUPPORTING HAMLET OF PINE HILL'S HISTORIC DISTRICT DESIGNATION**

**WHEREAS**, the Hamlet of Pine Hill in the Town of Shandaken has a number of structures already recognized as Historic including several buildings and bridges, and

**WHEREAS**, the Hamlet of Pine Hill has been nominated to be designated as a "Historic District" in the National Registry of Historic Places through both the National Park Service and the State Historic Preservation Office,

**THEREFORE, BE IT RESOLVED** the Town of Shandaken Town Board supports the nomination of Pine Hill, New York as an Historic Community in order to help further the efforts of the Town, local businesses and residential owners to re-invigorate interest in the Hamlet and the Town of Shandaken.

**AND MOVES ITS ADOPTION**

Seconded by: Stanley

**ROLL CALL 4 Ayes, 1 Absent**

**RESOLUTION # 74 -12**

**OFFERED BY Bernstein**

**RESOLUTION APPOINTING PLANNING BOARD MEMBER**

**WHEREAS** pursuant to § 20 of the Town Law it is the duty of the Town Board to appoint all Boards and Commissions

**THEREFORE BE IT RESOLVED** that **Art Christie** be appointed to the Shandaken Planning Board with his term to expire on December 31, 2016.

**AND MOVES ITS ADOPTION**

Seconded by: Bartlett

**ROLL CALL 4 Ayes, 1 Absent**

**RESOLUTION # 75 -12**

**OFFERED BY Stanley**

**RESOLUTION ADVERTISING FOR ELECTRICAL AND PLUMBING BIDS  
FOR TOWN HALL SEPTIC**

**WHEREAS** the Town of Shandaken septic was deemed to be in failure in 2010, and  
**WHEREAS** the Town needs to complete work on the septic in order to be in compliance,  
**THEREFORE BE IT RESOLVED** that the Town of Shandaken advertise for bids to be received for the electrical and plumbing portions of this work, and  
**BE IT FURTHER RESOLVED** that the specifications for this work can be picked up from the Supervisor's Office and that all bids must have written in block letters on the outside of the envelope "Town Hall Septic Bid," must be received by the Town Clerk's Office (PO Box 67, Shandaken, NY 12480) no later than 3p.m. Monday, April 2, 2012 and that all bids will be opened and reviewed at the regularly scheduled Shandaken Town Board meeting at 7pm on Monday April 2, 2012. The Town Board reserves the right to reject any and all bids  
**AND MOVES ITS ADOPTION**  
Seconded by: Higley  
**ROLL CALL 4 Ayes, 1 Absent**

**RESOLUTION # 76 -12**

**OFFERED BY Higley**

**RESOLUTION APPOINTING SUPERVISOR AS MARRIAGE OFFICER**

**WHEREAS** pursuant to Article 3 Section 11c of the New York State Domestic Relations Law, a Public Official may be appointed as a Marriage Officer, and  
**WHEREAS** Supervisor Stanley has a special request to perform a marriage ceremony between Kristine Marie O'Donnell and Jennifer Sutherland  
**THEREFORE BE IT RESOLVED** that the Town Board appoint Supervisor Robert A. Stanley as a temporary Marriage Officer, and that he may perform marriages within the jurisdictional bounds of the Town of Shandaken.  
**AND MOVES ITS ADOPTION**  
Seconded by: Bartlett  
**ROLL CALL 3 Ayes, 1 Absent, 1 Abstain (Bernstein)**

**Bid Specifications**  
**Crawler Hydraulic Excavator**

The Town of Shandaken Highway Dept. will be accepting bid proposals for the purchase of One (1) Crawler Hydraulic Excavator in compliance with the minimum bid specifications as outlined below. Bids will be accepted until 3 p.m. on Monday, April 2, 2012. The bids will be opened and publicly read aloud at the regular Shandaken Town Board Meeting scheduled for 7 p.m. on Monday, April 2, 2012. The machine is to be new and completely equipped with all manufacturer's standard equipment.

Bidder is to furnish descriptive literature, complete specifications and all other necessary data on the equipment they propose to furnish. Should Bidder's machine not comply with minimum specification requirements, Bidder shall provide detailed exception and explanation as to variances. Failure to note exceptions to minimum bid specifications shall be cause for immediate rejection of bid.

CATEGORY	SPECIFICATION	YES	NO	EXPLANATION
<b>1.</b>	<b>Operating Weight</b>			
	Machine equipped with all attachments as outlined below must be minimum 39,240 lbs	X		
<b>2.</b>	<b>Engine</b>			
	Minimum of 4 cylinders, 259 cu in displacement, 120 Net HP (SAE) at 2000 rpm	X		
	Auto overheat prevention	X		
	Auto warm-up system	X		
	3-stage auto idle function for maximum fuel efficiency	X		
	Electronically controlled	X		
	Must comply with Tier III emissions requirements	X		
	Aluminum-type coolers – Radiator, Oil Cooler, A/C condenser	X		
<b>3.</b>	<b>Hydraulic System</b>			
	Two (2) variable displacement Piston pumps capable of 44.4 gpm each and a separate pilot pump and circuit	X		
	Minimum swing speed of 11.3 rpm	X		
	Auto Swing Brake	X		
	Two speed travel with max speed of 3.4 mph	X		

Minimum drawbar pull 34,600 lbs	X		
Must include Power Boost feature	X		
Minimum arm crowd force of 19,600 lbf (ISO) - boost engaged & 8' 6" Arm Installed	X		
Minimum bucket digging force of 30,160 lbf (ISO) - boost engaged	X		
Minimum hydraulic oil filtration of 10 microns (main return filter)	X		
Bi-Directional Plumbing	X		
Pattern Change Valve – convert joystick control patterns from ISO to SAE (standard equipped)	X		
Gas charged accumulator on pilot system	X		

<b>5.</b>	<b>Computer System</b>		
	2 work modes including general excavation, attachment	X	
	At least 3 power modes: (P) Power, (S) Standard, (E) Economy	X	
	Must offer programmable user modes (U) capable of memorizing user preferences	X	
	Must have self diagnostic capabilities with a minimum of 48 error codes	X	
	Monitoring system with warning indicators for: battery, engine coolant temp, engine oil pressure, fuel level indicator, hydraulic oil temp, hour meter, air filter restriction indicator	X	
	In case of computer failure, an emergency procedure for starting / operating machine must be available	X	
	Must be able to connect to external laptop for technician to download additional diagnostic information	X	
	One-touch idle function	X	
	Anti-restart system – prevents restarting when engine is running	X	

Must be equipped with remote management system (GPS / Satellite based) with online access to diagnostic data, machine working information, fault codes, alarms, geofencing capabilities, and text and email communication. Service is offered for 3 years free of charge.	X		
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<b>6.</b>	<b>Undercarriage</b>		
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Minimum 24" Triple grouser shoes	X		
Travel Motor Guards	X		
Swivel Guard (factory installed) – protective plate below rotating joint	X		
Minimum of 7 track rollers on each side frame	X		
Minimum of 2 upper rollers on each side frame	X		
Minimum of 1 track guards per side for proper track alignment and protection	X		

<b>7.</b>	<b>Upper Structure</b>		
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Remote-mounted engine oil filter – located in pump compartment for easy service	X		
Reinforced, sound-insulated house doors on pump and cooler compartments for reduced outside sound levels	X		
Battery cut-off switch with key for added security	X		
Minimum fuel tank capacity of 71.3 gallons	X		
Dual element air cleaner should be 9 micron and 25 micron inner / outer elements respectively	X		
Air cleaner clog sensor with visible warning and alarm on cluster display	X		
Lockable fuel cap	X		

Fuel tank must be equipped with service access hole and drain cock for tank maintenance	X		
Lights: minimum of 2 lights on boom, 1 in tool box , 1 in upper frame below cab	X		

<b>8.</b>	<b>Attachment</b>		
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Minimum boom length of 16' 9"	X		
Minimum arm length of 8' 6"	X		
36 in Bucket	X		
Ribbing reinforcement on back of arm for added wear protection	X		
Boom foot and arm tip boss area must be cast steel for additional strength and durability	X		
Max reach on ground of 29' 1" with standard arm length of 8' 6"	X		
Max digging depth of 19' 11" with standard arm length of 8' 6"	X		
Hydraulic Thumb	X		
<b>Dozer Blade</b>	X		

<b>9.</b>	<b>Cab</b>		
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Pressurized cab	X		
Cab front, side and rear windows to be made of safety glass for <u>max visibility</u> and operator safety	X		
Heated <u>Air-Ride</u> Operator's Seat (Standard Equipped)	X		
7" Color LCD display cluster for mode selection, settings and diagnostics	X		
Multifunction joystick controllers equipped with switches for open/close, rotate left/right, and trigger button for hammer activation	X		
Adjustable height left and right control consoles	X		

Maximum inside cab sound level of 71 dB	X		
Maximum outside cab sound level or 101 dB	X		
Window defroster	X		
Wiper must stow off of front window when not used – out of operator view	X		
Horn	X		
AM/FM Stereo with CD Player and MP3 Input	X		
Hands-free cell phone module equipped with cable for connection to cell phone	X		
Remote mounted controls for radio, CD, MP3 and hands-free cell phone	X		
Integrated color rear-view camera – viewable through machine cluster	X		
Roller-style sunshade on front window	X		
Transparent upper roof hatch with sunshade	X		
One-piece right side window for improved visibility	X		
3 position cab light: Off / Constant On / On when door open	X		
Coat Hook	X		
Minimum of 2 cup holders with removable ash tray insert	X		
Hot / Cold storage box	X		
1 left side and 2 right side rearview mirrors	X		
Adjustable arm rests	X		
12V socket for electrical accessory charge	X		
Minimum of 6 viscous cab mounts for smooth ride and reduced sound	X		

<b>10.</b>	<b>Electrical System</b>
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	Minimum 24 Volt system	X		
	Minimum 50 Amp alternator	X		
<b>11.</b>	<b>Machine Dimensions</b>			
	Maximum overall transport length 28' 5"	X		
	Maximum transport width of 8' 6" (with 24" shoes)	X		
	Maximum height of boom in transport position should not exceed 9' 10" (with 8' 2" arm)	X		
<b>12.</b>	<b>Manuals</b>			
	Operators Manual must be supplied with machine. Service and Parts Manuals must be supplied with machine.	X		
<b>13.</b>	<b>Training</b>			
	Bidder to supply, at no cost, training program for operator orientation training and periodic maintenance as required for proper machine operation	X		
<b>14.</b>	<b>Warranty</b>			
	3 year / 3,000 full machine warranty, 3 years free fluid analysis, 5 year / 10,000 hr structural guarantee	X		

**RESOLUTION APPROVING HIGHWAY DEPARTMENT  
EQUIPMENT PURCHASE**

**WHEREAS**, the Town of Shandaken Highway Department is in need of an excavator in order to expedite flood recovery work and standard operating work, and

**WHEREAS**, the Highway Superintendent has selected an excavator for purchase by the Town,

**THEREFORE BE IT RESOLVED**, that the Town of Shandaken Town Board, advertise for the bids for a Crawler Hydraulic Excavator following the Specification Sheet provided with this resolution, and

**BE IT FURTHER RESOLVED**, all bids will be accepted until 3 p.m. on Monday, April 2, 2012. The bids will be opened and publicly read aloud at the regular Shandaken Town Board Meeting scheduled for 7 p.m. on Monday, April 2, 2012. The Town of Shandaken retains the right to reject any and all bids.

**AND MOVES ITS ADOPTION**

Seconded by: Stanley

**ROLL CALL 4 Ayes, 1 Absent**

**Town of Shandaken Smart Growth Agreement  
- Information Kiosk Artist****PREAMBLE**

The Town of Shandaken has been awarded a grant from the NYS Department of Conservation for "Smart Growth" Initiatives. Included in this grant is the proposal for four (4) "X -Shaped Information Kiosks to be placed throughout the Town of Shandaken. It is the intent of this contract to hire the artist for the development, creation and installation of eight (8) information panels to be installed in each of these kiosks for a total of thirty-two (32) panels.

**Project Description**

**Dave Channon of 247 Broadstreet Hollow Rd., Shandaken, NY 12480** (herein after referred to as the **ARTIST** ) shall provide for the **Town of Shandaken, 7209 Rte. 28, PO Box 134, Shandaken, NY 12480** (herein after referred to as the **SHANDAKEN**), collectively referred to as the "PARTIES," a total of thirty-two (32) three foot high by two foot wide (3'h X 2'w) plastic-aluminum laminate information panels, painted with weatherproof exterior paint and provided with additional UV barrier protection containing the information as approved by the Town of Shandaken Kiosk Committee. Payments and Deliverables will be presented using the Schedule of Tasks and Schedule of Payments included and agreed to in this Agreement.

Price is all inclusive. The ARTIST will secure all materials and supplies and provide all labor for the contract price. There will be no additional compensation whatsoever without a written change order signed by the ARTIST and SHANDAKEN.

No laborer or material liens or mechanic liens whatsoever shall be allowed and if any are filed, the ARTIST will either discharge same or post a bond to indemnify SHANDAKEN within 15 days of the filing.

**Project Duration**

The required completion date of the Information Kiosk Plan is March 1, 2013. This will enable the ARTIST time to accrue all available information required, attend meetings of the Kiosk Committee, create the necessary panels and install them into the kiosks.

This Agreement shall be effective when a fully executed Agreement is in the hands of both PARTIES. This Agreement shall terminate on **March 1, 2013** unless an extension approved in writing by SHANDAKEN. This Agreement may be extended, renewed, or terminated at any time. Any extension, renewal or termination must be upon approval of the Town Board of Shandaken.

**Non-Performance**

In the event that the ARTIST does not complete the contract, the ARTIST shall surrender all materials collected and constructed available to date of default to SHANDAKEN. Furthermore, ARTIST shall not be entitled to any further payment under this contract.

**Definitions**

For the purposes of this contract the following terms shall apply:

**Hamlet Regions:** Four Kiosks are planned, each Kiosk is to represent a region within the Town of Shandaken. These are the regions and locations for the Kiosks:

*Phoenicia, Chichester Woodland Valley:* Main St., Phoenicia

**Allaben, Bushnellsville, Shandaken:** Intersection of State Rtes 28 & 42, Shandaken

**Big Indian, Oliveria :** Big Indian Park, Big Indian

**Highmount, Pine Hill:** Main St., Pine Hill

**General Panels:** All panels reflecting the general nature and assets and any other pertinent generalized overview information concerning the Catskill Forest Preserve, NYC Watershed or Ulster County, as deemed by the Shandaken Kiosk Committee. Town of Shandaken Kiosk Artist Contract

**Town Panels:** All panels reflecting the general nature and assets and any other pertinent overview information concerning the entire Town of Shandaken, as deemed by the Shandaken Kiosk Committee.

**Hamlet Panels:** All panels reflecting the general nature and assets and any other pertinent information specific to the **Hamlet Region** to which the kiosk is to be placed, as deemed by the Shandaken Kiosk Committee.

**Schedule of Tasks (w/deliverables)**

**ARTIST Shall:**

**Task 1 –**

Meet with the Shandaken Kiosk Committee

Designate one (1) contact person for each kiosk

Gather input on content from Kiosk Committee

Provide rough guideline of possible artistic layouts

Begin compiling information for panels

**Task 2 –**

Draft General Panels

Meet with Kiosk Committee

Make Possible Recommendations and Alternatives

**Task 3 –**

Draft Town Panels

Meet with Kiosk Committee

Meet with Town Board publicly to obtain input

Finalize & Construct General Panels

**Task 4 –**

Draft Hamlet Panels

Meet with Kiosk Committee

Meet with Town Board publicly to obtain input

Finalize & Construct Town Panels

**Task 5 –**

Meet with Kiosk Committee

Finalize Hamlet Panels

Meet with Town Board publicly to obtain approval

Construct Hamlet Panels

Install All Panels

Supply all waivers of liens from all materialmen and laborers certifying that no liens shall be filed

**TOWN Shall:**

Provide access to any maps, logos or information to be included in panels

Provide Town Historical, Recreational or Tourism related Materials

Ease Of Access, as best can be provided, to any other agencies or organizations information necessary for the kiosk panels

Have Town Supervisor review work completed for each task and report progress to Town Board

Make payments along Schedule of Payments for tasks completed

Review all work upon written request for Final Payment by the ARTIST and if all requisites are met to the Town Board's satisfaction, Final Payment will be forwarded to ARTIST, as specified in this contract.

**Schedule of Payments**

Payments shall be made on the completion of each task based on a total of payments of \$13,600, as follows:

- Task 1 – 20% of total contracted price
- Task 2 – 10% of total contracted price
- Task 3 – 15% of total contracted price
- Task 4 – 25% of total contracted price
- Task 5 – 30% of total contracted price

**Authority and Possession**

All drawings, drafts, models and materials are the sole and exclusive property of the Town and all must be delivered to the Town upon the completion of each task and upon default of the contract by the ARTIST and upon completion of this contract.

**Additional Information**

Questions regarding the project may be directed to Supervisor Robert A. Stanley at:

Town of Shandaken  
P.O. Box 134,  
Shandaken, New York 12480  
(845) 688 – 7165  
shandakensupervisor@yahoo.com

**AGREEMENT**

The undersigned do hereby approve and accept all the terms and conditions of this agreement signed and dated this 7<sup>th</sup> day of February, 2012

\_\_\_\_\_  
Supervisor, Robert A. Stanley      Date

\_\_\_\_\_  
Artist, Dave Channon                      Date

**RESOLUTION #78 - 12 (61 -12)**

**OFFERED BY: Bernstein**

**RESOLUTION HIRING ARTIST FOR SHANDAKEN KIOSK**

**WHEREAS**, the Town of Shandaken is in receipt of a Smart Growth Grant through the New York State Department of Environmental Conservation (DEC), and

**WHEREAS**, a portion of this grant is for the placement of four (4) information kiosks throughout the Town, and

**WHEREAS**, Dave Channon of Esopus Creek Enterprises (Artist), has provided this service previously to the DEC using similar materials and content, and

**WHEREAS**, a contract exists for the completion and installation of thirty-two (32) information panels with eight (8) each to be placed in each community kiosk and for involvement and coordination with the kiosk committee;

**THEREFORE, BE IT RESOLVED**, that the **Town Board of the Town of Shandaken** approves the Supervisor entering into contract with the Artist for a total price of \$13,600 to be paid in installments as per the contract

AND MOVES ITS ADOPTION

Seconded by: Higley

**ROLL CALL 4 Ayes, 1 Absent**

**All business pertinent having been discussed, the Town Board adjourned at 8:12 on a Stanley/Bernstein motion.**

**Signed this 6<sup>th</sup> day of March, 2012**

\_\_\_\_\_  
**Joyce Grant, Town Clerk**

**SAFARI Meeting Minutes**

**Date: May 31, 2012**

**Time: 1:00 PM-3:30 PM**

**Location: AWSMP Office, Phoenicia, NY 12464**

***In attendance:\****

Candace Balmer, RCAP Solutions

John Horn, Shandaken Planning Board

Beth Reichheld, NYC DEP

Rich Stokes, Town of Shandaken Code Enforcement Officer/Building Inspector

Cory Ritz, Ulster County Soil & Water Conservation District

Rob Stanley, Town of Shandaken Supervisor

Brent Gotsch, Cornell Cooperative Extension of Ulster County

Aaron Bennett, Ulster County Department of the Environment

Gretchen Rae, Cornell Cooperative Extension of Ulster County

Doris Nieves, Mount Tremper Resident

\*(Rob will review list of SAFARI committee members and notify Gretchen of “active” members)

**Updates:**

**EWP (Emergency Watershed Protection) – Cory**

1. In Shandaken - there are 4 sediment related (turbidity control, property loss and potential infrastructure threat) projects in the queue
  - A. All sites are in Chichester along the Stony Clove and Warner creeks
  - B. Rough estimates for each project site have been compiled, approximately in excess of \$4million. Formal estimates will be made as designs are finalized and as actual construction bids are submitted
  - C. The first project Chichester Site #1, should begin construction sometime in mid-June 2012
  - D. Rob has signed town support with formal agreements with NRCS. Agreements have been sent to Albany NRCS offices for final signoff.
2. In addition to sediment related sites, there three other EWP sites. The county has 1 infrastructure project in Oliverea, and Town has 2 sites (Fox Hollow bridge and water treatment plant) planned for 2012 The Town’s EWP sites are:
  - A. Muller Road along Fox Hollow
  - B. High Street, Phoenicia Water District Station
3. NRCS has asked for additional paperwork from the Town which show that they have property for access to the sites. Sample letters were delivered to Rob.

**FEMA – Rob**

1. Eric has a list of 77 sites, minor to major, listed as FEMA sites for the Town.
  - A. Rob will ask Eric to provide the list and overview map to Cynthia (Tetra Tech)
  - B. The town has hired engineers Brinnier & Larios in Kingston for consult on the sites with a focus on slope failures and bridges

- C. The Town is planning 3 sites for construction in 2012
- D. 4 sites are planned for construction in 2013
- E. Update on Flood Control Systems and Dams in the Hudson Valley: Governor Cuomo's Press Release (see attachment at end of this document).

### **Tetra Tech Update – Cynthia**

1. Emergency Response Plan
  - A. A document which outlines personnel and lines of authority in the event of a Town emergency.
  - B. Cynthia will send link to Flood inundation mapper – allows Town to upload the output of HAZUS, and interactively slide a scale relative to discharge stage at gages, to show resultant inundation at different discharge stages.
  - C. Updates to the Emergency Response Plan have been made since the draft was provided. Feedback comments are being integrated and an updated version will be provided shortly. Liz, Rob and Candace still need to discuss with Cynthia the specifics regarding appendices for the document; such as what is the list of people & their associated organizations for the “Command Team”.
    1. Command team: ensure that a stream representative is included.
    2. Red flag with CRS if the same person wears too many hats; see NIMS for substructures of command, and relief hours needed for the personnel.
2. Risk Assessment and Vulnerability Update, due August 31, 2012 and on schedule
  - A. Have completed flood profile of area, but the new FIRM Maps from FEMA would be helpful – Can Phil Eskeli provide any updates to Tetra Tech?
  - B. Google Maps since Oct. 2011– for updated aerial photos?
  - C. Aaron will ask Art Snyder for the aerial photos Mike Hein and Art took in the flyover a few days after the flood
3. Complete Flood Hazard Plan is due Oct. 2012 and is on track
  - A. Tetra Tech's recommendations for CRS (Community Rating System) will be based on the 2007 manual even though a new manual is due out in 2013
4. Candace will continue to work with Rob on getting the Flood Hazard Mitigation Resident Surveys distributed to targeted audiences. Brent and Doris have volunteered their time to assist with door to door attempts. Aaron will e-mail the link from the Town's webpage to the Big Indian / Oliverea community e-mail group:  
<http://www.shandaken.us/disaster-prep-response/flood-mitigation-plan/>

### **Other:**

1. Liz has accepted a new position with Sullivan County CCE. Brent is the new Floodplain Manager point-person for the AWSMP office
2. Cory stated no stream data is being collected at this time near the Phoenicia Main Street Bridge, due to continued low water conditions.
3. Rob will check in with Art Snyder at UC on the status of the repetitive loss property buy-out list.
4. New structure of the AWSMP Stakeholder Council, 2 representatives from SAFARI need to be appointed to serve on the Stakeholder Council as SAFARI committee reps. Next Stakeholder meeting is Friday June 29<sup>th</sup> 1-4pm.

**Next SAFARI Meeting date/time: July 19<sup>th</sup>, 2012 (1:00-3:00PM, at AWSMP Office)**

**Contact Information:**  
 Governor's Press Office  
 NYC Press Office: 212.681.4640  
 Albany Press Office: 518.474.8418  
 press.office@exec.ny.gov



Andrew M. Cuomo - Governor

## Governor Cuomo Announces NY Works Projects to Restore and Repair Flood Control Systems and Dams in the Hudson Valley

Printer-friendly version

### *\$5,690,200 Investment for 15 Flood Control and Dam Repair Projects*

Albany, NY (April 16, 2012)

Governor Andrew M. Cuomo today announced a \$5,690,200 investment for NY Works projects that will allow for 15 flood control system and dam repair projects in the Hudson Valley.

NY Works is designed to reinvent state economic development with innovative new strategy that will put New Yorkers back to work rebuilding the state's infrastructure. The Task Force will help create tens of thousands of jobs by coordinating comprehensive capital plans, overseeing investment in infrastructure projects, and accelerating hundreds of critical projects across the state.

"For the second year in a row, New York State has passed a transformative and balanced budget that holds the line on spending, while focusing on job creation and government efficiency," Governor Cuomo said. "The centerpiece of this budget is the New York Works program, which will help rebuild our aging infrastructure, including our dams and flood control systems, to protect people and property throughout our state."

Senator Bill Larkin said, "The storms of last year showed the necessity of having New York's flood control infrastructure operating at peak performance. These grants will ensure our dams and flood control projects are the safest and most efficient they can be to prevent further catastrophic damage similar to what we witnessed last year."

"These projects will provide much-needed security and relief to communities where major flooding has become annual event," said Assemblymember Kevin Cahill. "The \$2.1 million included in the state budget to support crucial work in hard hit areas like Shandaken, Ellenville, Rosendale and Kingston is just a small part of what will be a sustained effort by the State to partner with local leaders and the City of New York to collaborate on a comprehensive action plan to minimize the impacts of future flood events."

"I am pleased to announce \$5.7 million in funding to strengthen our flood prevention systems and help safeguard the Hudson Valley from the devastation wrought by flooding," said Assemblyman Tom Abinanti. "In particular, this appropriation includes \$306,000 to support the repair of local dams and the rebuilding of flood control systems in Ardsley, Mount Pleasant and Yonkers. While strengthening our flood prevention infrastructure, this is also an investment in our local workforce."

Assemblyman Frank Skartados said, "I applaud Governor Cuomo for making sure that the NY Works program helps repair our region's aging dams, flood walls, levees and channels. Making sure we have proper flood control is so important to our Hudson Valley families. These repairs will not only make certain our communities are safe; they will also put people back to work."

The Budget continues the Governor's commitment to fiscal responsibility while creating jobs and strengthening communities across the state. It closes a multi-billion dollar deficit with no new taxes, fees or gimmicks, limits spending growth to two percent or below for the second year in a row, and launches the NY Works Task Force to invest billions of dollars to rebuild the state's roads, bridges, parks, and other infrastructure and create tens of thousands of jobs.

The Budget includes key economic development and transportation initiatives, important reforms to improve government efficiency, and measures to strengthen communities across the state.

#### NY Works Task Force

The NY Works Task Force will coordinate capital plans across 45 agencies and authorities, oversee investment in projects and access to funding, and facilitate the creation of tens of thousands of jobs.

Prior to the NY Works initiative, there was no comprehensive state plan for the \$16 billion in annual capital expenditures by 45 state agencies and authorities. In some cases, including with respect to projects by the Port Authority, the MTA, and the Department of Transportation, billions of dollars of taxpayer or commuter funds are being used to fund transportation plans in the same region with no coordination between

6/1/12

Governor Cuomo Announces NY Works Projects to Restore and Repair Flood Control Systems and Da...

the agencies. For the first time, the NY Works Task Force will develop a coordinated capital infrastructure plan among agencies and authorities. The Task Force, made up of leaders in finance, labor, planning and transportation will also recommend financing options for projects and methods to accelerate construction of critical infrastructure.

The NY Works Task Force will consist of fifteen members. Nine of the members will be appointed by the Governor and six by the Legislature. All major state agencies and authorities will participate in an implementation council to coordinate capital planning.

All NY Works projects will be posted on the web with real-time updates so that New Yorkers can track the progress of projects in their community. The full list will be posted online over the next several days.

**Repairing New York's Dams and Flood Control Infrastructure**

The state's Department of Environmental Conservation (DEC) maintains 106 flood control projects, of which 91 have been rated "minimally acceptable" or "unacceptable" by the Army Corps of Engineers. Additionally, DEC owns 577 dams statewide. Of the DEC-owned dams, DEC engineers classify at least 24 dams as "high" and "intermediate" hazard structures, where failure poses serious threat to human life or significant property damage. The New York Works Funds will designate \$102 million, leveraging more than \$100 million in matching funds, to repair aged and otherwise failing structures. The \$102 million will include \$18.5 million to repair state-owned dams, \$56 million to perform maintenance of flood control facilities such as levees, and \$27 million to implement coastal erosion and inlet navigation maintenance projects, plus over \$100 million in matching funds.

The NY Works dam and flood control projects in the Hudson Valley are as follows:

Project Name	Project Description	Total Project Cost
Alder Lake Dam	Critical Dam Repair	\$500,000
Waneta Lake Dam	Critical Dam Repair	\$500,000
White Pond Dam	Critical Dam Repair	\$500,000
Ardsley	Flood Control Project	\$109,200
Chappaqua	Flood Control Project	\$98,000
Ellenville	Flood Control Project	\$420,000
Highland Mills	Flood Control Project	\$163,000
Kingston	Flood Control Project	\$532,000
Mt. Pleasant	Flood Control Project	\$130,000
Mt. Tremper	Flood Control Project	\$80,000
Pleasant Valley	Flood Control Project	\$24,000
Rosendale	Flood Control Project	\$790,000
Shandaken	Flood Control Project	\$322,000
Wallkill	Flood Control Project	\$500,000
Yonkers	Flood Control Project	\$67,000
DEC Region 3 Equipment	Additional funds to support all projects in the region	\$505,000
DEC Region 3 Maintenance	Additional funds to support all projects in the region	\$450,000
	<b>Total:</b>	<b>\$5,690,200</b>

###



**SAFARI Meeting Minutes**  
**July 19, 2012**  
**1-3pm**  
**AWSMP Office**

*In attendance:*

Cynthia Bianco, TetraTech  
Allison Miskerman, TetraTech  
Brent Gotsch, CCE Ulster County  
Cory Ritz, UCSWCD  
Rob Stanley, Town of Shandaken Supervisor  
Dany Davis, NYCDEP  
John Horn, Town of Shandaken Planning Board  
Candace Balmer, RCAP Solutions  
Aaron Bennett, UC Department of the Environment  
Eric Hofmeister, Shandaken Highway Superintendent  
Doris Nieves, Save Our Shandaken, Mt. Tremper Resident  
Gretchen Rae, CCE Ulster County  
Richie Stokes, Town of Shandaken Code Enforcement Officer

**Welcome**

Brief introductions of attendees were made.

**Approval of Previous SAFARI Meeting Minutes**

Minutes were approved unanimously.

**Old Business**

**Status of Flood Mitigation Plan (TetraTech)**

The next milestone will be the complete risk assessment which is due August 31.

*Status of Deliverables:*

1. Create draft of Emergency Response Plan [COMPLETE]
2. Distribute and analyze resident survey [COMPLETE]
3. Draft Table of Contents [IN PROGRESS—sample available at meeting]
4. Town Profile (demographics, climate, population, building inventory, etc.) [IN PROGRESS—sample available at meeting]

All comments related to the draft of the plan should be sent to Rob Stanely. Rob will then give to Candace Balmer to compile. Candace will then send comments to Cynthia at TetraTech. Please do this ASAP.

In the plan there was a reference multiple times to “Olive.” What is Olive? Must be mistaken with Town of Olive or similar. Recommended that this be removed or determine if Olive means something else.

There was also a reference to 10 USGS gages. Review to ensure proper amount of gages. Consider gages that are in other towns whose water flows into or out of Shandaken. Coldbrook Gage (which is technically in Olive) is the most important for this area.

There was a question about what to do with private levies or dams. Should it be based on cubic feet? TetraTech says if in doubt include it! It is always easier to take something out than it is to add in later.

#### *Flood Assessment*

-No preliminary data until January 2013. DFIRMS not available yet.

Depth Grids: digital grid, every cell represents 3 meters and shows depth of water during inundation.

Q3 floodplain data-recurrence intervals are changing. New maps will most likely change the current return interval for 50-year, 100-year storms, etc. TetraTech can tweak the data to reflect new realities of climate change and post-Irene experiences.

Flood Inundation Mapper (USGS & NWS online tool): Uses precipitation data to show floodwashed areas in real-time. You have to upload the data to the site and participate in it to determine inundation levels. It’s somewhat similar to Stream Stats.

Group recommends that we add this as one of the recommendations to our program. Suggests that we get an intern to upload data to site. [http://water.usgs.gov/osw/flood\\_inundation/focus-rmap.html](http://water.usgs.gov/osw/flood_inundation/focus-rmap.html)

Table 5.4-14 needs further review (located on page 5.4-28). Some locations are listed twice with different values. Some are flooded in 100-year event and some are depicted as not.

Cynthia needs comprehensive list of these comments in ASAP.

#### *Community Rating System Impact Analysis Report*

TetraTech provided documents advising what activities the Town of Shandaken can do to increase their score on the NFIP Community Rating System (CRS). The higher the Town scores on the CRS the lower flood insurance premiums are for Town residents. Currently, if the Town does all of the recommendations on the list (such as filing elevation certificates) then Town residents stand to save between 10%-15% on their flood insurance premiums.

#### **Status of EWP Projects throughout Town (Ulster County Soil & Water)**

Kathy Capella (NRCS) has reported that the Phoenicia Pump Station and Fox Hollow below Muller Road will be sponsored through EWP.

Flood Hazard Working Group has asked for a 440 day extension which would allow them to continue with EWP projects through the summer of 2013. As it stands, the potential for EWP funded projects only goes until November 2012. If the extension is not granted then any project that is not completed this year will not receive funding through EWP.

### *Site Updates/Status*

Chichester Site 1: Construction has begun. 90% of construction is expected to be done by mid-August 2012.

Warner Creek Site 5: Getting permits, Army Corps of Engineers permits, drafting letter to one out-of-state landowner who has not signed a landowner agreement. The plans for this project will be needed by the next Town board meeting on August 16. There may be the possibility of holding a special session on August 17 for bid openings if the need arises. Stream work should be done around September 30, 2012. The rest of the project should be completed around October 30. It does not need to go to public comment. It will need to be out to bid for two week.

Silver Hollow on Warner Creek: This project needs everything all ready to go to bid by August 6 in order for it to be completed this year. This one will need to go to public comment. The original cost estimate for this project was about \$1.5 million. The revised cost estimate is now considerably higher. The stream is threatening the road and will eventually become a severe public safety issue. The project proposes using 8 sheet-piling cross-vanes to control the large headcut in this section of stream. There is an alternate plan that would cost less but this would require that the road be moved which is politically very difficult at this time. Cory Ritz (UCSWCD) needs to write an Article 15 DEC permit. DEC has a permission form that needs to be signed before project can commence. Town needs to make sure that the bid gets out to the newspapers at the appropriate time.

### *Local Priorities*

Stony Clove Lane: hillslope failure; medium priority

Kurtz Property: Woodland Valley, hillslope failure; medium priority. DEP has agreed to pay the 25% match for this project.

Brown Road—Yarkin Property Update:

Mr. Yarkin has withdrawn from the buyout program and will sell the property to his neighbors. There was a question about whether this changes the Cost-Benefit Score for the project? This will require an official letter from the Town saying that the property is being sold and explaining how it may affect the proposed stream work in that area. Mr. Yarkin will also have to sign a letter stating that he has sold his property.

### **Update on FEMA work throughout Town (Town of Shandaken Highway Department)**

See list provided by Eric Hofmeister that was handed out at meeting.

## **New Business**

### **Formalization of SAFARI Membership**

Rob Stanley and Richie Stokes will be the SAFARI representatives to the AWSMP Stakeholders' Council.

There was discussion about who the regular members of SAFARI should be. There was concern that the only County representatives who show up with any frequency are Aaron Bennett and Amanda LaValle (both of UC Department of the Environment). UC Emergency Management really needs to have a stronger presence as does the Department of Public Works and even the NYS DOT. Will continue to reach out to these agencies/individuals to encourage attendance.

Gretchen Rae will update committee list with changes as approved by Rob Stanley.

### **Recognition of the impact of Elizabeth Higgins**

The members of the SAFARI group and the Town of Shandaken Supervisor wish to make it known that AWSMP Program Coordinator Elizabeth Higgins (formerly of Cornell Cooperative Extension of Ulster County, now of Cornell Cooperative Extension of Sullivan County) has been instrumental in the development and in guiding SAFARI in its formative years. She has also been an asset to the Town of Shandaken on numerous occasions but particularly during the aftermath of Tropical Storm Irene. The SAFARI group thanks her for her service and wishes her the best in her new position.

### **Next Meeting Time**

Thursday, October 18, 2012 at 1:00PM, AWSMP Office.

### **Meeting Adjournment**

## **SAFARI Meeting Notes**

November 1, 2012

Ashokan Watershed Stream Management Program Office, Phoenicia, NY

1:00-3:00pm

### *In attendance:*

Cory Ritz, UCSWCD  
Leslie Zucker, CCEUC  
Brent Gotsch, CCEUC  
Gretchen Rae, CCEUC  
Beth Reichheld, NYC DEP  
Dennis Dempsey, NYC DEP  
John Horn, Town of Shandaken Planning Board  
Candace Balmer, RCAP Solutions  
Aaron Bennett, UC Dept. of Environment  
Cynthia Bianco, Tetra Tech (via phone)

### **Welcome/Check-in and Introductions**

#### **Update from Cynthia Bianco (Tetra Tech)**

C. Bianco provided a progress report on development of a Flood Hazard Mitigation Plan for the Town. The current schedule for deliverables ended yesterday (October 31, 2012). R. Stanley and C. Bianco have been informed of proposed schedule modifications. Data gathering and turn-around time on comments has taken longer than expected. Would like SAFARI group to try and be more proactive about giving comments to C. Balmer/C. Bianco and Tetra Tech. Tetra Tech has updated list of critical facilities and re-run HAZUS. They have estimated that Town of Shandaken will be able to enter the Community Rating System (CRS) for reduced flood insurance premiums at a level 8. The Town may qualify for a lower score in the future if Mitigation Plan recommendations are implemented.

C. Ritz, B. Taylor and E. Hofmeister can help to refine the list of flood mitigation projects for the town and create priority projects. Tentative deadline for supplying additional known projects to C. Bianco is November 15.

C. Bianco would like to hold a Strengths Weaknesses Obstacles and Opportunities (SWOO) workshop. The SWOO would be attended by representatives from SAFARI, local and county transportation departments, fire and police chiefs, etc. The SWOO workshop will help us to identify technical needs, barriers, and additional flood mitigation projects. R. Stanley should schedule this meeting and send out invites for those who he would like to see attend.

A. Bennett will provide C. Bianco with a shapefile of the Ulster County flood buy-outs. There may be privacy concerns related with these files. Would have to show only general locations (such as street names only and not tax map numbers). R. Stanley should make the decision on how he wants to proceed with this situation.

R. Stanley and C. Balmer have had difficulties obtaining post-Irene NFIP claims data from FEMA. It was suggested that Art Schneider might facilitate access to this data through his position with Ulster County Emergency Management.

Elevation Certificates: Tetra Tech has included a requirement for certificates in a new permit application for all future construction and substantial improvements to existing structures. This will help to improve the Town's CRS score.

Tetra Tech has completed maps of repetitive loss areas.

FIRM maps are currently being updated. Draft maps will be available in spring 2013. Question was raised on whether we should wait until new flood maps are available before adopting certain ordinances. The answer was that the Town should not wait because these ordinances are for public safety purposes.

Tetra Tech will work with Town on preparing a CRS application.

Tetra Tech reviewed existing studies and incorporated them into a flood profile. They extracted flood mitigation recommendations which they turned over to SAFARI group to review and got very limited feedback. R. Stanley and C. Balmer went through the list and refined it. SAFARI will receive an updated copy and review the list at its next meeting.

Tetra Tech has run HAZUS and hopes to re-run the model again (using new data). They hope to have results in a couple of weeks. They have developed a flood profile for the town with details on Phoenicia and Mount Tremper.

#### *Deliverables from Tetra Tech*

Emergency Response Plan: Town currently does not have procedures written down and the final product will go beyond the typical "snapshot" summary. Currently working on draft of procedures which anyone can pick up and understand what to do during a flood event or natural disaster.

Appendixes: 4 appendixes are currently in draft form. Appendixes include a call-out list, EOC staffing plan (who works what shift, their title, etc.), and suggested community advisory protocols tied to stream gage data.

Additional discussion is needed about use of stream gage levels as advisory triggers. Discussion items include how to determine a warning level where streams aggrade and degrade so rapidly that flow elevations may fluctuate from storm event to storm event. SAFARI group will brainstorm more on this. Suggested that group reach out to Delaware County SWCD as they are thinking along similar lines. It was suggested that a low-tech way to educate citizens about flood advisory levels would be to paint a line on a bridge. One line would be a flood advisory, the next one up would be for flood warning, etc. This is an interesting idea, however, the problems mentioned above must be discussed.

Tetra Tech has agreed the Mitigation Plan will provide a "roadmap" to help the Town reduce its CRS score. Right now the Town is expected to receive a score of 8. CRS analysis does have

specific activities to help improve that score. If the Town wants to move from a score of 8 to 7 or a 6 that will require significant additional effort on the part of the Town. Each step down in the CRS score results in a 5% reduction of flood insurance premiums. So going from a 10 to an 8 would result in a 10% savings. Although a lower score will result in reduced flood insurance premiums the major focus of the Plan is public safety.

### **Working Meeting (Candace Balmer)**

Group reviewed the draft mission statement for the Town of Shandaken Multi-Hazard Mitigation Plan and agreed that it was good.

Group began reviewing the Mitigation Plan's draft goals and objectives. The goals/objectives came from other hazard management plans in the state and elsewhere. Group was unable to complete this work as time ran-out. Approved draft goals and objectives for now, but will come back and review again at a later date.

### **Other Information**

Art Christie is the interim code enforcement officer for the Town of Shandaken.

### **Next Steps**

R. Stanley will schedule the SWOO meeting. It was suggested that SAFARI members be invited to the SWOO workshop without obligation to attend, but it will ultimately be up to R. Stanley to determine who is invited to SWOO. Suggested that SAFARI members be CC'd on SWOO results.

C. Ritz and E. Hofmeister will finalize a list of priority projects for the Town of Shandaken by November 15 is possible.

A. Bennett will provide C. Bianco with a shape file of the Ulster County Flood Buy-out Program. R. Stanley will make a decision on how this information should be made available and determine privacy concerns.

R. Stanley and C. Balmer will contact Art Schneider (Director, Ulster County Emergency Management/Communications) for help obtaining post-Irene NFIP information.

SAFARI members should review project list results, flood mitigation topics and information, and Mitigation Plan goals and objectives and come prepared with comments to the next meeting. These documents will be provided for review.

**Next meeting for SAFARI scheduled for December 4<sup>th</sup> 8:30am-12:30pm. This meeting will be for 4 hours in order to get through all of the business that needs to be completed before the end of the year.**



Cornell University  
Cooperative Extension  
Ulster County



SOIL & WATER  
Conservation District



New York State  
DEC



# SAFARI Group

Shandaken Area Flood Assessment & Remediation Initiative



Sign- In Sheet - Meeting date / /

Name	Agency	Phone	Email
Brent Gotsch	CCE UC	845-688-3047	bwg37@cornell.edu
DANYELLE DAUS	DEP		
JOHN HORN	SHANDAKEN PLANNING BOARD	688-2072	MAIL@NEWYORK-DATA.COM
Rob Stanley	Town of Shandaken	688-2165	
Eric Hofmeister	Town of Shandaken	688-9901	
Aaron Bennett	UC Dept Environment	340-3572	abenn@co.ulster.ny.us
Ben Reichard	NYC DEP		
Leslie Zucker	AWSMP - CCE		l175@cornell.edu
Adam Doan	AWSMP - UCSWCD		
CHRISTINA APPLEBY	AWSMP - UCSWCD		

By Signing-In here, I agree to allow the Member Organizations to take and use my photograph for publications and media outreach materials.



Cornell University  
Cooperative Extension  
Ulster County



**SOIL & WATER**  
Conservation District



New York State  
**DEC**



# SAFARI Group

Shandaken Area Flood Assessment & Remediation Initiative



Sign- In Sheet - Meeting date / /

Name	Agency	Phone	Email
Cynthia Bianco	Tetra Tech		
Candace Balmo	RCAP		

By Signing-In here, I agree to allow the Member Organizations to take and use my photograph for publications and media outreach materials.

SAFARI

2-20-13

Sign In

Brent Gotsch  
Aaron Bennett  
JOHN HORN  
Robert Stanley  
ADAM DOAN

Reth Hughes

DANYELLE DAVIS  
Eric Hofmeister  
DORIS NIEVES  
Leslie Zucker  
Candace Balmer

CCE Ulster  
Ulster Co. Dept of Environment  
SHANDAKEN PLAN, BOARD  
Shandaken Supervisor  
ADAM.DOAN@ASHOKANSTREAMS.ORG  
Town of Shandaken Building morning  
NYC DEP EMP  
t/o Shandaken  
RESIDENT OF H. TREMPER  
CCE Ulster  
RCAP

This appendix provides an example progress report with the purpose to provide an annual update on the implementation of the Town of Shandaken Flood Mitigation Plan.



# EXAMPLE PROGRESS REPORT

## Town of Shandaken, NY Flood Hazard Mitigation Plan Annual Progress Report

**Reporting Period:** *(Insert reporting period)*

**Background:** The Town of Shandaken developed a flood hazard mitigation plan to reduce risk from flooding by identifying resources, information, and strategies for risk reduction. To prepare the plan, the Town of Shandaken organized resources, assessed risks from flooding, developed planning goals and objectives, reviewed mitigation alternatives, and developed an action plan to address probable impacts from floods. The plan can be viewed on-line at:

<http://www.shandaken.us/flood-mitigation-plan/flood-mitigation-plan-post/>

**Summary Overview of the Plan's Progress:** The performance period for the Hazard Mitigation Plan became effective on [REDACTED], 2013, with the final approval of the plan by FEMA. The initial performance period for this plan will be 5 years, with an anticipated update to the plan to occur before [REDACTED], 2018. As of this reporting period, the performance period for this plan is considered to be [REDACTED]% complete. The Flood Hazard Mitigation Plan has targeted 32 flood hazard mitigation initiatives to be pursued during the 5-year performance period. As of the reporting period, the following overall progress can be reported:

- [REDACTED] out of [REDACTED] initiatives ([REDACTED]%) reported ongoing action toward completion.
- [REDACTED] out of [REDACTED] initiatives ([REDACTED]%) were reported as being complete.
- [REDACTED] out of [REDACTED] initiatives ([REDACTED]%) reported no action taken.

**Purpose:** The purpose of this report is to provide an annual update on the implementation of the action plan identified in the Town of Shandaken Flood Hazard Mitigation Plan. The objective is to ensure that there is a continuing and responsive planning process that will keep the Hazard Mitigation Plan dynamic and responsive to the needs and capabilities of the Town of Shandaken and stakeholders. This report discusses the following:

- Flood events that have occurred within the last year
- Changes in risk exposure within the planning area
- Mitigation success stories
- Review of the action plan
- Changes in capabilities that could impact plan implementation
- Recommendations for changes/enhancement.









**Recommendations for Changes or Enhancements:** Based on the review of this report by SAFARI, the following recommendations will be noted for future updates or revisions to the plan:

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

***Public review notice:** The contents of this report are considered to be public knowledge and have been prepared for total public disclosure. Copies of the report have been provided to the Town of Shandaken governing board and to local media outlets and the report is posted on the Town of Shandaken Flood Hazard Mitigation Plan website. Any questions or comments regarding the contents of this report should be directed to:*

Robert Stanley, Supervisor  
Town of Shandaken  
P.O. Box 134,  
7209 Rte. 28  
Shandaken, NY 12480  
Telephone: (845) 688-7165  
Email: [shandakensupervisor@yahoo.com](mailto:shandakensupervisor@yahoo.com)

