

Flood Mitigation Action Plan

Town of Veteran & Village of Millport

Flood Mitigation Action Plan

Town of Veteran & Village of Millport

Chemung County, New York

September 1999

Prepared with assistance from:

Southern Tier Central Regional Planning and Development Board
145 Village Square
Painted Post, NY 14870

This Flood Mitigation Action Plan was prepared as part of the Southern Tier Central Flood Mitigation Planning Project, which was funded in part by the New York State Emergency Management Office and Federal Emergency Management Agency.

Table of Contents

	<u>page</u>
Background	1
How This Plan Was Prepared	3
Public Involvement	4
Coordination with Relevant Agencies	4
Procedure for Review and Revision of the Plan	5
Flood Hazards and Problems	6
Riverine Flooding and Streambank Erosion	6
Drainage Problems and Soil Instability	11
Shallow Water Table	14
Flood Warning	15
Development Trends	15
Hazardous Material Spills	16
Flood Mitigation Goals	17
Preventive Activities	17
Natural Resource Protection	17
Property Protection	18
Structural Solutions	18
Emergency Services	18
Other Goals	18
Flood Mitigation Solutions	19
Action Plan	20
Public Information	20
Preventive Activities	20
Property Protection	22
Structural Solutions	22
Emergency Services	22
Post-Disaster Mitigation Policies And Procedures	23
ATTACHMENT A: Map of Flood Hazards and Problems Summary of Flooding Problems	
ATTACHMENT B: Map of Land Uses	
ATTACHMENT C: Flood Solutions Worksheet	
ATTACHMENT D: Documentation of Public Involvement	

BACKGROUND

The Town of Veteran (population 3,468) and Village of Millport (population 342) are in northern Chemung County, NY. The Village of Millport is located within the Town of Veteran along Catharine Creek. The principle sources of flooding are from Catharine Creek and its tributaries (in the central and western part of Veteran and in Millport) and from the North Branch of Newtown Creek (in the eastern part of Veteran). Additional water problems result from streambank erosion, slope instability, inadequacies of local drainage, and a shallow water table. Many of these problems are chronic.

The most recent severe flooding in Veteran and Millport occurred in November 1996, when Catharine Creek and surrounding areas were seriously devastated by high water. This flood destroyed one house in the Village of Millport. Additional flooding has occurred in June 1972 (Hurricane Agnes), September 1975 (Hurricane Eloise), June 1976 (“Fathers’ Day Flood”), April 1993 (“Blizzard of ‘93” snowmelt), August 1994 (Hurricane Beryl), and January 1996 (snowmelt and heavy rain). In addition to these major floods, many additional heavy rainfall events have caused localized drainage problems, ponding, streambank erosion, groundwater flooding, and other difficulties. Approximately twenty percent of the houses in the Village of Millport have been lost since 1978, mostly due to deterioration from chronic water problems.

The Town of Veteran joined the Regular Phase of the National Flood Insurance Program in 1983; the Village of Millport joined in 1988. Since that time, development within the areas designated as the 100-year floodplain (on the Town and Village Flood Insurance Rate Maps) has been regulated by a local ordinances.

Flood insurance can be purchased for any building in the Town of Veteran or Village of Millport. On March 3, 1999, there were 3 flood insurance policies in the Town (2 in the 100-year floodplain) and 4 in the Village (2 in the 100-year floodplain). Flood insurance claims since 1978 have totaled \$1,085 (1 claim) in the Veteran and \$11,077 (1 claim) in Millport. This represents only a fraction of the total flood damages because many property owners do not carry flood insurance and many damages (particularly to basements and basement contents) are not covered.

Ongoing efforts to resolve flooding and drainage problems in Veteran and Millport have been extensive. When road, shoulder, road ditch, and culvert repairs have been necessary, every effort has been made to address the problem rather than just repairing the damage. Because Catharine Creek is a world-renown trout fishery, access to the creek and its tributaries is regulated by the State Department of Environmental Conservation. The Town and Village have repeatedly requested cooperation and assistance from the State for management of Catharine Creek and its tributaries. Some erosion sites have been stabilized with rock riprap. Stream restoration work was done in Catharine Creek following the devastation caused by the November 1996 flood. The Village of Millport has requested assistance from Chemung County and the State Department of Transportation to address drainage issues associated with County and State roads. Additional drainage improvements along these roads are anticipated. This Plan represents

a serious effort on the part of the Town of Veteran and Village of Millport to identify and implement measures that will further reduce flood damages.

HOW THIS PLAN WAS PREPARED

This Plan was prepared by the Veteran/Millport Flood Mitigation Planning Committee. The Committee was composed of the Millport Mayor, the Veteran Supervisor, the Highway Superintendent for Veteran, and a citizen member. Additional participation was solicited from both municipalities. However, most of those contacted about participation in the flood mitigation planning process were unable to attend meetings. Staff support was provided by Southern Tier Central Regional Planning and Development Board. All decisions were reached by consensus of those present.

The Committee held a series of meetings. The information gathered and committee recommendations were documented by the Regional Flood Specialist from Southern Tier Central Regional Planning and Development Board, who prepared drafts that were reviewed at each meeting. The following meetings were held:

- **10/6/98: Organizational meeting/Assess the hazards:** Introduction to the flood mitigation planning process. Identify planning committee members. Develop a strategy for coordinating with other agencies. Develop a strategy for involving the public. Identify individuals (agency staff and members of the public) who will be asked to participate. Identify flood hazard areas.
- **10/19/98: Assess hazards and problems:** Define the scope of the planning process. Compile information about flood hazards and flood problems. Mark flood problem areas on a map showing designated 100-year floodplains.
- **10/26/98: Assess hazards and problems:** Review hazard and problem information compiled from previous meeting. Compile additional information.
- **11/9/98: Set flood mitigation goals:** Review text and maps of flood hazards and problems; make necessary corrections. Review other community goals. Discuss the committee's vision of how flooding issues can be addressed and future damages prevented. Compile a list of flood damage reduction goals for the Town of Veteran and Village of Millport.
- **11/23/98: Evaluate Flood Solutions:** Review flood mitigation goals. Review Flood Solutions Worksheet – a comprehensive list of possible activities for reducing flood damages. Identify the activities that are applicable to the resolution of flooding problems in the Town of Veteran and Village of Millport.
- **12/14/98: Prepare an action plan:** Review a map of land uses in relation to flood-prone areas. Using the flood mitigation goals and the flood solutions worksheet, prepare a list of the action items needed to implement the proposed solutions. Recommend post-disaster mitigation policies and procedures. Develop a strategy for implementation, evaluation, and revision of the Plan. Recommendation for public review of the draft Plan.

PUBLIC INVOLVEMENT

The chronic nature of flooding, drainage, and groundwater problems in Millport and Veteran has led to frequent interactions between residents and municipal officials concerning water management issues. This public input has occurred at municipal board meetings and through a variety of other forums. The problems and potential solutions arising from these ongoing interactions were incorporated into this flood mitigation planning process.

Additional input was sought during the planning process through personal communications with individuals affected by flooding problems. A brief article apprising the public of this planning effort was published in the November/December 1998 issue of the Horseheads Community Policing Newsletter, which is sent to all residents in Veteran and Millport (included in Attachment D).

A draft of this Plan was presented at a public information meeting on January 18, 1999. This meeting was publicized in the local newspaper and on a sign at the Millport Village Hall. It was attended by about 25 citizens and elected officials. Minutes of this public meeting are in Attachment D. The meeting began with a presentation of the planning process and the proposed action items. This was followed by a discussion of flooding issues, concerns, and mitigation measures. Large-format copies of the Flood Hazard and Problem Maps (Attachment A) were displayed for review and discussion. Each participant was given a handout summarizing the flood mitigation planning process (included in Attachment D) and a copy of the draft Flood Mitigation Action Plan. Those in attendance were supportive of this Plan. The only recommended change was to clarify the description of Problem #36, which was done.

COORDINATION WITH RELEVANT AGENCIES

At the beginning of the planning process, Committee members discussed flood mitigation planning with other municipal officials (Town Board members, Village Board members, Planning Board members, Code Enforcement Officers, etc.). Input from those unable to attend Committee meetings was obtained through personal communications, thus insuring consistency with other community goals and objectives. A draft of this Flood Mitigation Action Plan was submitted to Town and Village officials for review and comments.

Information about the flood mitigation planning process and a request for relevant information and recommendations was sent to the following county, regional, and state agencies:

- Chemung County Soil & Water Conservation District
- Chemung County Emergency Management Office
- Chemung County Planning Department
- Chemung County Water Quality Strategy Committee
- Chemung County Environmental Management Council
- Chemung County Public Works Department
- Southern Tier Central Regional Planning and Development Board
- Sullivan Trail Resource Conservation and Development Council

Finger Lakes State Parks
New York State Emergency Management Office
New York State Department of Environmental Conservation
USDA Natural Resources Conservation Service

Personnel from these agencies contributed to the planning process in a variety of ways: providing information, answering specific questions, reviewing minutes, and reviewing draft sections of this document.

A draft of this Flood Mitigation Action Plan was submitted to each of these departments and agencies for additional review and comment. It was also submitted to the Federal Emergency Management Agency. All recommendations received were incorporated into this Plan.

PROCEDURE FOR REVIEW AND REVISION OF THE PLAN

The Flood Mitigation Action Plan for the Town of Veteran and Village of Millport will be reviewed and updated at an annual meeting of Town and Village officials and interested members of the public. The Village will be represented by the Mayor (or representative), Planning Board representative, Code Enforcement Officer, Fire Chief, and Superintendent of Streets. The Town will be represented by Town Board representative, Planning Board representative, Code Enforcement Officer, Highway Superintendent, and Assessor. If possible, this meeting will be facilitated by an outside party (i.e. Regional Flood Specialist). This review will be conducted in the fall (preferably September) prior to adoption of the Town budget and before preliminary budget review for the Village.

FLOOD HAZARDS AND PROBLEMS

Flood **hazards** occur in areas that are prone to flooding, whether or not any development is affected. This Plan addresses the following hazards throughout the Town of Veteran and Village of Millport: riverine flooding, drainage problems, unstable slopes, groundwater flooding, erosion of streambanks, and hazardous material spills. The Flood Insurance Rate Maps for the Town and Village indicate the areas expected to be inundated by 100-year flooding along the principle waterways (Attachment A). Additional hazards due to flooding and bank erosion exist along every stream and many unmapped drainage ways. Unstable slopes occur in many areas. The risk of hazardous material spills is greatest along the principle transportation routes (State Route 13 and State Route 14). The hazard areas for overland flooding, ponding, and groundwater flooding are generally not recognized unless they contribute to flooding problems. The potential hazard areas are thus widespread.

Flood **problems** occur when development is adversely impacted by flood hazards. Numerous flood problem areas have been identified throughout Veteran and Millport. These problems are described below and indicated on the Map of Flood Hazards and Problems (Attachment A). This information about flooding problems was assembled from previous documentation and the knowledge of Committee members, municipal officials, residents, and agency personnel familiar with flooding in Veteran and Millport.

RIVERINE FLOODING AND STREAMBANK EROSION

Riverine flooding occurs when streams and rivers overflow their banks and inundate adjacent valleys. This occurs when heavy rainfall or rapid snowmelt produces water runoff that exceeds the carrying capacity of the channel. Riverine flood damages can be triggered or exacerbated by constriction or obstruction of stream and river channels. This blockage can result from undersized drainage structures, debris dams, ice jams, or accumulation of sediment within the channel. Backwater flooding occurs when a stream is unable to flow into a larger stream due to high water in the downstream waterbody.

The Flood Insurance Rate Maps (FIRMs) for the Town of Veteran and the Village of Millport identify the areas expected to be inundated by the 100-year flood for the principle drainage ways in the community. No detailed studies were done to evaluate the expected elevations of flooding. Development within the 100-year floodplain is regulated by local law. It should be noted that the hydraulic analyses used to delineate the 100-year floodplains were based on the assumption of unobstructed flow. The delineated floodplains are thus considered valid only if all channels and drainage structures remain unobstructed, operate properly, and do not fail. If these conditions do not exist, the area subject to 100-year flooding could be greater.

The potential for riverine flooding from most of the smaller streams in the Town and Village was not evaluated when the Flood Insurance Rate Maps were prepared. Yet these streams have floodplains and pose flood hazards. Because there is no floodplain designated on

the FIRMs, development along these streams is not regulated by local laws for flood damage prevention. Yet development in these areas is at risk from both flooding and streambank erosion.

Erosion of streambanks and the subsequent deposition of eroded materials are major concerns in both the Town of Veteran and in the Village of Millport. The severity of these problems is due, in part, to the widespread occurrence of poorly consolidated glacial deposits, which are particularly susceptible to erosive forces. Natural erosional processes are accelerated during flood events. Bank erosion leads to the loss of lawns and agricultural land and can undermine buildings, roads, and bridges. Severe erosion also degrades riparian and aquatic habitat. Accelerated erosion of banks loosens large volumes of material that are subsequently deposited within stream channels, limiting the capacity for carrying water. Sediment and debris accumulation can plug culverts and lodge under bridges, displacing the flow of water. Eroded material that is carried downstream contributes to sedimentation problems at downstream locations. In the Catharine Creek watershed this downstream deposition impairs habitat in Catharine Creek, navigation in the Chemung Barge Canal and water quality in Seneca Lake. Erosion in the Newtown Creek Watershed (North Branch of Newtown Creek and Bulkley Creek) contributes to downstream deposition in the Sullivanville reservoir, Newtown Creek, the Chemung River, the Susquehanna River, two reservoirs in Pennsylvania, and the Chesapeake Bay. Although bank erosion and channel migration are natural processes, they can be accelerated by human activities.

Catharine Creek (Town of Veteran and Village of Millport)

Catharine Creek originates in the Town of Veteran, from which it flows south into the Town of Horseheads before returning north through the western part of Veteran and the Village of Millport. Catharine Creek continues northward into Schuyler County, where it is a tributary to Seneca Lake. Catharine Creek is recognized as a world-class trout fishery. In 1977, the New York State Department of Environmental Conservation purchased fishing easements from many property owners along the Catharine Creek. These easements allow public access for fishing and allow DEC to maintain the channel and banks. Although it was the understanding of many property owners that DEC would assume responsibility for channel maintenance, the bank stabilization needed to protect homes along the stream has not been done. In November 1996, severe flooding led to extensive disruption of the stream, with sediment, trees, and other debris filling the channel. Restoration work was undertaken to re-establish the stream channel after this event, particularly in the reach downstream (north) of Millport. Large volumes of trees and other debris were removed from the channel. Additional funds have been allocated to a habitat restoration project, scheduled for implementation by DEC in 1998-99.

PROBLEMS:

1. Dann Boulevard (Veteran): The upstream reaches of Catharine Creek contain large amounts of debris, which tend to plug the twin pipes at Dann Boulevard. Material accumulation at this site obstructs flow in Catharine Creek and threatens the road.

2. Briarcliff Drive (Veteran): High water in a Catharine Creek tributary floods a residential neighborhood on Briarcliff Drive. The 100-year floodplain was not designated along this small tributary. Flooding from the stream is compounded by stormwater runoff from development on Stonecroft Drive (see Problem #27). Two houses had water on the main floor two times in 1996. About 6 additional homes experience water in basements and yards. Water flowed across Ridge Road during the November 1996 flood. The stream channel has subsequently been cleared of brush and a culvert was replaced by a larger concrete box structure. Planned development along Johnson Road may lead to increased runoff into this tributary.
3. Middle Road (Veteran): About 3 houses on Middle Road are located within the 100-year floodplain of a Catharine Creek tributary and have a history of flooding problems. A new road into the golf course has altered drainage in this area, with the intent of protecting the houses from flooding.
4. Kenwood Drive (Veteran): One or two houses on Kenwood Drive are located adjacent to a wetland within the 100-year floodplain of Catharine Creek.
5. Pine Valley (Veteran): A couple of homes in Pine Valley are located within the 100-year floodplain of Catharine Creek.
6. Smith Road (Veteran): Gravel deposition in Catharine Creek at the mouth of Panther Lick Creek has been an ongoing problem. Sediment accumulation at the Smith Road Bridge has contributed to repeated flooding around a mobile home. During the 1996 floods, water was within inches of entering the structure. This mobile home and four other houses are located within the 100-year floodplain of Catharine Creek.
7. Midway (Veteran): The reach of Catharine Creek near the mouth of Johnson Hollow (between Stafford Road and the Millport Village line) includes about 8-10 houses in the 100-year floodplain.
8. Church Street and Church Street Extension (Millport): The Catharine Creek tributary that crosses the Church Street Extension formerly flowed under Main Street (State Route 14) south of Church Street Extension. It was relocated to its present location by New York State and has subsequently experienced severe bank erosion. One house and one yard have been lost due to this erosion. One or two more houses are at risk. The culvert that conveys this tributary beneath State Route 14 (Main Street) is undersized and collapsing. When the capacity of this culvert is exceeded, high velocity water flows north along Main Street. This culvert is scheduled for replacement by the State in 2001. A total of six homes on Church Street and Church Street Extension experience flooding from this tributary.
9. Millport: Development within the 100-year floodplain of Catharine Creek in the Village of Millport includes 11 houses, 4 businesses, 1 church, and 1 pavilion. Yards and structures are threatened by streambank erosion, which is a problem along both the east and west banks for the entire length of the Village. Encroachment by the creek has washed out two septic systems and one house. Additional houses, septic systems, and out buildings are threatened. A couple of structures have been protected with rock riprap.

Panther Lick Creek (Town of Veteran)

Panther Lick Creek enters Catharine Creek from the west in the hamlet of Pine Valley. Trees and gravel in the channel contribute to flooding and bank erosion at numerous locations along Dunn Road in the Town of Catlin. A high sediment load is carried downstream into the Town of Veteran, where Panther Lick Creek flows through the hamlet of Pine Valley. A section of the creek has been channelized east of State Route 14 and a berm has been constructed to protect adjacent development.

PROBLEMS:

10. Pine Valley: About ½ dozen houses in the hamlet of Pine Valley are located within the 100-year floodplain of Panther Creek. It has been necessary to evacuate two houses on Route 14. One house experienced first floor flooding and water was very close to entering another. Significant volumes of gravel accumulated downstream of the channelized section during the two 1996 floods and water was within 6 inches of the top of the berm. Failure of this berm could result in the flooding of additional houses. Gravel was removed from the channel following the 1996 floods. The Clair Street bridge was also replaced.

Mann's Creek (Town of Veteran)

Mann's Creek is an eastern tributary to Catharine Creek that flows into Catharine Creek north of Pine Valley. The 100-year floodplain is delineated along the lower reach of this stream and contains no buildings. The creek experiences severe bank erosion, particularly along the lower reach. The channel contains large amounts of trees and gravel.

PROBLEMS:

11. Clair Road: The Clair Road bridge over Mann's Creek was washed out by high water in 1996. The bridge was replaced by a box culvert. This structure is threatened by the accumulation of debris and sediment upstream, which could plug the culvert. Severe streambank erosion upstream of Clair Road is contributing to this problem.

Johnson Hollow Creek (Town of Veteran)

Johnson Hollow Creek originates in the Town of Catlin and enters Catharine Creek from the west. It experiences problems with bank erosion and debris accumulation within the channel.

PROBLEMS:

12. Johnson Hollow Road: A trailer park (with approximately 40 units), 6-7 houses and the Veteran Town Hall are located near the bank of the stream along Johnson Hollow Road. Although the 100-year floodplain was not delineated for this stream, the potential for bank erosion and debris dams threatens adjacent development. The wall protecting the Town Hall caved in during the November 1996 flood and was subsequently replaced with concrete blocking. Trees were removed from the lower reach of the channel, but additional debris upstream is likely to wash into the area.

School House Creek (Town of Veteran and Village of Millport)

School House Creek is a western tributary that joins with Catharine Creek in the Village of Millport. No 100-year floodplain was delineated along this stream. The stream once flowed down what is now Maple Street, but was relocated to its present course farther north.

PROBLEMS:

13. **Morris Hill Road** (Veteran and Millport): A 60-70 foot high embankment on Morris Hill Road slides whenever the soil is saturated. The situation has been described as very severe. An abandoned railroad bed stabilizes the foot of part of this embankment. Elsewhere, mass wasting has caused damage to Morris Hill Road and requires frequent maintenance of the road surface. A wall has been constructed at the worst location, but is inadequate to contain the problem. In 1996, debris from this embankment blocked the flow in Schoolhouse Creek causing water to flow down Morris Hill Road (Veteran) and Maple Street (Millport), affecting one house in Veteran and 13 houses in Millport.
14. **Village Playground** (Millport): The Village Playground was previously located within the 100-year floodplain of School House Creek. Large amounts of sediment accumulation near the mouth of the creek contribute to channel instability and out-of-bank flow in this area. The playground experienced flooding approximately 6 months per year. The Village has removed its existing playground equipment and is locating the new equipment approximately 100 feet beyond the designated floodplain.

Sleeper Creek (Town of Veteran)

Sleeper Creek is a Catharine Creek tributary located in the northwestern part of the Town of Veteran. This stream has washed out grade control structures and structures placed in the stream for habitat enhancement.

PROBLEMS:

15. **Sewfuse Road**: Streambank erosion on Sleeper Creek is eroding a private driveway.

North Branch of Newtown Creek (Town of Veteran)

The North Branch of Newtown Creek flows southward along State Highway 13 in the Town of Veteran. Downstream in the Town of Horseheads, it is impounded by the Sullivanville Dam, which provides flood protection for development farther downstream. The high sediment load in the creek has resulted in significant sedimentation within the reservoir since its construction in 1989. Bank erosion threatens numerous properties.

PROBLEMS:

16. **Terry Hill Road**: The unnamed tributary along Terry Hill Road has downcut approximately three feet in the past year. This severe incision has led to unstable banks. Approximately 90 feet of farmland have been lost along this small mobile stream.
17. **Crome Link**: Bank erosion on the North Branch of Newtown Creek threatens development along State Highway 13 in the Crome Link area. The creek spreads out and deposits gravel, so that it no longer flows through a clearly defined channel. The houses in this area are elevated above the level of recent flooding. A couple may be located within 100-year floodplain.

18. East Sullivanville Road: The East Sullivanville Road bridge over the North Branch of Newtown Creek had just been replaced when the November 1996 flood occurred. The temporary bridge washed under the new bridge, causing the approaches to the new bridge to wash out.
19. Vargo Road: Vargo Road crosses the flood storage area for the Sullivanville Dam and is impassable during flood events.

Bulkley Creek (Town of Veteran)

Bulkley Creek is an eastern tributary to the North Branch of Newtown Creek that flows southward along East Sullivanville Road. During November 1996, flooding of numerous bridges across Bulkley Creek and nearby streams severely limited access to hundreds of homes in Chemung and Schuyler Counties. A seasonal road (Benjamin Road) was kept opened by a Town highway crew, providing the only access to the area. Streambank erosion threatens property along the entire length of Bulkley Creek.

PROBLEMS:

20. Jackson Creek Road: Jackson Creek Road follows an eastern tributary to Bulkley Creek. This stream washed out the road and washed away an out building in 1996. The structure was replaced at a higher elevation.
21. Lesky Road: Water flowed over the Lesky Road bridge in 1996, leaving debris deposits on the bridge surface.
22. Brick House Road: During the November 1996 flood, water from Bulkley Creek flowed across Brick House Road. The bridge has since been replaced.
23. Mallory Hill Road: Floodwater from Bulkley Creek washed out the approaches to the Mallory Hill Road bridge during the November 1996 flood and again during repairs. The bridge is currently being replaced.
24. Bush Road: One house on Bush road is located in the 100-year floodplain. A wall that protects this structure from bank erosion has recently been repaired. The streambank near the Bush Road bridge has also been repaired and stabilized, but adjacent areas remain at risk from bank erosion. The back yard of a second home has been lost to streambank erosion.

DRAINAGE PROBLEMS AND SOIL INSTABILITY

Overland flooding and ponding occurs when excess runoff is not carried in a defined channel. It leads to flood damages when structures are improperly sited and stormwater runoff is not properly managed at development sites. Alteration of natural drainage patterns has contributed to drainage problems in several areas in the Town of Veteran and Village of Millport.

Roadside drainage problems in Veteran and Millport are compounded by numerous areas with unstable slopes that are subject to erosion and mass wasting. The most severe case of slope instability is along New Road, where a landslide covered the road in 1994. It was not possible to reclaim the site, so the affected section of road was abandoned by the Town. A survey of road banks in the Seneca Lake Watershed identified three sites in Veteran and Millport with very

severe erosion (totaling 0.35 miles) and 10 sites with severe erosion (totaling 3.05 miles). Road bank erosion at these sites alters the drainage patterns and contributes to road damages. Additional roadbank problems are located in the eastern part of the Town within the Chemung and Upper Susquehanna River watersheds (not surveyed).

In some areas drainage problems are caused or aggravated by dumping of trash into ravines and drainage way. Trees and other debris that accumulate naturally or from timber harvesting operations also pose problems.

PROBLEMS:

25. Merka Road (Veteran): Severe road ditch erosion is occurring along a 0.2-mile section of Merka Road. The ditch is getting deeper and wider, causing damage to the shoulder and a farm field. Funding is being sought to resolve this problem.
26. Acker Road (Veteran): Very severe road ditch erosion along Acker Road has damaged the roadway. Part of the ditch has been stabilized with rock riprap, but other areas still threaten the road.
27. Stonecroft Drive and Briarcliff Drive (Veteran): Runoff from development on Stonecroft Drive may have contributed to recent flooding of 4-6 houses located downhill on Briarcliff Drive. The outflow from a small holding pond below Stonecroft Drive spreads out onto pastureland and the yards on Briarcliff Drive before entering a tributary to Catharine Creek. This problem is compounded by floodwater in the tributary (see Problem #2).
28. Stafford Road (Veteran): An 800-foot section of Stafford Road experiences road ditch erosion plus poor soils that slide when saturated. Saturated soils repeatedly slide onto the road surface. Funding is being sought to stabilize this site with fabric, rock, seeding, and some geo-textures.
29. Burch Hill Road (Veteran): An 80-foot high embankment along Burch Hill Road slides when the soil becomes saturated. During the November 1996 flood, this sliding inhibited drainage and led to erosion of a gully 10 feet deep along the edge of the road. The gully was subsequently filled and the ditch was stabilized with fabric and rock. The high, unstable bank poses an ongoing threat. A tie wall stabilizing a section of the embankment has fallen over, allowing significant amounts of erosion at that site. Sediment from this unstable embankment is washed into Catharine Creek where it contributes to habitat degradation and channel instability.
30. Cemetery Hill Road (County Route 6A) and Main Street (State Route 14) (Millport): A 2-foot pipe along Cemetery Hill Road is intended to convey runoff from the road and cemetery at the eastern Village limit into Catharine Creek. This pipe is partially collapsed or plugged and does not convey a sufficient amount of water. During storm events, the hydraulic pressure within this pipe causes a fountain of water at its lower end. Excess surface runoff flows down a paved drainage ditch on the north side of Cemetery Hill Road. Downhill of the paved ditch is a large gully that threatens one house and is "deep enough to lose a car in." The drainage grates on Main Street are not sited properly to intercept this flow. A property owner attempts to correct this by placing cinder blocks in the street to direct water into the grates during storm events. Water tends to flow north along Main Street and into basements on the east side of the road before crossing the road

and flowing into Catharine Creek. One house on the west side of the road is sometimes flooded as well. Tons of eroded material and debris (up to 6 feet deep) are deposited on and near the highway. State Route 14 (Main Street) has been flooded by as much as 18 inches of water. During the January 1996 flood, water froze across the highway. This drainage from Cemetery Hill Road floods the basements of 7 houses and the main floor of one store. During the January 1996 flood, erosion around the culvert under State Route 14 (Main Street) produced a cavern of unknown size, necessitating closure of the highway for several hours. Traffic was limited to a single lane for 1-½ weeks until the cavern was filled. The State plans to replace the culvert and remove one house that is threatened. This project is scheduled for completion in 2001. Both the County Highway Department and the State Department of Transportation have been notified about the serious nature of the drainage problems in this area.

31. Maple Street area (Millport): At least three artesian wells are located near the uphill end of Maple Street in the Village of Millport. The flow from these wells generally percolates into the ground and contributes to chronic groundwater flooding in the Maple Street area (see problem #36). There is no channel to convey the water from these wells when the soil is saturated. Surface runoff flows through the residential neighborhood along Maple Street, Crescent Street, State Street, and Lewis Street. Water has flowed into the front doors of two houses on State Street. The Village is seeking funding to install a new drainage system to convey runoff from the artesian wells and surrounding areas the full length of Maple Street to School House Creek.
32. Abandoned railroad bed (Millport): An abandoned railroad bed along the west side of Catharine Creek obstructs the natural drainage patterns in both Millport and Veteran. When this railroad was active, the railroad company maintained the drainage system associated with the elevated tracks. This maintenance was discontinued when the railroad was abandoned in the 1960's, leading to drainage problems. The culverts that convey runoff under the tracks have become plugged with sediment and debris, causing water to pond on the west (uphill) side of the tracks. One partially plugged pipe has recently been filled completely. Percolation of ponded water under the old railroad bed may contribute to an elevated water table along Maiden Lane (see Problem #37). Ponding has led to failure of the railroad bed in several areas, with rapid releases of water to down slope areas. One such failure washed out half Sundown Road. The primary remaining threat to development is to two houses on Maiden Lane (Millport). The railroad bed is now owned by the New York State Department of Parks and Recreation, which plans to construct a Rails to Trails bike path.
33. Rolling Acres Mobile Home Park (Millport): A mobile home park in the Village of Millport experiences ponding problems. The property owner is working on drainage improvements.

SHALLOW WATER TABLE

Groundwater flooding results from water below the surface of the ground that seeps through basement walls or backs up through basement drains. The shallow water table contributes to basement flooding and septic system failure in several developed areas in the Village of Millport. Similar problems may also exist in the Town of Veteran. Because groundwater levels are subject to natural fluctuations, these problems are not always apparent at the time a site is developed or when a home is purchased.

PROBLEMS:

34. Sundown Road (Millport): One house at the south end of Sundown Road experiences chronic groundwater flooding for about 9 months of every year. These problems are attributed to alteration of the natural drainage system and uphill artesian wells. The Village installed a larger lateral drainpipe on Sundown Road in 1998 to lessen some of the adjacent flooding on the Village side of the affected property.
35. Cemetery Hill Road (County Route 6A) and Main Street (State Route 14) (Millport): Seven houses at the base of Cemetery Hill Road and on Main Street experience chronic groundwater flooding that lasts about 9 months per year. These problems are compounded by inadequate drainage of surface runoff from Cemetery Hill Road (see Problem #30).
36. Maple Street area (Millport): Residents report that they can hear water flowing under the Maple Street, which is located in the former channel of Schoolhouse Creek. A shallow water table in this area floods the basements and septic systems of at least 15 houses on Maple Street, State Street, Lewis Street, Crescent Street, and adjacent streets. These areas experience groundwater flooding at least nine months per year. Most of the houses have severe foundation problems as a result of this chronic flooding. Three known artesian wells contribute to the drainage problems in this area (see problem #31). Subsurface drains were installed during the construction of a new Village Playground at the lower end of Maple Street in 1998. This has reduced groundwater flooding in a few adjacent basements (with the water table dropping by as much as 4 feet). The Village plans to install a new drainage system the full length of Maple Street (with connectors on Crescent Street, Lewis Street, and Morris Hill Road), but the funds are not currently available.
37. Maiden Lane (Millport): Three houses on Maiden Lane experience chronic groundwater flooding that lasts for about 9 months each year. The shallow water table in this area is thought to result from infiltration of water that has ponded on the west side of an abandoned railroad bed (see Problem #32). The Village has improved surface drainage in this area by replacing one plugged pipe, but the system still retains water on the uphill side of the tracks. The NYS Department of Parks and Recreation, which owns the abandoned tracks, has been notified of the situation.

FLOOD WARNING

Flood warnings in the Town of Veteran and Village of Millport are provided by the Chemung County Emergency Management Office, which obtains flood warning information from the Flood Warning Service of Steuben and Chemung Counties (operated by Environmental Emergency Services, Inc.) and from the National Weather Service. These warnings are based on a network of automated rain and river-level gauges, supplemented by additional observations and reports.

Flood warnings for the streams in Veteran and Millport are based on rain gauge data and rainfall forecasts by the National Weather Service. Automated rain gauges located in Big Flats, Catlin, and Erin provide information about the rates and amounts of rainfall in the area. Data from these gauges are relayed by telemetry to the Flood Warning Service for Steuben and Chemung Counties and to the National Weather Service for use in preparing flood forecasts. Additional information can be provided by volunteer rain gauge readers.

PROBLEMS:

38. **Flash flooding:** The streams in Veteran and Millport are highly susceptible to flash flooding, which can occur suddenly with little or no lead-time.
39. **Stream gauges:** There are no stream gauges on the streams that flow through Veteran and Millport. During a flood event, the Chemung County Emergency Management Office gathers stream level descriptions from the fire departments and relays this information to emergency personnel.
40. **Rain gauges:** A procedure for timely reporting of high rainfall rates and amounts by volunteer rain gauge readers in the Veteran and Millport area has not been established.
41. **Disaster plans:** The Town and Village disaster plans need to be reviewed periodically to insure that they include specific information that will enable local officials and emergency personnel to respond appropriately to flood warnings and data from stream monitoring and rain gauges.

DEVELOPMENT TRENDS

The Town of Veteran and Village of Millport are located in a rural area north of the City of Elmira. Current land uses in the Town and Village are indicated on the Map of Land Uses (Attachment B). The area has experienced limited amounts of development in recent years. There are 17 potential development sites on Main Street in Millport. Care is needed to insure that new development does not contribute to increased flooding problems.

PROBLEMS:

42. **Floodplain development regulations:** Consistent enforcement of existing floodplain development regulations is needed to insure that new construction in identified flood hazard areas is protected from anticipated flood conditions.
43. **Stormwater management:** Building regulations in the Town of Veteran and Village of Millport do not protect against increased runoff and altered drainage patterns from new

development. If construction disturbs five or more acres, a general permit for storm water discharges is required for compliance with the State Pollutant Discharge Elimination System (SPDES). This permit requires preparation of a stormwater pollution prevention plan, but the State does not review or enforce the plans. Neither Veteran nor Millport has enacted legislation for local enforcement of stormwater management standards.

44. Timber harvesting: There is no mechanism for insuring that appropriate stormwater management practices are implemented during timber harvesting operations in the Town of Veteran or up-slope areas.
45. Shallow water table: The Town of Veteran and Village of Millport building codes do not protect against the construction of basements below the seasonal high water table levels. This is a particular concern in the Village, where, many areas are known to experience groundwater flooding of existing development. Data documenting water table levels at undeveloped sites do not exist.

HAZARDOUS MATERIAL SPILLS

The Town of Veteran and Village of Millport have the potential for transportation accidents involving petro-chemicals and other hazardous materials, including radioactive materials. Accidents involving hazardous materials may result in fire, explosion, or the release of toxic fumes.

PROBLEMS:

46. State Route 14 (Veteran and Millport): State Route 14 carries traffic through the Town of Veteran and the Village of Millport. A survey conducted by the Village indicates that about 93 marked hazardous materials vehicles are driven through the Village on State Route 14 in a 24-hour period. This route is subject to flooding by Catharine Creek and its tributaries. This risk of flooding increases both the likelihood of a hazardous material spill and the potential dispersion of contaminants. Icing occurs on a continuous basis during cold weather.
47. State Route 13 (Veteran): State Route 13 carries traffic through the Town of Veteran. This highway follows the North Branch of Newtown Creek and Hooker Creek. An accident involving hazardous materials could contaminate these areas.

FLOOD MITIGATION GOALS

Although the policies of the Town of Veteran and Village of Millport have included numerous efforts to mitigate flood damages, these policies do not stem from written goals that have been adopted by the communities. A principle policy objective has been to stabilize and protect existing buildings and infrastructure. This objective was identified in a Village of Millport HUD application for drainage system improvements on Maple Street. Both the Village and the Town wish to protect the investment of private and federal funds within the community.

The following risk reduction goals were prepared by the Flood Mitigation Planning Committee, based on their understanding of the problems and objectives of the two municipalities. These goals emphasize preventive measures and protection of the beneficial functions of natural systems.

PREVENTIVE ACTIVITIES

- * Implement planned development in order to reduce the susceptibility of new construction to flood damages and to insure that septic systems function properly.
- * Review and revise Town and Village building codes to:
 - ⇒ Prevent or adequately protect new development in areas with existing drainage or flooding problems.
 - ⇒ Prohibit the construction of basements in areas that are known to have a shallow water table.
 - ⇒ Require that new buildings be set back from streambanks.
 - ⇒ Require adequate stormwater management at new development sites.
- * Educate Village Board, Town Board, Planning Boards, Zoning Boards of Appeal, and Code Enforcement Officers about flooding issues.
- * Complete road specifications to insure adequate drainage capacity for all new culverts, bridges, and ditches.

NATURAL RESOURCE PROTECTION

- * Stabilize Catharine Creek to reduce bank erosion and deposition in the channel.
- * Reduce the sediment and debris load in all streams, particularly the tributaries that deliver this load into Catharine Creek.
- * Implement good forest management and timber harvesting practices. Reforest upland areas with species that will decrease runoff. Vegetate stream corridors with appropriate plants to stabilize the stream systems.

- * Maintain and improve the storage capacity in ponds, wetlands, and other areas that naturally slow or store surface runoff.

PROPERTY PROTECTION

- * Protect roads and adjacent areas by improving the patterns of stormwater drainage on roads and in road ditches (Merka Road, Acker Road, Stafford Road, Burch Hill Road, Cemetery Hill Road, Maple Street, and State Route 14).

STRUCTURAL SOLUTIONS

- * Install appropriate structures to mitigate existing flooding problems (storm sewer along Maple Street, berm at Briarcliff Drive, etc.)

EMERGENCY SERVICES

- * Improve the flood warning capability to maximize the response time for local and regional flood events. The system should include active collection of rainfall and stream level data within the Catharine Creek Watershed.
- * Review and revise the Town and Village Emergency Plans to insure that they include specific information that will enable local officials and emergency personnel to respond appropriately during a flood event.

OTHER GOALS

- * Implement solutions to flooding problems through improved cooperation between NYS Department of Transportation, NYS Department of Environmental Conservation, Chemung County Highway Department, NYS Department of Parks and Recreation, Town of Veteran, and Village of Millport.

FLOOD MITIGATION SOLUTIONS

The Veteran/Millport Flood Mitigation Planning Committee reviewed and evaluated the measures on a comprehensive list of possible activities for reducing flood damages. The Committee selected techniques applicable to the problems and goals that had been identified for their community. A copy of the worksheet with the recommended solutions for Veteran and Millport is provided in Attachment C. All of the measures listed on this worksheet were reviewed and evaluated. Many of the activities on this list are already being implemented. The techniques that committee members recommend initiating or expanding in the Town of Veteran and/or the Village of Millport are indicated in Attachment C.

ACTION PLAN

The following activities are recommended to minimize the effects of flooding in the Town of Veteran and the Village of Millport. These are action items that can be accomplished by the Town and Village with existing staff and volunteer resources within the next couple of years. These actions will not achieve the goals set forth in this Plan, but represent the next steps that need to be taken. Additional activities will be required in future years to meet the community's flood mitigation goals. The timetable and source of funding for each activity is given in Table 1.

PUBLIC INFORMATION

1. Display map of flood hazards and problems: The map showing floodplains and flood problem areas that was prepared for this Plan will be posted in the Veteran Town Hall and Millport Village Hall. Each municipality will obtain a large plot of this map from Southern Tier Central Regional Planning and Development Board. This Plan will be referenced on the map and will be readily available.
2. Distribution of flood information to Millport property owners: The Village of Millport will distribute a packet of information about flood risks, emergency preparedness, and floodproofing techniques to all property owners in the Village. This information will be hand-delivered. The Regional Flood Specialist (with Southern Tier Central Regional Planning and Development Board) will assist the Village with identifying appropriate information to be included in this mailing.
3. Include flood information in Village water bills: The Village of Millport plans to begin including literature in the Village water bills, which are issued 4 times per year. Material relevant to flooding will be included about once each year.
4. Provide Flood Mitigation Action Plan to public library: After this Flood Mitigation Action Plan has been approved by both the Village of Millport and the Town of Veteran, a copy will be provided to the Horseheads Public Library.
5. Incorporate stream issues into Village youth program: The Millport Youth Director will incorporate programs dealing with Catharine Creek into the Village youth program. The Chemung County Environmental Educator (with the County Environmental Management Council) will be asked to assist with a program addressing stream and flooding issues. The County Soil & Water Conservation District will be contacted about planting trees along School House Creek (at the new playground) in the spring.

PREVENTIVE ACTIVITIES

6. Training for Planning Board members on flooding and drainage issues: The Village will ask the Chemung County Planning Department and Southern Tier Central Regional Planning and Development Board to conduct a training session for Planning Board members to address flooding issues as they relate to planning and development proposals.

This program could be conducted jointly with the Veteran and Millport planning boards and with neighboring municipalities.

7. Request updated Flood Insurance Rate Maps: When this Plan is finalized, the Town of Veteran and Village of Millport will each send a copy to the Federal Emergency Management Agency with a request that the Flood Insurance Rate maps be updated to more accurately reflect the flood hazards. Village of Millport has already initiated this request in a 1998 letter.
8. Update Town of Veteran Code: The Town of Veteran will begin the process of reviewing and updating the Town Code in 1999. As part of this process, the Town will evaluate stormwater management provisions and stream setback requirements (with technical assistance from the Regional Flood Specialist). Appropriate standards will be included in the revised ordinance. The Town Highway Superintendent is currently preparing standards for driveways, bridges, and culverts that will be included in the revised code. The application for a building permit will be modified to include a question about whether the building site is located within the 100-year floodplain.
9. Update Village of Millport Code: The Village of Millport has initiated the process of reviewing and updating the Village Code and plans to adopt revisions in 1999. As part of this process, the Village will evaluate a restriction on tree cutting along Catharine Creek and/or a requirement to replace trees that have been removed. The Village will evaluate stormwater management provisions (with technical assistance from the Regional Flood Specialist) and include appropriate standards in the revised ordinance. Standards for driveways, bridges, and culverts will be added (consistent with those for the Town of Veteran). The application for a building permit will be modified to include a question about whether the building site is located within the 100-year floodplain.
10. Prepare drainage system maintenance plan for Veteran: The Town of Veteran will prepare a written Drainage System Maintenance Plan which specifies the sites that require routine inspection, inspection frequency, responsibilities for inspection, and maintenance responsibilities. The Town will request technical assistance from the Chemung County Soil & Water Conservation District Manager and the Regional Flood Specialist (from Southern Tier Central Regional Planning & Development Board) with implementation of this task.
11. Prepare drainage system maintenance plan for Millport: The Village of Millport will prepare a written Drainage System Maintenance Plan which specifies the sites that require routine inspection, inspection frequency, responsibilities for inspection, and maintenance responsibilities. The Village will request technical assistance from the Chemung County Soil & Water Conservation District Manager and the Regional Flood Specialist (from Southern Tier Central Regional Planning & Development Board) with implementation of this task. It is anticipated that the Village will hire a Village resident to undertake routine inspection of the street drainage systems.

PROPERTY PROTECTION

12. Distribute floodproofing information with building permit applications: The Town and Village Code Enforcement Officers will begin to distribute information about floodproofing and other property protection measures with applications for building permits.
13. Improve sewage disposal in Millport: The Village of Millport is currently evaluating options for improving sewage disposal in the Village. Many of the existing septic systems are compromised by a shallow water table, which underlies most of the Village (Problems # 34 through 37). The goal is to replace these systems with a municipal sewage disposal system or a number of small community septic systems (to optimize siting and insure appropriate maintenance). When an acceptable solution is identified, the Village will pursue funding for this project.
14. Notify County Highway Department about Cemetery Hill Road drainage problems: The Village of Millport Mayor will write a letter to the Chemung County Highway Department, informing them of the serious nature of the drainage problems on Cemetery Hill Road (County Route 6A; Problem #30). The letter will express the Village's desire to work with the County to resolve these problems.
15. Work with Department of Transportation to resolve drainage problems on Main Street: The State Department of Transportation (DOT) plans to improve drainage along Main Street (State Route 14) in the Village of Millport in 2001 (Problem #30). The Mayor will maintain communications with DOT personnel in order to evaluate the proposed design and express the Village's desire to work with the State to resolve these problems.

STRUCTURAL SOLUTIONS

16. Install storm sewer system in Maple Street area of Millport: The Village of Millport plans to install a storm sewer system to convey runoff in the Maple Street area (Problems #13, 31, and 36). Catch basins with sumps will be installed to replace the existing structures and 900 feet of pipe will be installed along Morris Hill Road, Maple Street, State Street, and Lewis Street. The Village has applied for grant funding through the Hazard Mitigation Grant Program and included funding for this task in the 1999 Village budget.
17. Evaluate feasibility of a berm at Briarcliff Drive: The Town of Veteran will evaluate the suggestion that a berm or wall be constructed to protect houses on Briarcliff Drive from flooding (Problems #2 and 27). The Town Highway Superintendent will consult with the County Soil & Water Conservation District (S&WCD) about this proposal and initiate discussions with the property owner.

EMERGENCY SERVICES

18. Establish network of volunteer rain gauge readers: The Town of Veteran and the Millport Fire Department will work with the Chemung County Emergency Management Office to recruit volunteer rain gauge readers located around the Town and provide them with

National Weather Service rain gauges. A procedure for emergency reporting of high rainfall amounts will be established.

19. Install staff gauge in Catharine Creek: The Village and Town will work with the Chemung County Emergency Management Office and the Flood Warning Service of Steuben and Chemung Counties to address the lack of stream gauge information for Catharine Creek. A potential site for installation of a staff gauge is Smith Road near Pine Valley. It is expected that nearby residents would be willing to read the gauge and report water levels during high water events.
20. Document historic flood information: The Town of Veteran and Village of Millport will compile a record of known information about the timing and sequence of flooding in recent high water events. If possible, a student volunteer will be found to talk to fire fighters, municipal and county officials, and others and document the information provided. This historic flood information will be used to prepare a summary of the sequence of flooding problems during a high water event and the time delay between upstream and downstream peaks. This summary information will be used for emergency planning and for reference during future flood response efforts.
21. Review and update Veteran Emergency Plan: The Veteran Supervisor will work with the Chemung County EMO and the Millport Fire Department to review and update the Emergency Plan for the Town of Veteran.
22. Review and update Millport Emergency Plan: The Mayor of Millport will work with the Chemung County EMO and the fire departments serving the Town to review and update the Emergency Plan for the Village of Millport.

POST-DISASTER MITIGATION POLICIES AND PROCEDURES

Following a flood incident, the Town of Veteran and Village of Millport will examine the damage areas, evaluate the suitability of rebuilding damaged structures, and make recommendations to property owners. The majority of the decisions about reconstruction will be at the discretion of individual property owners. Many of the residents likely to sustain serious damages may lack the resources for restoration following a severe flood. Any repairs to buildings located within the 100-year floodplain will comply with the Town and Village laws for floodplain development, which specify that structures that are substantially damaged (cost of restoring the structure to its before damaged condition would equal or exceed 50% of the market value of the structure before the damage occurred) will only be rebuilt if they are brought into compliance with current floodplain development standards.

Table 1. Flood Mitigation Action Items (page 1 of 3)

PUBLIC INFORMATION			
Task	Responsible Person	Time Table	Financing
1. Display map of flood hazards and problems	Planning Committee members	1999	none required
2. Distribute flood information to Millport property owners	Millport Mayor	winter 1999	Minimal Village expense
3. Include flood information in Village water bills	Millport Mayor	beginning in 1999	minimal Village expense
4. Provide Flood Mitigation Action Plan to public library	Millport Mayor	1999	minimal expense
5. Incorporate stream issues into Village youth program	Millport Youth Director	1999	staff and volunteer time

PREVENTIVE ACTIVITIES			
Task	Responsible Person	Time Table	Financing
6. Training for Planning Board members on flooding and drainage issues	Planning Committee members	1999	staff and volunteer time
7. Request updated Flood Insurance Rate Maps	Veteran Supervisor; Millport Mayor	1999	none
8. Update Town of Veteran Code	Veteran Town Board	1999 to 2000	staff and volunteer time
9. Update Village of Millport Code	Millport Village Board	1999	staff and volunteer time
10. Prepare drainage system maintenance plan for Veteran	Veteran Highway Superintendent	1999	staff and volunteer time
11. Prepare drainage system maintenance plan for Millport	Millport Mayor	1999	staff and volunteer time

Table 1. Flood Mitigation Action Items (page 2 of 3)

PROPERTY PROTECTION			
Task	Responsible Person	Time Table	Financing
12. Distribute floodproofing information with building permit applications	Veteran & Millport Code Enforcement Officers	beginning in 1999	minimal expense
13. Improve sewage disposal in Millport	Millport Village Board	evaluation 1999; implement when funding is available	not yet determined
14. Notify County Highway Department about Cemetery Hill Road drainage problems	Millport Mayor	1999	County expense
15. Work with DOT to resolve drainage problems on Main Street (Millport)	Millport Mayor	ongoing	State expense

STRUCTURAL SOLUTIONS			
Task	Responsible Person	Time Table	Financing
16. Install storm sewer system in Maple Street area of Millport	Millport Village Board	1999	possible grant funding; Village budget
17. Evaluate feasibility of a berm at Briarcliff Drive	Veteran Highway Superintendent (working with County S&WCD)	1999	staff time

Table 1. Flood Mitigation Action Items (page 3 of 3)

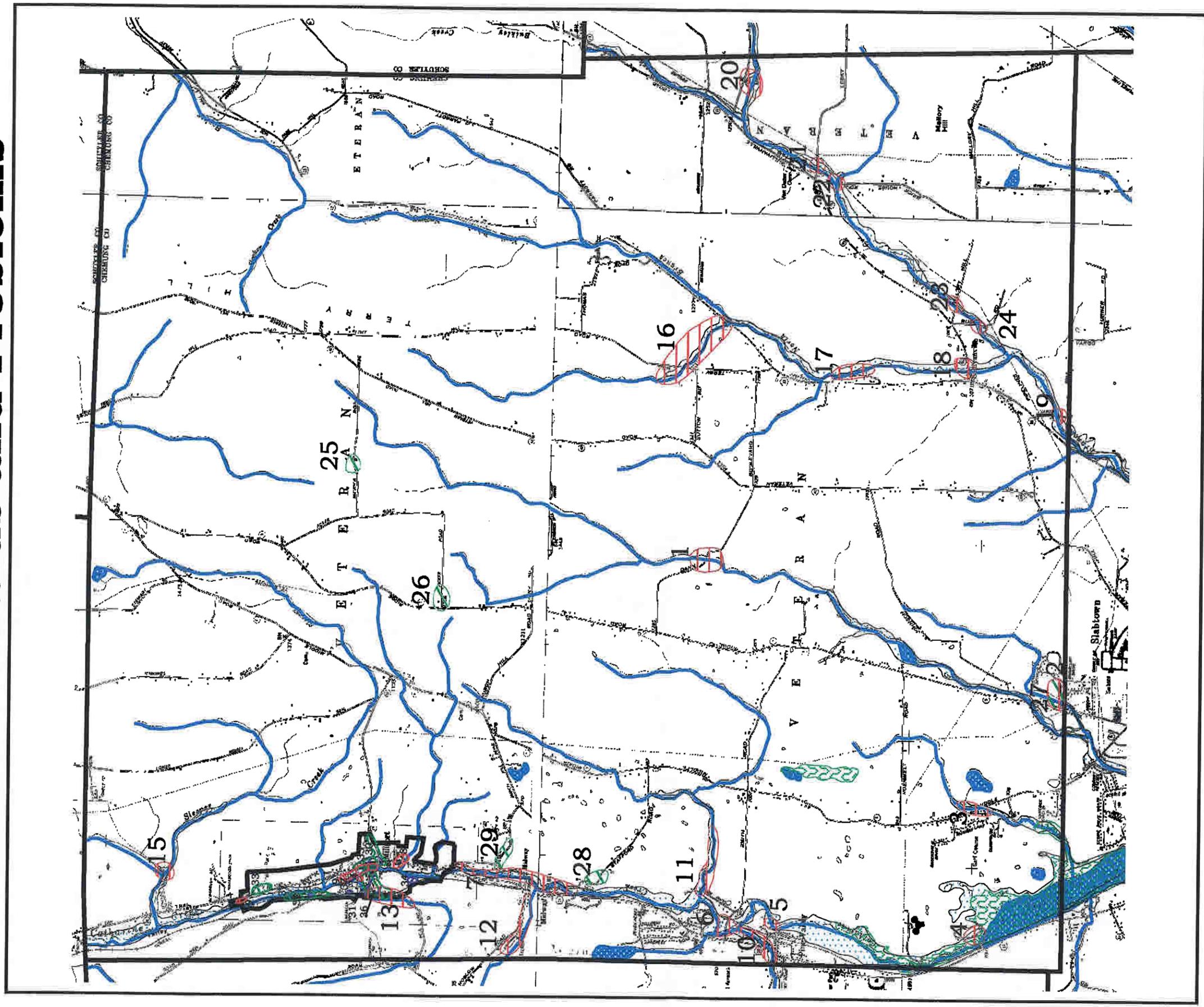
EMERGENCY SERVICES			
Task	Responsible Person	Time Table	Financing
18. Establish network of volunteer rain gauge readers	County Emergency Management Office (assisted by Town and fire department)	1999	staff and volunteer time
19. Install staff gauge in Catharine Creek	Millport Mayor	1999	staff and volunteer time
20. Document historic flood information	Millport Mayor	1999	staff and volunteer time
21. Review and update Veteran Emergency Plan	Veteran Supervisor	1999	staff and volunteer time
22. Review and update Millport Emergency Plan	Millport Mayor	1999	staff and volunteer time

ATTACHMENT A

Map of Flood Hazards and Problems

Summary of Flooding Problems

Town of Veteran and Village of Millport Flood Hazards and Problems



- Flood Problem Areas**
- Riverine Flooding and Bank Erosion (1-24)
 - Drainage Problems (25-33)
 - Shallow Water Table (34-37)
- Wetlands**
- Wetlands
- Rivers and Lakes**
- Rivers and Lakes
- Streams**
- Streams
- Municipal Boundaries**
- Municipal Boundaries
- Floodplains**
- 100 Year Floodplain
 - 500 Year Floodplain



Flood Problems are described in "Flood Mitigation Action Plan, Town of Veteran and Village of Millport" (available at Veteran Town Hall And Millport Village Hall).

Note:
Floodplains and Wetlands data are approximate. Not for legal floodplain or wetland determination.
Does not include changes past September 1996.

Source:
Flood Mitigation Planning Committee,
Q3 Flood Data, Disc 19 (Rivers), Federal Emergency Management Agency, National Flood Insurance Program, September 1996.
New York State Department of Environmental Conservation, July 1997.
New York State 7.5 Minute Quadrangle Insects, NYS Department of Environmental Conservation, May 1992.
New York State Department of Transportation, February 1993.

Prepared by Genesee\Finger Lakes Regional Planning Council, October 1998

Village of Millport Flood Hazards and Problems

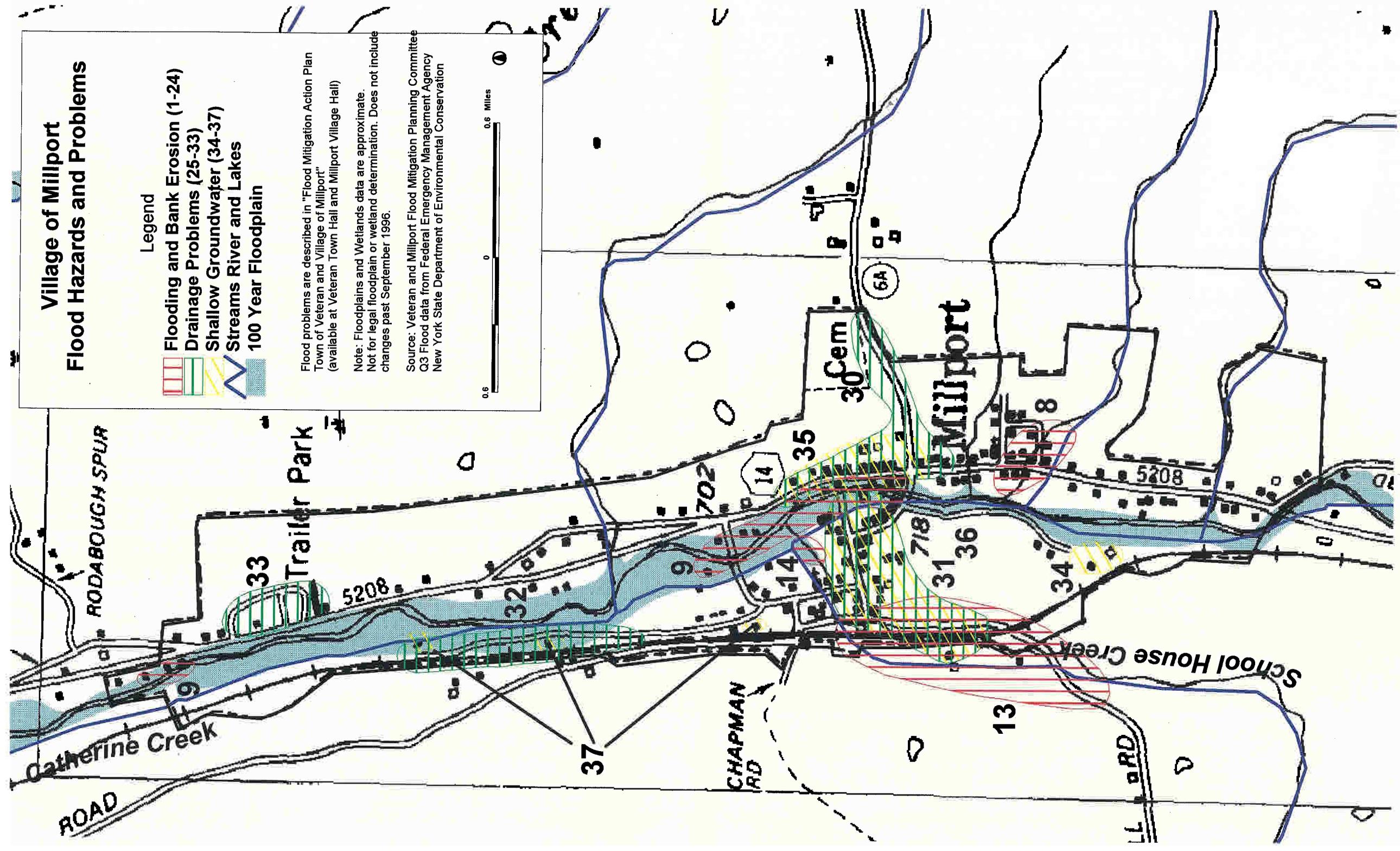
Legend

- Flooding and Bank Erosion (1-24)
- Drainage Problems (25-33)
- Shallow Groundwater (34-37)
- Streams River and Lakes
- 100 Year Floodplain

Flood problems are described in "Flood Mitigation Action Plan Town of Veteran and Village of Millport" (available at Veteran Town Hall and Millport Village Hall)

Note: Floodplains and Wetlands data are approximate. Not for legal floodplain or wetland determination. Does not include changes past September 1996.

Source: Veteran and Millport Flood Mitigation Planning Committee Q3 Flood data from Federal Emergency Management Agency New York State Department of Environmental Conservation



SUMMARY OF FLOODING PROBLEMS
TOWN OF VETERAN AND VILLAGE OF MILLPORT

Problem #	Stream/Drainage Basin	Problem Name	Municipality	Houses Affected	Roads/Culverts/Bridges?	Streambank/Lakeshore Erosion?	Riverine Flooding?	Stormwater Flooding?	Groundwater Flooding?	Potential Development?
RIVERINE FLOODING AND BANK EROSION										
1	Catharine Creek	Dann Boulevard	Town of Veteran	0	x	x	x			
2	Catharine Creek Tributary	Briarcliff Drive	Town of Veteran	8	x		x			x
3	Catharine Creek Tributary	Middle Road	Town of Veteran	3			x			
4	Catharine Creek	Kenwood Drive	Town of Veteran	2			x			
5	Catharine Creek	Pine Valley	Town of Veteran	2			x			
6	Catharine Creek	Smith Road	Town of Veteran	5	x		x			
7	Catharine Creek	Midway	Town of Veteran	10			x			
8	Catharine Creek Tributary	Church Street & Church Street Ext.	Village of Millport	6	x	x	x			
9	Catharine Creek	Millport	Village of Millport	11		x	x			
10	Panther Lick Creek	Pine Valley	Town of Veteran	6	x		x			
11	Mann's Creek	Clair Road	Town of Veteran	0	x	x	x			
12	Johnson Hollow Creek	Johnson Hollow Road	Town of Veteran	0	x	x	x			
13	School House Creek	Morris Hill Road	Town of Veteran	47		x	x			
14	School House Creek	Village Playground	T. Veteran, V. Millport	*14	x	x	x			
15	Sleeper Creek	Sewfuse Road	Village of Millport	0			x			
16	North Branch of Newtown Creek Tributary	Terry Hill Road	Town of Veteran	0		x				
17	North Branch of Newtown Creek	Grome Link	Town of Veteran	0		x				
18	North Branch of Newtown Creek	East Sullivanville Road	Town of Veteran	2		x	x			
19	North Branch of Newtown Creek	Vargo Road	Town of Veteran	0	x	x	x			
20	Bulkley Creek Tributary	Jackson Creek Road	Town of Veteran	0	x	x	x			
21	Bulkley Creek	Lesky Road	Town of Veteran	0	x	x	x			
22	Bulkley Creek	Brick House Road	Town of Veteran	0	x	x	x			

*most houses same as #36

**SUMMARY OF FLOODING PROBLEMS
TOWN OF VETERAN AND VILLAGE OF MILLPORT**

Problem #	Stream/Drainage Basin	Problem Name	Municipality	Houses Affected	Roads/Culverts/Bridges?	Streambank/Lakeshore Erosion?	Riverine Flooding?	Stormwater Flooding?	Groundwater Flooding?	Potential Development?
23	Bulkley Creek	Mallory Hill Road	Town of Veteran	0	x	x	x			
24	Bulkley Creek	Bush Road	Town of Veteran	1	x	x	x			
DRAINAGE PROBLEMS AND SOIL INSTABILITY										
25	Catharine Creek	Merka Road	Town of Veteran	0	x			x		
26	Catharine Creek	Acker road	Town of Veteran	0	x			x		
27	Catharine Creek	Stonecroft Drive & Briarcliff Drive	Town of Veteran	**6				x		
28	Catharine Creek	Stafford Road	Town of Veteran	1				x		
29	Catharine Creek	Burch Hill Road	Town of Veteran	0	x			x		
30	Catharine Creek	Cemetery Hill Road & Main Street	Village of Millport	8	x			x		
31	Schoolhouse Creek	Maple Street Area	Village of Millport	***2	x			x		
32	Catharine Creek	Abandoned Railroad Bed	Village of Millport	^2	x			x		
33	Catharine Creek	Rolling Acres Mobile Home Park	Village of Millport	0				x		
SHALLOW WATER TABLE										
34	Catharine Creek	Sundown Road	Village of Millport	1					x	
35	Catharine Creek	Cemetery Hill Road & Main Street	Village of Millport	@7					x	
36	Schoolhouse Creek	Maple Street Area	Village of Millport	15					x	
37	Catharine Creek	Maiden Lane	Village of Millport	3					x	

** houses included in #2
 *** houses included in #14 and #36
 ^ houses included in # 37
 @ houses included in #30

SUMMARY OF FLOODING PROBLEMS
TOWN OF VETERAN AND VILLAGE OF MILLPORT

Problem #	Stream/Drainage Basin	Problem Name	Municipality	Houses Affected	Roads/Culverts/Bridges?	Streambank/Lakeshore Erosion?	Riverine Flooding?	Stormwater Flooding?	Groundwater Flooding?	Potential Development?
FLOOD WARNING										
38	All	Flash Flooding	T. Veteran, V. Millport	x	x		x			
39	All	Stream Gauges	T. Veteran, V. Millport	x	x		x			
40	All	Rain Gauges	T. Veteran, V. Millport	x	x		x			
41	All	Disaster Plans	T. Veteran, V. Millport	x	x		x			
DEVELOPMENT TRENDS										
42	All	Floodplain Development Regulations	T. Veteran, V. Millport	x			x		x	
43	All	Stormwater Management	T. Veteran, V. Millport	x	x			x	x	
44	All	Timber Harvesting	T. Veteran	x				x		
45	all	Shallow Water Table	T. Veteran, V. Millport	x					x	x
OTHER HAZARDS										
46	Catharine Creek	State Route 14	T. Veteran, V. Millport							
47	North Branch of Newtown Crk, Hooker Crk.	State Route 13	Town of Veteran							

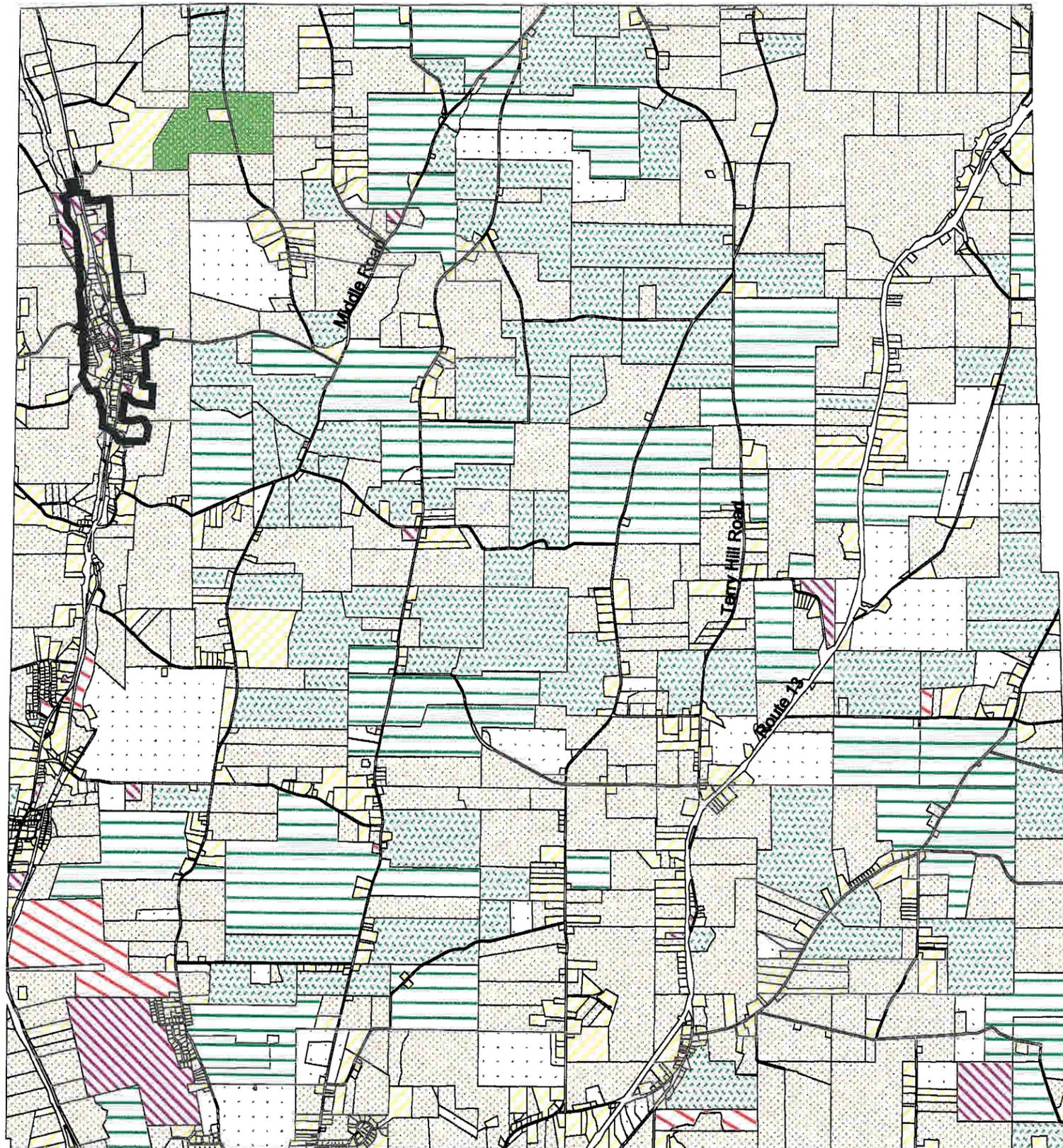
ATTACHMENT B

Map of Land Uses

**Land Use Categories Using Tax Parcel Land Use Codes
for Creating Flood Plain GIS Land Use Maps**

LAND USES BY IMPACT ON FLOOD PRONE AREAS

*Town of Veteran, Village of Millport,
Chemung County, New York*

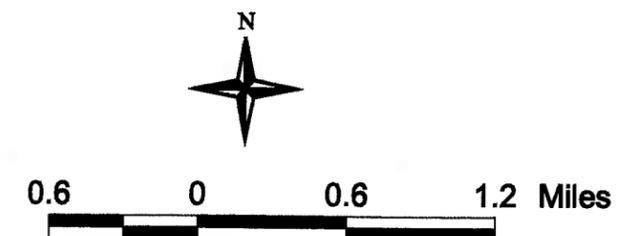


Land Use

-  General Agriculture
-  Agricultural - Cropland
-  Agricultural - Livestock
-  Residential
- Commercial, Recreational, Institutional, Industrial**
-  Minimal Risk Hazardous Materials
-  Possible Risk Hazardous Materials
-  Vacant, Very Low Density Residential, and Parks
-  Not Categorized

Source:
Chemung County Office of Real Property Services, 1997 and 1998.
New York State Department of Transportation, February 1997.

Prepared by Genesee\Finger Lakes Regional Planning Council, October 1998.



LAND USE CATEGORIES
FOR FLOOD PLAIN LAND USE MAPS

AGRICULTURAL - LIVESTOCK	
110 - 119	Livestock and Products, Poultry and Poultry Products: eggs, chickens, turkeys, ducks and geese, Dairy Products: milk, butter cheese, Cattle, Calves, Hogs, Sheep and Wool, Honey and Beeswax, Other livestock: donkey, goats, Horse Farms
180 - 189	Specialty Farms, Fur Products: mink, chinchilla, etc., Pheasant, Aquatic: oysterlands
533	Game Farms
555	Riding Stables
AGRICULTURAL - CROPLAND	
120 - 179	Field Crops, Acquired Development Rights, Truck Crops - Mucklands, Truck Crops, Not Mucklands, Orchard Crops, Apples, Pears, Peaches, Cherries, etc., Vineyards, Other Fruits, Nursery and Greenhouse
473	Greenhouses
RESIDENTIAL	
210 - 239	One Family Year-Round Residence, Two Family Year-Round Residence, Three Family Year-Round Residence
250 - 289	Estate, Seasonal Residences, Mobile Home, Multiple Mobile Homes, Multiple Residences
410- 418	Living Accommodations, Apartments, Hotel, Motel, Mobile Home Parks (trailer parks, trailer courts), Camps, Cottages, Bungalows, Inns, Lodges, Boarding and Rooming Houses, Tourist Homes, Fraternity and Sorority Houses
693	Indian Reservations
COMMERCIAL/RECREATION/INSTUTIONAL/INDUSTRIAL - MINIMAL RISK HAZARDOUS MATERIALS	
420 - 426	Dining Establishments, Restaurants, Diners and Luncheonettes, Snack Bars, Drive-Ins, Ice Cream Bars, Night Clubs, Bar, Fast Food Franchises
437-439	Parking Garage, Parking Lot, Small Parking Garage
450-454	Retail Services, Regional Shopping Centers, Area or Neighborhood Shopping Centers, Large Retail Outlets, Large Retail Food Stores
460 - 472	Banks and Office Buildings, Standard Bank/Single Occupant, Drive-In Branch Bank, Bank Complex with Office Building, Office Building, Professional Building, Miscellaneous Services, Funeral Homes, Dog Kennels, Veterinary Clinics
474	Billboards
480- 486	Multiple Use or Multipurposes, Downtown Row Type (with common wall), Downtown Row Type (detached), Converted Residence, One Story Small Structure, One Story Small Structure -Multioccupant, Minimart

COMMERCIAL/RECREATION/INSTITUTIONAL/INDUSTRIAL - MINIMAL RISK HAZARDOUS MATERIALS (Continued)

510- 521	Entertainment Assembly, Legitimate Theaters, Motion Pictures Theaters (excludes drive-in theaters, Drive-In Theaters, Auditoriums, Exhibition and Exposition Halls, Radio, T.V. and Motion Picture Studios, Sports Assembly, Stadiums, Arenas, Armories, Field Houses
530 - 532	Amusement Facilities, Fairgrounds, Amusement Parks
534	Social Organizations
540 - 544	Indoor Sports Facilities, Bowling Centers, Ice or Roller Skating Rinks, YMCA's, YWCA's, etc., Health Spas
546	Other Outdoor Sports
551	Skiing Centers
556 - 557	Ice or Roller Skating Rinks (may be covered), Other Outdoor Sports
560	Improved Beaches
610 - 633	Education, Libraries, Schools, Colleges and Universities, Special Schools and Institutions, Other Education Facilities, Religious, Welfare, Orphanages, Benevolent and Moral Associations, Homes for the Aged
652-653	Office Building, Parking Lots
662-670	Police and Fire Protection, Electrical Signal Equipment and Other Facilities for Fire, Police, Civil Defense, etc., Correctional
681	Cultural Facilities
691	Professional Associations
694	Animal Welfare Shelters
695	Cemeteries
720 - 723	Mining and Quarrying, Sand and Gravel, Limestone, Trap Rock
822	Water Supply
830 - 839	Communication, Telephone, Telegraph, Radio, Television other than Community Antenna Television, Community Antenna Television, Telecommunications
862-867	Water, Telephone, Miscellaneous
869	Television

COMMERCIAL/RECREATION/INSTITUTIONAL/INDUSTRIAL - POSSIBLE RISK HAZARDOUS MATERIALS

430 - 436	Motor Vehicle Services, Auto Dealers - Sales and Service, Service and Gas Stations, Auto Body, Tire Shops, Other Related Auto Sales, Automatic Car Wash, Manual Car Wash, Self-Service Car Wash
440-449	Storage, Warehouse and Distribution Facilities, Gasoline, Fuel, Oil, Liquid Petroleum Storage and/or Distribution, Bottled Gas, Natural Gas Facilities, Grain and Feed Elevators, Mixers, Sales Outlets, Lumber Yards, Sawmills, Coal Yards, Bins, Cold Storage Facilities, Trucking Terminals, Piers, Wharves, Docks and Related Facilities
455	Dealerships - Sales and Service (other than auto with large sales operation)
475	Junkyards
522	Racetracks

COMMERCIAL/RECREATION/INSTITUTIONAL/INDUSTRIAL - POSSIBLE RISK HAZARDOUS MATERIALS (Continued)

545	Indoor Swimming Pools
552 - 554	Public Golf Courses, Private Golf Country Clubs, Outdoor Swimming Pools
570	Marinas
641 - 651	Hospital, All Other Health Facilities, Government, Highway Garage
660 - 661	Protection, Army, Navy, Air Force, Marine and Coast Guard Installations, Radar, etc.
692	Roads, Streets, Highways and Parkways, Express or Otherwise (if listed) Including Adjoining Land
710-719	Manufacturing and Processing
724 - 729	Salt, Iron and Titanium, Talc, Lead and Zink, Gypsum, Other
730 - 749	Wells, Oil - Natural Flow (for production), Oil - Forced Flow (for production), Gas (for production), Junk, Water used for Oil Production, Gas or Oil Storage Wells, Gas, Water, Brine, Petroleum Products, Other
810 - 819	Electric and Gas, Electric Power Generation - Hydro, Electric Power Generation - Coal Burning Plant, Electric Power Generation - Oil Burning Plant, Electric Power Generation - Nuclear Plant, Electric Power Generation - Gas Burning Plant, Gas Generation Plant, Electric Transmission and Distribution
840-849	Transportation, Motor Vehicle, Ceiling Railroad, Nonceiling Railroad, Air,, Water, Bridges, Tunnels and Subways, Pipelines
850 - 859	Waste Disposal, Solid Wastes, Landfills and Dumps, Sewage Treatment and Water Pollution Control, Air Pollution Control
861	Electric and Gas
868	Pipelines

VACANT - UNDEVELOPED VERY LOW DENSITY RESIDENTIAL (1du/10 acres or more), PARKS

105	Agricultural Vacant Land (Productive)
190	Fish, Game and Wildlife Preserves
240	Rural Residence with Acreage
310 - 359	Residential, Residential Vacant Land, Residential Land Including a Small Improvement (not used for living accommodations), Waterfront Vacant Lots, Rural Vacant Lots of 10 Acres or Less, Underwater Vacant Land, Waterfront Vacant Land Including a Small Improvement (not used for living accommodations), Rural, Abandoned Agricultural Land, Residential Vacant Land over 10 Acres, Other Rural Vacant Lands, Vacant Land Located in Commercial Areas, Vacant Land Located In Industrial Areas, Urban Renewal or Slum Clearance
580 - 593	Camps, Camping Facilities and Resorts, Camps, Camping Facilities, Resort Complexes, Parks, Playgrounds, Athletic Fields, Picnic Grounds
682	Recreational Facilities

VACANT - UNDEVELOPED VERY LOW DENSITY RESIDENTIAL (1du/10 acres or more), PARKS
(Continued)

900 - 999	Wild Forested, Conservation Lands and Public Parks, Private Wild and Forest Lands except for Private Hunting and Fishing Clubs, Forest Land Under Section 480 of the Real Property Tax Law, Forest Land Under Section 480-a of the Real Property Law, Private Hunting and Fishing Clubs, State Owned Forest Lands, State Owned Land (Forest Preserve) in the Adirondack or Catskill Parks Taxable Under Section 532-a of the Real Property Tax Law, State Owned Land Other than Forest Preserve Covered Under Section 532-b,c,d,e,f, or g of the Real Property Tax Law, Reforested Land and Other Related Conservation Purposes, State Owned Reforested Land Taxable Under Sections 534 and 536 of the Real Property Tax Law, County Owned Reforested Land, Hudson River and Black River Regulating District Land, State Owned Public Parks, Recreation Areas, and Other Multiple Uses, County Owned Public Parks and Recreation Areas, City/Town/Village Public Parks and Recreation Areas, Other Wild or Conservation Lands, Wetlands, Either Privately or Governmentally Owned, Subject to Specific Restrictions as to Use, Land Under Water, Either Privately or Governmentally Owned (other than residential -more properly classified as code 315), Taxable State Owned Conservation Easements, Other Taxable State Land Assessments, Adirondack park Aggregate Additional Assessments (Real Property Tax Law, Section 542(3)), Hudson River-Black River Regulating District Aggregate Additional Assessments (Environmental conservation Law, Section, Transition Assessments for Taxable State Owned Land (Real Property Tax Law, Section 545), Transition Assessments for Exempt State Owned Land (Real Property Tax Law, Section 545)
Flood Control	
820 - 821	Water, Flood Control

ATTACHMENT C

Flood Solutions Worksheet

Attached is a completed copy of the worksheet used to evaluate flood mitigation measures. All of the measures listed on this worksheet were reviewed and evaluated by the Veteran/Millport Flood Mitigation Planning Committee. Recommended techniques for the Town of Veteran and Village of Millport are marked in the left column of the worksheet. If a technique is already implemented in either Veteran or Millport, an X indicates an interest in additional implementation measures. Comments applicable to the Town of Veteran and Village of Millport are indicated in italics.

Name: Flood Mitigation Planning Committee Municipality: T. Veteran & V. Millport

FLOOD SOLUTIONS WORKSHEET

As you listen to and participate in discussions of alternative techniques for reducing flood damages, record your ideas and thoughts on this worksheet. Check those ideas that might work in your community. Specify the geographic areas for applying these solutions.

Alternative Flood Damage Reduction Techniques

PUBLIC INFORMATION

Information About Flood Insurance Rate Maps

- Post floodplain maps in municipal buildings — *Millport does*
- Map determinations (flood zone for a particular property or structure)
- Provide information about additional locations with known flood problems (riverine flooding, shallow water table, bank erosion, etc.)
- Other: Post flood problem maps in municipal buildings

Flood Information Outreach Projects

- Newsletter article in _____
- Enclosure in utility bills Village water bills
- Direct mailing to _____
- Special outreach project _____
- Other: Distribute information door to door in the Village

Real Estate Disclosure

- Education of potential property buyers
- Education of real estate agents
- Mandatory disclosure of flood history by real estate agents
- Other: _____

Provide References to Public Library

- Current Flood Insurance Rate Maps
- Flood insurance information
- Information about protecting buildings from flooding
- Documents on community floodplain management and flood hazard mitigation
- Information about the natural and beneficial functions of floodplains
- Local accounts of past flood events
- Directory of sources for additional information on these topics
- Other: Evaluate information needs and procedures for Horseheads Library

Provide Technical Assistance

- Site-specific information about historic flood events
- Names of contractors and consultants knowledgeable or experienced in retrofitting techniques and construction – *currently use HUD list*
- Material on how to select a qualified contractor and what recourse people have if they are dissatisfied with a contractor’s performance – *distribute HUD material*
- Site visits to review flooding, drainage, and sewer problems or provide advice on contemplated development – *lack expertise*
- Advice and assistance on retrofitting techniques
- Other: _____

Environmental Education

- Education programs for children – *Village youth program*
- Education programs for adults
- Other: _____

PREVENTIVE ACTIVITIES

Floodplain Regulations

- Training for local officials (Code Enforcement, Planning Board, Municipal Board)
- Adopt updated NYS Model Law
- Revise law to require building elevation 2 feet above base flood elevation
- Revise law to include additional flood-prone areas
- Update Flood Insurance Rate Maps (restudy, amend, or revise)
- Require that all new buildings in and out of the designated floodplain be elevated above historic high water levels
- Other: Add question about 100-year floodplain to building permit application

Conventional Zoning *Village restricts most uses in 100-year floodplain*

- Low density zoning
- Depth restrictions for basements at _____
- Standards for private bridges
- Standards for driveways and driveway culverts
- Maximum lot coverage for impervious surfaces
- Other: _____

Subdivision Regulations

- Require that each lot includes a safe building site at an elevation above selected flood heights (either by a lot layout that enables out-of-the-floodplain construction or by filling a portion of each lot)
- Require placement of streets above selected flood protection elevations
- Require placement of public utilities above selected flood protection elevations
- Prohibit encroachment of floodway
- Require that flood hazard areas be shown on plat
- Require adequate drainage facilities
- Other: _____

Cluster Development

- Cluster development provisions
 - in zoning ordinance
 - in subdivision ordinance
 - as a separate ordinance
- Other: _____

Open Space Preservation

- Stream setback requirement – *not needed in Village due to lot layout*
- Lake shore setback requirement
- Vegetated buffer strips along _____
- Conservation District or other restrictive development regulations _____
- Agricultural districts
- Parks, preserves, or recreation areas _____
- Transferable development rights _____
- Land use easements _____
- Apply floodway development standards to wider area along _____
- Other: _____

Stormwater Management

- Stormwater management plan for _____ watershed(s)
- Stormwater management regulations
 - in zoning ordinance
 - in subdivision ordinance
 - as a separate ordinance
- Stormwater management regulations for timber harvesting
- Education and technical assistance
- Design and construction of regional stormwater management facilities
 - to address existing problems at _____
 - in anticipation of future development at _____
- Inspection and maintenance of stormwater management facilities
- Other: _____

Drainage System Maintenance

- Line item in budget for drainage system maintenance
- Debris removal when problems occur
- Routine inspection and removal of debris _____ times per year
- Written drainage system maintenance plan (specifying maintenance needs and responsibilities)
- Establish a drainage district
- Channel/bank stabilization on _____
- Debris basin(s) on _____
- Other: _____

NATURAL RESOURCE PROTECTION

Wetlands

- Protect existing wetlands at _____
- Enlarge existing wetlands at _____
- Create new wetlands at _____
- Other: _____

Erosion and Sediment Control

- Channel/bank stabilization of _____
- Erosion and sediment control at new development
 - through regulation
 - through education and technical assistance
- Other: _____

Best Management Practices

- Agriculture
 - education and technical assistance
 - financial incentives
- Timber harvesting
 - regulations
 - education and technical assistance
- Other: _____

PROPERTY PROTECTION

Relocation

- Relocation of building(s) from _____
- Other: _____

Acquisition

- Acquisition of undeveloped flood-prone property at _____
- Acquisition and demolition of buildings at _____
- Acquisition of development rights or easements at _____
- Other: _____

Building Elevation

- Elevate existing building(s) at _____
- Other: _____

Floodproofing of Buildings and Sewer Backup Protection

- Distribute information about floodproofing techniques
- Technical assistance
- Financial assistance _____
- Other: Provide floodproofing literature with application for building permit

Infrastructure Protection

- Design standards for new or replaced bridges and culverts – *Town is preparing*
- Mitigation of existing problems at _____
- Debris removal when problems occur
- Routine inspection and maintenance
- Other: _____

Insurance

- Education of property owners
- Education of insurance agents, mortgage lenders, and real estate agents
- Community Rating System (to reduce insurance premiums)
- Other: _____

STRUCTURAL PROJECTS

Reservoirs

- New water retention structures in _____ watershed
- Identify and maintain existing ponds and retention structures
- Other: _____

Levees and Floodwalls

- New levee along *Catharine Creek tributary at Briarcliff Drive*
- Increased protection of existing levee along _____
- Maintain existing dike system
- Other: _____

Diversions

- High flow diversion channel at _____
- Other: _____

Channel Modifications

- Removal of sand bars or islands from _____
- Straightening, widening, or deepening of _____
- Channel paving of _____
- Other: _____

Storm Sewers

- Storm sewer installation at *Morris Hill/Maple Street area*
- Increased storm sewer capacity at _____
- Inspection and maintenance of existing storm sewer at _____
- Other: _____

EMERGENCY SERVICES

Flood Warning

- Rain gauges
 - Automated gauges at _____
 - Volunteer reporting *at locations throughout the Town* _____
- Stream/river/lake level gauges
 - Automated gauges at _____
 - Staff gauges at *Catharine Creek at Smith Road* _____
 - Historic information for _____
 - Stage relation information for _____
- Local flood forecast center (operated by Environmental Emergency Services)
- Other: _____

Flood Response

- Flood stage forecast maps for _____
- Emergency plan for municipality (command structure, communication procedures, emergency flood proofing measures, evacuation procedures, etc.)
- Other: *Document historical flood problems (areas affected, timing, etc.)* _____

Critical Facilities Protection

- Protection or relocation of critical facilities (sites with toxic materials, medical facilities, emergency operation centers, utilities) _____
- Emergency plan for critical facilities _____
- Other: _____

ATTACHMENT D

Documentation of Public Involvement:

Newsletter Article

Minutes of Public Information Meeting

Handout Summarizing the Flood Mitigation Action Plan
(distributed at public information meeting)

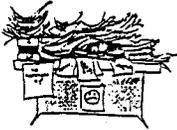


Horseheads Community Policing Newsletter

November/December 1998

www.stny.lrun.com/horseheadspd/

MESSAGE FROM "THE CHIEF"



As 1998 comes to a close, I would like to share a few thoughts. As our community grows and changes, so has the police department. The police officers have about 130 years of "collective" experience. We have added three "Community Service Officers". We are currently in the process of obtaining State Accreditation. Our Advisory Board has now completed it's third year and developed many successful programs through Community Policing. We feel that we have grown closer to the people in our community. I encourage everyone to visit our "recently updated" web site listed above.

Thank you.

IN THE SPOTLIGHT

Officer Michael J. Barton was appointed to the Horseheads Police Department on July 8, 1993. Mike is responsible for the police departments mountain bike program and is certified as a police mountain bike patrol instructor, police general topics instructor and as an arson investigator. He is a member of the area multi-jurisdictional tactical response team and is the president of the Horseheads Village Fire Company. Mike is a native of Horseheads and a valuable member of the police department.



PERSONNEL NEWS

Congrats to Jamie Masclee, our newest police officer, for recently attending and becoming certified as a D.A.R.E. instructor in Vestal, NY - Look for Jamie in the next edition under the officer spotlight.



HOLLY DAYS FESTIVAL



The Horseheads Holly Days Festival will be held on November 28th from 4:00 p.m. - 9:00 p.m. in Hanover Square. The annual festival sponsored by the Horseheads Merchants Associations brings the sense of community spirit into the holiday season. The evening includes food, crafts, a visit from Santa, and entertainment featuring Phillipetti's Dance Academy and vocalists under the direction of Dan Palmer. This year's raffles will include five money wreaths. Take your chance at winning for \$1.00 a ticket or 6/\$5.00. Tickets are available at these Horseheads Merchants - Hanovers Grill, Beef's, Confections Bakery, Glacier Lakes Systems, Chemung Canal and Zeiglers Florist.



NEIGHBORHOOD WATCH



Horseheads District #11 Neighborhood Watch Group held their first organizational meeting at the Locy Reality Group Building September 28th. Sergeant Dave Kole conducted an informational session assisted by Neighborhood Watch Chairperson, Don Biegun. The group presently consists only of Day Street Residents and we are beginning recruitment campaign for more concerned citizens in this area. For further information, call Gene Hepner at 739-3292 or the Horseheads Police Department.

PUBLIC WELCOME

The C.O.P. Advisory Board will meet on November 16th and December 14th at 7:00 p.m. The meetings are held at Our Saviour's Lutheran Church in Horseheads. They are open to the public and all are welcome to attend.



P.B.A. FUND DRIVE The Horseheads Police Benevolent Association will be conducting its annual fund drive during November and December. Businesses will be solicited over the telephone and if you have any questions, please contact Officer Hetzler, P.B.A. President, at 739-5668.

SOLUTIONS TO FLOODING PROBLEMS

Committees for the Town of Horseheads, Village of Horseheads, Town of Veteran, and Village of Millport are preparing Flood Mitigation Action Plans - ways to protect these communities from flood damages. The committees are documenting existing flooding problems, evaluating the range of potential solutions, and identifying the best ways to address the problems. This planning process will enable the municipalities to qualify for project funding from the recently established Flood Mitigation Assistance grant program. For more information contact Janet Thigpen at 739-2096 or Tom Skebey, Horseheads Code Enforcement at 739-7605.

CITIZENS POLICE ACADEMY

The Police department will be scheduling another session of the Citizens Police Academy next Spring. If you would like to be involved or would like more information, call or stop by the Horseheads Police Department.



IT'S THE LAW NYS Vehicle & Traffic Law Section 1225 prohibits driving across or upon a sidewalk, driveway, parking lot or private property, or otherwise drive off the roadway, in order to avoid an intersection or traffic control device.



"INSIDE" NEWS A Special thanks to Thomas and Betts for their recent donation of a computer and printer to the police department. In September, five officers attended "Life Skills Training" conducted at the Horseheads High School. In October, six officers attended Domestic Violence training in Elmira. Several officers also conducted training programs throughout the community. Officer Todd Adams became the P.B.A. Treasurer.

COLORING CONTEST Thank you to all that participated in the coloring contest at the Village of Horseheads Fire Departments Open House on October 9, 1998. Choosing the winners out of all the wonderful entries was a tough job for our judges.



4 yrs and under -

- 1st Annabelle Hyde
- 2nd Amanda Willette
- 3rd Kristy Grannis

5 yrs - 8 yrs -

- 1st Bobby Thorborg
- 1st Ryan Finefrock
- 2nd Jonathon Willette
- 3rd Kayla Fivie

9 yrs - 12 yrs -

- 1st Kelly Walters
- 2nd Austin Leach
- 3rd Stacie Snyder



HAVE A SAFE AND HAPPY HOLIDAY SEASON FROM THE ENTIRE STAFF OF THE HORSEHEADS POLICE DEPARTMENT.

This Newsletter is brought to you by the following sponsors:

- Convenient Food Mart*
- Van Buskirk-Lynch Funeral Home*
- Chemung Canal Trust Company*
- Horseheads-Big Flats Ecumenical Council*
- Horseheads Do-It Center*
- Horseheads P.B.A.*

If you have any questions or comments about this newsletter, please contact Chief Banfield at the Horseheads Police Department at 739-5668.

MINUTES - PUBLIC HEARING
FLOOD MITIGATION PLANNING
January 18, 1999

The Hearing was called to order by Mayor Gumtow at 6:30 p.m. with all the Board members present. The Mayor read the Legal Notice for the Public Hearing.

The Mayor presented Janet Thigpen, a representative from the Southern Tier Central Regional Planning Board to the residents. Ms. Thigpen has been working with the Village of Millport and the Town of Veteran to evaluate the community's flooding problems and to discuss potential solutions.

The members of the Public were presented with a composite and full draft, including a map, which identifies the problems and hazards. Long range goals were listed in the draft. Possible solutions to the flooding problems in the Village and Town were listed in an Action Plan. She stated that the Planning Committee is now soliciting comments and input to the Draft Flood Mitigation Action Plan. This plan, once incorporated, will be submitted to the State Emergency Management Office and the Federal Emergency Management for approval. Should this plan be adopted, it will enable the Village and Town to qualify for Flood Mitigation Assistance grant funding.

The Mayor stated that there are common sense things the Village can do at this time. The emergency plans need to be updated each year. The drains need to be cleaned on an annual basis.

Trustee Stoddard asked if the drainage problems that currently exist on Crescent Street are included in the draft plan. The Mayor stated that the Maple Street drainage area in the plan also includes the problems on Crescent Street.

The Public was asked to review the plan and give any comments they have to the Village Clerk by January 28, 1999. The best draft will then be forwarded to SEMO's funding project. They will come back to us with their comments. It will then be submitted to the Village and Town Board's for their adoption. Once adopted, the Village will be able to qualify for the Flood Mitigation Assistance funding.

There were no further comments at this time.

The Hearing was closed at 6:49 p.m.

RESPECTFULLY SUBMITTED,

Joan Santulli, Village Clerk

Flood Mitigation Planning

Town of Veteran & Village of Millport

The Veteran/Millport Flood Mitigation Planning Committee has evaluated the community's flooding problems and a variety of potential solutions in order to prepare a program of activities that the Town and Village can undertake to tackle these problems.

WHY?

- Planning is a critical step toward coordinated implementation of activities that will reduce flood damages.
- Fulfill planning requirements for state or federal assistance programs (particularly the newly established Flood Mitigation Assistance Program).
- Qualify for Community Rating System credit toward reduced flood insurance premiums.

ASSESS THE FLOOD HAZARDS AND PROBLEMS

The Flood Mitigation Planning Committee identified and documented 47 flooding problems or potential flooding problems in the Town of Veteran and Village of Millport. This documentation includes problems that have been addressed by the municipalities as well as those that still require resolution. A map indicating the locations of flood problem areas was prepared.

SET RISK REDUCTION GOALS

Long range goals for reducing future flood damages in Veteran and Millport were proposed. These goals address the need for preventive measures, natural resource protection, protection of at-risk property, emergency services, and cooperation with county and state agencies.

ASSESS POSSIBLE MITIGATION MEASURES

The committee reviewed a comprehensive list of possible measures for resolving flooding problems. They identified those solutions that are most applicable to the flooding problems and community needs in Veteran and Millport.

DEVELOP AN ACTION PLAN

The committee prepared an Action Plan, which describes 22 activities that the Town and Village can implement with existing resources to address flooding problems. Each year this Plan will be reviewed and updated to incorporate the next steps that need to be taken to reach the communities' long term flood damage reduction goals.

REVIEW AND ADOPTION OF THE PLAN

The Planning Committee is now soliciting comments and input to the Draft Flood Mitigation Action Plan. Once local input has been incorporated, the Plan will be submitted to the State Emergency Management Office and Federal Emergency Management Agency for approval. It will then be presented to the Veteran Town Board and the Millport Village Board for adoption. Adoption of this plan will enable the Town and Village to qualify for Flood Mitigation Assistance grant funding.