

Flood Mitigation Action Plan

Town of Ashland

Flood Mitigation Action Plan

Town of Ashland

Chemung County, New York

August 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	4
Public Involvement	5
Coordination with Relevant Agencies	5
Procedure for Review and Revision of the Plan	6
Flood Hazards and Problems	7
Riverine Flooding and Bank Erosion	7
Drainage Problems	14
Shallow Water Table	14
Flood Warning	15
Development Trends	16
Hazardous Material Spills	16
Other Hazards	17
Flood Mitigation Goals	19
Preventive Activities	19
Natural Resource Protection	19
Property Protection	19
Structural Solutions	19
Emergency Services	20
Other Goals	20
Flood Mitigation Solutions	21
Action Plan	22
Public Information	22
Preventive Activities	22
Natural Resource Protection	23
Property Protection	24
Structural Solutions	24
Emergency Services	24
Post-Disaster Mitigation Policies And Procedures	25
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 Ashland is a community of 1,966 residents (1990 census) located southeast of the City of Elmira in Chemung County, NY. The principle sources of flooding are the Chemung River (which forms part of the northern corporate limit), Seeley Creek, Bentley Creek, and Baldwin Creek. The most extensive area of flood-prone development is along Lower Maple Avenue (State Route 427), which is within the Chemung River floodplain and has also experienced flooding from Seeley Creek.

The Town of Ashland experienced damage from Chemung River flooding in 1946, 1972 (Hurricane Agnes Flood), and 1975 (Hurricane Eloise Flood). Recent flooding in August 1994 (Hurricane Beryl), January 1996 (rain and snowmelt), and November 1996 (heavy rain) resulted in damage from the tributary streams. During all three of these events, Seeley Creek overflowed its bank and flooded areas along Maple Avenue that are outside of the Seeley Creek watershed. In addition to these floods, many additional heavy rainfall events have caused localized drainage problems, ponding, streambank erosion and other difficulties.

In 1980, Ashland joined the Regular Phase of the National Flood Insurance Program. Since that time, development within the areas designated as the 100-year floodplain (on the Town's Flood Insurance Rate Maps) has been regulated by a local ordinance.

Flood insurance can be purchased for any building in the Town of Ashland. On March 3, 1999, there were 30 flood insurance policies in the Town (18 in the 100-year floodplain). Flood insurance claims since 1978 have totaled \$281,697 (23 claims). 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. Five properties in the Town of Ashland are classified by the National Flood Insurance Program as "repetitive loss properties," indicating that they have experienced two or more flood insurance claims within any ten year period since 1978. The flooding problems at these sites are described in this Plan under Problems #1, 7, 8, and 20. Some of these problem areas have been addressed by the Town and property owners. Additional protection will be sought through implementation of floodproofing measures (Action Item #10). In addition, the acquisition of one "repetitive loss property" is proposed in this Plan as Action Item #12.

In 1991, Ashland began participation in the Community Rating System of the National Flood Insurance Program. Participation in this program enables property owners to purchase flood insurance at reduced rates as a result of activities that reduce the flood risks within the Town. The Town presently qualifies for a 5% reduction in flood insurance premiums.

In 1965, the counties and municipalities in the Bentley Creek watershed (including the Town of Ashland) applied to the federal government as sponsors of a flood control project through the PL-566 Watershed Protection and Flood Prevention Program. A 1965 Preliminary Report indicated that the benefit/cost ratio for a Bentley Creek flood control project was not

sufficient to be eligible for federal assistance. After the 1972 Hurricane Agnes flood, the benefit/cost ratio was reevaluated, but the results still indicated that a federal flood control project could not be economically justified. However, the local sponsors refused to withdraw the PL-566 application and asked that it be reevaluated again after a series of flooding events during the summer of 1994. The extensive damages of the January 1996 flood were included in the benefit/cost analysis of the Preliminary Investigation Report that was completed in 1997. This report indicated a potential for viable PL-566 projects in the Bentley Creek watershed. The Natural Resources Conservation Service has initiated the process of preparing a Watershed Plan, which will include a more intense study of the watershed and evaluation of potential projects to reduce the damages from flooding and bank erosion. This work is ongoing.

In October 1996, major stakeholders in the management of the natural resources of Bentley Creek participated in a two-day Coordinated Resource Management session. Public officials, landowners, businesses, federal, state and local officials and agencies from both Pennsylvania and New York were in attendance. The purpose was to begin to address the serious flooding and stream instability in the watershed. Concerns and issues were voiced, discussed, and strategies proposed. The top elements identified during this session are listed in Table 1.

A major outcome of the Coordinated Resource Management session was formation of the Penn-York Bentley Creek Watershed Association. This open group of stakeholders meets every month to keep updated on progress and to advocate the needs of the watershed. The Town of Ashland is an active participant in this association.

The U.S. Fish and Wildlife Service initiated the Bentley Creek Stream Restoration Project in 1998. This project demonstrates an approach to stream restoration that incorporates the principles of applied river morphology. The primary concept behind this approach is that undisturbed streams are very stable during high water situations. Since a primary concern in the Bentley Creek watershed is the instability and resulting gravel deposition, restoration of the stream channel is a beginning goal. The river morphology approach aims to restore the natural stability of Bentley Creek by reconstructing a stream system that is matched to the physical characteristics of the stream section. A demonstration project was implemented along a Pennsylvania reach of Bentley Creek in 1998. A conceptual restoration plan for the remainder of the stream is expected to be completed in 1999.

Additional efforts to resolve flooding and drainage problems in the Town of Ashland are numerous. When road, shoulder, culvert, and road ditch repairs have been necessary, every effort has been made to address the problem rather than just repairing the damage. Extensive channel improvements have been implemented in Seeley Creek, Bentley Creek, and in the Chemung River at the mouth of Bentley Creek. Erosion sites have been rehabilitated with rock riprap. Local regulations require that timber harvesting operations address stormwater management and erosion control. This Plan represents a serious effort on the part of the Town of Ashland to identify and implement measures that will further reduce flood damages.

Table 1. Coordinated Resource Management Recommendations, Bentley Creek Watershed

ISSUES

1. Flood damage
2. Lack of watershed specific plan
3. Watershed stabilization (land, streams, banks)
4. Gravel and debris (including trees at bridges, etc.)
5. Need for landowner education and information
6. Need for coordination
7. Loss of property
8. Funding
9. Level of stakeholder commitment
10. How to increase stakeholder commitment
11. Need for watershed information (hydrology, land use, etc.)
12. Determine areas of responsibility
13. Permit process – complexity
14. Enforcement of existing regulations
15. Cost of solutions

NEEDED INVOLVEMENT

1. All watershed landowners/businesses
2. All local government
 - * Town/Township
 - * Counties
 - * Villages/Boroughs
 - * Conservation Districts
3. State Agencies
 - * PA DEP Bureau of Land & Water Conservation
 - * PA DCNR Bureau of Forestry
 - * PA Fish and Boat Commission
 - * PA DEP Bureau of Dams, Waterways & Wetlands
 - * PA Game Commission
 - * PA DEP Bureau of Water Projects
 - * PA DOT
 - * NY DOT
 - * NY DEC Flood Control
 - * PA Emergency Management Agency
4. Federal
 - * Army Corps
 - * Natural Resources Conservation Service
 - * U.S. Fish and Wildlife Service
 - * Forest Service
 - * Federal Emergency Management Agency
 - * U.S. Geological Survey
5. Susquehanna River Basin Commission
6. Big Pond Association
7. Bradford/Sullivan Farm Bureau
8. Athens, Troy and Elmira School Districts
9. Legislators (state and federal)
10. Trout Unlimited

HOW TO GET STARTED

1. Organize a steering committee
 - * Local residents
 - * Property owners

- * Local government
2. Develop a comprehensive watershed restoration plan
 - * Damage assessment
 - * History of watershed
 - * Establish goal
 - * Develop issues
 - * Develop and evaluate alternatives
 3. Hold a public meeting
 - * Solicit volunteers
 - * Educate and inform public
 4. Form a Watershed association/organization
 5. Establish subcommittees/task forces
 - * Technical
 - * Issue identification
 - * Funding
 - * Alternative development and evaluation

INFORMATION NEEDED

1. Physical characteristics of the watershed
2. Identify sources of funding
3. Identify sources of technical, educational, etc. assistance
 - * Compile and distribute
4. Complete damage/problem inventory
5. Complete historical background of watershed
 - * Major watershed changes/impacts
 - * Past work in watershed
6. Flood plain delineation
7. Input from successful watershed organizations
8. Rules and regulations
9. Cost/benefit analysis
10. Projected costs

OPPORTUNITIES

1. Community cooperation
2. Money saved in damage prevention
3. Improved real estate values
4. Peace of mind from flooding, sense of security
5. Create local watershed association/network
6. Acquire/secure outside technical/financial assistance
7. Address identified issues in a coordinated manner
8. Develop a model watershed management plan for use by other N. Tier/S. Tier counties/regions
9. Better Life
10. Contractor profit through planned and implemented work

OVERALL RECOMMENDATIONS

1. Continue forward with the initiative
2. Keep both communities involved
3. Keep the Big Vision
4. Establish a mission statement
5. Form a steering committee
6. Continue a maintenance plan
7. Communicate with the public

HOW THIS PLAN WAS PREPARED

This Plan was prepared by the Ashland Flood Mitigation Planning Committee. The Committee was composed of the Town Supervisor, Highway Superintendent, Code Enforcement Officer, and the Regional Flood Specialist (who provided staff support). Additional participation was solicited. However, most of those contacted about participation in the flood mitigation planning process were unable to attend meetings. 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:

- **6/16/98: Organizational meeting:** 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. Define the scope of the planning process.
- **7/29/98: Assess hazards and problems:** Update on outreach activities. Review format for the survey of flood-prone residents. Compile information about flood hazards and problems throughout the Town of Ashland. Mark flood problem areas on a map.
- **9/8/98: Set flood damage reduction goals:** Update on outreach activities. Review hazard and problem text and add additional information. 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 Ashland.
- **10/22/98: Flood Solutions Workshop:** At a joint meeting with other Flood Mitigation Planning Committees and County and State agency personnel, review and discuss possible solutions to flooding and drainage problems. The agencies represented at this workshop included the County Emergency Management Office, County Soil and Water Conservation District, County Planning Department, County Environmental Management Council, County Legislature, Regional Planning Board, State Department of Environmental Conservation, and State Emergency Management Office.
- **1/25/99: Prepare an action plan:** Review flood mitigation goals. Review a map of land uses in relation to flood-prone areas. Evaluate potential flood solutions using 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 recurring flooding problems in the Town of Ashland have led to frequent interactions between residents, local businesses, and Town officials concerning water management issues. The problems and potential solutions arising from these ongoing interactions were incorporated into this flood mitigation planning process.

The Penn-York Bentley Creek Watershed Association was apprised of this planning effort. The planning committee incorporated the findings and recommendations of the Coordinated Resource management session (see Table 1) into the recommendations presented in this Plan. Additional input was sought through a newsletter article in the July 1998 edition of "The Bentley Creek Watershed News," which was mailed to all residents in the Bentley Creek watershed (clipping in Attachment D).

Additional public input was sought throughout the planning process. The Town distributed a questionnaire to property owners in flood-prone areas of the Town. Recipients were asked to provide information about flood problems and possible solutions.

A draft of this Plan was presented at a public information meeting on February 8, 1999. Due to limited attendance, a second public meeting to present the draft Flood Mitigation Action Plan was held at the March 10, 1999 meeting of the Town Board. Both meetings were publicized in the local newspaper. Minutes of the Board Meeting are included in Attachment D. The public meeting began with a presentation of the planning process and the proposed action items. This was followed by a general discussion of flooding issues. A large-format copy of the Flood Hazard and Problem Map (Attachment A) was displayed for review and discussion. Each participant was given a handout summarizing the flood mitigation planning process (included in Attachment D) and the Action Plan section of the draft document. Copies of the entire Plan were available for review. Those in attendance were supportive of this Plan. It was recommended that additional water level gauging be sought for the Chemung River as well as for the tributary streams. Action Item #14 was modified accordingly.

COORDINATION WITH RELEVANT AGENCIES

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

The following county, regional, and state agencies were contacted for relevant information and recommendations about this flood mitigation planning effort:

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
Bradford County, Pennsylvania, Conservation District
Southern Tier Central Regional Planning and Development Board
Sullivan Trail Resource Conservation and Development Council
New York State Emergency Management Office
New York State Department of Environmental Conservation
USDA Natural Resources Conservation Service, Chemung County, New York
USDA Natural Resources Conservation Service, Bradford County, Pennsylvania

Personnel from these agencies contributed to the planning process in a variety of ways: providing information, answering specific questions, reviewing minutes, reviewing draft sections of this document, and presenting recommendations at the Flood Solutions Workshop (at which flood mitigation alternatives were evaluated).

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 Ashland will be reviewed and updated at an annual meeting of the following Town officials: Town Board representative, Town Planning Board representative, Code Enforcement Officer, and Highway Superintendent. If possible, this meeting will be facilitated by an outside party (i.e. Regional Flood Specialist).

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 Ashland: riverine flooding, overland flooding and ponding, ditches and other localized drainage ways, groundwater flooding, and erosion of streambanks. The Town's Flood Insurance Rate Maps and Flood Insurance Study include detailed analyses of the flood hazards from the principle waterways in the Town. The identified areas of 100-year and 500-year flooding are shown on the Map of Flood Hazards and Problems (Attachment A). Additional hazards due to flooding and bank erosion exist along every stream in the Town and many unmapped drainage ways. 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 the Town of Ashland. 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, Town officials, residents, and agency personnel familiar with flooding in the Town of Ashland.

The **additional hazards** addressed in this Plan include: hazardous material spills, hurricanes, earthquakes, ice storms, drought, and wildfire. These hazards are identified in the Chemung County Comprehensive Emergency Plan. The hazard areas for these risks encompass the entire Town. The areas with the highest risk for hazardous material spills are along the railroad track and other transportation routes. Information about the problems associated with these hazards was assembled from the knowledge of Committee members, Village officials, and agency personnel.

RIVERINE FLOODING AND BANK 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 or river due to high water in the downstream waterbody.

The Town's Flood Insurance Rate Maps (FIRMs) identify the areas expected to be inundated by the 100-year and the 500-year flood on the Chemung River and the major streams. Development within the 100-year floodplain is regulated by local law. The FIRMs also provide the expected water elevations for the 100-year flood. Flood profiles and supporting

documentation are provided in the Flood Insurance Study. It should be noted that the hydraulic analyses used to delineate floodplains on the FIRMS were based on the assumption of unobstructed flow. The floodplains and flood elevations indicated on these maps 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 impact of 100-year flooding could be greater.

The potential for riverine flooding from the Town's smaller streams was not evaluated when the Flood Insurance Study and Flood Insurance Rate Maps were prepared. Yet these streams have floodplains, many of which pose serious flood hazards. Because there is no floodplain designated on the FIRMS, development along these streams is not regulated by the Town's local law 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 a major concern in the Town of Ashland. 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 and river 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 increased deposition rates in downstream reservoirs and the Chesapeake Bay. Although bank erosion and channel migration are natural processes, they can be accelerated by human activities.

Chemung River

The Chemung River flows generally southeastward through the Town of Ashland, with about 5 miles of the river either within the Town or along the northeastern municipal boundary. None of this riverfront is protected by a flood control levees. The dike that protects the south side of Elmira ends just upstream of the Ashland Town line, at Coldbrook Creek. Flood protection along the Chemung River is provided by four upstream dam projects: Arkport Dam on the Canisteo River (Steuben County, NY), Almond Dam on Canacadea Creek (Steuben County, NY), the Tioga-Hammond Dam Project on the Tioga River and Crooked Creek (Tioga County, PA), and the Cowanesque Dam on the Cowanesque River (Tioga County, PA). These structures reduce peak flows during flood events and prolong the period in which the river is bank full following each event.

The Chemung River occupies a wide floodplain in the Town of Ashland, within which the pattern of meanders and islands has changed over time. Progressive migration of the channel is causing riverbank erosion in many areas. One property owner reports losing an average of about 4 feet of river bank each year. Some areas that were once farmed have had to be abandoned. Channel migration poses a very serious threat to the Lowman Crossover (County Route 8). A meander in the river has moved downstream over the years and now threatens the roadway. In

recent years, the river flow pattern near Bentley Creek was altered by a large delta that formed at the mouth of the creek and extended half way across the river. This delta was removed in 1998.

PROBLEMS:

1. Maple Avenue: The most extensive floodplain development in the Town of Ashland is along Lower Maple Avenue (State Route 427). This route follows the southwest side of the Chemung River valley across the Town of Ashland. Approximately 50 homes and businesses are located within the 100-year floodplain. One house is classified by the National Flood Insurance Program as a “repetitive loss property,” due to flood damages in April 1993 and January 1996. The Maple Avenue area was devastated during the 1972 Hurricane Agnes flood and at least one building was washed away by the Chemung River. During the January 1996 event, flooding from the Chemung River filled basements, damaged property, and was within a few inches of the main floor of several houses. Additional flood damages along Lower Maple Avenue have resulted from obstructions that diverted floodwater from Seeley Creek into this area (Problem #7).
2. Lowman Crossover (County Route 8): The Lowman Crossover carries traffic across the Chemung River floodplain, crossing the river near the Village of Wellsburg. This road is frequently closed due to flooding (several times each year) and has sustained repeated erosion damage to the road surface. The road itself is threatened by a meander in the river, which has migrated progressively closer to the road. Closure of the Lowman Crossover inhibits access and emergency operations. The Wellsburg fire station (located south of the river) services areas north of the river in the Town of Ashland and Town of Elmira, which cannot be accessed quickly when the Lowman Crossover is closed. Two houses on the Lowman Crossover are located within the 100-year floodplain and have been damaged by river flooding. One was elevated above the base flood elevation after sustaining damage during the January 1996 flood.
3. Lowman Crossover bridge: The Lowman Crossover bridge and an adjacent section of railroad track are threatened by bank erosion on the right (south) bank of the Chemung River. The river no longer flows under the northern span of this bridge due to the accumulation of gravel on the inside edge of a bend. Rock riprap intended to stabilize the bank adjacent to the railroad track has been partially washed out.
4. Bank erosion: River bank erosion has led to discontinuation of farming in some parts of the Chemung River floodplain. One farmer fears the loss of 200 acres that are currently in production. Bank erosion and flooding threaten an outdoor catering business, which is located very close to the river.
5. Tory Meadows Drive: Approximately 6 houses and a farm on Tory Meadows Drive are located in the combined floodplain of the Chemung River, Coldbrook Creek, and Seeley Creek. This area was flooded from the Chemung River in 1972.
6. Dam failure (not shown on map): The emergency plans for catastrophic releases of water from the Tioga, Hammond, and Cowanesque Dams indicate that such an event could inundate significant portions of the Town of Ashland, with arrival times of 14 or more hours. Although the possibility of such an occurrence is considered to be extremely remote, the potential damages could be quite severe.

Coldbrook Creek

Coldbrook Creek forms the northern corporate limit of the Town of Ashland for about one mile before entering the Chemung River. This reach of Coldbrook Creek is located completely within the 100-year floodplain of the Chemung River and was flooded by the river during the 1972 Hurricane Agnes Flood. The area has not experienced flooding from Coldbrook Creek, probably due to the diversion of part of the Coldbrook Creek drainage into Seeley Creek at the time the Seeley Creek flood control levee was constructed.

Seeley Creek

Seeley Creek enters the Town of Ashland just downstream of a flood control levee in the Town of Southport. It flows through Ashland for about 2 miles before entering the Chemung River. Channel instability is a serious problem along the entire length of Seeley Creek, resulting in the delivery of high sediment loads to its lower reaches in the Town of Ashland. This high sediment load has resulted in a braided and unstable channel. This instability has been aggravated by the accumulation of trees and other debris from eroded banks upstream.

During three recent floods (August 1994, January 1996, and November 1996), Seeley Creek has overflowed its bank upstream of the railroad bridge and Maple Avenue bridge, flooding development a mile away on Lower Maple Avenue. This overflow is attributed, in part, to a large tree jam the size of a two story house. This debris blocked the main channel, diverting water into an overflow channel that was unable to contain the flow. Floodwater breached a berm (located on the bank at the outside of a sharp bend), flowed across an agricultural field, and backed up behind an elevated railroad bed. During each of the three flood events, the railroad bed breached or overflowed, releasing a wall of water that flooded numerous structures and Lower Maple Avenue. During the August 1994 (Hurricane Beryl) event, this flooding resulted in a release of hazardous materials stored at a Maple Avenue business. In addition, a train (that could not be recalled in time) crossed the damaged section of track, posing a serious risk of derailment. In 1997, the debris dam was removed from Seeley Creek and the channel was modified and stabilized at the site where water had been diverted. The channel was reconstructed with a capacity comparable to that at the railroad bridge downstream. The Town of Ashland established a maintenance program to keep this section of Seeley Creek cleared of debris. In 1998, gravel was removed to maintain the design capacity of the main channel through this project area.

PROBLEMS:

7. Maple Avenue: Flooding of Lower Maple Avenue (State Route 427) by Seeley Creek has occurred beyond the normal Seeley Creek watershed, as well as in areas adjacent to Seeley Creek. The area impacted includes 1 farm, 5 businesses, more than a dozen houses, a railroad track, and the road. The railroad company reports that it costs them about \$50,000 each time they need to stop a train due to flooding or damaged track. One house on Lower Maple Avenue is classified as a National Flood Insurance Program “repetitive loss property” due to flooding from Seeley Creek in August 1994 and January 1996. All appliances in this house have subsequently been relocated to the first floor to minimize damages from future flooding of the basement. The channel improvements in Seeley Creek and the stream maintenance program initiated by the Town of Ashland should

- reduce future flooding of Lower Maple Avenue from Seeley Creek.
8. Tory Meadows Drive: Two or three houses on Tory Meadows Drive have experienced flooding problems from Seeley Creek. This area is located in the combined floodplain of the Chemung River, Coldbrook Creek, and Seeley Creek (see also Problem #5). Two houses are classified by the National Flood Insurance Program as “repetitive loss properties,” due to flood damages from Seeley Creek in August 1994 and January 1996. Flooding problems at this site were subsequently addressed by the Town and property owners through gravel removal from the channel, re-establishment of a high flow channel, and construction of a small dike.

South Creek

South Creek is a Seeley Creek tributary that flows through the southwest portion of Ashland for about two miles. The only development within the mapped floodplain of South Creek is Bentley Road and a bridge across the creek. Streambank erosion has caused damage along South Creek and several unnamed tributaries.

PROBLEMS:

9. Bentley Road: Bank erosion on South Creek and an unnamed tributary has threatened Bentley Road, the South Creek bridge, 2-3 houses near South Creek, and 5 houses along the tributary. These sites have been protected with rock riprap.
10. Unnamed tributary along Rogers Road: The northern tributary to South Creek that flows near Rogers Road damaged the culvert where it passes under State Route 14, necessitating replacement.
11. Unnamed tributary at South Creek Church: The northern tributary to South Creek that passes under State Route 14 at the South Creek Church, has washed out the culvert under Route 14, necessitating replacement.

Bentley Creek

Bentley Creek is a tributary to the Chemung River that flows north from Pennsylvania and through the center of the Village of Wellsburg (located within the Town of Ashland). Bentley Creek flows through the Town upstream and downstream of Wellsburg for a total distance of about ½ mile. There are no flood-control structures on Bentley Creek.

Bentley Creek is an extremely unstable stream, which is subject to extensive streambank erosion and accumulation of erosion products (gravel and trees) within the channel. A recent survey found that 87% of the main stem of Bentley Creek (in Pennsylvania and New York) contains an unstable creek environment. Prior to 1972, these problems were relatively minor. However, streambanks throughout the Bentley Creek watershed experienced extensive damage during the 1972 (Hurricane Agnes) flood and subsequent flood recovery efforts. Streambank erosion has been accelerating since that time and remains a serious problem. Expenditures for bank stabilization projects throughout the watershed have exceeded \$1 million since 1994. The eroded soil particles and trees that are undermined by erosion accumulate within the channel and are transported downstream. This deposition contributes to reduced flow capacity within the Bentley Creek channel in the Town of Ashland and Village of Wellsburg (particularly under the

Front Street bridge and the railroad bridge in the Village). When the channel is filled or blocked by debris, floodwaters inundate surrounding areas. Over the years, a large delta of sediment accumulated at the mouth of Bentley Creek, altering flow patterns in the Chemung River and reducing the flow of water from Bentley Creek into the river. This sediment was removed in 1998. The U.S. Fish and Wildlife Service is currently preparing a restoration plan that will outline management and restoration strategies for stabilizing Bentley Creek. This plan will not address the volume of floodwater in the creek, but will recommend solutions for stabilizing the channel and sediment load.

There are seven man-made impoundments located upstream of Ashland in the Bentley Creek Watershed. The three largest are Ridgebury Lake (surface area of 58 acres, volume 150 million gallons), Lake Ondawa (surface area 25 acres, volume 81 million gallons), and Miller Pond (surface area 10 acres, volume 8 million gallons). None of these reservoirs were constructed or maintained for flood control purposes. The condition and safety of the dams that form these lakes is not known.

PROBLEMS:

12. Sediment accumulation: Sediment accumulation near the mouth of Bentley Creek restricts flow into the Chemung River, causing water to back up in the Village of Wellsburg. The Town has repeatedly removed gravel from this lower reach of the creek. In 1998, 25,000 cubic yards of sediment were removed from the lower reach of Bentley Creek and a delta at the mouth of the creek.
13. Wellsburg Fire Station: Emergency services for the Town of Ashland operate out of the Wellsburg Fire Station, which is located within the Bentley Creek floodplain in the Village of Wellsburg. This building was constructed in 1946 and a major addition was added in 1975 (after flood damage from the Chemung River in 1972 and 1975). The floor is approximately 4 feet below the predicted elevation of the 100-year flood. The building houses the Wellsburg Fire Department, a New York State Police substation, and the Village offices. During the January 1996 flood, the fire station was flooded to a depth of 54", causing more than \$250,000 in damage, primarily to building contents and equipment. The building was subsequently restored. The Village is pursuing alternatives for relocating the fire station to a site that is less vulnerable to flooding.
14. Town Hall: The Ashland Town Hall is located within the 100-year floodplain of Bentley Creek on Sixth Street in the Village of Wellsburg. The building has no history of flooding. The Town is planning an addition to this facility.
15. Mobile home park: A 100-unit mobile home park is located completely within the floodplain of Bentley Creek in the Village of Wellsburg, Town of Ashland, and Ridgebury Township (in Pennsylvania). Fifty mobile homes are currently located in the Town of Ashland and ten additional sites have been numbered. All of these sites are within the floodway. No houses were flooded during the January 1996 flood. However, the area between the existing mobile homes and Bentley Creek did flood and the park owner is interested in expanding into this area. The Town is aware of this and would not authorize this expansion.
16. Upstream dams (not shown on map): Dam failure at any of the seven man-made lakes

located in the Bentley Creek watershed would send a wave of high water down Bentley Creek. The risk of failure and the potential impacts in Ashland are not known.

Tyler Run

Tyler Run is an intermittent eastern tributary to Bentley Creek. Although the channel is usually dry, it is susceptible to flash flooding with high sediment and debris loads. A local cloudburst in 1989 resulted in a debris jam under the Terrace Street Extension bridge that caused water to back up along the road. This event caused flood damage to the bridge, one house, and the Town highway garage (plus additional damage downstream in the Village of Wellsburg).

PROBLEMS:

17. Terrace Street Extension: Streambank erosion on Tyler Run threatens one house, which has been protected with riprap. If the bridge plugs with debris, this house and the Town highway garage could be flooded again.

White Hollow Run

White Hollow Run is a western tributary to Bentley Creek. The downstream reach of this stream is unstable, with bank erosion threatening development in the Village of Wellsburg.

PROBLEMS:

18. Robinson Road: The Town recently spent \$36,000 on streambank protection on White Hollow Run and to replace the box culvert under Robinson Road.

Baldwin Creek

Approximately 2 ½ miles of Baldwin Creek flow through the northeastern section of the Town of Ashland. Most of the area within the Baldwin Creek floodplain is agricultural land. The creek experiences bank erosion and a buildup of trees and debris. A 1998 project is currently underway to remove trees from the channel upstream in the Town of Elmira. Baldwin Creek caused flooding, bank erosion, and floodplain scouring along Old Lowman Road three times in recent years (August 1994, January 1996, and November 1996).

PROBLEMS:

19. Near Town of Elmira line: One house is located within the 100-year floodplain of Baldwin Creek near the Elmira Town line. This house is located near the stream and is threatened by bank erosion.
20. Old Lowman Road: Five houses on Old Lowman Road are located within the 100-year floodplain of Baldwin Creek. Three of these houses have been damaged in recent years. During the January 1996 flood, one house received 4 feet of water and two had basement flooding to within a foot of the main floor. The most severely impacted of these homes is classified by the National Flood Insurance Program as a “repetitive loss property,” due to flood damages in August 1994 and January 1996. Bank erosion has reduced one yard by about 5 feet during each major storm. These problems are attributed, in part, to the limited capacity of the Old Lowman Road bridge over Baldwin Creek. Floating trees become caught on the bridge and water is displaced onto adjacent properties. Water

washing over the approach to this bridge removed large blocks of asphalt from the road surface in January 1996.

21. State Route 17 bridges: Two bridges carry the east- and west-bound lanes of State Highway 17 over Baldwin Creek. The State Department of Transportation has indicated that these bridges will be replaced, and clearance under them increased, as part of a project scheduled for completion in 2000.

DRAINAGE PROBLEMS

Overland flooding 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 problems with drainage ditches on several roads in the Town of Ashland.

PROBLEMS:

Drainage problems have damaged road ditches along the following roads. Most of these problems are attributed to new development.

22. Suffern Hill Road (South Creek drainage area): Several culverts had to be replaced.
23. Harry Smith Road (South Creek drainage area): Road ditch damage.
24. Merriam Road (South Creek drainage area): The ditch has been stabilized with rock.
25. Rogers Road (South Creek drainage area): The ditch has been stabilized with rock.
26. West end of Comfort Hill Road (South Creek drainage area): Road ditch damage.
27. East end of Comfort Hill Road (near White Hollow Run): The ditch has been stabilized with rock.
28. Robinson Road (White Hollow Run drainage area): Plowing of a previously uncultivated field caused the formation of a gully. Concentrated flow at this site washed out a culvert under Robinson Road. The culvert has been replaced.
29. Doty Hill Road (White Hollow Run drainage area): Road ditch damage.
30. Cowell Hill Road (near Tyler Run): Road ditch damage.

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 Town of Ashland. 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:

31. Lower Maple Avenue (not shown on map): Many homes on lower Maple Avenue (State Route 427) experience basement flooding due to groundwater infiltration and/or surface drainage problems.

32. Lowman (not shown on map): A shallow water table in the Lowman area causes basement flooding of 4-5 houses.

FLOOD WARNING

Flood warnings in the Town of Ashland 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. The Town is in the process of revising and updating its emergency response plan.

Flood warnings for Chemung River flooding are based on a network of rainfall and river level gauges in the Chemung River Basin. The travel time of peak flows from the Chemung River gauge in Corning to the Chemung River gauge in Elmira is 4 to 5 hours. Greater warning times can be provided based on gauges on the three rivers that join upstream of Corning (average travel times from upstream gauges to Elmira range from 9 to 20 ½ hours), a network of rainfall gauges throughout the basin, and rainfall forecasts.

The areas expected to be inundated by various flood stages on the Chemung River are shown on River Stage Forecast Maps. These maps are used to identify areas requiring evacuation and to designate evacuation routes. River Stage Forecast Maps have been prepared for the Chemung River in the Town of Ashland.

Flood warnings for tributary streams are based on rain gauge data and rainfall forecasts by the National Weather Service. There are currently no automated rain gauges located in the drainage basins for any of the tributaries that flow through the Town of Ashland. Procedures for emergency reporting of high rainfall data by volunteer rain gauge readers are not yet established.

PROBLEMS:

33. Flash flooding: The short steep tributary streams in the Town of Ashland are highly susceptible to flash flooding, which can occur suddenly with little or no lead-time.
34. Gauges: There are no stream gauges or stream monitoring locations on the tributary streams that flow through the Town of Ashland. Of particular concern is the lack of gauge data for Bentley Creek.
35. Rain gauges: There are no automated rain gauges in the Seeley Creek, Bentley Creek, or Baldwin Creek watersheds. A procedure for timely reporting of high rainfall rates and amounts by volunteer rain gauge readers in these areas has not been established.
36. Flood stage maps: Flood Stage Forecast Maps are not available for Bentley Creek. The Bentley Creek floodplain in the Village of Wellsburg and adjacent parts of the Town of Ashland contains extensive floodplain development that is not protected by any flood control structures. Emergency operations would be enhanced by maps delineating the areas inundated by specified stream levels.

DEVELOPMENT TRENDS

The Town of Ashland is located southeast of the City of Elmira. Current land uses in the Town are indicated on the Map of Land Uses (Attachment B). Development is currently concentrated west and north of Elmira in the Towns of Big Flats and Horseheads. However, future development of rural areas in the Town of Ashland is likely. The upland hills contain many sites that could be profitably developed. In addition, development within the Chemung River floodplain on Maple Avenue is likely. Completion of the Elmira Arterial South Extension to Route 427 in Southport (Cedar Street) and improvements to the Lowman interchange on State Highway 17 are expected to improve access to potential development sites in the Town of Ashland. The Town is currently reviewing its zoning ordinance and may incorporate building requirements for stormwater management, areas with known shallow water table, and steep slopes.

PROBLEMS:

37. Stormwater management: Building regulations in the Town of Ashland do not protect against increased runoff and altered drainage patterns from new development.
38. Shallow water table: The Town of Ashland building codes do not protect against the construction of basements below the seasonal high water table levels. The data documenting water table levels in undeveloped sites do not exist.

HAZARDOUS MATERIAL SPILLS

The Town of Ashland has the potential for accidents involving petro-chemicals and other hazardous materials, including radioactive materials. This risk includes in-transit releases, (e.g., railroads and highways) and fixed sites where hazardous materials are used or stored. Accidents involving hazardous materials may result in fire, explosion, or the release of toxic fumes. The risk of flooding of highways, secondary roads, railroads, and stationary sites increases both the likelihood of a hazardous material spill and the potential dispersion of contaminants.

The Town experienced a serious flood-related hazardous material spill during the Hurricane Beryl flood in August of 1994. Flooding resulted in the release and dispersal of hazardous chemicals that were stored at a business on Maple Avenue. The cleanup expenses to date have exceeded \$500,000 and the cleanup is not yet complete. Ashland remains at risk of additional hazardous material spills, particularly along the major transportation routes through the Town.

PROBLEMS:

39. Railroad: Hazardous materials are routinely transported through the Town of Ashland by rail. This railroad is located within the Chemung River floodplain and has a history of flooding and flood damage. The risk of a train derailment increases significantly during flood events.
40. State highways: State Routes 17 and 427 carry traffic through the Town of Ashland.

Route 427 (Maple Avenue) is located in the Chemung River floodplain. The risk of flooding of this highway increases both the likelihood of a hazardous material spill and the potential dispersion of contaminants. The truck traffic on Route 427 is expected to increase significantly when the Elmira Arterial South Extension is completed to Route 427 in Southport (Cedar Street). Improvements to the State Route 17 interchange with County Route 8 (Lowman Crossing) are expected to improve the safety in that location. Both projects are scheduled for completion in 2000.

OTHER HAZARDS

The Chemung County Comprehensive Emergency Plan includes a risk analysis, in which following hazards are identified as concerns for the Town of Ashland:

- Ice jam
- Ice storm
- Power failure
- Severe winter storm
- Hazardous materials -- transit
- Windstorm
- Transport -- highway
- Bombing
- Gas

The Chemung County Comprehensive Emergency Plan provides general all-hazards management guidance, using existing organizations and lines of authority. It provides a comprehensive emergency management system that deals with prevention and mitigation activities, response operations, and recovery activities. The Town's emergency response plan coordinates with the County Plan.

PROBLEMS:

41. Severe weather: The weather conditions that lead to flooding may be accompanied by additional emergency conditions. Hurricanes, tornadoes, or winter storms that cause flooding may also trigger transportation accidents, hazardous material releases, landslides, power failure, or water supply failure. The emergency response to these disasters may require simultaneous response to a variety of emergency conditions.
42. Earthquakes: Although the earthquake hazard in Chemung County is considered to be low, there is some risk. Earthquakes can cause buildings to collapse and disrupt utilities. In addition, an earthquake can trigger landslides, fire, flash floods, levee failure, dam failure, transportation accidents, hazardous material releases and fires.
43. Wildfire: The Town of Ashland and surrounding areas have a history of wildfire. The risk of wildfire is greatest during periods of drought. Most forests fires are started by people through negligent behavior. If heavy rains follow a major forest fire, other natural disasters can occur, including landslides, mudflows and floods.

44. Gas supply lines: Gas supply lines service development along State Routes 14 and 427 (Maple Avenue). The pipeline along Route 14 extends to the mobile home park and services more than 100 households. The Maple Avenue pipeline is larger, servicing Wellsburg and Maple Avenue development. The depth of these pipelines under streams and drainage ways is not known. Of particular concern is the Maple Avenue pipeline where it passes beneath the highly unstable Seeley Creek (downstream of the Maple Avenue bridge).

FLOOD MITIGATION GOALS

Although the policies of the Town of Ashland have included efforts to mitigate flood damages, these policies do not stem from written goals that have been adopted by the Town. The Town Board has demonstrated its commitment to the resolution of flooding problems by financing stream maintenance projects in Seeley Creek, Bentley Creek, and the Chemung River.

The following risk reduction goals were prepared by the Flood Mitigation Planning Committee, based on their understanding of the Town's problems and objectives. These goals emphasize the need for a variety of measures to prevent additional flooding problems, while protecting the development that is currently at risk. The need for cooperation with numerous agencies and neighboring municipalities was also highlighted.

PREVENTIVE MEASURES

- * Reduce the risks to new development in identified flood-prone areas and near streambanks by educating developers and implementing controls as appropriate.
- * Improve the management of stormwater on a watershed basis (by encouraging establishment of a County engineering position to review stormwater management practices and implement watershed-based stormwater management planning).
- * Establish driveway and stormwater management standards for all new development.
- * Insure ongoing maintenance of creeks, ditches, and drainage ways.

NATURAL RESOURCE PROTECTION

- * Insure that timber harvesting in neighboring communities (in Pennsylvania and New York) incorporates adequate stormwater controls.

PROPERTY PROTECTION

- * Install mitigation measures to resolve drainage problems whenever repairs are necessary.
- * Facilitate floodproofing of existing flood-prone development through education and incentives.

STRUCTURAL SOLUTIONS

- * Construct structural flood control measures as appropriate.

EMERGENCY SERVICES

- * Maintain and expand existing emergency operation and flood warning capabilities.
- * Prepare a more extensive emergency plan.

OTHER GOALS

- * Continue and expand cooperation with the Town of Southport, Town of Elmira, Pennsylvania, NYS Department of Environmental Conservation, and County Soil and Water Conservation District, particularly with regard to the effect of development on neighboring municipalities.

FLOOD MITIGATION SOLUTIONS

One Town of Ashland Flood Mitigation Planning Committee member participated in a Flood Solutions Workshop (held on October 22, 1998) with representatives of 7 municipalities, and county, regional, and state agencies. Alternative techniques for reducing flood damages were presented by agency personnel. Participants discussed and evaluated the various mitigation measures and completed a Flood Solutions Worksheet. Those unable to attend the workshop reviewed this worksheet and selected techniques applicable to the problems and goals for Ashland. A copy of this worksheet indicating the recommended solutions for the Town of Ashland is provided in Attachment C. All of the measures listed on this worksheet were reviewed and evaluated. The techniques that committee members recommend initiating or expanding in the Town of Ashland are indicated in Attachment C.

ACTION PLAN

The following activities are recommended to minimize the effects of flooding in the Town of Ashland. These are action items that can be accomplished by the Town 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 Town's flood mitigation goals. The timetable and source of funding for each activity is given in Table 2.

PUBLIC INFORMATION

1. Display map of flood hazards and problems: The map showing flood plains and flood problem areas that was prepared for this Plan will be posted in the Town Hall after the present renovation is complete. The Town 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. Educate potential property buyers and builders: The Chemung County Water Quality Strategy Committee has recently produced a brochure entitled "Investigating Potential Water and Flood Control Problems Before You Buy or Build." This is a valuable resource for educating potential homebuyers or builders about flood risks and where to get additional information. The Town of Ashland, through its representation on the County Water Quality Strategy Committee, will support efforts to distribute this brochure and other relevant information to potential property buyers and builders. Copies of the brochure will be displayed at the Ashland Town Hall.
3. Display flood information in Town Hall: The Code Enforcement Officer will review existing brochures about flood hazards, flood damage prevention, and emergency preparedness. Suitable information for distribution at the Town Hall will be obtained and displayed.

PREVENTIVE ACTIVITIES

4. Update zoning and subdivision regulations: The Town of Ashland will initiate the process of reviewing and updating the zoning and subdivision regulations in 1999. As part of this process, the Town will evaluate a number of provisions for addressing flooding and drainage problems, including the following:
 - ⇒ a stream setback provision,
 - ⇒ a Conservation District encompassing the floodway of the Chemung River,
 - ⇒ stormwater management standards,
 - ⇒ erosion and sediment control standards,
 - ⇒ cluster development, and
 - ⇒ design standards for driveways, private bridges, and private culverts.

5. Encourage County to provide engineering support for stormwater management: Chemung County has previously applied for funding to hire an engineer to address stormwater management issues on a countywide basis. The Town of Ashland will encourage the County to pursue this idea. The issue will be raised at meetings of the Rural Association of Mayors and Supervisors and the County Water Quality Strategy Committee.
6. Evaluate funding mechanism for stream maintenance: The Town currently funds stream maintenance operations through its Highway Department budget. During the next budget cycle, the Town will review the feasibility of placing a line item in the budget for drainage system maintenance.
7. Prepare drainage system maintenance plan: The Town of Ashland has implemented several stream projects in Seeley and Bentley Creek in recent years. They recognize the need to insure that this work is maintained and that preventive measures are implemented in all of the Town's waterways. The Town will prepare a written Drainage System Maintenance Plan specifying: 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 and Water Conservation District Manager and the Regional Flood Specialist (from Southern Tier Central Regional Planning and Development Board) with implementation of this task.

NATURAL RESOURCE PROTECTION

8. Implement stream stabilization projects: The Town will continue to work cooperatively with property owners, the County Soil and Water Conservation District (S&WCD), the Federal Emergency Management Agency (FEMA), and others to implement stream stabilization projects. Projects constructed under the County's 1/3 program will be cost shared by the Town, the County, and the property owner.
9. Implement restoration measures in Bentley Creek: The ongoing Bentley Creek Stream Restoration Project of the U.S. Fish and Wildlife Service will produce a conceptual plan for stabilization of Bentley Creek based on the principles of applied fluvial geomorphology. The measures identified in the stabilization plan will not reduce the volume of flood discharges, but are expected to reduce the flood damages (Problems #12 through 15) by reducing bank erosion, debris accumulation, and sedimentation. When the Bentley Creek Restoration Plan is complete, the Town of Ashland will support and assist with implementation of the recommended stabilization measures, as funding permits. It is expected that the restoration plan will be completed in 1999. Because the stability of Bentley Creek in the Village of Wellsburg and Pennsylvania affect conditions in Ashland, the Town will support stream restoration efforts throughout the watershed through continued participation in the Penn-York Bentley Creek Watershed Association.

PROPERTY PROTECTION

10. Assist property owners with floodproofing measures: The Code Enforcement Officer will continue to provide technical assistance for elevation of utilities and other measures for floodproofing existing structures. Information about floodproofing techniques will be included in the flood information available at Town Hall (Action Item #3). Information will be mailed directly to owners of National Flood Insurance Program “repetitive loss properties.” If residents request funding assistance, the Town will help with applications for financial assistance.
11. Improve Community Rating System classification: The Town is working to reduce the cost of flood insurance by improving its Community Rating System classification (which currently enables a 5% reduction in the cost of flood insurance coverage). The Town will review its participation in this program and evaluate the feasibility of qualifying for an improved rating. This Plan will be submitted after it has been approved by the Town Board. Additional efforts will be made to implement and document activities that will improve the classification, thus enabling a greater reduction in flood insurance premiums. The goal is to achieve a 10% reduction in premiums by 1999 or 2000.
12. Acquire and remove a flood-prone structure: The owner of a repeatedly flooded house near Baldwin Creek on Old Lowman Road (Problem #20) has agreed to sell the property below its fair market value if funding becomes available. The Chemung County Soil and Water Conservation District (S&WCD) has applied for funding from the New York State Clean Water/Clean Air Bond Act to purchase this property and demolish the building. The Town of Ashland supports this application because it would permanently resolve the flooding problem at this site (which is listed as a National Flood Insurance Program “repetitive loss property”).

STRUCTURAL SOLUTIONS

13. Evaluate and pursue alternatives for reducing flood damages from Bentley Creek: The Town of Ashland is among the local Sponsors of the PL 566 Bentley Creek Watershed of the Natural Resources Conservation Service (NRCS). The Preliminary Investigation Report (completed in December 1997) identified possible solutions to flooding and bank erosion problems. As a result of continued interest from the local Sponsors, a Plan of Work for developing a Watershed Plan and Environmental Assessment has been prepared (but not yet signed). The Town of Ashland will sign this Plan of Work and assist with its implementation. This effort will include an evaluation of alternative solutions to flooding and bank erosion problems and is scheduled for completion in 1999. The Town will then work closely with the other participants to implement recommended solutions to the Bentley Creek flooding problems in the Town of Ashland (Problems #12 through 15).

EMERGENCY SERVICES

14. Evaluate stream gauge needs: The Town will work with the Chemung County Emergency Management Office (EMO), the Flood Warning Service of Steuben and Chemung

Counties, and neighboring municipalities to address the lack of stream gauge information for Bentley Creek and Seeley Creek. The adequacy of existing gauges on the Chemung River will also be evaluated. It will be necessary to determine the type of gauge(s) desired (automated gauge or a painted staff gauge), identify suitable sites, and procure funding.

15. Improve emergency reporting of high rainfall amounts: The Town will work with the Chemung County Emergency Management Office, the Flood Warning Service of Steuben and Chemung Counties, and Bradford County agencies to establish procedures for emergency reporting of high rainfall events by a network of volunteer rain gauge readers. The feasibility of an automated precipitation gauge on Comfort Hill will be evaluated.
16. Review and update Emergency Plan: The Town is currently working with the Chemung County Emergency Management Office to review and update the Emergency Plan for the Town of Ashland. The revised plan is expected to be adopted in 1999.
17. Install generator for Town garage: The Town plans to acquire a generator at the Town garage to enable operation of equipment at this site during an emergency.
18. Install radios in Town Hall: The Town plans to install radios in the Town Hall (after ongoing renovations are complete) to enable use of this facility as a command post during an emergency.

POST-DISASTER MITIGATION POLICIES AND PROCEDURES

Following a flood incident, the Town of Ashland will examine the damage areas and evaluate the suitability of rebuilding damaged structures. They will assist property owners with evaluating the cost of repairs and the cost of floodproofing or other mitigation measures. If any properties sustain extensive damages, the cost-effectiveness of seeking federal funding for a buyout will be evaluated. To the extent possible, property owners will be provided with appropriate recommendations and information to enable them to make informed decisions.

Repairs to buildings located within the 100-year floodplain will comply with the local law for floodplain development, which specifies 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 2. Flood Mitigation Action Items (page 1 of 2)

PUBLIC INFORMATION			
Task	Responsible Person	Time Table	Financing
1. Display map of flood hazards and problems	Code Enforcement Officer	1999	none required
2. Educate potential property buyers and builders	Code Enforcement Officer	1999	County expense
3. Display flood information in Town Hall	Code Enforcement Officer	1999	minimal expense

PREVENTIVE ACTIVITIES			
Task	Responsible Person	Time Table	Financing
4. Update zoning and subdivision regulations	Planning Board	1999-2000	staff and volunteer time
5. Encourage County to provide engineering support for stormwater management	Supervisor, Code Enforcement Officer	1999	staff and volunteer time
6. Evaluate funding mechanism for stream maintenance	Supervisor	1999	staff and volunteer time
7. Prepare drainage system maintenance plan	Highway Superintendent	1999	staff time

NATURAL RESOURCES PROTECTION			
Task	Responsible Person	Time Table	Financing
8. Implement stream stabilization projects	Highway Superintendent (working with County S&WCD)	ongoing, as funding permits	Town, County, FEMA, property owner, etc.
9. Implement restoration measures in Bentley Creek	Highway Superintendent (working with County S&WCD and others)	as funding permits	cost unknown

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

PROPERTY PROTECTION			
Task	Responsible Person	Time Table	Financing
10. Assist property owners with floodproofing measures	Code Enforcement Officer	ongoing	staff time
11. Improve Community Rating System classification	Code Enforcement Officer	1999-2000	staff time
12. Acquire and remove a flood-prone structure	County S&WCD Manager	when funding is available	approximately \$60,000

STRUCTURAL SOLUTIONS			
Task	Responsible Person	Time Table	Financing
13. Evaluate and pursue alternatives for reducing flood damages from Bentley Creek	Supervisor (working with NRCS, other Sponsors, and participating agencies)	Watershed Plan in 1999-2000; construction schedule unknown	staff and volunteer time for Plan; implementation costs unknown

EMERGENCY SERVICES			
Task	Responsible Person	Time Table	Financing
14. Evaluate stream gauge needs	Supervisor (working with County EMO and others)	1999	staff and volunteer time
15. Improve emergency reporting of high rainfall amounts	Supervisor (working with County EMO and others)	1999	staff and volunteer time
16. Review and update Emergency Plan	Town Board (working with County EMO)	1999	staff and volunteer time
17. Install generator for Town garage	Highway Superintendent	1999-2000	cost unknown
18. Install radios in Town Hall	Supervisor	1999-2000	cost unknown

ATTACHMENT A

Map of Flood Hazards and Problems

Summary of Flooding Problems

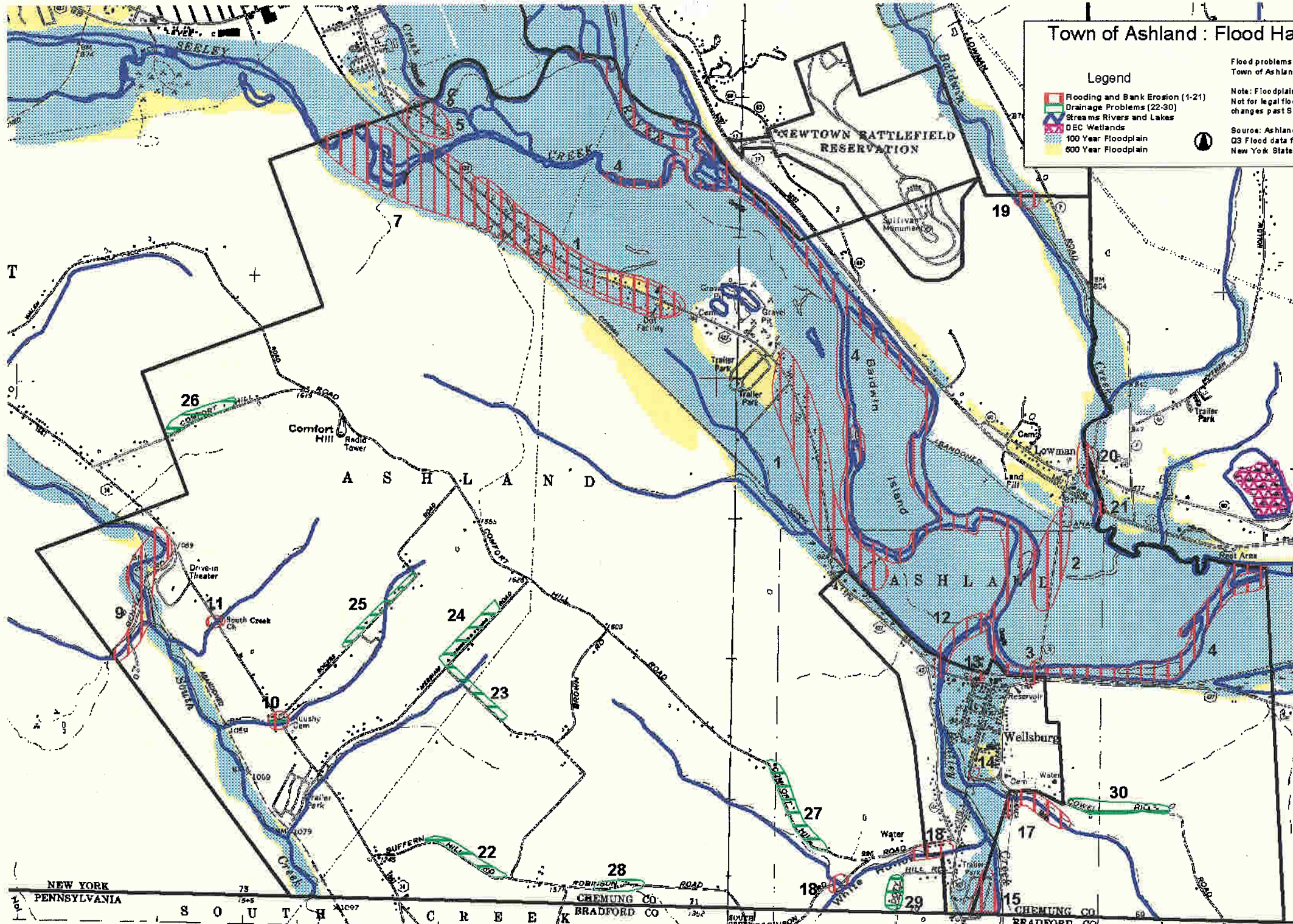
Town of Ashland : Flood Hazards and Problems

Legend

-  Flooding and Bank Erosion (1-21)
-  Drainage Problems (22-30)
-  Streams Rivers and Lakes
-  DEC Wetlands
-  100 Year Floodplain
-  500 Year Floodplain

Flood problems are described in "Flood Mitigation Action Plan Town of Ashland" (available at Ashland Town Hall)
 Note: Floodplains and Wetlands data are approximate. Not for legal floodplain or wetland determination. Does not include changes past September 1990.

Source: Ashland 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 ASHLAND

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	Chemung River	Maple Avenue	Town of Ashland	50			x			
2	Chemung River	Lowman Crossover (County Route 8)	Town of Ashland	2	x	x	x			
3	Chemung River	Lowman Crossover Bridge	T. Ashland/V. Wellsburg	0	x	x				
4	Chemung River	Bank Erosion	Town of Ashland	0		x				
5	Chemung River/ Coldbrook Ck./Seeley Ck.	Tory Meadows Drive	Town of Ashland	6			x			
6	Chemung River	Dam Failure	Town of Ashland	x	x		x			
7	Seeley Creek	Maple Avenue	Town of Ashland	*12	x	x	x			
8	Chemung River Coldbrook Ck./Seeley Ck.	Tory Meadows Drive	Town of Ashland	**3			x			
9	South Creek	Bentley Road	Town of Ashland	8	x	x				
10	South Creek	Unnamed tributary along Rogers Road	Town of Ashland	0	x	x				
11	South Creek	Unnamed tributary at South Creek Church	Town of Ashland	0	x	x				
12	Bentley Creek	Sediment Accumulation	Town of Ashland	0		x	x			
13	Bentley Creek	Wellsburg Fire Station	V. Wellsburg/T. Ashland	x			x			
14	Bentley Creek	Ashland Town Hall	T. Ashland/V. Wellsburg	0			x			
15	Bentley Creek	Mobile Home Park	Town of Ashland	50			x			x
16	Bentley Creek	Upstream Dams	Town of Ashland	x	x		x			
17	Tyler Run	Terrace Street Ext.	Town of Ashland	1	x	x	x			

*included in houses for problem #1

**included in houses for problem #5

**SUMMARY OF FLOODING PROBLEMS
TOWN OF ASHLAND**

Problem #	Stream/Drainage Basin	Problem Name	Municipality	Houses Affected	Roads/Culverts/Bridges?	Streambank/Lakeshore Erosion?	Riverine Flooding?	Stormwater Flooding?	Groundwater Flooding?	Potential Development?
18	White Hollow Run	Robinson Road	Town of Ashland	0	x	x				
19	Baldwin Creek	Near Town of Elmira Line	Town of Ashland	1		x	x			
20	Baldwin Creek	Old Lowman Road	Town of Ashland	5	x	x	x			
21	Baldwin Creek	State Rt. 17 Bridges	Town of Ashland	0	x		x			
DRAINAGE PROBLEMS										
22	South Creek	Suffern Hill Road	Town of Ashland	0	x			x		
23	South Creek	Harry Smith Road	Town of Ashland	0	x			x		
24	South Creek	Merriam Road	Town of Ashland	0	x			x		
25	South Creek	Rogers Road	Town of Ashland	0	x			x		
26	South Creek	West End of Comfort Hill Rd.	Town of Ashland	0	x			x		
27	White Hollow Run	East End of Comfort Hill Rd.	Town of Ashland	0	x			x		
28	White Hollow Run	Robinson Road	Town of Ashland	0	x			x		
29	White Hollow Run	Doty Hill Road	Town of Ashland	0	x			x		
30	Tyler Run	Cowell Hill Road	Town of Ashland	0	x			x		
SHALLOW WATER TABLE										
31	Chemung River	Lower Maple Avenue	Town of Ashland	x					x	
32	Baldwin Creek	Lowman	Town of Ashland	5					x	
FLOOD WARNING										
33	All	Flash Flooding	Town of Ashland	x	x		x			
34	Bentley Ck./other Streams	Gauges	Town of Ashland	x	x		x			
35	All	Rain Gauges	Town of Ashland	x	x		x			
36	Bentley Creek	Flood Stage Maps	Town of Ashland	x	x		x			
DEVELOPMENT TRENDS										
37	All	Stormwater Management	Town of Ashland	x	x			x		x
38	All	Shallow Water Table	Town of Ashland	x					x	x

**SUMMARY OF FLOODING PROBLEMS
TOWN OF ASHLAND**

Problem #	Stream/Drainage Basin	Problem Name	Municipality	Houses Affected	Roads/Culverts/Bridges?	Streambank/Lakeshore Erosion?	Riverine Flooding?	Stormwater Flooding?	Groundwater Flooding?	Potential Development?
HAZARDOUS MATERIAL SPILLS										
39	Chemung River	Railroad	Town of Ashland							
40	All	State Highways	Town of Ashland							
OTHER HAZARDS										
41	All	Severe Weather	Town of Ashland							
42	All	Earthquakes	Town of Ashland							
43	All	Wildfire	Town of Ashland							
44	Chemung River/Seeley Ck./ South Creek	Gas Supply Lines	Town of Ashland							

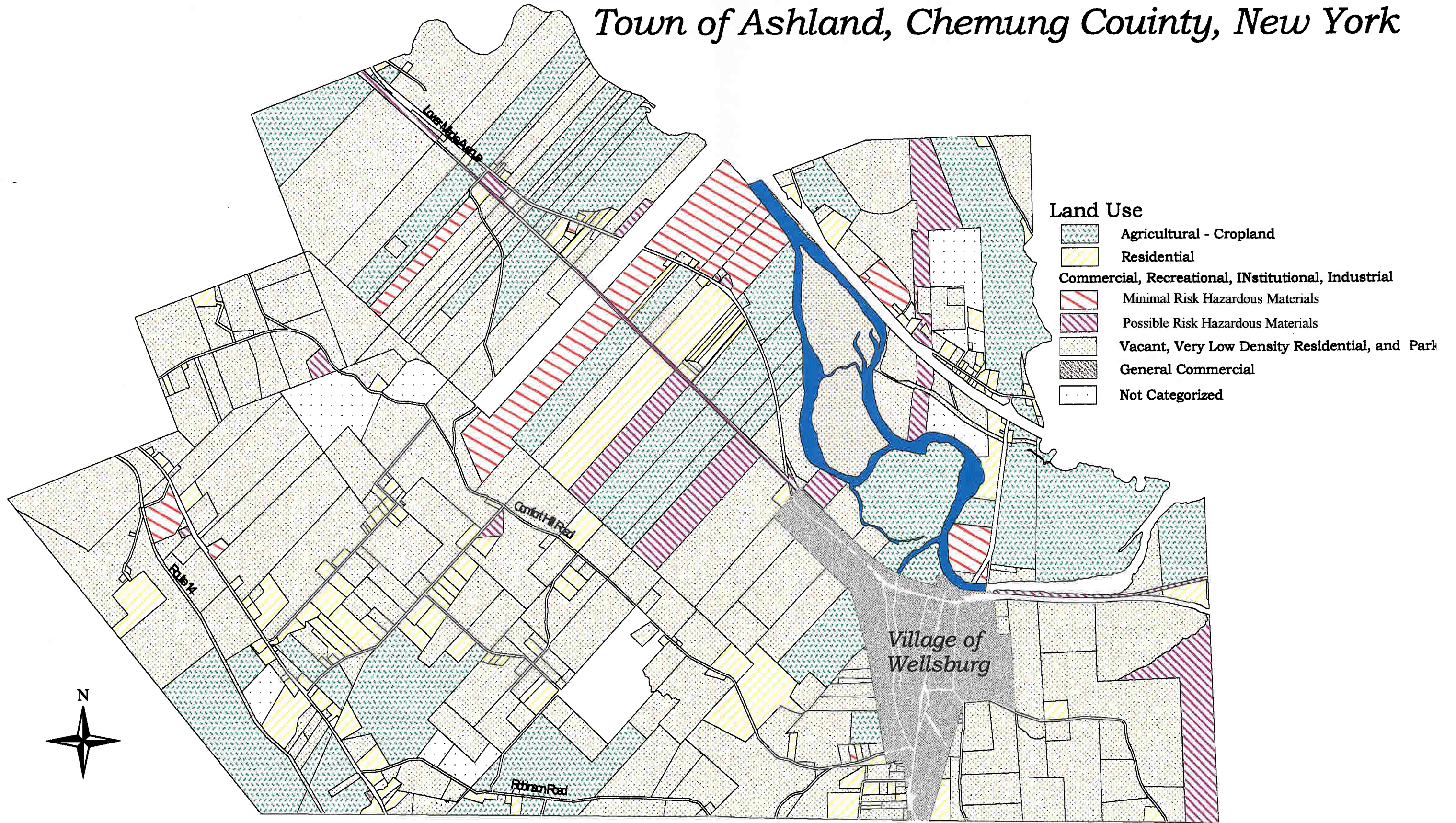
ATTACHMENT B

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 Ashland, Chemung County, New York



Source:
Chemung County Office of Real Property Services, 1997 and 1998.
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 Quarring, 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 Town of Ashland Flood Mitigation Planning Committee. Recommended techniques for the Town of Ashland are marked in the left column of the worksheet. If a technique is already implemented in the Town of Ashland, an X indicates an interest in additional implementation measures. Comments applicable to the Town of Ashland are indicated in italics.

Name: Flood Mitigation Planning Committee

Municipality: Town of Ashland

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
- Map determinations (flood zone for a particular property or structure) *do*
- Provide information about additional locations with known flood problems (riverine flooding, shallow water table, bank erosion, etc.) *do*
- Other: Post flood problem map in Town Hall

Flood Information Outreach Projects

- Newsletter article in _____
- Enclosure in utility bills _____
- Direct mailing to _____
- Special outreach project _____
- Other: _____

Real Estate Disclosure

- Education of potential property buyers
- Education of real estate agents
- Mandatory disclosure of flood history by real estate agents
- Other: Cooperate with county-wide efforts to educate potential home buyers

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: _____

Provide Technical Assistance

- Site-specific information about historic flood events
- Names of contractors and consultants knowledgeable or experienced in retrofitting techniques and construction
- Material on how to select a qualified contractor and what recourse people have if they are dissatisfied with a contractor’s performance
- Site visits to review flooding, drainage, and sewer problems or provide advice on contemplated development
- Advice and assistance on retrofitting techniques
- Other: Brochures in Code Enforcement Office

Environmental Education

- Education programs for children
- Education programs for adults
- Other: _____

PREVENTIVE ACTIVITIES

Floodplain Regulations

- Training for local officials (Code Enforcement Officer, Planning Board, etc.)
- Adopt updated NYS Model Law
- Revise law to require building elevation 2 feet above base flood elevation *have*
- 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: _____

Conventional Zoning

- 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
- Lake shore setback requirement
- Vegetated buffer strips along _____
- Conservation District or other restrictive development regulations *River floodway*
- 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 *have*
- 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: *Encourage County to provide engineering support for stormwater mgt.* _____

Drainage System Maintenance

- Line item in budget for drainage system maintenance
- Debris removal when problems occur
- Routine inspection and removal of debris 2 times per year
- Written drainage system maintenance plan (specifying maintenance needs and responsibilities)
- Establish a drainage district
- Channel/bank stabilization on *Seeley Creek, Bentley Creek* _____
- 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 *currently work with County S&WCD*
 - education and technical assistance
 - financial incentives
- Timber harvesting
 - regulations *have*
 - 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 *do*
- Financial assistance _____
- Other: _____

Infrastructure Protection

- Design standards for new or replaced bridges and culverts
- Mitigation of existing problems *at do whenever funding permits*
- 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 _____
- 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 *Bentley Creek, Seeley Creek*
- Straightening, widening, or deepening of _____
- Channel paving of _____
- Other: _____

Storm Sewers

- Storm sewer installation at _____
- Increased storm sewer capacity at _____
- Inspection and maintenance of existing storm sewer at _____
- Other: _____

EMERGENCY SERVICES

Flood Warning

- Rain gauges
- Automated gauges at Comfort Hill
- Volunteer reporting _____
- Stream/river/lake level gauges
- _____ Automated gauges at _____
- _____ Staff gauges at _____
- _____ Historic information for _____
- _____ Stage relation information for _____
- _____ Local flood forecast center (operated by Environmental Emergency Services)
- _____ Other: _____

Flood Response

- Flood stage forecast maps for Chemung River
- Emergency plan for municipality (command structure, communication procedures, emergency flood proofing measures, evacuation procedures, etc.)
- Other: Generator for Town garage. Radios in Town Hall.

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: _____

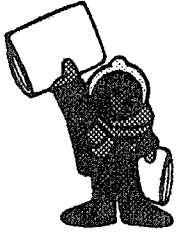
ATTACHMENT D

Documentation of Public Involvement:

Newsletter Article

Minutes of Public Information Meeting
(March 10, 1999 Town Board Meeting)

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



THE BENTLEY CREEK WATERSHED NEWS

VOLUME 1 NUMBER 1

JULY 1998

PUBLISHED BY THE BRADFORD COUNTY CONSERVATION DISTRICT
with funding provided through the US Fish & Wildlife Service

FLOOD MITIGATION PLANNING

The Village of Wellsburg and Town of Ashland have formed a committee to prepare a Flood Mitigation Action Plan of ways to protect the community from flood damages. This committee will document existing flooding problems, evaluate the range of potential solutions, and identify the most appropriate measures for addressing the identified problems. This planning process will enable the Town and Village to qualify for project funding from the recently established Flood Mitigation Assistance grant program. For more information, contact Janet Thigpen at (607)737-2096.

MINUTES OF THE TOWN BOARD MEETING OF THE TOWN OF ASHLAND ON WEDNESDAY, MARCH 10, 1999
AT THE TOWN HALL IN THE VILLAGE OF WELLSBURG, NEW YORK, AT 7:00 P.M.

Board members present were, Robinson, Zerbe, Jilson, Stanton. Russell was absent. Others present were Clerk Ann Doland, Fred Roberts, Gary Patelunas, Atty Balok, Art Doane, Janet Thigpen, Lorraine & Bob Green, Milt, Steve Yusko and Pat, Mr & Mrs John O'Shaneshee.

Public Hearing opened at 7:00 pm, on Flood mitigation. Janet Thigpen discussed with those present what was being done to help with flooding in our area. Hearing closed at 7:27 p.m.

Regular meeting opened with the salute to the flag.

Motion was made by Mr. Stanton, seconded by Mr. Jilson, moved to accept the minutes of the last meeting as transcribed by the clerk. Carried.

RESOLUTION NO. 1

RESOLUTION TO ALLOW A NEW VENTURE AT OLD DRIVE IN

Resolution by: Mr. Jilson

Seconded by: Mr. Stanton

SEE ATTACHED

Ayes: Jilson, Stanton, Zerbe, Robinson.

Nayes: None.

RESOLUTION NO. 2

RESOLUTION TO ALLOW LOAM MINING

Resolution by: Mr. Stanton

Seconded by: Mr. Jilson

SEE ATTACHED

Ayes: Zerbe, Stanton, Jilson, Robinson.

Nayes: None.

RESOLUTION NO. 3

RESOLUTION TO PERMIT CLEAN FILL ON PRIVATE LAND

Resolution by: Mr. Robinson

Seconded by: Mr. Zerbe

SEE ATTACHED

Ayes: Stanton, Zerbe, Jilson, Robinson.

Nayes: None.

RESOLUTION NO. 4

RESOLUTION APPROVING LIABILITY INSURANCE FOR FIREWORKS

Resolution by: Mr. Stanton

Seconded by: Mr. Zerbe

RESOLVED, that the Town Board hereby does approve a Fireworks display with the appropriate liability insurance coverage of \$1,000,000.

Ayes: Zerbe, Jilson, Stanton, Robinson.

Nayes: None.

RESOLUTION NO. 5

RESOLUTION TO PURCHASE PICKUP FOR HIGHWAY DEPT.

Resolution by: Mr. Jilson

Seconded by: Mr. Stanton

RESOLVED, that the Town Board hereby does approve the purchase of a new 1999, 360 Dodge Pick-up under state bid for \$19,919.40.

Ayes: Jilson, Stanton, Zerbe, Robinson.

Nayes: None.

RESOLUTION NO. 6

RESOLUTION AUTHORIZING PAYMENT OF BILLS

Resolution by: Mr. Stanton

Seconded by: Mr. Zerbe

RESOLVED, that the bills as audited by the Town board and the same hereby are, audited approved, and ordered paid to wit: Vouchers No. 46 thru No. 61 and payroll 2-99 in a total amount of \$46,238.57; and Vouchers No. 40 thru No. 58 for \$3879.65 & No. 13 true No. 22 for \$12,368.81 for New Addition on Highway Abstract No. 3-99.

Ayes: Stanton, Zerbe, Jilson, Robinson.

Nayes: None.

There being no further business the meeting was adjourned at 9:07 pm.

Flood Mitigation Planning

Town of Ashland

The Town of Ashland 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 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 44 flooding problems, potential flooding problems, and other hazards in the Town of Ashland. This documentation includes problems that have been addressed by the Town 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 the Town of Ashland were proposed. These goals emphasize the need to implement measures that will prevent additional flooding problems, while protecting the property that is currently at risk.

ASSESS POSSIBLE MITIGATION MEASURES

Committee members reviewed a comprehensive list of possible mitigation measures. They identified those solutions that are most applicable to the flooding problems and community needs in the Town of Ashland.

DEVELOP AN ACTION PLAN

The committee prepared an Action Plan, which describes 17 activities that the Town 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 community's 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 Ashland Town Board for adoption. Adoption of this plan will qualify the Town for Community Rating System Credit (toward reduced Flood Insurance premiums) and allow application for Flood Mitigation Assistance grant funding.