

FINAL

Town and Village of Unadilla

All-Hazards Mitigation Plan



Approved January 31, 2008

Prepared by:

The Town and Village of Unadilla Hazard Mitigation Committee

And

The Otsego County Planning Department
197 Main St. Cooperstown, NY 13326

This hazards mitigation plan encompasses the Town and Village of Unadilla, New York.

This plan was developed through coordination with the Otsego County Planning Department and was funded, in part, by a Pre-Disaster Mitigation program grant from the New York State Emergency Management Office and Federal Emergency Management Agency.

TABLE OF CONTENTS

| | |
|--|-------------|
| | <u>Page</u> |
| Section 1 – Executive Summary | 1-1 |
| Background | 1-1 |
| Planning Process | 1-1 |
| Risk Assessment | 1-1 |
| Mitigation Strategy | 1-2 |
| Action Plan | 1-3 |
| Plan Maintenance | 1-5 |
| Section 2 - Background | 2-1 |
| Section 3 - Planning Process | 3-1 |
| Section 4 - Risk Assessment introduction | 4-1 |
| Town Historic data | 4-2 |
| HAZNY results | 4-3 |
| Hazard Definitions | 4-3 |
| High Hazards | 4-8 |
| Moderately High Hazards | 4-7 |
| Moderately Low Hazards | 4-10 |
| Low Hazards | 4-28 |
| Critical Building Value, Replacement and Content Cost | 4-17 |
| Critical Facilities Inventory | 4-18 |
| Damages assessment | 4-18 |
| | <u>Page</u> |
| Section 5 - Mitigation Goals and Actions introduction | 5-1 |
| Actions Specific to New and Existing Buildings | 5-2 |
| Prioritized method of goals and actions | 5-6 |
| Goals and Action Plan | 5-8 |
| | <u>Page</u> |
| Section 6 - Plan Maintenance | 6-1 |
| Appendix A - List of Acronyms | A |
| Appendix B - Unadilla All-Hazard Mitigation Plan Adoption | |
| B-1 – Appointment of Members to Planning Committee | B-1 |
| B-2 – Plan Adoption | B-2 |
| B-3 – Resolution of amended plan 2006 | B-3 |

| | |
|--|--------------|
| Appendix C – Notices | C |
| C-1 – Public Notice | C-1 |
| C-2 – List of notified agencies | C-2 |
| C-3 – Letters to other agencies | C-3 |
| Appendix D – Critical Facilities and Vulnerable Sites | D |
| Appendix E – Maintenance | E |
| E-1 – Sample of Annual Maintenance Report | E-1 |
| E-2 – Sample cover letter for annual maintenance report | E-2 |
| Appendix F – Maps | F |
| F-1 Roads and Parcels | F-1 |
| F-2 Water & Forest Resources | F-2 |
| F-3 School Districts | F-3 |
| F-4 Fire Districts | F-4 |
| F-5 Transportation/Crashes | F-5 |
| F-6 Critical Facilities (T) | F-6 |
| F-7 Critical Facilities (V) | F-7 |
| F-8 2006 Flood | F-8 |
| F-9 Potential Hazardous Areas | F-9 |

Section 1 – Executive Summary

The Town and Village of Unadilla *Hazards Mitigation Plan* includes resources and information to assist public and private sectors to reduce the losses from future hazard events. This plan is not a manual of what to do if a disaster occurs. Instead, it concentrates on actions that can be implemented prior to disaster events in order to reduce the damage to property and potential loss of life. The plan includes an assessment of the Town's risk and vulnerability, a strategy for minimizing those risks (goals and objectives), and an action plan that will be implemented to achieve the objectives.

This plan is intended to fulfill the planning requirements for state and federal assistance programs. It will enable the Town to apply for future hazards mitigation grants that will assist with implementation of the proposed projects identified in this plan.

BACKGROUND

Section 2 of this plan provides background material about the Town and Village of Unadilla and previous efforts to mitigate hazards.

PLANNING PROCESS

The Town and Village of Unadilla officially began the development of this multi-jurisdictional all-hazards mitigation plan with a July 20, 2004 meeting held at the Unadilla Town hall in the Village of Unadilla, New York. The purpose of this meeting was to introduce the mitigation concept, describe past efforts in the Town and to get all possible participants at the same point for the multi-jurisdictional planning process. Key players from several organizations in the County were invited. The meeting was well attended with 10 people representing the County of Otsego, Unadilla Town Board, Unadilla Village Board, Unadilla Fire Department, as well as the Town and Village Highway Department.

A series of meetings were held to gather information and recommendations for this hazards mitigation plan. Staff support was provided by the Otsego County Planning Department. In addition to the information and recommendations assembled at the planning meetings, numerous agencies, organizations, and members of the public were contacted for additional input.

RISK ASSESSMENT

The recommendations in the Otsego County Hazards Mitigation Plan are based on an assessment of the community's vulnerability to 23 of the 32 hazards identified in the New York State Emergency Management Office HAZNY Program. The reasons for omission of certain hazards are explained in Section 4 – Risk Assessment. The priority rankings were prepared based on the scope, frequency, impact, onset and duration of each hazard considered (using the HAZNY interactive spreadsheet program).

Mitigation Strategy

The overall purpose of the Town and Village of Unadilla All Hazards Mitigation Action Plan is to protect life and property from natural and human-caused hazards.

The proposed mitigation strategy is represented by the following long range goals, which encompass the *highest* ranked hazards for Otsego County. The Otsego County Hazards Mitigation Action Plan identifies specific objectives for achieving each goal.

Multi-Hazards Mitigation Goals

- Continue ongoing efforts and increase public awareness about hazards
- Provide emergency services in a timely and effective manner
- Maintain the viability of all critical facilities and operations
- Maintain support (political and private sector) for hazards mitigation and emergency response

Severe Weather Goals

(Severe Storm, Severe Winter Storm, Ice Storm, Tornado, Extreme Temperatures)

- Minimize damage from trees to utilities, structures, and other utilities
- Build and maintain structures to withstand high winds and heavy snow
- Reopen transportation routes as quickly as possible following a severe weather event

Flood/Flash Flood Goals

- Raise public awareness about flood hazards, flood safety, and flood damage protection measures
- Minimize stream bank erosion and improve water quality
- Decrease flooding/ice jam impact on roads with repetitive events
- Minimize the potential for obstruction of flow by maintaining streams, drainage ways, and drainage structures
- Mitigate flood risks for existing development

Utility Failure Goals

- Raise public awareness about power failure, and what to do in the event of power loss
- Reduce possibility/impact of utility failure
- Provide emergency services to the public

Dam Failure Goals

- Provide public awareness by providing information on the potential for dam failure
- Routinely check and maintain dams for safety
- Respond quickly and effectively in the advent of a dam failure
- Prevent new development from occurring in dam failure inundation areas

Action Plan

The Town and Village of Unadilla Hazards Mitigation Plan recommends implementation of the following actions over the next several years.

Multi-Hazards Mitigation Actions

Public Awareness

- Improve educational programs about hazards and family planning, emergency supplies, evacuation procedures, transportation safety and hazards mitigation
- Encourage local officials' participation in hazards related training offered at County, State, and Federal levels
- Provide municipal officials with periodic training and responsibilities during hazards events

Emergency Services

- Improve/maintain communication among highway departments to enable coordinated maintenance of emergency routes
- Improve dissemination of emergency warnings and weather information to residents, businesses, and institutions

Critical Facilities

- Periodically review and update the list of critical facilities serving the community
- Develop and implement strategies to mitigate risks to critical facilities

Support

- Invite elected municipal officials to meetings of the Otsego County Hazard Mitigation Committee to guide implementation of this plan and revision of the plan
- Maintain and expand public/private sector coordination through organizations that are actively involved in hazards reduction activities
- Encourage public/private sector organizations (tourist facilities) to prioritize and implement hazards mitigation actions

Severe Weather Actions

Minimize Damage from Trees

- Maintain trees along municipal right-of-ways
- Support/encourage utility companies to maintain trees near telephone and power lines
- Locate/create educational information about maintenance of trees adjacent to structures
- Explore providing brush pickup services and/or designated drop off locations to encourage tree maintenance and to discourage improper disposal of yard debris in drainage ways
- Recommend, encourage, or require underground utilities in new developments through land use regulations. Encourage utility companies to use underground construction methods if feasible

Buildings Are Able to Withstand High Winds and Snow

- Provide annual training for code enforcement officers in order to effectively enforce the structural standards in the International Building Code.
- Identify vulnerabilities for owners of older buildings that may not conform to the structural standards in the International Building Code

Transportation Routes are Reopened Quickly

- Improve highway departments' monitoring of weather conditions and forecasts to enable timely response to snow, ice, and high water conditions. Review and revise highway departments' plowing schedules and hazardous weather response procedures to minimize time required to restore safe roadways
- Provide emergency service transportation during inclement weather through highway departments and emergency service providers

Flood/Flash Flood Mitigation Actions

Public Awareness

- Disseminate and improve flood informational packets.
- Increase flood awareness locally by educating property owners within the floodplains
- Educate property owners adjacent to streams about proper stream maintenance

Minimize Erosion and Improve Water Quality

- Study, develop, and implement projects for stabilizing stream channels in locations where erosion threatens development of agricultural resources
- Periodically check water for contaminants and other foreign material

Decrease Flooding/Ice Jam Impact on Roads

- Increase funding to mitigate damage to flood prone areas

Minimize Obstruction of Flow

- Reduce the potential for flooding caused by debris through routine inspection and maintenance of streams, roadside ditches, and drainage ways
- Develop and implement a strategy for maintenance of privately owned storm water drainage systems and secondary stream channels

Mitigate Flood Risks for Existing Development

- Evaluate opportunities to alleviate flooding problems by retaining water upstream through wetland creation/retention structures during high flow periods (and implement as appropriate)
- Develop and implement a strategy for replacing undersized bridges and culverts on public road ways and on private property

Utility Failure Mitigation Action

Public Awareness

- Develop a pamphlet describing the problems associated with power loss, and what can be done to alleviate these problems

Reduce Possibility/Impact of Failure

- Explore means to help offset costs to obtain and maintain generators for schools, commercial businesses, and agricultural industry
- Recommend, encourage, or require underground utilities in new developments through land use regulations. Encourage utility companies to use underground construction methods if feasible
- Create a clear path for electric lines by trimming back trees 20 feet on both sides of power lines

Provide Emergency Services to the Public

- Develop a power failure plan that will provide essentials (food, water, medical supplies) to residents without power

Dam Failure Mitigation Actions

Public Awareness

- Provide informational packets on dam failure
- Develop an emergency evacuation plan for residents within flood zone of dams

Maintenance

- Provide periodic inspections and maintenance on dams

Emergency Response Personnel

- Create dam failure emergency procedures for emergency personnel
- Provide training to emergency response personnel on the effects of dam failure
- Provide an effective emergency evacuation plan to emergency response personnel as well as local residents

Prevent New Development in Path of Dam

- Encourage local municipalities to create land use laws to reduce the amount of development in the path of dams

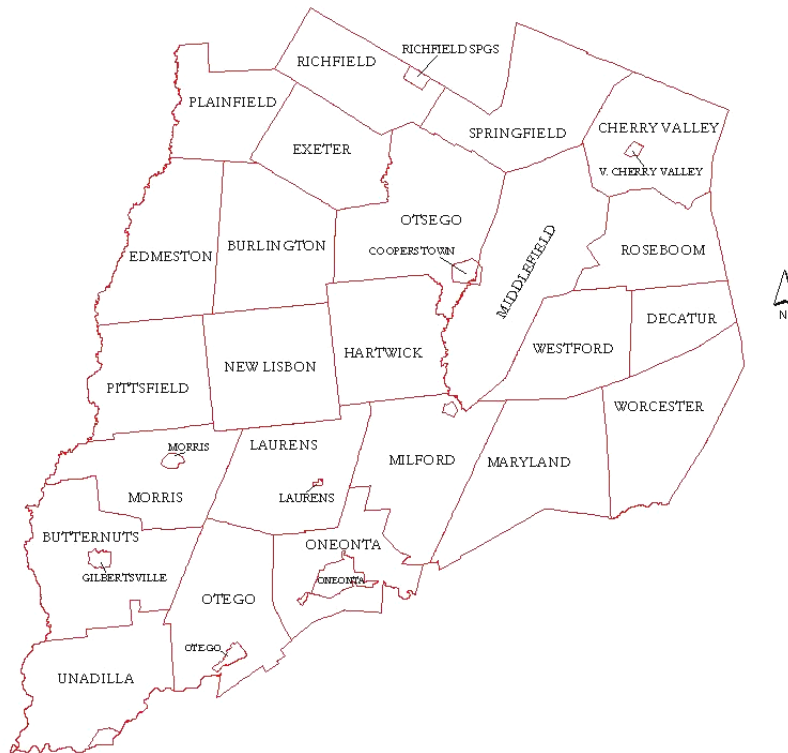
Plan Maintenance

The Town and Village of Unadilla Hazards Mitigation Plan is an active document that will be periodically reviewed, updated, and revised. Municipal officials, emergency response personnel, agency staff, and the public will be involved in this on-going planning process.

SECTION 2 – BACKGROUND

The Town of Unadilla is located in the southwestern corner of Otsego County. Unadilla contains the Village of Unadilla on its central southern border along the Susquehanna; the hamlet of Wells Bridge on the southeastern border next to the Town of Otego; and the hamlet of Unadilla Center near the central northern border below the Town of Butternuts. To the west of Unadilla resides Chenango County; Delaware County abuts the Town to the South.

In 2000, the population for the Town of Unadilla was 4,548, which indicates an increase of 205 over the 1990 Census figures; and for the Village it was 1,127 which is an decrease of 138 people from 1990. Census figures show a steady decline in population for the Village since 1960, losing 100+ people per decade.



LAND: The Town of Unadilla is located in the southwestern corner of Otsego County. The topographic quadrangle location is divided between four areas: Guilford, Gilbertsville, Sidney and Unadilla. The Town of Unadilla is 47.5 square miles, plus 0.93 square miles for the Village.

FLOOD PLAIN: The major flood plains in the Town/Village of Unadilla are the entire length of the Susquehanna River, Rogers Hollow Creek, Ideuma Brook, the Unadilla Creek, Indian Creek, and Sand Hill Creek.

CLIMATE: The climate of Unadilla is classified as continental-humid, with cold winters and mild summers with precipitation well distributed throughout the year. The result of this climate is an abundance of flora and fauna throughout the region and a wealth of water resources. The average annual temperature is 45 degrees. Temperatures in January are an average of 11 degrees while temperatures in July are an average of 81 degrees. Annual precipitation averages 46.81 inches. Annual snowfall averages 81 inches, although recent years have seen much less than this. The sun shines an average of 50% of the daylight hours. The climate defines a somewhat limited growing season for field crops, due to late spring and early fall frosts. The growing season averages 120 days.

POLITICAL GEOGRAPHY: Unadilla has two hamlets and one village. Unadilla harbors the Village of Unadilla on its central southern border along the Susquehanna; the hamlet of Wells Bridge is on the southeastern border next to the Town of Otego; and the hamlet of Unadilla Center is near the central northern border below the Town of Butternuts. The western border of Unadilla abuts Chenango County and Delaware County on the southern border. Most of the population in Unadilla today is evenly distributed throughout the rural municipality. The only exception is that of the Village. The population density for the Town is 95.7 persons/square mile, for the Village it is 1,211.8 persons/square mile.

TRANSPORTATION: There are nearly 118 miles of roads within the Town/Village of Unadilla maintained by New York State DOT, Otsego County, the Town and Village of Unadilla, or private land owners. The Town and Village are responsible for the vast majority of the roads within the Town (67.5 miles), while New York State DOT maintains slightly less than 12 miles. Otsego County maintains slightly more than 24 miles of roadways. Private roads account for more than 14 miles within the Town/Village.

PEOPLE: The 2000 census revealed that almost 41% of the Town's population is between the ages of 25 and 54 with a median age in the Town of 38.6 years. It also revealed that nearly 18% of the population is at or above the retirement age of 62.

EMPLOYMENT:

| <u>Occupations</u> TOWN | <u>Number</u> | <u>Percent</u> |
|--|---------------|----------------|
| Management, professional and related.... | 527 | 26 |
| Service.... | 227 | 11 |
| Sales & office.... | 491 | 23 |
| Farming, fish & forestry.... | 27 | 2 |
| Construction, extraction & maintenance.... | 202 | 10 |
| Production, transportation & moving.... | 592 | 28 |

| <u>Occupations</u> VILLAGE | <u>Number</u> | <u>Percent</u> |
|--|---------------|----------------|
| Management, professional and related.... | 133 | 25 |
| Service.... | 86 | 16 |
| Sales & office.... | 125 | 23 |
| Farming, fish & forestry.... | 4 | 1 |
| Construction, extraction & maintenance.... | 60 | 11 |

ECONOMY: In 1999, the median household income in the Town of Unadilla was \$26,619; it was \$24,735 for the village. The combined average for the entire area is \$25,677. This figure is considerably lower than the median for Otsego County, which is \$33,444.

AGRICULTURE: Agriculture in the Town/Village of Unadilla at one time played a vital role in the economy; today it is less than 1.3% of the populations' occupation. Nearly 7,800 acres of land in Unadilla are currently assessed as actively used for some type of agricultural use: dairy, field crops, cattle/calves/hogs, sheep/wool, and nursery/greenhouse.

LAND USE REGULATION:

Town of Unadilla: Junkyard Law

Village of Unadilla: Zoning Law, Subdivision Regulations

PUBLIC EDUCATION: The Town of Unadilla created a unified school district, the Unatego Central School District, more than 20 years ago. The District also encompasses most of the town of Otego, Unadilla's neighbor to the east. Services through BOCES are also shared with these other School Districts: the Bainbridge /Guilford Central School in Chenango County, The Gilbertsville/ Mt. Upton Central School in the Town of Butternuts and the Sidney Central School in Delaware County.

COMMUNITY SERVICES: Police protection is provided by both the County and State which patrol on a random or as needed basis.

County Sheriff Headquarters – Cooperstown.

State Police Barracks - Sidney.

Fire Protection: Unadilla VFD, Wells Bridge VFD, Mt. Upton VFD (Chenango County) and Sidney FD (Delaware County).

EMS: Unadilla, Mt. Upton and Sidney Emergency Squads and a First Responder Unit from Wells Bridge.

UNADILLA MITIGATION PROJECTS: All of the mitigation projects undertaken to date in the Town/Village of Unadilla have been to reduce the impact of disaster. Since the 1960's, Unadilla has been proactive in mitigating flood related disasters in the community. In the mid 60's, a levy was constructed to alleviate the seasonal flooding of the Susquehanna. Improvements and maintenance to that structure have become routine over the years. A storm sewer system, a raceway, and numerous other projects have been essential in lessening the effects of flooding on Unadilla as a whole.

SECTION 3 - PLANNING PROCESS

The Town and Village of Unadilla officially began the development of this all-hazards mitigation plan with a July 20, 2004 meeting held at the Unadilla Town hall in the Village of Unadilla, New York. The purpose of this meeting was to introduce the mitigation concept, describe past efforts in the Town and to get all possible participants at the same point for the multi-jurisdictional planning process. Key players from several organizations in the County were invited. The meeting was well attended with 10 individuals representing the County of Otsego, Unadilla Town Board, Unadilla Village Board, Town and Village Clerk's Office, as well as the Town and Village Highway Departments.

Based on interest generated at the meeting, the Town and Village of Unadilla, in conjunction with the Otsego County Planning Department, formed a Planning Committee made up of the following members:

Planning Committee:

| | |
|-------------------------|---|
| Kevin Rickard, Chairman | Emergency Squad Captain, Village Trustee- Administration, Resource and Reference |
| Carl French, Secretary | Member of Town Fire Department, County Fire Department coordinator- Resource and Reference |
| Joe Campbell | Village Highway Superintendent- Resource and Reference |
| John Jessup | Town Representative- Resource and Reference |
| David Wright | Town Highway Superintendent- Resource and Reference |

Staff to the Committee:

| | |
|---------------------|--|
| Diane Carlton, AICP | Director, Otsego County Planning Department |
| Matt Van Slyke | Planner, Otsego County planning Dept. |
| Ann Williamson | Administration, Mapping, Editing, Budgeting, |
| Matthew Munson | Intern - State University College at Oneonta- Research and Development. |
| Nancy Okkar | Administrative Assistant |

The County Planning Department, under the guidance of Matt Van Slyke and supervision of Director Diane Carlton was responsible for the coordination of other agencies, scheduling of meeting, presentation of information and development of the plan. Matt Van Slyke acted as the liaison between governing bodies preparing the plan and other agencies. Matt was assisted by college intern Matt Munson, an undergraduate geography student from the State University College at Oneonta. Ann Williamson, Planner assisted with administrating, mapping, budgeting, writing and editing of the plan. On July 23, 2004 the Village and Town Trustees appointed a Hazard Mitigation Committee to work with the Planning Department and a list of other county, regional and state agencies to

contact for relevant information. Each committee member's responsibilities are outlined above.

The committee met monthly beginning in July 2004 until January 2005. On January 11, 2005 the Town of Unadilla, and on January 18, 2005 the Village of Unadilla following a 7 month process, adopted the Draft All Hazards Mitigation Plan.

The committee made a conscious effort to involve the public by advertising each public meeting and or hearing in the official newspaper. Public meetings were held during the formation of the plan: one at the introductory, one when soliciting information to identify hazardous analysis report, and one prior to submitting the final document. Meetings were held in the evenings to allow for individuals to attend during non-working hours. Citizens were also notified through public notice and posted bulliten, of the proposed revisions and were able to comment before September 11, 2006. Copies of the document was available at both the Village and Town Clerk's office and also the County Planning Department for review. In addition, Unatego Jr. Sr. School, Methodist Church, Presbyterian Church, Catholic, Baptist Church, C&S Auto, Red Apple gas and grocer, Great American, Brooks Machine, Bassett Hospital, Country computers and Publications, Unadills Drive-In, Milfer Farms, Banta Brothers, Waste Recovery Enterprises, Unadilla Bolt & Nut, Kings Castle Construction and a few larger businesses were notified by the Village Clerk during the revsision phase of the document to allow for additional input. A list and copy of the letter appears in appendix C-2 & C-3.

Meetings of the committee were held on a regular basis and open to the public.

Planning Process

- **7/20/2004: Town and Village of Unadilla Introductory Meetings:** Planning Department staff met with the Town and Village Boards to discuss the All Hazards Mitigation Plan. Mitigation examples, copies of the County Plan, and a sample resolution of participation were handed out to Board members.
- **7/23/2004: Village of Unadilla Hazard Mitigation Resolution Received:** Receipt of resolution from the Village establishing the Hazard Mitigation Planning Committee. The Village's resolutions indicated it wished to participtae jointly with the Town on this project. Three individuals from the Village were named to serve on the committee.
- **9/24/04: Town of Unadilla Hazard Mitigation Resolution Received:** Receipt of resolution from the Town establishing the Hazard Mitigation Planning committee. Two individuals from the Town were named to serve on the Hazard Mitigation Committee (HMC).
- **10/28/2004: Town and Village of Unadilla Hazard Analysis:** In conjunction with other involved agencies, a hazard analysis was created for the Town and Village of Unadilla. A total of 23 hazards were analyzed for the Towna nd

Village. This analysis was created by using the HAZNY (Hazards New York) computer program supplied by the State Emergency Management Office.

- **11/15/2004: Town and Village of Unadilla HAZNY / Hazard Mitigation Plan Review:** The Hazard Mitigation Planning Committee as well as other involved agencies met to review the compiled HAZNY report. After close review some minor changes were made to the report to better reflect the Town and Village of Unadilla. Committee members also discussed the formation of the Town and Village of Unadilla Hazard Mitigation Plan. HMC members recommended changes to the plan and agreed to further review it independently prior to the next meeting.
- **1/11/05 Town of Unadilla Adopts All Hazards Mitigation Plan as Draft Document:** The Town Board adopted the plan as a draft document.
- **1/18/05 Village of Unadilla Adopts All Hazrds Mitigation Plan as Draft Document:** The Village Board of Trustees adopted the plan as a draft document.
- **8/25/06: Village and Town of Unadilla Hazard Mitigation Plan revision and crosswalk review.** County planning representatives Fiona Carbin met with David Wright the Town Highway Superintendent, Joe Campbell, the Village Highway Superintendent, John Jessup a town representative, Car French member of the town fire department, and county fire department coordinator, and Kevin Rickahrd, the Emergency Squad Captian. A public notice was drafted by the comittee notifying the public of the revision period and acceptance of any additional comments before amendments would be completed. A deadline of September 11, 2006 was established. In addition, the commmittee would send individual letters to Unatego Jr. Sr. School, Methodist Church, Presbyterian Church, Catholic, Baptist Church, C&S Auto, Red Apple gas and grocer, Great American, Brooks Machine, Bassett Hospital and other local businesses invitinnng their input for the revisions (C-2 & C-3).

Coordination with Agencies:

Matt Van Slyke, contacted county, regional, and state agencies for relevant information and recommendations about the mitigation planning effort. These agencies were all notified of each meeting and invited to participate. In addition, the State University College at Oneonta provided the County Planning Department with an undergraduate student, Matt Munson who was extremely helpful in assisting Matt Van Slyke by attending meetings, gathering information, interviewing various officials and gathering data information. Personnel from these agencies attended planning meetings, provided information, answered questions, reviewed minutes, and reviewed draft sections of documents. . Feedback from these agencies help to develop hazardous areas and concerns not recognized by the committee and aided in the development of the maintenance and mitigation portion of the document. The County office of Emergency Services was able to provide historical data of hazardous conditions. The planning department was the major sources for population statistics and geographical information. Marybeth Vargha

from the county GIS department assisted with mapping and GIS interpretation. Representatives from the Red Cross were able to provide historical data of the county in regards to services rendered during hazardous weather conditions and or other county-wide disaster related situations.

The contributions from agencies and organizations that contributed to this planning process are listed below:

- Otsego County Office of Emergency Services
- Otsego County Health Department
- Otsego County Planning Department
- American Red Cross
- New York State Emergency Management Office
- New York State Department of Environmental Conservation
- Otsego County Building and Codes
- Local Business (see appendix C-2)

Specific Documents incorporated into the plan

The committee utilized various documents in the preparation of the plan, including historical data provided by County Office of Emergency Services and prior FEMA requests documented through the Village and Town of Unadilla. These two documents provided the Village and Town of Unadilla with data to identify prior occurrences of disasters in the Village and Town. Local flood plain maps, and GIS information gathered from the county GIS coordinator Marybeth Vargha, provided the geographical data to apply to the Village and Town boundaries and map accordingly. Zoning and land use comprehensive plans were reviewed to identify any existing regulations pertaining to site plan restrictions and building proposals that would be located in identified potentially hazardous areas. The Village and Town have flood plain restriction to avoid building in high water table areas (See appendix F-3). These areas are identified by the flood plain map information. In general these areas include River Street and area running perpendicular to the Susquehanna River. The village and town building code addresses the construction of any outdoor burning. The Village and Town operates under the jurisdiction of the NYS building code. Otsego County Building and Codes was able to supply information in regards to building requirements for new construction in high water table areas.

Existing evacuations and terrorism plans are established for the Unatego Jr. Sr. School along with the Fire Departments. These plans are documented in the Butch Jones, Emergency Services coordinator.

- -See appendix F-4 map of identified natural hazards.

SECTION 4 – RISK ASSESSMENT

Specific locations within the Town and Village of Unadilla that may be affected by relevant natural hazards were located on a map with the assistance of historical data and the professional knowledge of the highway department and the county emergency management director. Appendix F-4 identifies the locations of these areas. The committee then determined the risk assessment for each as well as gathered historical data to support risk assessment. The following is a summary of historical documentation for the Town and Village.

| Hazard or Event Description | Source of information | Map available? |
|--|---|-----------------------|
| Fire-1957 The Unadilla House. Third Floor suffered major damage. | Members of community Emergency Representatives | Unavailable |
| Fire-1971 Unadilla Bowling ally Total loss, some injuries, One death. | Members of community Emergency Representatives | Unavailable |
| Winter snow storm- 1990 Entire town was affected | Members of community Emergency Representatives | See figure4.2 |
| Blizzard 1993- Entire town was affected. Major road closures and loss of power. | Newspaper Members of the community Emergency Representatives | See Figures 4.2&4.1 |
| Flood-1994 Heavy rains resulted in major flooding damaging Hart T.C. fields and many other agriculture and residential property. \$6,000 in clean up. | Members of community Emergency Representatives | See Appendix F-7 &F-8 |
| Flood- 1996 January thaw. Snow accumulation and high temperatures created flooding and washouts on many roads such as Kilkenny Rd. \$11-12,000 in damages and clean up | Members of community Emergency Representatives | See Appendix F-7 &F-8 |
| Fire-1997 Village Barn. Coffee maker started fire, total loss. | Members of community Emergency Representatives | Unavailable |
| 2000- Y2K Entire town threatened by the failure of its facilities | Members of the Community Emergency Representatives | Unavailable |
| Winter Snow Storm- 2002/03 Entire town was affected, people could not go to work due to road closures and holiday plans were either altered or terminated. | Members of the Community Emergency Representatives FEMA | See figure 4.2 |
| Ice Storm- 2003 The entire town was affected. A total of 2,100 people were affected. The village received \$2,809.47 from FEMA | Members of the Community Emergency Representatives FEMA | See figure 4.2 |
| Flood- 2005 | | |

| | | |
|---|---|------------------------|
| Heavy rain fall caused washout on some town roads. | Members of the Community Emergency Representatives FEMA | See Appendix F-3 & f-4 |
| 2006- Flood Heavy Rains caused major flooding throughout the entire town. Properties were seriously damaged especially residential areas, most roads were closed, and residents were out of work for 2-3 days, high cost in repair. Along the Susquehanna from the railroad tracks to the bank of the river was totally flooded. Major damage to basements and first floor. 65% of the houses within the village boundary suffered major damage. Estimated damage was \$1.5 million. | Members of the Community Emergency Representatives FEMA | See Appendix F-3& F-4 |

SECTION 4 – RISK ASSESSMENT

In order to prepare for and mitigate the consequences of hazardous events, it is necessary to understand the local vulnerability. Vulnerability is based on the natural and man-made factors that determine the probability of an event occurring and community factors that contribute to the severity of the impacts.

A quantitative risk assessment for the Town and Village of Unadilla was conducted using the HAZNY program developed by the New York State Emergency Management Office. HAZNY is an automated interactive spreadsheet that enables a group of local experts to rank hazards based on the scope (area of impact and potential of cascade effect), frequency, impact, onset, (warning time) and duration of each hazard considered. The group evaluated **23** hazards that can potentially impact the Town and Village of Unadilla and rated them as follows. The highlighted hazards were identified by the team to be representative of natural hazards that have occurred and potential hazards that are more likely to occur.

The hazards identified by an “*” are further reviewed for risk assessment. It was decided to determine risk assessments of natural hazards which are the most likely to occur, or have historically occurred in the Town and Village of Unadilla.

MODERATELY HIGH HAZARDS:

| | |
|------------------------|-----|
| *ICE STORM | 312 |
| *SEVERE STORM | 304 |
| *WINTER STORM (SEVERE) | 297 |
| *FLASH FLOOD | 284 |
| *EROSION/LANDSLIDE | 276 |
| HAZMAT (IN TRANSIT) | 259 |
| FIRE/WILD FIRE | 257 |
| TRANS ACCIDENT | 255 |
| DAM FAILURE | 248 |

MODERATELY LOW HAZARDS:

| | |
|----------------------------|-----|
| *FLOOD | 238 |
| TORNADO | 232 |
| UTILITY FAILURE | 222 |
| WATER SUPPLY CONTAMINATION | 208 |
| EXTREME TEMPS | 204 |
| OIL SPILL | 204 |
| RADIOLOGICAL (IN TRANSIT) | 203 |
| EXPLOSION | 198 |
| HAZMAT (FIXED SITE) | 187 |
| ICE JAM | 177 |

| | |
|---------------------|-----|
| STRUCTURAL COLLAPSE | 174 |
| EARTHQUAKE | 173 |

LOW HAZARDS:

| | |
|----------|-----|
| DROUGHT | 144 |
| EPIDEMIC | 142 |

The Following hazards were eliminated from consideration for the reason stated:

| | |
|--------------------|--|
| Air Contamination | Air Contamination has not been found to pose a great risk to the residents of Unadilla as reviewed by the HMC. High Levels of Smog are nearly nonexistent within the municipality. High pollen levels in the spring and fall account for the greatest threat to Unadilla's residents with allergies, but even those numbers are quite small. |
| Avalanche | Avalanches in New York State are mainly confined to the higher peaks of the Adirondacks. Any small avalanche that may occur in the Town and/or Village of Unadilla is likely to be of such small size and power that the damage would be negligible. |
| Blight | Blight was not considered by the HMC to pose a great risk to Unadilla. Agricultural Activities have downsized over the years and most have diversified activities to remain viable, not wholly dependent on any one crop. |
| Civil Unrest | Civil Unrest was considered a negligible hazard by the HMC. |
| Food/Fuel Shortage | Both Food and Fuel Shortage were reviewed by the HMC as primary hazards to Unadilla. After lengthy discussion, it was agreed that both of these risk are more likely to occur in Unadilla as a secondary or even tertiary result of another hazard. Town/Village wide shortages were deemed remote by the HMC. |
| Hurricane | Hurricane force winds and accompanying rain were not reviewed separately. The impacts were analyzed as Severe Storm. |
| Mine Collapse | There are no underground mines located in the Town and/or Village of Unadilla. The closest mines located near the Town and Village of Unadilla are located in |

Schoharie County, which is over 25 miles North East of the Town and Village of Unadilla.

Radiological at Fixed Site

Radiological Hazards at a fixed site was omitted from review due to the fact that no known repositories of radioactive material exist within municipal boundaries. There are three electricity generating nuclear power sites in New York State. The Indian Point site, located in Westchester County, is probably the closest, located approximately 100 miles from the Town of Unadilla's border. The other sites are in the Towns of Scriba and Ontario along Lake Ontario and are greater than 100 miles away. The possibility is remote, but Unadilla could be impacted by low levels of radiation in a major anomaly at one of these generating plants. In such a case, considerable time would be available for any necessary actions.

Tsunami/Wave Action

According to the National Weather Service (Philadelphia/Mount Holly), tsunamis have impacted the Atlantic Coast of the Northeastern United States in the past. All tsunami/wave damage was confined to the immediate coast. Due to the geographic location of the Town and Village of Unadilla, the ability of a tsunami to impact Town and Village of Unadilla is extremely remote, bearing a catastrophic event in the Atlantic Ocean.

The following assessment evaluates the risks associated with each hazard in the Town and Village of Unadilla. The responses used for the HAZNY assessment are presented, along with additional information about historic occurrences and vulnerabilities.

MODERATELY HIGH HAZARDS

**Ice Storm, Severe Storm, Winter Storm, Flash Flood,
Erosion/Landslides, Hazmat in Transit, Fire/Wildfire, Transportation
Accidents, and Dam Failure.**

ICE STORM

| | |
|---------------------------------|---|
| <u>Potential Impact:</u> | Throughout a Large Region |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | A Frequent Event |
| <u>Onset:</u> | Several Hours Warning |
| <u>Hazard Duration:</u> | Two to Three Days |
| <u>Recovery Time:</u> | One to Two Weeks |
| <u>Impact:</u> | <ul style="list-style-type: none">• Serious Injury or Death is Likely, but not in Large Numbers• Moderate Damage to Private Property• Severe Structural Damage to Public Facilities |

Definition: Freezing rain that accumulates in a substantial glaze layer of ice resulting in serious disruptions of normal transportation and possible downed power lines.

Profile/Vulnerability Assessment: When ice encases exposed surfaces, hazardous road conditions disrupt transportation. The weight of the ice can knock down trees and power lines, disrupting power and communication for days. Additional hazards that can be triggered by an ice storm include: transportation accidents, power failure, and fuel shortage. Normal emergency operations, such as police, fire and ambulance service, can also be impeded. Since the same conditions may occur over a large area, aid from neighboring jurisdictions may not be available. The entire Town and Village of Unadilla is vulnerable to the impact of ice storms.

Several ice storms have occurred in the Town and Village of Unadilla throughout the last decade. These storms usually occur two times a year on average, and last two to three days. Although there have not been any major storms comparable to the severe ice storms that occurred in the northern counties throughout New York State, a potential still exists.

It is difficult to affix any type of value to private losses from a disaster of this type. There are many losses that are unaccounted for because they are not reported to insurance agencies. Because of this fact, the Hazard Mitigation Committee had to use its best judgment in determining the value of losses from this type of disaster. According to the committee, a moderate loss could easily top a few hundred dollars per residence.

Public losses from this type of disaster include direct expenses to the Town's Highway budget. Items such as road clearing, tree removal, sand and salt spreading, items above and beyond the regular allocated budgeting can account for major deficits of the highway

budget. Fire Departments, Emergency Crews, and Community Service Agencies are also prone to major expenditures of resources. Utilities are estimated to be one of the largest hit during an event of this nature.

SEVERE STORM

Potential Impact: Throughout a Large Region

Cascade Effects: Highly Likely

Frequency: A Frequent Event

Onset: No Warning

Hazard Duration: Less Than One Day

Recovery Time: Three Days to One Week

Impact:

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Severe Structural Damage to Public Facilities

Definition: A storm including, but not limited to hail storms, windstorms, and severe thunderstorms (with associated severe wind events such as derechos, gustnados, dust devils, and downbursts).

Profile/Vulnerability Assessment: The Town and Village of Unadilla experiences many severe storms each year. These storms may include severe thunderstorms and remnants of major hurricanes or tropical storms. These storms have the potential to cause several cascading events including utility failure, floods, flash floods, dam failure, water supply contamination, transportation accidents, and erosion/landslides. In the event of a severe storm private property as well as public infrastructure could be adversely affected.

It is difficult to affix any type of value to private losses from a disaster of this type. There are many losses that are unaccounted for because they are not reported to insurance agencies. Because of this fact, the Hazard Mitigation Committee had to use its best judgment in determining the value of losses from this type of disaster. According to the committee, a moderate loss could easily top a few hundred dollars per residence.

Public losses from this type of disaster include direct expenses to the Town's Highway budget. Items such as road clearing, tree/debris removal, items above and beyond the regular allocated budgeting can account for major deficits of the highway budget. Fire Departments, Emergency Crews, and Community Service Agencies are also prone to major expenditures of resources. Utilities are estimated to be one of the largest hit during an event of this nature.

Below is a map showing the wind zones of New York State. Otsego County is identified as mostly zone 3 characteristics which represents wind zones of 200 mph

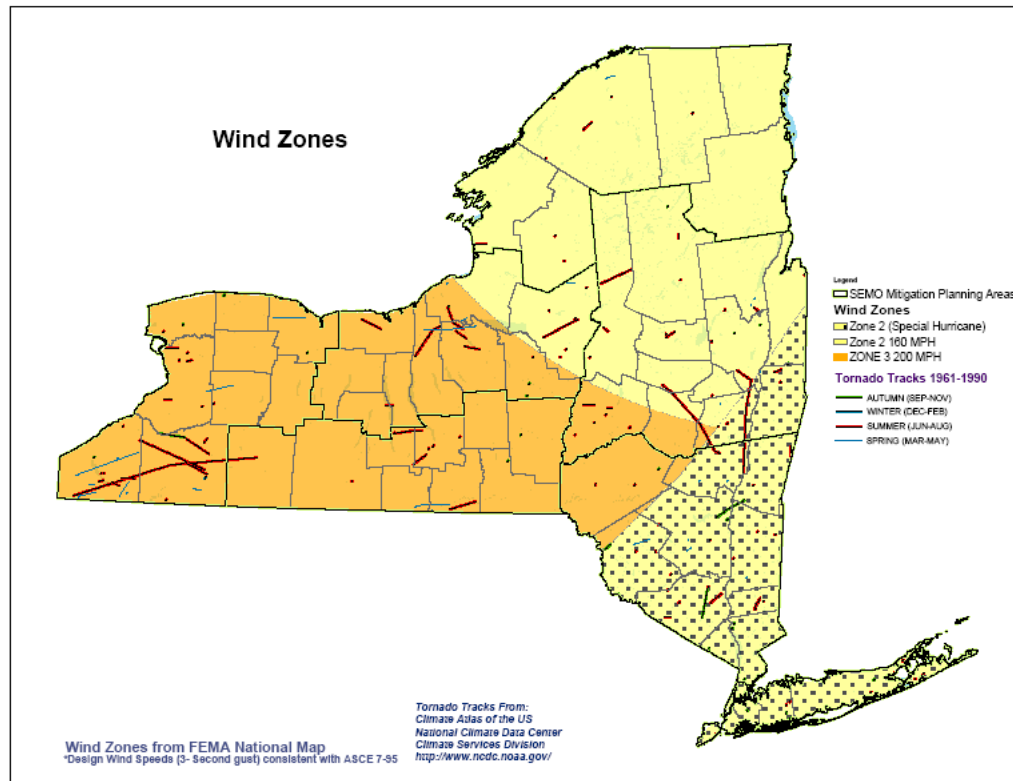


Figure 4.1

WINTER STORM (SEVERE)

Potential Impact: Throughout a Large Region

Cascade Effects: Highly Likely

Frequency: A Frequent Event

Onset: Several Hours Warning

Hazard Duration: One Day

Recovery Time: Three Days to One Week

Impact:

- Serious Injury or Death is Likely, but not in Large Numbers
- Moderate Damage to Private Property
- Severe Structural Damage to Public Facilities

Definition: A storm system that develops in the late autumn to early spring and deposits wintry precipitation, such as snow, sleet, or freezing rain, with a significant impact on transportation systems and public safety. Ice Storm is included as a separate hazard. For this analysis, the following could meet this definition:

- Heavy snow – Snowfall accumulating to 6 inches in twelve hours or less.

- **Blizzard** – A winter storm characterized by low temperatures, wind speeds of 35 miles per hour or greater, and sufficient falling and/or blowing snow in the air to frequently reduce visibility to ¼ mile or less for a duration of at least three hours.
- **Severe Blizzard** – A winter storm characterized by temperatures near or below 10 degrees Fahrenheit, winds exceeding 45 mph, and visibility reduced by snow to near zero for duration of at least three hours.

Profile/Vulnerability Assessment: Limited primarily to the late autumn through early spring, most severe winter storms impact the entire Town and Village of Unadilla by causing roadway hazards and transportation accidents. In addition, severe winter storms are capable of costing thousands of dollars, due to damage to structures resulting from the weight of large accumulations of ice/snow and the removal of snow accumulations. Significant losses attributed to these weather events have included widespread interruption of electric-power delivery to thousands of customers as a result of down power lines and utility poles.

Severe winter storms occur frequently throughout the Town and Village of Unadilla, primarily Nor-Easters as well as the occasional blizzard. Although Town and Village of Unadilla expects to deal with annual snow removal, major snowfall in a short period of time or blizzard conditions can exceed the normal capacity of Town and Village of Unadilla's local highway departments. Emergency response times can be impeded and the ability for all residents, especially those in the most remote locations of the Town, may find fuel and food availability hindered with a higher possibility of utility failure occurring. Access to certain homes can take days to clear, especially dead end roads and residents with long driveways. In the village, placement of removed snow becomes a problem. Residents have a tendency to plow into the streams or floodways creating the potential for a greater hazard in the future.

It is difficult to affix any type of value to Public and private losses from a disaster of this type. Public losses from this type of disaster include direct expenses to the Town's Highway budget. Items such as around the clock plowing, sanding, salting, beyond the regular allocated budgeting can account for major deficits of the highway budget. Fire Departments, Emergency Crews, Community Service Agencies, and Utilities are also prone to major expenditures of resources.

The map below shows the annual snowfall for the state of New York. Otsego county is approximately 75-100" per year.

Annual Snowfall Normals 1971-2000

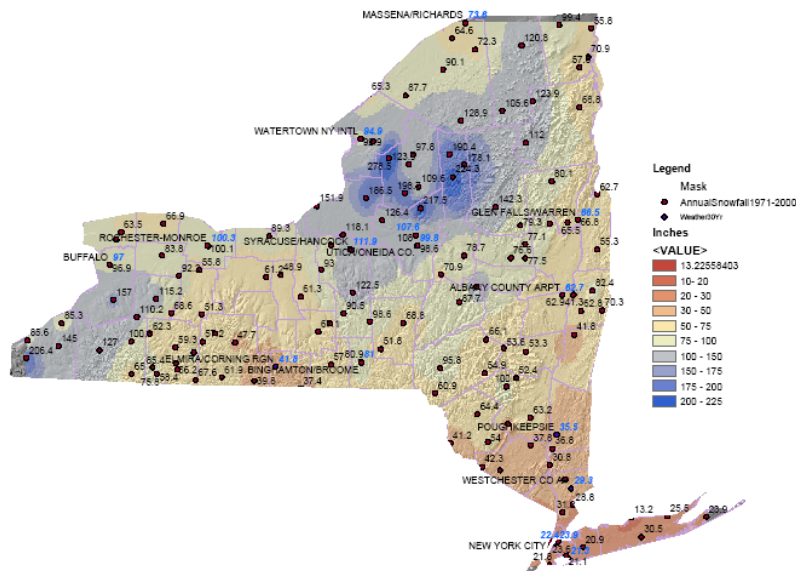


Figure 4.2

FLASH FLOOD

| | |
|---------------------------------|------------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | A Frequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | Three Days to One Week |
| <u>Impact:</u> | |

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Severe Structural Damage to Public Facilities

Definition: Flooding usually is a natural, cyclic occurrence in existing water bodies or drainage ways. When a water body overflows its “normal” banks, a potentially violent and/or destructive waterway can form. A flash flood is a sudden transformation of a small stream into a violent waterway after heavy rain and/or rapid snowmelt. Urban flooding occurs in developed areas where the drainage system is inadequate to safely convey runoff.

Profile/Vulnerability Assessment: Flooding is New York’s most constantly damaging natural disaster. Since 1955, New York has recorded more flood events than any other state in the Northeast. Millions of dollars in flood losses are sustained each year due to private property damage, infrastructure damage, disruption of commerce, unemployment

caused by floods, the expense of disaster relief, and other related costs. Annual economic losses are estimated to be as high \$100 million state-wide.

Flash Flooding can be caused by excessive precipitation, rapid snowmelt, ice jams, beaver dams, or dam failure. Steep slopes make areas very prone to flash flooding. Slow moving thunderstorms often produce flash floods, particularly during summer months. Remnants of tropical storm systems can produce both flash floods and river flooding.

The Town and Village of Unadilla contain numerous storm water management devices such as ditches, culverts, and storm sewers that are susceptible to flash flooding. Additional hazards that are likely to be triggered by a flash flood event include: hazardous material release, transportation accident, power failure, fuel shortage, water supply contamination, food shortage, erosion/landslide, disease, and dam failure. The damages and recovery time from a major flood can be extensive.

Both private and public losses can be substantial in a flash flood event. Depending on when and where an event takes place determines the resources needed to remedy the situation. Public facilities have the potential for the greatest loss due to possibility of ditch, culvert, road, and even bridge maintenance/replacement being necessary after an event.

EROSION/LANDSLIDE

| | |
|---------------------------------|--|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | A Frequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | Three Days to One Week |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death Unlikely• Little or No Damage to Private Property• Severe Structural Damage to Public Facilities |

Definition: The downward and outward movement of slope-forming materials reacting to the force of gravity. Slide materials may be composed of natural rock, soil, artificial fill, or combinations of these materials. The term landslide is generalized and includes rock falls, rockslides, creep, block glides, debris slides, earth-flow, mudflow, slump, and other similar terms.

Profile/Vulnerability Assessment: There are several areas throughout the Town and Village of Unadilla where steep slopes can be found, including river banks and road sides. Numerous small landslides occur each year, blocking culverts and filling ditches rendering them useless. Most landslides in Unadilla are caused by extensive amounts of

rain or storm water runoff. As storm water control devices become affected, roads, culverts, and banks fail needing immediate attention.

Additional hazards that are likely to be triggered by an erosion/landslide event include: flooding, flash flooding, hazardous material release, transportation accident, power failure, water supply contamination, disease, and dam failure. The damages and recovery time from a major landslide/erosion event can be extensive.

Public facilities have the potential for the greatest loss due to an erosion/landslide event. The actual erosion/landslide event dictates resources needed to remedy the situation. From stream bank stabilization to culvert replacement, the costs widely vary. Both the Town and Village fund storm water maintenance activities and implement erosion control practices on a regular basis, but in a multi-disaster events, local budgets can be easily overwhelmed.

The landslide hazardous map below identifies the areas in the state of New York and the potential for landslide susceptibility. Otsego county is highlighted as pale green indicating a low incidence of landslide activity. Historically, landslides have not been a significant hazard in the area. Due to the low incidence of landslide activity and the lack of any historical data, a risk assessment was not completed for this hazard.

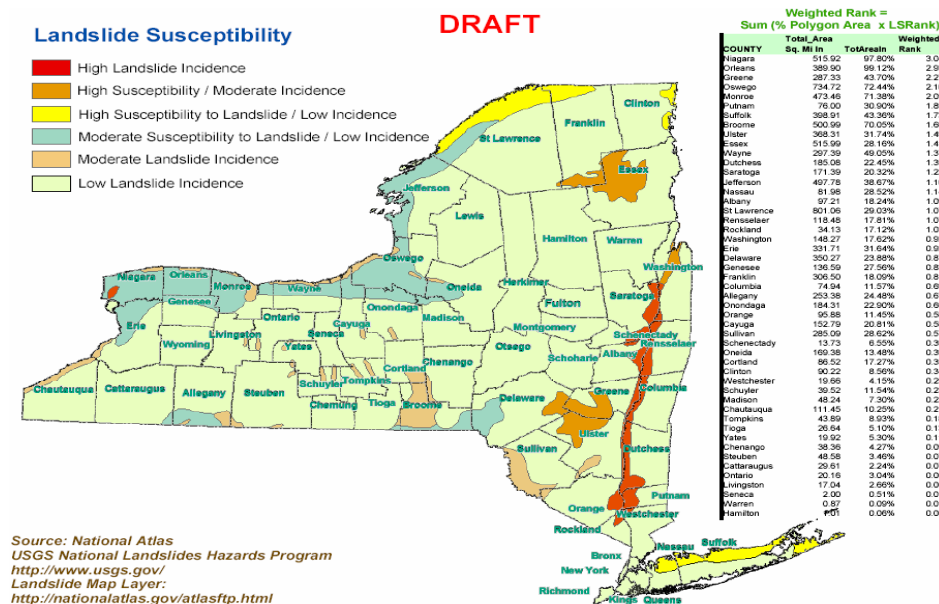


Figure 4.3

HAZMAT (IN TRANSIT)

Potential Impact: Throughout a Small Region

Cascade Effects: Some Potential

Frequency: A Frequent Event

Onset: No Warning

Hazard Duration: One Day

Recovery Time: One to Two Days

Impact:

- Serious Injury or Death Unlikely
- Little or No Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: The uncontrolled release of material during transport, which when released can result in death or injury to people and/or damage to property and the environment through the material's flammability, toxicity, corrosiveness, chemical instability and/or combustibility.

Profile/Vulnerability Assessment: The Town and Village of Unadilla contain, or are in close proximity to, major transportation routes carrying hazardous materials on a regular basis. Unadilla contains State Route 7, State Route 8, and Interstate 88(a major thoroughfare between Binghamton and Albany) and over seven miles of the Delaware and Hudson Rail Line/Canadian Pacific Railway.

Transportation accidents in Unadilla involving hazardous material could occur on municipal roads, with the greatest probability along the railroad line and the interstate highway. These principal transportation routes pass through more densely populated areas of the Town.

Transportation accidents frequently occur that result in the release of hazardous materials. Fortunately, these incidents generally involve small quantities of material. The potential exists for a more serious incident since most of the residents and businesses in Unadilla are located within one mile of a major transportation corridor.

Transportation accidents resulting in the release of hazardous materials can result in fire, explosion, and the release of toxic fumes, water supply contamination, agricultural damage, or environmental contamination. If an acutely toxic substance is dispersed in the atmosphere, the area of concern can extend as far as 10 miles from the site of the release. An overturned tanker or derailed tank car may take a week or more to mitigate. If contaminants are dispersed into the environment, the cleanup can take years.

A credible worst-case hazardous material incident could result from an accident that ruptures a railroad car containing hazardous materials. If the released material is subject to atmospheric dispersion, the radius of concern could be as much as 10 miles (for example, ammonia, chlorine, or nitric acid). If a release occurs along the railroad near the village and requires evacuation of a 5-mile radius, approximately 5,000 residents

would be displaced. The estimated cost to these residents would be at least \$125,000 (based on a Red Cross estimate that expenses are a minimum of \$25.00 - \$100.00 per person per day). In addition to emergency response expenses, casualties, and medical expense, the property damage and environmental cleanup costs resulting from a hazardous material release could be hundreds of thousands of dollars.

FIRE/WILDFIRE

| | |
|---------------------------------|-------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | A Frequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | Less Than One Day |

Impact:

- Serious Injury or Death Unlikely
- Severe Damage to Private Property
- Little or No Structural Damage to Public Facilities

Definition: The uncontrolled burning in residential, commercial, industrial, or other properties in developed areas. Wildfires are defined as the uncontrolled combustion of trees, brush, or grass involving large areas potentially threatening human life and property.

Profile/Vulnerability Assessment: Most fires including wildfires are started by people through negligent behavior, environmental factors, or by downed power lines. The risk of wildfire is greatest in the Town during drought conditions, when the moisture content of forests and grasslands is low. Factors that contribute to the spread and severity of fires include the available fuel, terrain (fire spreads faster uphill than downhill), and the urban-wild land interface.

There have been numerous accounts of fire throughout the Town and Village of Unadilla's history. A large scale residential fire usually occurs every 10 years. Much of the Village's business district consists of buildings in excess of 100 years in age. These buildings are very close to one another, creating the potential for a series of devastating fires. These fires could have the potential to destroy a large portion of Unadilla's business district.

Private losses are the greatest in a fire related disaster event. The Town and Village have an equalized assessed building value of \$119,236,965.56. Replacement costs could be greater than four times this amount due to the historic nature of buildings in the community. Full replacement value including content and loss of use would be astronomical.

TRANS ACCIDENT

Potential Impact: Throughout a Small Region

Cascade Effects: Some Potential

Frequency: A Frequent Event

Onset: No Warning

Hazard Duration: Less Than One Day

Recovery Time: Less Than One Day

Impact:

- Serious Injury or Death is Likely, but not in Large Numbers
- Little or No Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: A mishap involving one or more conveyances on land, sea, and/or in the air that results in casualties and/or substantial loss of property.

Profile/Vulnerability Assessment: Unadilla has the potential for a large transportation accident; there are several heavily traveled routes which extend throughout the Town and Village. Interstate 88, State Route 7, as well as several rail lines run through the southern portion of Unadilla. The Town also includes State Route 8, along the Town's western boundary, and over 58.6 miles of town roads which contribute to the threat of a transportation accident. Animal/weather related accidents are the number one cause of this.

Numerous trans accidents within Unadilla contribute to individual private losses. The leading cause of accidents in Unadilla is weather/animal related. The culmination of numerous accidents lead to escalating expenses incurred by Fire Departments, Emergency Crews, Medical Facilities, etc. in Unadilla.

DAM FAILURE

Potential Impact: Several Locations

Cascade Effects: Highly Likely

Frequency: A Regular Event

Onset: No Warning

Hazard Duration: Less Than One Day

Recovery Time: Three Days to One Week

Impact:

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Severe Structural Damage to Public Facilities

Definition: Structural deterioration, either gradual or sudden, resulting in the facility's inability to control impounded water as designed, resulting in danger to people and/or property in the potential inundation area. Dams may be either man-made or exist because of natural phenomena, such as landslides or beavers.

Profile/Vulnerability Assessment: In the event of a dam failure, the sudden release of enormous amounts of water would cause flash flooding downstream of the dam structure. The damage to private property and infrastructure located within the inundation zone could be extensive. The water surge can cause water supply failure, erosion/landslide, storm sewer system failure, hazardous material release, power outage, and other cascade effects.

Dam failure can result from many factors such as natural disasters, structural deterioration, or actions caused by man, including terrorism. According to the International Commission of Large Dams (ICOLD), the three major causes of dam failure are overtopping by flood, foundation defects, and piping.

The largest threat of dam failure in Town and Village of Unadilla is caused by natural phenomena, primarily from beavers. There have been numerous accounts of beaver dam failure throughout Town and Village of Unadilla causing damage to private property as well as infrastructure. Beaver damage in Unadilla ranges from culvert blockages to complete road washouts. Unadilla is also at risk from inundation waters of the East Sidney Dam- especially the residents of Wells Bridge.

MODERATELY LOW

**FLOOD, TORNADO, UTILITY FAILURE, WATER SUPPLY
CONTAMINATION, EXTREME TEMPS, OIL SPILL, RADIOLOGICAL (IN
TRANSIT), EXPLOSION, HAZMAT (FIXED SITE), ICE JAM, STRUCTURAL
COLLAPSE, EARTHQUAKE**

FLOOD

Potential Impact: Throughout a Small Region

Cascade Effects: Highly Likely

Frequency: A Regular Event

Onset: Several Hours Warning

Hazard Duration: Four days to One Week

Recovery Time: Three Days to One Week

Impact:

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: Flooding usually is a natural, cyclic occurrence in existing water bodies or drainage ways. When a water body overflows its “normal” banks, a potentially violent and/or destructive waterway can form

Profile/Vulnerability Assessment: Flooding is New York’s most constantly damaging natural disaster. Since 1955, New York has recorded more flood events than any other state in the Northeast. Millions of dollars in flood losses are sustained each year due to private property damage, infrastructure damage, disruption of commerce, unemployment caused by floods, the expense of disaster relief, and other related costs. Annual economic losses are estimated to be as high \$100 million.

Geographically, Unadilla is situated at the union of the Unadilla and Susquehanna Rivers in a low lying valley. The Town is interspersed with numerous tributaries of these rivers. According to the State Emergency Management Office, there are 95 residents in Town and Village of Unadilla enrolled in the National Flood Insurance Program, with a total of \$5,713,900 of coverage. Since 1978 Unadilla has had only 13 claims valued at \$15,678. This low number of claims is mainly due to the many improvements in the Town and Village to mitigate flooding since the 1960’s. Numerous flood control devices such as dykes, raceways, and storm sewers have decreased the effects of flooding on the community.

Additional hazards that are likely to be triggered by a flood event include: hazardous material release, transportation accident, power failure, fuel shortage, water supply contamination, food shortage, landslide, disease, and dam failure. The damages and recovery time from a major flood can be extensive.

With the recent flood of June 2006, it is evident the Town and Village of Unadilla experienced a moderate level of damage. The majority of damage occurred within roadways and culvert areas throughout the county. The town and village experienced damage to an estimated extent of \$ 1.5 million. The risk assessment from flooding was calculated using current information from the Town and Village during the recent flood. See appendix F-3.

TORNADO

| | |
|---------------------------------|--|
| <u>Potential Impact:</u> | Throughout a Large Region |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | Three Days to One Week |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death Unlikely• Moderate Damage to Private Property• Severe Structural Damage to Public Facilities |

Definition: A tornado is a violently rotating column of air that extends from the base of a thunderstorm and comes in contact with the ground. The vortex, up to several hundred yards wide, is visible to the observer as a whirlpool-like column of winds rotating about a hollow cavity or funnel. Tornadoes are the most violent storms on earth, with estimated wind speeds of 200-300 miles per hour.

Profile/vulnerability Assessment: The entire Town is vulnerable to tornado damage. The last accounted tornado occurred in 1998, with major damage to the State reforestation lands. Damage paths for tornadoes can be in excess of one mile wide and 50 miles long. Despite improved weather forecasting capability, tornadoes can occur with little or no warning. A tornado is a great threat to life and usually causes catastrophic damage to property within its path. The winds in the strongest tornadoes are the fastest winds experienced anywhere on earth, with rotation velocities up to 300 mph. They can result in the total destruction of homes (especially mobile homes), businesses, cars, etc. and cause many deaths. Extensive damage to electric and telephone lines is likely. Extensive tree damage along roadways may inhibit or block access. Damaged or destroyed radio and television towers can impede communication. Because tornadoes are associated with thunderstorms, they may be preceded or followed by heavy rainfall or hail. This violent path of destruction caused by a tornado is likely to result in serious injury or death and moderate to severe damage to public and/or private property. Tornadoes can trigger many other hazards, including power outages, structural collapse, fires, and hazardous chemical releases.

Potential dollar damages are difficult to estimate for a tornado event in the Town and Village of Unadilla. A F3 tornado impacting any part of the Town could devastate several structures, result in multiple deaths/injuries and result in millions of dollars in damages. On the other hand, a tornado impacting an undeveloped area could result in far less damage to agricultural crops, forest, or some single-family housing.

The map below indicates the wind zones throughout the US based on historical data, showing where Presidential declarations have been issued for our state. Otsego county overall is 95% Zone 3 @ 200 winds per hour and 5% zone 2 at 160 miles per hour. Given this information a risk assessment was then generated for this hazard.

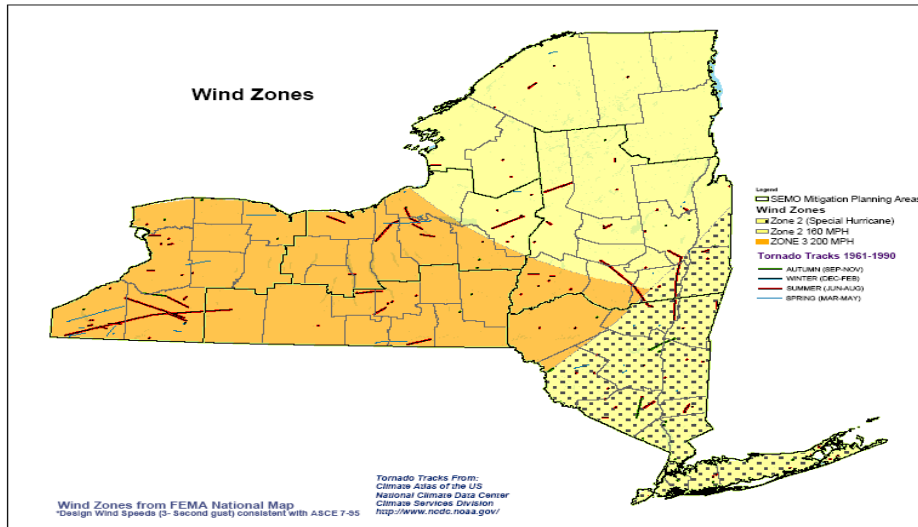


Figure 4.4

The following chart is from the website www.tornadoproject.com and is historical data for tornadoes in Otsego County from 1950 on. The damage pattern F0-F5 indicates the extend of damage to the county. This information was used for the Town and Village to determine the risk assessment from a Tornado. F0 category is considered a Gale tornado at wind speeds of 40-72 mph with light damage. Some damage to chimneys; broken branches; push over shallow-rooted trees; Category F1 or moderate tornado (73-112 mph) created moderate damage including roof surfaces were peeled off, mobile homes pushed off foundations or overturned; moving autos pushed off road. Category F2 is considered a significant tornado of 113-157 mph causing considerable damage where roofs are torn off and mobile homes demolished, large trees snapped and/or uprooted.

Otsego County Tornadoes

| | | | | | | |
|--------------|-----|------|---|---|----|-----|
| AUG 10, 1958 | 001 | 1644 | 0 | 0 | F1 | 077 |
| AUG 16, 1961 | 004 | 1800 | 0 | 0 | F0 | 077 |
| JUN 16, 1976 | 005 | 1810 | 0 | 0 | F2 | 077 |
| JLY 26, 1985 | 005 | 1155 | 0 | 0 | F1 | 077 |
| JUN 16, 1986 | 002 | 2000 | 0 | 0 | F0 | 077 |
| JUN 22, 1987 | 002 | 1500 | 0 | 0 | F0 | 077 |
| JLY 25, 1987 | 004 | 1600 | 0 | 0 | F0 | 077 |
| JLY 05, 1992 | 012 | 1500 | 0 | 0 | F1 | 077 |

UTILITY FAILURE

| | |
|---------------------------------|--|
| <u>Potential Impact:</u> | Throughout a Large Region |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | A Regular Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | One Day |
| <u>Recovery Time:</u> | Less Than One Day |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death Unlikely• Little or No Damage to Private Property• Little or No Structural Damage to Public Facilities |

Definition: Loss of electric and/or natural gas supply, or public water supply as a result of an internal system failure and as a secondary effect of another disaster agent.

Profile/Vulnerability Assessment: A widespread and prolonged utility outage is most likely to occur as a cascade effect of another hazard (severe winter storm, ice storm, flood, etc.). These incidents are evaluated elsewhere under this plan. The loss of power generally results from damage to power lines (due to high wind, ice, traffic accidents, etc.) or transmission equipment (often resulting from animal damage). Telephone service can be lost due to overloaded systems, mechanical problems, or damage to phone lines. The ongoing maintenance and operational procedures of each utility provider are intended to minimize the risk of service disruption.

Due to our widespread reliance on electricity, telephones, and potable water, the loss to these services can disrupt many ordinary activities. Emergency communications may be impaired if it becomes necessary to rely on radio communications. A water supply failure can result in an increased fire hazard if it becomes necessary to transport water to areas normally served by fire hydrants. A prolonged power failure can impact heating, food (spoilage, inability to cook), water supplies, industrial processes, and businesses. The most likely cause of injury or death is from unsafe use of alternate fuel sources for heating, cooking and lighting.

The entire community is vulnerable to the potential impacts of an electricity or telephone outage. An extended utility outage in the Town would represent an inconvenience for most residents, with economic losses for some businesses. The greatest economic loss would be for the utility itself, which must provide the crews and equipment to restore service. The northeast blackout in August 2003 affected the entire Town. Commercial grocery businesses with generators were positively impacted, whereas businesses without generators were harmed.

WATER SUPPLY CONTAMINATION

Potential Impact: Throughout a Small Region

Cascade Effects: Highly Likely

Frequency: A Rare Event

Onset: No Warning

Hazard Duration: More Than One Week

Recovery Time: More Than Two Weeks

Impact:

- Serious Injury or Death is Likely, but not in Large Numbers
- Little or No Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: The contamination or potential contamination of surface or subsurface public water supply by chemical or biological materials that results in restricted or diminished ability to use the water source.

Profile/Vulnerability Assessment: Water supply contamination in Town and Village of Unadilla poses a greater threat in the Village than it does in the Town. This is primarily because the Village of Unadilla relies on a public water supply consisting of two wells and a series of springs. In the Town, where water supply is provided by individual wells, the threat of water supply contamination is largely isolated to contaminated wells.

Water supply contamination would most likely occur during another hazard event (such as flood, earthquake, or landslide), where ground movement would cause ruptured water mains, or contaminated wells.

EXTREME TEMPS

Potential Impact: Throughout a Large Region

Cascade Effects: Some Potential

Frequency: A Regular Event

Onset: Several Days Warning

Hazard Duration: Two to Three Days

Recovery Time: One to Two Days

Impact:

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: Extended periods of excessive cold or hot and humid weather with a serious impact in human and/or animal populations, particularly elderly and/or persons with respiratory ailments.

Profile/Vulnerability Assessment: Extreme temperature conditions generally impact only a few isolated individuals. However, compounding circumstances, such as severe

winter weather that strands motorists or an extended power failure, can increase the number of people affected.

Freezing temperatures can cause problems with burst pipes, ruptured water mains, and automobiles that will not start, but the greatest danger is to people. Prolonged exposure to extreme cold can lead to frostbite, hypothermia, and death. If extreme cold conditions do not occur in combination with a power failure or other hazard, the greatest impact will be on low-income residents who do not have access to adequate heating. If a prolonged power outage occurs during cold weather the entire population will be impacted. Injury and deaths can result from fires or carbon monoxide poisoning that result from unsafe use of alternate sources for heating. Extreme cold can also cause damage to livestock, crops, landscaping, and other property.

OIL SPILL

| | |
|---------------------------------|--|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Two to Three Days |
| <u>Recovery Time:</u> | Three Days to One Week |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death Unlikely• Moderate Damage to Private Property• Moderate Structural Damage to Public Facilities |

Definition: The uncontrolled or accidental discharge of petroleum into water and/or onto land or sea.

Profile/Vulnerability Assessment: Traffic accidents are historically the number one cause for oil spills in Unadilla, but there have been instances in the past of fuel station filling accidents. Unadilla has a number of fuel stations located within its flood zone that, if a major leak or accident occurred, could easily contaminate the Village's water supply and/or the Susquehanna River.

Most oil spill incidents, according to NYSDEC, involve leaking underground storage tanks or the release of fuel due to a motor vehicle crash. The most frequent fixed site petroleum spill incidents responded to by Spills Engineers from the NYSDEC involve the release from abandoned underground storage tanks. The cleanup costs for these incidents typically range from a minimum of \$10,000 to \$50,000 or more if groundwater is contaminated. The most frequent transit-related petroleum spills involve the release of fuel due to traffic accidents. A tractor trailer accident can result in a surface spill of 50 to 300 gallons of diesel oil, which requires a response from the NYSDEC and contractor work to clean up the site. The typical cost for this type of incident is \$2500 to \$10,000

(estimate from NYSDEC Spills Engineer). Smaller releases can be managed by fire departments. Although a transportation accident resulting in a petroleum spill could occur on county and municipal roads, the probability of significant releases is greatest along the state highways, such as Rte 7, Route 8, and Interstate 88.

RADIOLOGICAL (IN TRANSIT)

| | |
|---------------------------------|---------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | A Rare Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | More Than One Week |
| <u>Recovery Time:</u> | More Than Two Weeks |

Impact:

- Serious Injury or Death is Likely, but not in Large Numbers
- Moderate Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: A release or threat of release of radioactive material from a transportation vehicle (including truck, rail, air, and marine vehicle) or other mechanism.

Profile/Vulnerability Assessment: No radiological release in transit has ever occurred in Otsego County. The possibility of a low level release exists, especially along rail lines and the I-88 corridor as well as other major roads. Packing requirements for transportation of radioactive materials would most likely prevent release, even in the event of a transportation accident. If a transportation accident involving radioactive materials were to occur, unnecessary panic by residents in the immediate area would be the greatest concern. Clean up costs would most likely be small and public health would most likely not be threatened any more than natural radiation affects living things.

EXPLOSION

| | |
|---------------------------------|---------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | One to Two Days |

Impact:

- Serious Injury or Death is Likely, but not in Large Numbers
- Moderate Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: The threat or actual detonation of an explosive device or material with the potential of inflicting serious injury to people or damage to property.

Profile/Vulnerability Assessment: An explosion generally occurs with little or no warning. It can cause serious injury or death to those in the immediate vicinity of the explosion and damage to the surrounding property. If it occurs in a building, the structure is likely to be extensively damaged or destroyed. An explosion can trigger a fire, transportation accident, hazardous material release, or other event.

The type of situations that can lead to an explosion are so numerous, that most areas in the Town must be considered vulnerable. Explosive materials can be stored and used at industrial sites, retail establishments, agricultural operations, residences, and illegal methamphetamine labs. Explosive materials are transported through the community along roads and railroads. Propane, fuel oil, and gas trucks deliver explosive materials to customers throughout the Town and Village of Unadilla.

HAZMAT (FIXED SITE)

| | |
|---------------------------------|------------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Two to Three Days |
| <u>Recovery Time:</u> | Three Days to One Week |
| <u>Impact:</u> | |

- Serious Injury or Death Unlikely
- Little or No Damage to Private Property
- Little or No Structural Damage to Public Facilities

Definition: The uncontrolled release of material from a stationary facility, which when released can result in death or injury to people and/or damage to property and the environment through the material's flammability, toxicity, corrosiveness, chemical instability, and/ or combustibility.

Profile/Vulnerability Assessment: The greatest threat for hazardous materials at fixed sites in the Town and Village of Unadilla lies with the some of the larger businesses, petroleum storage facilities, and the agricultural industry. The International Building Code sets higher standards for seismic, snow loading, and wind for buildings that contain "sufficient quantities of toxic or explosive substances to be dangerous to the public if released." The agricultural industry uses fertilizers that have harmful or explosive capabilities if misused or stored improperly on a farm.

Incidents involving hazardous materials may result in fire, explosion, release of toxic fumes, water supply contamination, or other environmental contamination. An air contamination could cause a problem for miles from the release site. Emergency responders need to be aware of what hazardous materials are being stored in Unadilla.

ICE JAM

| | |
|---------------------------------|----------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Highly Likely |
| <u>Frequency:</u> | A Regular Event |
| <u>Onset:</u> | Several Days Warning |
| <u>Hazard Duration:</u> | Two to Three Days |
| <u>Recovery Time:</u> | Less Than One Day |

Impact:

- Serious Injury or Death Unlikely
- Little or No Damage to Private Property
- Moderate Structural Damage to Public Facilities

Definition: Large accumulation of ice in rivers or streams interrupting the normal flow of water and often leading to flooding conditions and/or damage to structures.

Profile/Vulnerability Assessment: An ice jam in a river or stream effectively forms a hanging dam that can block flow and cause water to back up. The flooding caused by an ice jam will persist until the ice breaks up, either naturally or as a result of human intervention. The resulting flood damages would be localized. Areas along streams where debris jams have developed at bridges and culverts could experience similar flooding and erosion problems due to ice jams.

Ice jam flooding in the Town and Village of Unadilla is not likely to impact more than a few houses. The major hazards occur along the Susquehanna and flood control devices within the Town. The largest potential impact would be to public facilities such as roads and bridges with costs escalating into the millions of dollars.

STRUCTURAL COLLAPSE

| | |
|---------------------------------|---------------------|
| <u>Potential Impact:</u> | Several Locations |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | No Warning |
| <u>Hazard Duration:</u> | Less Than One Day |
| <u>Recovery Time:</u> | One to Two Days |

Impact:

- Serious Injury or Death Unlikely
- Moderate Damage to Private Property
- Little or No Structural Damage to Public Facilities

Definition: A sudden structural failing, partially or fully, of buildings, bridges or tunnels, threatening human life and health.

Profile/Vulnerability Assessment: Structural Collapse in the Town and Village of Unadilla is usually the result of : improper construction methods, improper structure maintenance, heavy snow weight, a transportation accident, a fire, or structure age. Barns have collapsed in the Town during winter months, usually due to a combination of heavy snow pack with subsequent rain. Unadilla consists of a large percentage of aged housing stock. With older buildings, there is a greater chance of collapse if proper maintenance has been neglected over the years. The likelihood of structural collapse of newer residential structures or newer commercial structures is low, especially with the present International Building Code. The collapse of residential structures could result in various amounts in damages per structure. Collapse of a large commercial structure or bridge could result in several hundred thousand dollars in damages. Collapse of occupied structures can result in deaths/injuries. Proper building methods and monitoring of snow load can help reduce this hazard.

EARTHQUAKE

Potential Impact: Throughout a Large Region

Cascade Effects: Highly Unlikely

Frequency: An Infrequent Event

Onset: No Warning

Hazard Duration: Less Than One Day

Recovery Time: Less Than One Day

Impact:

- Serious Injury or Death Unlikely
- Little or No Damage to Private Property
- Little or No Structural Damage to Public Facilities

Definition: A sudden motion of the ground caused by release of subterranean strain energy, due to plate tectonics, resulting in surface faulting (ground rupture), ground shaking, or ground failure (collapse).

Profile/Vulnerability Assessment: Earthquakes, although uncommon in this area, pose a relatively serious threat. Several fault lines run throughout New York State, as well as in close proximity to the Town and Village of Unadilla. In the past, Unadilla has had some minor tremors, particularly during the small earthquake which occurred in 2001 in upstate New York.

Earthquakes could trigger several other hazards. The sudden motion of the ground could cause waterlines to rupture, causing extensive damage to public and private property.

LOW HAZARDS

DROUGHT, EPIDEMIC

DROUGHT

| | |
|---------------------------------|--|
| <u>Potential Impact:</u> | Throughout a Large Region |
| <u>Cascade Effects:</u> | Some Potential |
| <u>Frequency:</u> | An Infrequent Event |
| <u>Onset:</u> | More Than One Week Warning |
| <u>Hazard Duration:</u> | More Than One Week |
| <u>Recovery Time:</u> | Less Than One Day |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death Unlikely• Little or No Damage to Private Property• Little or No Structural Damage to Public Facilities |

Definition: A prolonged period of limited precipitation affecting the supply and quality of water.

Profile/Vulnerability Assessment: The Town and Village of Unadilla has minor droughts every couple of years. Most recently there were drought warnings issued by the National Weather Service in 1999, 2000, and 2001. Droughts that impact private well supplies, agriculture, and wildfire risks are likely to occur, on the average, of every two years.

Even though New York normally possesses an adequate water supply with sufficient annual precipitation to replenish surface and groundwater resources, the region is still susceptible to periods of drought. In Town and Village of Unadilla, all private and some public water supplies are from wells and springs. Groundwater is the source of water for a majority of public water supplies.

Drought periods progress through stages and drought intensity may vary considerably during drought period. The time of occurrence and duration can cause significant variations in drought impacts. The initial impact of drought is likely to be felt by agriculture and those relying on private wells. Agriculture faces major losses when soil moisture can not be maintained and when sufficient water is not available for livestock. If it becomes necessary to impose mandatory water use restrictions or import water, additional economic impacts will occur. Some businesses and industry may be affected by reduced revenues resulting from increasingly severe restrictions on nonessential water uses. The potential costs associated with a severe drought include the cost of replacing private wells with deeper wells and agriculture damages.

EPIDEMIC

| | |
|---------------------------------|---|
| <u>Potential Impact:</u> | Throughout a Large Region |
| <u>Cascade Effects:</u> | Highly Unlikely |
| <u>Frequency:</u> | A Rare Event |
| <u>Onset:</u> | Several Days Warning |
| <u>Hazard Duration:</u> | More Than One Week |
| <u>Recovery Time:</u> | One to Two Weeks |
| <u>Impact:</u> | |
| | <ul style="list-style-type: none">• Serious Injury or Death is Likely, but not in Large Numbers• Little or No Damage to Private Property• Little or No Structural Damage to Public Facilities |

Definition: An epidemic is an occurrence or outbreak of disease to an unusual number of individuals or proportion of the population, human or animal.

Profile/Vulnerability Assessment: The U.S. Centers for Disease Control (CDC) reports that in most years, influenza-related complications are responsible for 10,000-40,000 deaths, 50,000-300,000 hospitalizations and approximately \$1-3 billion in direct costs for medical care in the United States. Flu pandemics have occurred in the United States in 1918, 1957, and 1968. Although death rates associated with the recent pandemics of 1957 and 1968 were confined primarily to the elderly and chronically ill, both pandemics were associated with high rates of illness and social disruption, with combined economic losses of approximately \$32 billion (in 1995 dollars).

The Spanish Influenza pandemic in 1918 is the catastrophe against which all modern pandemics are measured. It is estimated that approximately 20-40% of the worldwide population became ill and over 20 million people died. Between September 1918 and April 1919, approximately 500,000 deaths from the flu occurred in the U.S. alone. The attack rate and mortality was highest among adults 20 to 50 years old. Although the Asian influenza pandemic in 1957-58 was not as devastating as the Spanish Flu, about 69,800 people in the U.S. died. The elderly had the highest rates of death. The virus that caused this pandemic was quickly identified and limited supplies of vaccine were available.

The 1968 Hong Kong influenza pandemic was the mildest pandemic in the 20th century. The number of deaths between September 1968 and March 1969 was 33,800. The reasons cited for the lower death rate include: partial immunity due to similarities with the Asian flu virus, reduced transmission by school children due to school holidays, and improved medical care and antibiotics to treat those who became ill.

Immunizations and sanitary practices have decreased the prevalence of what most people would classically think of as epidemics. However, the human population remains susceptible to influenza outbreaks, Hepatitis B, Hepatitis A, HIV, meningitis, or vector borne diseases such as West Nile Encephalitis and Lyme Disease. In addition, rabies and

other diseases may affect the animal population (both wild and domestic). Recent concerns have focused on the possible use of anthrax or another biological agent by terrorists. Flooding could also trigger an epidemic, since floodwater can carry bacteria that are harmful to both humans and animals.

Although an epidemic could impact the entire population of Unadilla, it is generally the young, old and those with existing medical conditions who are at the greatest risk. Depending on the disease, the mechanism of transmission can result in greater risks for some segments of the population than for others.

Each of the 23 risks was then identified according to their effect on the municipality during the time of year they would normally occur any fluctuation of population during the different times of year. The Town and Village of Unadilla is not recognized as having a significant population change from tourist influx. The constant population based on the 2000 census totals 4,548 for the Town (4.7% increase) and 1,127 (-10.9 decrease).

The following information is based on “Otsego County Data Book” based on 2000 census information provided by the County planning department, real property tax department aerial.

Housing commercial and agricultural values were established by identifying numerous locations throughout the Town and Village by utilizing the county GIS mapping system to gather assessed values. Calculations were made by samples of assessed value of residential vs. commercial vs. agricultural. An average square footage for each type of facility was determined. The average square footage of residential structures is 2,062 sq. ft for residents in the Town and Village.. The replacement cost of \$77 per square foot was used for the residential households. The average residential replacement value was established at \$ 158,774x 50% content value = \$ 238,161 The average agricultural structure including replacement value, content value and displacement value is \$ 721,305. The average commercial full value replacement including displacement, using an average sq. footage of 5,724 is \$938,736.

A list of critical buildings and infrastructure can be found in Appendix D, F-2 and the following table.

A summary of replacement values and content value for the listed critical structures is as follows:

| <u>Critical Facilities</u> | <u>Bld. Value</u> | <u>Replacement Value</u> x <u>Content Replacement</u> |
|----------------------------|-------------------|---|
| (T) Highway Dept | \$35,500 | \$ 71,192 (\$88/sq.ft) \$ 142,384 (100%) |
| “ “ | \$115,900 | \$ 449,416 (\$88/sq.ft.) \$ 898,832 (100%) |
| (T)Fire Dept. | \$ 31,800 | \$ 350,740 (\$130/sq.ft)\$ 876,850 (150%) |
| (T) Offices | \$ 48,200 | \$ 433,752 (\$88/sq.ft) \$ 864,504 (100%) |
| “ “ | \$ 147,200 | \$ 152,152 (\$88/sq.ft.) \$ 304,304 (100%) |
| (V) Police Clifton St. | \$ 87,400 | \$ 369,850 (\$130/sq.ft)\$ 924,625 (150%) |
| (V)Water Works – Kilkenny | \$ 93,600 | \$ 197,472 (\$88/sq.ft) \$ 394,944 (100%) |
| (V) Highway | \$ 162,700 | \$ 417,208 (\$88/sq.ft) \$ 834,416 (100%) |
| Public Service | \$ 6,200 | \$ 70,400 (\$88/sq.ft) \$ 140,800 (100%) |

| | | | |
|----------------------------|-------------------|----------------------------|----------------------------|
| Wells Bridge Comm. House | \$ 111,200 | \$ 164,302 (\$113/sq.ft) | \$ 328,604 (100%) |
| Village Library | \$ 129,400 | \$ 288,640 (\$88/sq.ft) | \$ 577,280 (100%) |
| Post Office | \$ 65,400 | \$ 205,920 (\$88/sq.ft) | \$ 411,840 (100%) |
| Police | \$ 1,738,200 | \$ 2 m (\$130/sq.ft) | \$ 5 m (150%) |
| Episcopal Society | \$ 116,200 | \$ 566,243 (\$113/sq.ft) | \$ 1.1 m (100%) |
| Friendly Society | \$ 73,000 | \$ 303,631 (\$113/sq.ft) | \$ 607,262 (100%) |
| Methodist Society Main St. | \$ 78,600 | \$ 220,802 (\$113/sq.ft) | \$ 441,604 (100%) |
| Main St. | \$ 270,400 | \$ 367,363 (\$113/sq.ft) | \$ 734,726 (100%) |
| <u>Critical Facilities</u> | <u>Bld. Value</u> | <u>Replacement Value</u> x | <u>Content Replacement</u> |
| Methodist Society | | | |
| Butternut Rd. | \$ 54,300 | \$ 255,945 (\$113 sq. ft) | \$ 511,890 |
| (100%) | | | |
| Sand Hill Rd. | \$ 119,500 | \$ 239,673 (\$113/sq.ft) | \$ 479,346 (100%) |
| Presb. Society | \$ 169,500 | \$203,061 (\$113/sq.ft) | \$ 406,122 (100%) |
| St. Mathews Episcopal | \$ 88,100 | \$269,166 (\$113/sq.ft) | \$ 538,332 (100%) |

Replacement values were determined using the Average building replacement value per square foot found the how-to guide for the state and local mitigation planning workbook section 3-10.

The percent damage for structural loss was calculated for each using the available historical data and worksheets from the mitigation planning guide. Where loss values were not available, full value was used.

The following summary identifies the results of the survey for the natural hazards most likely to occur. Certain hazards are speculative and never occurred historically. These hazards were assessed as being random and having the potential of affecting the entire town.

Inventory Totals for the Town and Village of Unadilla are represented in millions (m)

The following summary identifies the results of the survey for the hazards most likely to occur. Certain hazards are speculative and never occurred historically. These hazards were assessed as being random and having the potential of affecting the entire town.

Moderately High Natural Hazards

Inventory Totals for the Town and Village of Unadilla – represented in millions (m)

| Occupancy Class | Total Assets | <i>Severe Storms</i> | <i>Winter Storms</i> | Flash Floods | Erosion | Flood |
|---------------------|----------------|----------------------|----------------------|--------------------------|---------|--------------------------|
| Residential | 2643 (629m) | Min. Structural | Min. Structural | 300 + in Village | 51 | 300 + in Village |
| Comm./Tourist | 110 (103 m) | Min. Struct. | Min. Struct. | Minimal | 1 | See note # 4 |
| Ind./Medical | 0 | 0 | 0 | 0 | 0 | 0 |
| Agricultural | 52 (37.5m) | Min. Struct. | Min. Struct. | Minimal | 8 | See note # 4 |
| Religion/non-profit | 11 (4.5m) | Min. Struct. | Min. Struct. | Minimal | 1 | See note # 4 |
| Government | 9 | Min. Struct. | Min. Struct. | Mostly roads and bridges | 1 | Mostly roads and bridges |
| Educational | 0 | 0 | 0 | 0 | 0 | 0 |
| Utilities | 0 | 0 | 0 | Minimal | 0 | See note # 4 |
| Gas Stations | 1 | Min. Struct | Min. Struct | Minimal | 0 | See note # 4 |
| Other | 0 | 0 | 0 | 0 | 0 | 0 |
| No. of bldgs. | 0 | Minimal | Minimal | 300+ | 62 | 300+ |
| Approx. Value (\$M) | 785.6 m | \$3,000- \$10,000 | \$3,000- \$10,000 | 1-2 m | 1-2 m | 1.5 m |
| # of People | 7335 | 7335 | 7335 | 65% of population | Minimal | 65% of population |

Italicizes are random in nature and could affect any portion or the entire community.

1. Shaded columns represent historical documentation.
2. Severe storm, winter storms and ice storm data is based on historical occurrences with the assumption all residents of the town will be affected, but structural damage would be minimal. Most damage is the results of road, culvert repair and power outages. Estimates for value are given based on historical data or surrounding community statistics.
3. Calculated loss is based on historical or total value including content.
4. Flood estimates are based on the June 2006 estimates from the municipality and consisted of bridge road and structural repair. According to the Town Highway Superintendent approximately 65% of the structures within the village experienced

serious damage from flooding. The total estimated amount of damage from the flood of 2006 is 1.5 m

SECTION 5 – MITIGATION

The table below highlights actions established by the Town and Village of Unadilla that address new and existing buildings within the community. The committee for the Town and Village of Unadilla was responsible for identifying actions that would mitigate impacts on both future and existing structures located within all hazard areas. The left column lists all the actions and hazards identified by the community. The actions are abbreviated and can be looked up in the following pages. Those actions that are marked with a XX are those actions that relate to new structures, existing structures or both.

| Mitigation Actions and Projects Addressing New/Existing Buildings and Infrastructure | | |
|---|--|--|
| Addresses the Effect of Hazards on: | | |
| | <u>New Buildings and Infrastructure</u> | <u>Existing Buildings and Infrastructure</u> |
| <u>Action by Hazard</u> | <i>Requirement 201.6(c)(3)(ii) B</i> | <i>Requirement 201.6(c)(3)(ii) C</i> |
| All Hazards | | |
| 1.1 Improve education program.... | | |
| 1.2 Improve dissemination of emergency warnings | | |
| 1.3 Make All-Hazards Mitigation Plan available | | |
| 1.4 Encourage local official participation in hazard... | | |
| 1.5 Be available to assist schools with fire drills | | |
| 2.1 Provide municipal officials with periodic training... | | |
| 2.2 Periodically test all emergency communication... | | |
| 2.3 verify that schools... emergency response plans | | |
| 2.4 Improve/maintain communication between Town Highway Department | | |
| 2.5 Create a local Emergency Response Plan... | | |
| 3.1 Periodically review and update the list of critical facilities serving the Town and Village | XX | XX |

| | | |
|---|----|----|
| 3.2 Ensure that critical facilities are able to provide essential services during a power outage. | | |
| 4.1 Invite municipal elected officials to meetings... | | |
| 4.2 Maintain and expand public/private sector... | | |
| | | |
| Severe Weather | | |
| 1.1 Maintain trees along municipal right-of-ways | | XX |
| 1.2 Support/encourage utility companies to maintain trees near telephone and power lines | XX | XX |
| 1.3 Locate/create educational information about maintenance of trees adjacent to structures | | |
| 1.4 Provide brush pickup services... | | |
| 1.5 Recommend underground utilities new developments.. | XX | |
| | | |
| 2.1 Encourage Code Officer receives annual training and political support... | | |
| 2.2 Encourage Code Officer to inspect older buildings... | | |
| | | |
| 3.1 Improve monitoring of weather conditions... | | |
| 3.2 review plowing schedules and hazardous weather response procedures... | | |
| 3.3 highway department and emergency service providers work together... | | |
| | | |
| Non-Hazardous Material Fire, Explosion, Wildfire | | |
| 1.1 Continue education public on carbon monoxide... | | |
| 1.2 Identify, create and maintain firebreaks near structures close to forested areas with steep slopes. | XX | XX |
| 1.3 fire department to inventory accessible water... | | |
| 1.4 fire departments to develop written, shared fire... | | |
| | | |
| Utility Failure | | |
| 1.1 Explore means to help offset costs to obtain... | | |
| 1.2 Explore means to offset costs to upgrade... | | |
| | | |
| Transportation Accident | | |

| | | |
|---|-----------|-----------|
| 1.1 Raise public awareness about traffic safety issues... | | |
| 1.2 Periodically survey approved traffic control devices... | | |
| 1.3 Provide municipal personnel with opportunities to... | | |
| 1.4 Work with NYSDOT to fix locations with accidents above the statewide average. | | |
| 1.5 Target law enforcement efforts at high accident locations and times. | | |
| | | |
| 2.1 - Promote development patterns in which major... | | |
| 2.2 Use comprehensive plans and land use regulations should encourage interconnection of commercial properties... | | |
| 2.3 Plan to eliminate at-grade railroad crossings... | | |
| | | |
| 3.1 Ensure that emergency personnel evaluate alternate access routes to areas that may become isolated... | | |
| 3.2 Annually update the Village plan that related to transportation events | | |
| | | |
| Flood | | |
| 1.1 Annually check location of "flood zone regulations... | XX | XX |
| 1.2 Disseminate and improve flood informational... | | |
| 1.3 Target property owners with structures in floodplain... | | XX |
| 1.4 Educate property owners adjacent to streams about proper stream maintenance. | | XX |
| | | |
| 2.1 Study, develop, and implement projects for... | XX | XX |
| | | |
| 3.1 encourage NYSDOT to make improvements to roads and streets to help minimize road closures,,, | | |
| | | |
| 4.1 routine inspections and maintenance of streams... | | |
| 4.2 Develop and implement a strategy for maintenance of privately owned storm water... | | |
| | | |
| 5.1 Evaluate opportunities to alleviate flooding problems.... | XX | XX |

| | | |
|--|----|----|
| 5.2Develop and implement a strategy for replacing... | XX | XX |
| 5.3Educate/assist owners with mitigation measures from flood risks | | XX |
| | | |
| 6.1Improve communication with private dam owners and encourage dam inspection by NYSDEC | | |
| 6.2Develop an Emergency Action Plan for water reservoir dams | | |
| 6.3 Participate in review and exercise in relation to Emergency Action Plans of Dam Failure... | | |
| 6.4 Develop mapping and inspection procedure for monitoring beaver dams in the Town | | |
| | | |
| Hazardous Materials/Fire | | |
| 1.1 Educate residents on evacuation procedures... A | | |
| 2.1Obtain hazardous material training for first responders periodically. | | |
| 2.2 first responders annually inventory their equipment | | |
| 2.3Encourage fire department to maintain up-to-date information about hazardous materials... | | |
| 2.4 Work with Otsego Farm Bureau to encourage safe storage practices for hazardous materials on agricultural operations. | | |
| 2.5Work with Bassett Hospital to ensure that medications and equipment needed to treat exposure to hazardous materials are accessible. | | |
| | | |
| 3.1 highway construction projects consider drainage... | | |
| 3.2Work with owners of facilities that store and/or utilize hazardous materials to safely store and handle such materials | | XX |
| | | |
| Ground Movement | | |
| 1.1 offer annual training and political support for Code officers in order to enforce structural standards... | | |
| 1.2_Ensure that land use project involving steep slopes are designed with proper measures to... | XX | |
| 1.3 Secure funding and design projects to eliminate existing landslides... | | XX |
| | | |
| Drought | | |

| | | |
|---|--|----|
| 1.1 identify back-up wells in the Town to be used for alternative water supply... | | XX |
| 1.2 Work with Otsego County Farm Bureau | | |
| 1.3 Continue work with NYSEMO to provide water pumps... | | |

The purpose of the Town and Village of Unadilla Multi-Hazard Mitigation Plan is to develop and promote methods of protecting residents, critical facilities, private property, infrastructure, and the environment from the results of a natural hazards.

The mitigation approach for the Town and Village of Unadilla follows the model provided in the FEMA how-go guide *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3). Establishing the Town and Village of Unadilla mitigation actions a series of steps was taken by the local committee such as developing mitigation goals, analyses of all actions influence economically and socially on the community which grouped them based on their outcome, and constructing an implementation strategy.

Town and Village of Unadilla goals were identified in order to mitigate exposures to each hazard. The goals for the Town and Village of Unadilla are based on the Risk Assessment including numbers of structures and residents affected by each hazard, and the estimate amount in damage to both public and private properties. Reviewing the possible damages from identified hazards and the availability of resources in the Town and Village of Unadilla the committee established the goals on the following pages as a method of mitigating the impacts from future mishaps.

The purposes of mitigation actions are to achieve the long –term goal set by the Town and Village of Unadilla committee. For each identified hazard the committee established possible mitigation actions. The established actions were based on long-term goals, concerns from members of the community, and data provided from the Risk Assessment. Each action has been thoroughly considered and prioritized into three different categories high, medium, or low. The options follow the six types of mitigation actions stated in the FEMA guide (FEMA 386-3), which are found below.

1. Prevention: Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses. Examples include planning and zoning, building codes, capital improvement programs, open space preservation, and storm water management regulations.

2. Property Protection: Actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.

- 3. Public Education and Awareness:** Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Such actions include outreach projects, real estate disclosure, hazard information centers, and school-age and adult education programs.
- 4. Natural Resource Protection:** Actions that minimize hazard loss and also preserve or restore the functions of natural systems. These actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- 5. Emergency Services:** Actions that protect people and property, during and immediately following, a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.
- 6. Structural Projects:** Actions that involve the construction of structures to reduce the impact of a hazard. Such structures include dams, levees, floodwalls, seawalls, retaining walls, and safe rooms.

Each action produced from the criteria established by FEMA was then evaluated and prioritized under social, technical, administrative, political, legal, economic, and environment (STAPLEE) considerations along with the cost to benefit outcome and time for the community.

- Social criteria: The public must support the overall implementation strategy and specific mitigation activities; therefore, community acceptance of the proposed mitigation activities must be considered.
- Technical criteria: Such factors as technical feasibility of the proposed mitigation activity to reduce losses in the long term, with minimal secondary impact, must be considered.
- Administrative criteria: Anticipated staffing, funding, and maintenance for each mitigation activity must be considered.
- Political criteria: The political leadership of the communities must support the overall implementation strategy and specific mitigation activities; therefore, decision-maker acceptance of the proposed mitigation activities must be considered.
- Legal criteria: Whether the communities have legal authority to implement the proposed mitigation activities must be considered.
- Economic criteria: Funding needs and budget constraints must be considered.
- Environmental criteria: Environmental impacts that could be caused by implementing specific mitigation activities must be considered.

Mitigation activity priorities also are based on “the extent to which benefits are maximized according to a cost benefit review” (DMA 2000). For example, low cost activities that support cross-jurisdiction and multi-hazard benefits are assigned a high priority in some cases, based on the cost/benefit review. Also, a number of high priority mitigation activities focus on public awareness and education programs or integrating the mitigation plan into current programs because these types of mitigation measures are affordable, achievable, can address multiple hazards and have an immediate benefit. Although detailed economic and social analyses for each mitigation action is beyond the scope and intent of this plan, consideration was given to the potential costs incurred and benefits derived from each proposal based in part on the personal and professional experiences of the members of the planning committee. The process then considered whether or not estimating a feasible dollar value could be associated with each action at this time. In instances where reasonable costs could not be associated with an action, estimates would be developed as sufficient information becomes available.

On June 26, 2006 Otsego County experienced a severe storm with unprecedented flooding of the Susquehanna River and many of its tributaries. The county was declared a state of emergency (FEMA 1650 DR NY). Estimated damages were in the \$50 million dollar range. The following is taken from the National Environmental Satellite, Data and Information Service (NESDIS).

Event Record Details

| | |
|---|------------------------|
| Event: Flash Flood | State: New York |
| Begin Date: 27 Jun 2006, 02:00:00 PM EST | |
| Begin Location: Countywide | County: Otsego |
| End Date: 28 Jun 2006, 02:00:00 PM EST | |
| End Location: Countywide | |
| Magnitude: 0 | |
| Fatalities: 0 | |
| Injuries: 0 | |
| Property \$ 50.0M | |
| Damage: | |
| Crop Damage: \$ 0.0 | |

Description:

Widespread heavy rain moved through Otsego County and upstate New York during the day Monday with more heavy rain Monday night and Tuesday morning. This rainfall saturated the soils before another more widespread area of heavy rainfall occurred Tuesday afternoon and night.

Tropical moisture combined with a slow-moving front and low-pressure system moving up the eastern seaboard to bring extreme rainfall to Otsego County. The serious flash flooding began in Otsego County during the afternoon of Tuesday the 27th and continued until Wednesday afternoon as a total of 6 to 12 inches of rain fell by Wednesday the 28th. The highest rainfall was near Unadilla where the Susquehanna River reached record levels. No one was killed from the floods in Otsego County. A state of emergency was declared Tuesday afternoon as all roads were closed. The sewer plant in Oneonta was flooded sending raw sewage into the Susquehanna River. Hardest hit areas were Leonardsville, Cooperstown, Hartwick, Bridgewater and Oneonta. Route 20 was under nearly three feet of water in East Winfield. Total damage is estimated at 50 million dollars. This was described as the worst flooding in at least 45 years. A total of 75 roads were flooded in the county.

As result of the June flood assorted actions are already in progress and others have been proposed. The majority of repairs are to damaged roads and bridges to sustain future events and avoid losses previously experienced. Realistically, considering Otsego County frequent floods, 40 occurrences since 1993, mitigation action potentially will reduce the dollar amount in damages and in return the community would benefit in the future from present costs.

Findings from the Risk Assessment identified natural hazards and their economic damage to the community, including replacement value, content value and displacement value. After detailed evaluation, each action was prioritized high, medium, or low based on effectiveness, importance, and cost results.

- * High Priority Actions- reduces vulnerability to damage, eliminate eminent danger, environmentally safe, easy enacted, within standing budget, community support.
- * Medium Priority Actions- some extent protect community, obstacles implanting, some community discrepancy
- * Low Priority Actions- ineffective mitigation hazard impacts, unaffordable, and unfavorable within the community

SECTION 5 – MITIGATION GOALS AND ACTIONS

The Town and Village of Unadilla Hazard Mitigation Committee (HMC) have analyzed natural and human-caused hazards and have devised this plan to protect life and property from such events. The Town and Village of Unadilla HMC has outlined the following approach to reduce the impact of the highest priority hazards that were identified previously. Lower priority hazards may have additional specific goals and actions, but are primarily covered under the "All Hazards" goals. Actions are prioritized as high or medium depending on the ease of implementation, cost, and overall timeliness/necessity

of the action. Time to implement an action is estimated based on; the complexity of the action, amount of preplanning needed to undertake the action, cost, and the likelihood of obtaining funding. Responsibility for an action is indicated as lead and supporting. In some cases, multiple lead agencies/municipalities are identified.

Multi-Hazard Mitigation

All Hazards

GOAL ONE: Continue ongoing efforts to increase public awareness about hazards.

- **ACTION 1.1-** Improve education program about hazards and family disaster planning, emergency supplies, evacuation procedures, transportation safety, and hazard mitigation. Education program can include video, County web site, printed material for general circulation, direct mailing, training sessions, and organized events.

PRIORITY: High

TIME: Ongoing annually

LEAD: Fire Departments/ Schools/Supporting Community Agencies

SUPPORTING: Town/County OES/County Planning/County Health/County Sheriff/County OES

COST: Provided through existing budgets and additional grant sources

- **ACTION 1.2** -Improve dissemination of emergency warnings and weather information to residents, businesses, and institutions by increasing use of NOAA Weather Radios and increasing use of National Weather Service - Albany web site for latest weather information. If duplication does not exist, work with SEMO on Emergency Alert System.

PRIORITY: High

TIME: Ongoing annually

LEAD: Town/Fire Departments

SUPPORTING: County OES/County Planning

COST: Provided through existing budgets and additional grant sources

- **ACTION 1.3** - Make the Town and Village of Unadilla All-Hazards Mitigation Plan available to the public at Town offices, public libraries, local fire departments, County Office of Emergency Services, and County Planning.

PRIORITY: High

TIME: Immediately after adoption/revision

Lead: Town Clerk

SUPPORTING: County Planning/County OES

COST: Provided through existing budgets and additional grant sources

- **ACTION 1.4** -Encourage local official participation in hazard related training offered at County, State, Federal levels.

PRIORITY: High

TIME: Ongoing annually

LEAD: County Health/County Sheriff/County OES/County Planning

SUPPORTING: Town Board

COST: Provided through existing budgets and additional grant sources

- ***Action 1.5*** - Be available to assist schools with fire and weather hazard drills.

PRIORITY: High

TIME: Ongoing annually

LEAD: Fire Department

SUPPORTING: County Health/County Sheriff/County OES

COST: May vary per drill.

GOAL TWO: Provide emergency services in a timely and effective manner

- ***Action 2.1*** – Provide municipal officials with periodic training and responsibilities during hazard events.

PRIORITY: High

TIME: Once every two years

LEAD: Town Board

SUPPORTING: County OES/NYSEMO/County Sheriff/County OES

COST: Minimal

- ***Action 2.2*** – Periodically test all emergency communication equipment and upgrade/replace as appropriate.

PRIORITY: High

TIME: Once annually

LEAD: Local Fire Department/ Local Highway Department

SUPPORTING: County OES/County Health/County Sheriff

COST: May vary depending on necessary upgrades/replacements

- ***Action 2.3*** – Periodically verify that schools, nursing homes, hospitals and businesses that handle hazardous materials have current emergency response plans in effect.

PRIORITY: High

TIME: Once every three years

LEAD: County OES/ County Health

SUPPORTING: Town

COST: Minimal

- **Action 2.4** – Improve/maintain communication between Town Highway Department and Town Board to enable coordinated maintenance of emergency transportation routes.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Board/Town Highway Department

SUPPORTING: County Highway/County OES/County Health

COST: Will vary depending on equipment needed.

- **Action 2.5** – Create a local Emergency Response Plan consistent with the County Comprehensive Emergency Operations Plan.

PRIORITY: High

TIME: Within the first five years after plan adoption

LEAD: Town Board

SUPPORTING: County Sheriff/County OES/Town Fire Department

COST: Minimal

GOAL THREE: Maintain the viability of all critical facilities and operations

- **Action 3.1** – Periodically review and update the list of critical facilities serving the Town.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Sheriff/County OES/County Planning

COST: Minimal

- **Action 3.2** – Ensure that critical facilities are able to provide essential services during a power outage.

PRIORITY: High

TIME: Within first five years

LEAD: Town

SUPPORTING: County OES

COST: May vary depending on necessary equipment and grant availability

GOAL FOUR: Maintain support (political and private sector) for hazards mitigation and emergency response.

- **Action 4.1** – Invite municipal elected officials to meetings of the Town and Village of Unadilla Hazard Mitigation Committee to guide implementation of this plan and the revision of the plan.

PRIORITY: High

TIME: Annually

LEAD: Town Clerk

Supporting: County OES/County Sheriff/County OES/Towns/Village

COST: Minimal

- **Action 4.2** - Maintain and expand public/private sector coordination through organizations that are actively involved in hazard reduction activities.

PRIORITY: Medium

TIME: Ongoing

LEAD: Town

SUPPORTING: County OES/County Hazard Mitigation Committee

COST: Minimal, grant dependent

Severe Weather

(Severe Storm, Severe Winter Storm, Ice Storm, Tornado, Extreme Temperatures)

GOAL ONE: Minimize damage from trees to utilities, structures, and other utilities

- **Action 1.1** - Maintain trees along municipal right-of-ways

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Highway Department

SUPPORTING: NYSDOT/County Highway

COST: Depends on project scope. May be handled by existing budgets or grant availability

- **Action 1.2** - Support/encourage utility companies to maintain trees near telephone and power lines.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Highway/County OES/County Planning

COST: Borne by utility companies.

- **Action 1.3** - Locate/create educational information about maintenance of trees adjacent to structures.

PRIORITY: Medium

TIME: Within first five years

LEAD: Town Residents

SUPPORTING: Town Board/County OES/County Planning

COST: Minimal

- **Action 1.4** - Provide brush pickup services and/or designated drop off locations (chip/mulch/compost) to encourage tree maintenance and to discourage improper disposal of yard debris in drainage ways.

PRIORITY: High

TIME: Annually

LEAD: Town

SUPPORTING: County Board of Representatives/County Planning/County OES

COST: Handled by existing budgets

- **Action 1.5** - Recommend, encourage, or require underground utilities in new developments if feasible through land use regulations. Encouraged utility companies to use underground construction methods if feasible.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: Town Board

SUPPORTING: Town Planning Board/County Planning/County Codes Enforcement

COST: Planning – Minimal. Project costs will vary.

GOAL TWO: Ensure that buildings are able to withstand high wind and heavy snow

- **Action 2.1** – Encourage Code Enforcement Officer receives annual training and political support in order to effectively enforce the structural standards in the International Building Code.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Towns/Village

SUPPORTING: County Codes

COST: Varies

- **Action 2.2** - Encourage Code Enforcement Officer to inspect older buildings that may not conform to the structural standards in the International Building Code so as to identify vulnerabilities for their owners.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Codes/County Planning/County Board of Representatives/NYS DOS

COST: Existing budgeted salary for Codes Enforcement Officer.

GOAL THREE: Reopen transportation routes as quickly as possible following a severe weather event

- **Action 3.1** - Improve monitoring of weather conditions and forecasts (on-line information) by highway departments to enable timely response to snow, ice, and high water conditions.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Highway Department

SUPPORTING: County Planning/County OES/County Highway/NYS DOT

COST: Varies depending on new equipment needed

- **Action 3.2** - Periodic review and revision of plowing schedules and hazardous weather response procedures by highway department to minimize time required to restore safe roadways.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Towns/Village Highway Department

SUPPORTING: County Highway/County Planning/County OES/NYS DOT

COST: Minimal

- **Action 3.3** – Ensure that highway departments and emergency service providers work together to provide emergency service transportation during inclement weather.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town/Village

SUPPORTING: County OES/County Highway/County Planning

COST: Minimal

Non-Hazardous Material Fire, Explosion, Wildfire

GOAL ONE: Lessen chances and impacts of fire related damage, injuries, and deaths

- **Action 1.1** - Continue ongoing education of public on use of carbon monoxide detectors, fire detectors, fire extinguishers and fire prevention/safety.

PRIORITY: High
TIME: Ongoing Annually
LEAD: Town Fire Department
SUPPORTING: County OES
COST: Existing budgets/grant sources

- *Action 1.2* - Identify, create and maintain firebreaks near structures close to forested areas with steep slopes.

PRIORITY: High
TIME: Within the first five years after plan adoption
LEAD: Town Fire Department
SUPPORTING: County OES
COST: Varies depending on size of firebreaks

- *Action 1.3* - Work with fire department to inventory accessible water supplies for fire protection and develop a dry hydrant program to make water more accessible in rural areas.

PRIORITY: High
TIME: Within the first five years after plan adoption
LEAD: Town Fire Department
SUPPORTING: County OES
COST: Existing budgets

- *Action 1.4* - Work with fire departments to develop written, shared fire fighting tactics for areas where large or multiple structure fires are possible.

PRIORITY: High
TIME: Within the first five years after plan adoption
LEAD: Town Fire Department
SUPPORTING: County OES
COST: Existing budgets

Utility Failure

GOAL ONE: Reduce possibility/impact of utility failure

- *Action 1.1* - Explore means to help offset costs to obtain and maintain generators for schools, commercial businesses, and agriculture industry.

PRIORITY: High
TIME: Ongoing annually
LEAD: Town
SUPPORTING: County OES/County Planning/County Sheriff
COST: Grants

- *Action 1.2* - Explore means to help offset costs to upgrade existing sewer, water and communications infrastructure in the Town.

PRIORITY: High

TIME: Once every two years

LEAD: Town

SUPPORTING: County OES/County Planning/County Health Department

COST: Grants

Transportation Accident

GOAL ONE: Promote transportation safety and maintain and upgrade roads in a manner that promotes transportation safety

- **Action 1.1** - Raise public awareness about traffic safety issues by participating in outreach efforts and disseminating safety information.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Traffic Safety Board/County OES/County Sheriff

COST: Varies depending on outreach method.

- **Action 1.2** - Periodically survey approved traffic control devices (signs, markers, signals, etc...) by highway departments.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: NYSDOT

COST: Varies depending on upgrades needed.

- **Action 1.3** – Provide municipal personnel with opportunities to participate in current defensive driving programs in County.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County OES/County Sheriff

COST: Existing budgets

- **Action 1.4** - Work with NYSDOT to fix locations with accidents above the statewide average.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: NYSDOT

COST: Varies depending on project.

- **Action 1.5** - Target law enforcement efforts at high accident locations and times.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Sheriff/NY State Police

COST: Existing budgets

GOAL TWO: Design and locate new development projects to promote transportation safety

- **Action 2.1** - Promote development patterns in which major transportation routes are located away from major population areas, schools, and gathering areas (through the use of comprehensive plans and land use regulations).

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Planning Board

SUPPORTING: County Planning

COST: Minimal

- **Action 2.2** – Use comprehensive plans and land use regulations should encourage interconnection of commercial properties in order to reduce use of major arterials.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: Towns/Village

SUPPORTING: County Planning

COST: Minimal

Action 2.3 - Plan to eliminate at-grade railroad crossings on State Routes and County Roads when road upgrades or other construction projects are developed.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: NYSDOT

COST: Varies depending on project scope. State/Federal grant funds may be possible.

GOAL THREE: Provide timely response by emergency personnel to major transportation accidents.

- **Action 3.1** – Ensure that emergency personnel periodically evaluate the need for alternate access routes to areas that may become isolated if a bridge, railroad crossing, or other transportation route becomes blocked. Find alternative solutions for gaining access if problem areas are identified.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: Town Emergency Services/County OES

SUPPORTING: County Sheriff

COST: Varies depending on project scope. State/Federal grant funds may be possible.

- **Action 3.2** - Annually update the Town plan that relates to transportation events.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County OES

COST: Existing Budgets.

Flood

(Flood/Flash Flood, Ice Jam, Dam Failure)

GOAL ONE: Educate public about flood dynamics, flood hazards, flood safety, and flood mitigation

- **Action 1.1** - Annually check location of "flood zone regulations in effect" signs and keep locations up to date in accordance with existing Special Flood Hazard Areas as indicated on the Flood Insurance Rate Map.

PRIORITY: High

TIME: Once Annually

LEAD: Town

SUPPORTING: County OES/County Planning/County Highway/NYS DOT

COST: Minimal, NYSDOT will move signs as needed

- **Action 1.2** - Disseminate and improve flood informational pamphlets for new buyers of property and general public.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: Municipal Flood Plan Administrator/County OES/County Planning

COST: Minimal

- **Action 1.3** - Target property owners with structures in floodplain with education material and increase flood awareness locally (especially with early warning procedures).

PRIORITY: High

TIME: Once every two years

LEAD: Towns/Village

SUPPORTING: County Planning/County OES

COST: Minimal

- **Action 1.4** - Educate property owners adjacent to streams about proper stream maintenance.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Soil and Water Conservation District/County Planning/County OES

COST: Minimal

GOAL TWO: Minimize stream bank erosion and improve water quality

- **Action 2.1** - Study, develop, and implement projects for stabilizing stream channels in locations where erosion threatens development or agricultural resources.

PRIORITY: High

TIME: Ongoing with first decade of plan adoption

LEAD: Town

SUPPORTING: County Soil and Water/NRCS/County Highway/County Planning/County OES

COST: Varies depending on the length of stream to be studied or size of problem.

GOAL THREE: Decrease flooding/ice jam impacts on roads with repetitive events

- **Action 3.1** - Encourage NYSDOT to make improvements to roads and streets to help minimize road closure due to ice jams and flooding.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town Highway Department

SUPPORTING: County Highway/County OES/County Sheriff/County OES

COST: Will vary depending on project scope.

GOAL FOUR: Maintain streams, drainage ways, and drainage structures to minimize the potential for obstruction of flow.

- **Action 4.1** – Develop routine inspections and maintenance of streams, roadside ditches, and drainage ways in order to reduce the potential for flooding caused by debris obstructions/sedimentation

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town Highway Department

SUPPORTING: County Highway/County OES County Planning

COST: Will vary depending on project scope.

- **Action 4.2** - Develop and implement a strategy for maintenance of privately owned storm water drainage systems and secondary stream channels.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town Highway Department

SUPPORTING: County Planning/County OES/ County Soil and Water/County Highway/Private property owners

COST: Currently unknown. Existing budgets.

GOAL FIVE: Mitigate flood risks for existing development

- **Action 5.1** - Evaluate opportunities (and implement as appropriate) to alleviate flooding problems by retaining or retarding water upstream through wetland creation/retention structures during high flow.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: County Planning/ County Soil and Water/County OES/NRCS/Otsego Land Trust

SUPPORTING: County OES/Town

COST: Maintenance and projects will vary depending on scope.

- **Action 5.2** - Develop and implement a strategy for replacing undersized bridges and culverts on public roadways and on private property.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town Highway Department

SUPPORTING: County Highway/NYS DOT/Private property owners

COST: Planning- None; Project costs will vary

- **Action 5.3** - Educate/assist property owners with implementation of measures that will protect existing development from flood risks (elevation of utilities, sewer backup protection, flood-proofing measures, extension of municipal sewer and water, structure elevation, property acquisition).

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County Planning/County OES

COST: Will vary depending on project scope. NYSDOT/Grant funds

- **Action 5.4** - Otsego County has received requests from numerous residents, in the flood prone section of the county, regarding the possibility of a buyout program, due to the flood of 2006. The County has initiated the application process to acquire funds for this purpose. The majority of these residences have suffered from flooding that has damaged their homes greater than 50% of their fair market value. Selling of their property and relocating is financially the ideal solution in preventing this problem from reoccurring. The proposed project consists of a voluntary buyout program located in the 100-year flood plain along the Susquehanna River in the southern section of the planning area. The proposal will eliminate housing units in the 100-year floodplain reducing structural and personal property damages, including repetitive losses for many of the properties located in the project area. The structures, if purchased, will be demolished, existing grades would be established, and re-vegetated. The property would remain in perpetuity. The alternative to the buy-out would include floodwall construction and property elevation. The proposed project was selected after a review of the project costs and the benefits derived, and the permanent protection from a 100-year event. The total estimated cost county wide of the project is \$1,500,000. The Otsego County will take the role as lead agency, and is currently for approval.

Priority: High

Time: Estimated at minimum 1 year

Lead: Otsego County Planning Department

Supporting: SEMO and FEMA

Cost: \$1.5 Million, SEMO

GOAL SIX: Check dams routinely and maintain for safety

- **Action 6.1** - Improve communication with private dam owners and encourage dam inspection by NYSDEC.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town

SUPPORTING: NYSDEC/County Planning/County OES/Private property owners

COST: Minimal

- **Action 6.2** - Develop an Emergency Action Plan for water reservoir dams.

PRIORITY: High

TIME: Within five years of plan adoption

LEAD: Town

SUPPORTING: County OES

COST: Within existing budgets of municipalities

- **Action 6.3** - Participate in review and exercises in relation to Emergency Action Plans in Event of Dam Failure with New York Power Authority.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County OES/County Sheriff/County Planning

COST: Minimal

- **Action 6.4** - Develop mapping and inspection procedure for monitoring beaver dams in the Town.

PRIORITY: Medium

TIME: Within five years of plan adoption

LEAD: Town Highway Department

SUPPORTING: County GIS/County Planning/County OES

COST: Minimal

Hazardous Materials/Fire

(Hazardous Material Release in Transit, Hazardous Material Release at a Fixed Site, Oil Spill, Explosion, Fire, Radiological Release in Transit)

GOAL ONE: Educate the public with information about how to respond to a hazardous material incident.

- **Action 1.1** - Educate residents on evacuation procedures and shelter locations in areas near major transportation routes/facilities that use or store hazardous materials. Improve Early Warning System (EWS) for use during a hazardous material incident.

PRIORITY: High

TIME: Within first five years

LEAD: County OES

SUPPORTING: County Planning/County Sheriff/Town

COST: Less than \$250.00 annually from existing budget

GOAL TWO: Ensure that emergency response personnel respond quickly and safely to hazardous material incidents.

- **Action 2.1** - Obtain hazardous material training for first responders periodically.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Fire Department

SUPPORTING: County Sheriff/County OES/Towns/Villages

COST: Varies from existing departments' budgets/grants

- **Action 2.2** – Ensure that first responders annually inventory their equipment and supplies for hazardous material response and fix/replace/obtain equipment as necessary.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town Fire Department

SUPPORTING: County OES/County Sheriff

COST: Varies depending on necessary equipment

- **Action 2.3** – Encourage fire departments to maintain up-to-date information about hazardous materials stored and used within their response area. Encourage fire department familiarity with the layout of these facilities.

PRIORITY: High

TIME: Ongoing Annually

LEAD: Town

SUPPORTING: County OES/County Sheriff/County OES

COST: Varies depending on necessary equipment

Action 2.4 - Work with Otsego County Farm Bureau to encourage safe and consistent storage practices for hazardous materials on agricultural operations. Improve communication with agricultural operations and fire departments about storage of hazardous materials. Obtain signage for agricultural hazardous material locations.

PRIORITY: High

TIME: Within first five years

LEAD: Town

SUPPORTING: County Farm Bureau/County OES

COST: Minimal. Signage – grants

Action 2.5 - Work with Bassett Hospital to ensure that medications and equipment needed to treat exposure to hazardous materials are accessible.

PRIORITY: High

TIME: Ongoing annually

LEAD: County Sheriff/County OES

SUPPORTING: Bassett Hospital

COST: May vary depending on materials needed.

GOAL THREE: Design new development in such a manner so as to minimize risks associated with the transportation and use of hazardous materials

- *Action 3.1* – Ensure that highway construction projects consider drainage, site access, and other conditions that might impact the dissemination of hazardous materials and the ability of emergency personnel to respond.

PRIORITY: High

TIME: Ongoing annually

LEAD: Town

SUPPORTING: County Highway/NYSDOT/County OES/County Planning

COST: Minimal

- *Action 3.2* - Work with owners of facilities that store and/or utilize hazardous materials to safely store and handle such materials.

PRIORITY: High

TIME: Within first five years

LEAD: Town

SUPPORTING: County OES

COST: Minimal

- *Action 3.3* – Encourage comprehensive plans and land use regulations to promote development patterns in which major transportation routes and industrial facilities are located away from schools, day cares, churches, waterways, and municipal water sources.

PRIORITY: Medium

TIME: Ongoing Annually

LEAD: Town Planning Board

SUPPORTING: County Planning

COST: Minimal

Ground Movement

(Earthquake, Landslide, Mine Collapse, Structural Collapse)

GOAL ONE: Protect people and structures from ground movement events

- **Action 1.1** - Offer annual training and political support for Code Enforcement Officer in order to effectively enforce the structural standards in the International Building Code.

PRIORITY: High

TIME: Once Annually

LEAD: County Codes Enforcement

SUPPORTING: Town Board

RESOURCES: Instructor/Training Location/Advertising

COST:

- **Action 1.2** - Ensure that land use projects involving steep slopes are designed with proper measures to reduce landslide and slump potential.

PRIORITY: High

TIME: Once Annually

LEAD: Town Board

SUPPORTING: Town Highway Superintendent/County Planning/NYS DOT

RESOURCES: Proper identification and review of projects/training materials for local officials

COST:

Action 1.3 - Secure funding and design projects to eliminate existing landslides throughout the County

PRIORITY: High

TIME: five to ten years after plan adoption

LEAD: Town Highway Department

SUPPORTING: County Soil and Water/NRCS/County OES/County Planning

COST: Varies depending on project scope.

Drought

GOAL ONE: Lessen drought impacts on private wells and agriculture

- **Action 1.1** - Identify back-up wells in the Town to be used for alternative water supply and arrange agreement for use of wells.

PRIORITY: High

TIME : Within the first five years after plan adoption

LEAD: Town Board and Village Board

SUPPORTING: County OES/County Soil and Water District/County Health Department/Natural Resources Conservation Service

COST: None for identification. Possible cost for purchasing right to use wells

- **Action 1.2** - Work with Otsego County Farm Bureau to encourage coordination with farmers during drought to assist each other with water supply issues.

PRIORITY: High

TIME: Ongoing annually

LEAD: Town Board, Village Board

SUPPORTING: County OES/County Farm Bureau/County Planning

COST: Minimal

- **Action 1.3** - Continue work with NYSEMO to provide water pumps and waterline for emergency use.

PRIORITY: High

TIME: Ongoing annually

LEAD: Fire Departments

SUPPORTING: County OES/NYSEMO

COST: Minimal

SECTION 6

There will be an annual meeting of the municipality to review and update the local all hazard mitigation plan. Monitoring of the mitigation plan will be the responsibility of the planning group members from each municipality. The planning group members shall consist of a representative from the County Planning Department, the Supervisor or Mayor of the municipality, highway department superintendent, planning board, emergency services and other significant parties as determined. Information will be collected from various departments, highway, streets and park, capital budget, emergency response team and planning boards to identify mitigation measures that were implemented during the year and to document any state of emergency declarations. The annual review will allow the municipality to assess which projects are completed, which is no longer feasible, and what projects may require additional funding. The annual reports provide the foundation for the five-year update. The annual report and summary will be available for public review and input.

The County Planning Department will annually send a reminder with a checklist to each participating municipality in order to update and document hazards and related damages that occurred within the last year. Municipality will be responsible for the annual status report to be submitted to the county planning department in order to document changes, mitigation measures, and future detailed mitigation measures proposed for the upcoming year. During the annual review process non-participating municipalities will be contacted by the county for inclusion in the multi jurisdictional plan. As the review is completed annually, the necessary data for the five year review and update is already complied. A copy of the cover letter and update form is attached in appendix E-1 & F-2

Monitoring and Updating Schedule:

The Town and Village of Unadilla has developed a method to ensure that the Hazard Mitigation Plan is reviewed and updated annually and every five years. In early November of each year the Planning Department will send a copy of the annual “check list” (appendix E-2) to the town supervisor and village mayor. At that time it is the responsibility for the local municipality to schedule a meeting with the both returning and new committee members along with knowledgeable members of the community to complete the annual “check list”. At this primary meeting the committee will discuss the following:

- Disasters that have occurred, impacted locations, and amount in damages within the past year.
- Progress status on mitigation actions
- Any relief funding
- implementation progress and overall success,
- Should strategies be revised or updated.

After the primary meeting, the committee will have three months to gather the needed data to address the concerns stated at the November meeting. Both meetings will be advertised and open to the public to encourage public involvement. The following month will mark the beginning of the summarizing and updating period. On the fourth year of the annual review it is important that the committee is aware that the updating process for the five-year review will begin. The five year update requires that the plan, all maps, data, and risk assessment information required to identify items that should be updated or modified will be reviewed. Any additional vulnerability assessment information that has been assembled since the plan adoption will be incorporated into the plan. In order to meet the deadline for the 5 year review, it will be necessary to coincide the updates beginning with the annual 4th year review in November and continue on during the months of December of the current year thru May of the following year. This will enable the committee to complete the fourth year review, continue onto the 5th year review and have the document completed six months prior to the end of the 5th year. A schedule of the annual process for plan monitoring is shown below. The schedule is based on the assumption of a resolution adopting the final Hazard Mitigation Plan by April 2007 with the need to complete the one year review ending April 2008 within two – three months following the year anniversary. Changes in dates of adoption will be adjusted accordingly.

ANNUAL AND FIVE YEAR PLAN UPDATE SCHEUDLE
Based on resolution of final plan adoption of April 1, 2007

| TARGET DATE | RESPONSIBLE PARTY | OUTCOME |
|---------------------|--|--|
| Oct 2007 – Nov 2007 | County Planning Department | Send a reminder letter with a checklist and status report to each jurisdiction. (See Appendix E) In the 4 th year post. In the 4 th year, indicate the significance and post the meeting schedule for the upcoming 5 year plan update meeting. |
| Dec 2007- Jan 2008 | Local municipal supervisor or mayor of jurisdiction along with local representatives from the highway department, planning board , emergency squad and fire department as well as County planning Department | Schedule a meeting or meetings for plan review and Annual Status Report completion. The local hazard Mitigation committee of appropriate officials and members of the public shall be appointed to this task by the supervisor. For the 4 th year review, participation should be expanded to include agencies, businesses, academia, the public and non-profits. It is at this time, preparations begin for the 5 year review. |

| | | |
|----------------------------|--|--|
| February 2008 - March | Supervisor, members of the mitigation committee and the County Planning Department | The amendments and additions are prepared for final submittal to the county planning department and implementation into each jurisdictions plan. Jurisdictions along with the help of the county continued to work on their 5 year plan review to prepare draft updated plan |
| April 2008 | County Planning committee Mayor/Supervisors | One year anniversary for document acceptance. Annual Update Report or a draft of the 5 years update is made available in public media and/or public media jurisdictions. |
| May 2008 thru end of March | County Planning committee And local municipal representatives | Hold meetings for 5 year update as needed and post plan for public review and submit the plan to SEMO prior to the anniversary date of April 2012 |
| | | |

The Committee will review each goal and objective in the mitigation strategy (Section 4) to determine the ongoing relevance to changing situations in the Town and Village of Unadilla. The Committee will evaluate the need to revise, eliminate, or replace each action item. Based on the hazard mitigation successes and failures the goals and objectives in the plan, and changing local circumstances, the committee will also recommend any new action items to be included in the plan.

After the Committee makes their recommendations, the Town and Village Boards will schedule a public hearing to solicit comments from town residents. The revised plans will then be submitted to SEMO and FEMA. Revisions will be placed in existing Multi-Hazard Mitigation Plan booklets.

Otsego County and the participating jurisdictions plan to gradually merge the hazard mitigation plan into the daily governmental operations. Both private and public organizations will be encouraged to become an active participant. The local Hazard Mitigation committee will work with local government officials to integrate the newly adopted hazard mitigation goals and actions into the general operations of government and partner organizations. This will allow for diversity of responsibility in order to meet the goals and actions (identified in section 5) of the plan. After which the committee will identify additional policies, programs, practices, and procedures that could be modified to accommodate hazard mitigation actions. In addition, the municipality will provide a copy of the plan to all officials and department heads; the highway department, zoning officer, planning board, or other groups, to encourage the use of the plan in their decision making process and to merge the Hazard Mitigation Plan into existing plans when appropriate. Other examples may be, contracting with our local educational facilities to implement

educational programs or, involving disasters relief volunteers in order to coordinate immediate response needs during a disaster period. The following table includes existing processes and programs through which the mitigation plan could be implemented

Also refer to Chart 6.1 at the end of the narrative section of this document.

| | Action | Implementation of Plan in Town and Village of Unadilla and Otsego County |
|----------------|--|---|
| Administrative | Departmental or organizational work plans, policies, and procedural changes. | <ul style="list-style-type: none"> ▪ Local Highway Department ▪ Otsego County Department of Emergency Response ▪ Otsego County Department of Information Technology Services ▪ Otsego County Highway Department ▪ Otsego County Department of Social Services ▪ Otsego County Emergency Planning Committee ▪ Otsego County Planning Department ▪ Otsego County Solid Waste Management Program |
| Administrative | Other organizations' plans | <ul style="list-style-type: none"> • Include reference to this plan in risk reduction section of the Otsego County Comprehensive Emergency management plan. • Include reference to this plan in the National Baseball Hall of Fame, both Basset and Fox hospitals, 20 (including the two colleges) county wide schools, Emergency plans. • Major Employers such as Wal-mart in Oneonta, New York State Central Mutual, Corning Glass, ect. • New York State Department of Agriculture and Markets |
| Administrative | Job/Job Descriptions | <ul style="list-style-type: none"> • Unpaid internship to assist in hazard mitigation plan maintenance Emergency Relief Coordinator funded through either federal or state grants |
| Budgetary | Capital and operational budgets | <ul style="list-style-type: none"> • Review of local budgets to include line item mitigation actions |
| Regulatory | Executive Orders, ordinances and other directives | <ul style="list-style-type: none"> • Comprehensive Planning -Institutionalize hazard mitigation for new construction and land use. • Zoning and Ordinances • Building Codes • Capital Improvements Plan – Ensure that the person responsible for projects under this plan evaluate if the new construction is in a high hazard area, flood plain, etc. so the construction is designed to mitigate the risk. Revise requirements for this plan to include hazard mitigation in the design of new construction. • National Flood Insurance Program – Continue participation in this program and encourage non-participants to join. • Community Rating System – Evaluate participation in the plan. Annually update the plan to receive credit for their hazard mitigation plan under this program. • Continue to implement County and town storm water management plans. • Prior to formal changes (amendments) to comprehensive plans, zoning, ordinances, capital improvement plans, or other mechanisms that control development must be reviewed to ensure they are consistent with the hazard mitigation plan. • Communicate with municipalities to have joint review of land use |

| | | |
|--|--|--|
| | | regulations and comprehensive plans to coordinate with Hazard mitigation |
|--|--|--|

| Process | Action | Implementation of Plan in Town and Village of Unadilla and Otsego County |
|---------|--|--|
| Funding | Secure traditional sources of financing. | <ul style="list-style-type: none"> Once plan is approved, initiate process to enable legislation to use fees, taxes, bonds, and loans to finance projects. Apply for grants from federal or state government, nonprofit organizations, foundations, and private sources including Flood Mitigation Assistance Program (FMA), and the Hazard Mitigation Grant Program (HMGP-Stafford Act, Section 404). Research grant opportunities through U.S. Department of Housing and Urban Development's Community Development Block Grant (CDBG) Investigate other federal sources of funding, such as but not limited to; Other potential federal funding sources include: <ul style="list-style-type: none"> Stafford Act, Section 406 – Public Assistance Program Mitigation Grants Federal Highway Administration Catalog of Federal Domestic Assistance United States Fire Administration – Assistance to Firefighter Grants United States Small Business Administration Pre and Post Disaster Mitigation loans United States Department of Economic Development Administration Grants United States Army Corps of Engineers United States Department of Interior, Bureau of Land Management |

| | | |
|--------------|--|---|
| Partnerships | Develop creative partnerships, funding and incentives. | <ul style="list-style-type: none"> • Public-Private Partnerships • Community Volunteers • State Cooperation • In-kind resources |
| Partnership | Existing Committees and Councils | <ul style="list-style-type: none"> • Department of Economic Development (SUNY) • Community Outreach (SUNY) • United Way • Otsego County Emergency Planning Committee |
| Partnership | Working with other federal, state, and local agencies | <ul style="list-style-type: none"> • Army Corp. of Engineers (USACE) • American Red Cross • Department of Homeland Security (DHS) • Federal Emergency Management Agency (FEMA) • National Oceanic and Atmosphere Agency (NOAA) • National Weather Service (NWS) • New York State Department of Transportation (NYSDOT) • State Emergency Management Office – SEMO • United States Department of Agriculture (USDA) • United States Department of Transportation (USDOT) • United States Fish and Wildlife Service (USFWS) • Otsego County Conservation Association • Otsego 2000 • Susquehanna Basin • State of New York University at Oneonta • Community Volunteers – Habitat for Humanity • Otsego Lake |

Continued Public Involvement

The Town and Village of Unadilla is committed to the continued involvement of the public in the hazard mitigation process. Copies of the Town and Village of Unadilla Hazard Mitigation Plan will be kept and made available for review at any time during business hours. If a web site is available for the municipality, efforts will be made to include notices of meetings and the actual document with planned updates posted at the time of review.

Copies of the plan will be placed at the following locations:

Town of Unadilla Clerks Office
 Village of Unadilla Clerks office
 Otsego County Planning Department
 Otsego County Emergency Services Department
 Otsego County Planning Department Website

Each municipality during their annual reviews will schedule meetings open to the public for input and comments prior to completing their update.

A notice regarding the existence and location of copies of the mitigation plan will be publicized annually in local newspaper(s) and posted on the Otsego County web site. This announcement will follow the Planning Group's annual review effort.

The public will have the opportunity to comment on the proposed updates to the plan during scheduled public meetings. Completion of the annual planning evaluation process and the 5-year plan update will take place only after considerable time and input from the public and involved departments is gathered and evaluated for inclusion. The Planner and members of the committee will be responsible for coordinating the plan evaluation portion of the meeting, soliciting feedback, collecting and reviewing the comments, and ensuring their incorporation in the 5-year plan update as appropriate. Additional meetings may also be held as deemed necessary by the committee. The purpose of these meeting would be to provide the public an opportunity to express concerns, opinions, and ideas about the mitigation plan.

Chart 6.1 Review of Existing Information

Record of the review and incorporation of existing programs, policies, and technical documents for a single local jurisdiction. Adapted from Draft FEMA 386-8.

Name of Jurisdiction: Town & Village of Unadilla

Prepared by: Name: County Planning Dept. Title: Fiona Carbin Phone :607-547-4225

| Existing Program/ Policy/ Technical Documents | Does the jurisdiction have this program/policy/ technical document? (Yes/No) | Reviewed? (Yes/No) | Method of incorporation into the hazard mitigation plan |
|--|--|--------------------|--|
| Comprehensive plan | Yes | No | Used for assessing development trends and future vulnerabilities |
| Growth Management plan/ Capital Improvement plan | No | No | |
| Flood Damage Prevention Ordinance | No | No | |
| Floodplain Management plan | Yes | Yes | Incorporated actions |
| Open Space program plan | No | No | |
| Flood Insurance Studies, DFIRMs or engineering studies for streams | Yes, NFIP | Yes | Incorporated expected frequency and extent of flooding |
| Hazard Vulnerability Analysis (by the local Emergency Management Agency) | No | No | |
| Emergency Management Plan/ Emergency Operations Plan | No | No | |
| Zoning Ordinance and/or subdivision regulations | Yes, Village has zoning Town does not | Yes | Used for assessing vulnerability of proposed project. |
| Building Code | Yes | No | |
| Drainage Ordinance | No | No | |

| | | | |
|---------------------------|----------------------------|-----|--|
| Critical Facilities maps | Yes, under All hazard plan | Yes | Assess vulnerability |
| Existing Land Use maps | Yes | No | Used for assessing vulnerability |
| Elevation Certificates | No | No | |
| State plan | Yes | Yes | Incorporated risk assessment data and maps |
| HAZUS study | Yes | Yes | Used for flood potential dollar loss estimates |
| SLOSH Studies | n/a | n/a | n/a |
| Hurricane Evacuation Plan | n/a | n/a | n/a |
| Other | | | |

Appendix

| | |
|-------------|---|
| Appendix A- | List of Acronyms |
| Appendix B- | Town and Village of Unadilla Resolutions |
| | B-1 2004 Formal Appointment of members of the Town and Village of Unadilla All- Hazards Mitigation Planning Committee |
| | B-2 2005 Town and Village of Unadilla All-Hazards Mitigation Plan Adoption |
| | B-3 2007 Town and Village of Unadilla, Resolution adopting the Amended All- Hazard Mitigation Plan |
| Appendix C- | Notification for Public Involvement |
| | C-1 Copy of Public Notice |
| | C-2 List of Other involved agencies |
| | C-3 Copy of letter sent to agencies |
| Appendix D- | List of Critical Facilities and Vulnerable sites in the Town and Village of Unadilla |
| Appendix E- | Annual Maintenance Report |
| | E-1 Cover Letter |
| | E-2 Annual Check List |
| Appendix F- | Hazard Maps |
| | F-1 Roads and Parcels |
| | F-2 Water & Forest Resources |
| | F-3 School Districts |
| | F-4 Fire Districts |
| | F-5 Transportation/Crashes |
| | F-6 Critical Facilities (T) |
| | F-7 Critical Facilities (V) |
| | F-8 2006 Flood |
| | F-9 Potential Hazardous Areas |

APPENDIX A

List of Acronyms

Throughout this plan, the following acronyms are used:

| Acronym | Meaning |
|----------------|---|
| CEO | Code Enforcement Officer |
| CWCABA | Clean Water/Clean Air Bond Act |
| EAP | Emergency Action Plan |
| EAS | Emergency Alert System |
| OES | Office of Emergency Services |
| EMS | Emergency Medical Service |
| EPA | Environmental Protection Agency |
| EPF | Environmental Protection Fund |
| FERC | Federal Energy Regulatory Commission |
| FEMA | Federal Emergency Management Agency |
| FIRM | Flood Insurance Rate Map |
| HAZNY | Hazards New York (Hazard Analysis Computer Program) |
| HMC | Hazard Mitigation Committee |
| HMGP | Hazard Mitigation Grant Program |
| ICS | Incident Command System |
| NFIP | National Flood Insurance Program |
| NOAA | National Oceanic and Atmospheric Administration |
| NRCS | Natural Resource Conservation Service |
| NWS | National Weather Service |
| NYSDEC | New York State Department of Environmental Conservation |
| NYSDOS | New York State Department of State |
| NYSDOT | New York State Department of Transportation |
| NYSEMO | New York State Emergency Management Office |
| NYSP | New York State Police |
| PDM | Post Disaster Mitigation |
| SEMO | State Emergency Management Office |
| SFHA | Special Flood Hazard Area |
| SUNY | State University of New York (Oneonta) |

Appendix B-1
2004 Formal Appointment of members of the Town and Village of
Unadilla All- Hazards Mitigation Planning Committee
Town

09/22/2004 10:36 6073633217

UNADILLA TOWNSHIP

PAGE 07

RESOLUTION AUTHORIZING PARTICIPATION IN THE OTSEGO COUNTY
MULTI-JURISDICTIONAL ALL HAZARD MITIGATION PLAN AND CREATING A
LOCAL LAW ALL HAZARD MITIGATION PLANNING COMMITTEE

WHEREAS, the Federal Disaster Mitigation Act of 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act to require that all local governments have an approved, All Hazard Mitigation Plan in place by November 1, 2004 to be eligible for Hazard Mitigation Grant Program funding and other pre-disaster funding, and

WHEREAS, the Hazard Mitigation Grant Program provides grants to States and Local Governments to implement long term hazard mitigation measures after a major disaster declaration to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented, and

WHEREAS, the Otsego County Board of Representatives has determined that the County will prepare a multi jurisdictional All Hazard Mitigation Plan that includes all Otsego County Municipalities that want to participate, and

WHEREAS, the County has requested that municipalities wishing to participate and maintain records of their hours spent working on this effort so that "in kind service" figures can be provided to meet the requirements of the grant:

Now Therefore Be it Resolved, that the Town of Unadilla has determined that it shall participate in the multi jurisdictional All Hazard Mitigation Plan to be prepared by the County, and further

RESOLVED, that all persons working on this plan will provide in kind hours to the County planning department so the parameters of the grant can be met and further

RESOLVED, that a Local Hazard Mitigation Committee is hereby created for purposes of preparing the multi jurisdictional All Hazard Mitigation Plan, and further

RESOLVED, that such Local Hazard Mitigation Committee shall be comprised of the following individuals and or agencies: (Names and Addresses)

And further RESOLVED, that such Local All Hazard Mitigation Committee shall have a Chairman and a Secretary:

And further RESOLVED, that the Clerk of this Board shall send a copy of this resolution to the County Planning Department, 197 Main Street Cooperstown, NY 13326

Approved 8-18-04

Janice C. Cole Town Clerk

Village

V. Unadilla

WHEREAS, the Hazard Mitigation Grant Program provides grants to States and Local governments to implement long-term hazard mitigation measures after a major disaster declaration to reduce the loss of life and property due to natural disasters and to enable mitigation measures to be implemented, and

WHEREAS, The Otsego County Board of Representatives has determined that the County will prepare a multi-jurisdictional All Hazard Mitigation Plan that includes all Otsego County municipalities that want to participate, and

WHEREAS, The County has requested that municipalities wishing to participate maintain records of their hours spent working on this effort so that "in-kind service" figures can be provided to meet the requirements of the grant;

NOW THEREFORE BE IT

RESOLVED, that the Village of Unadilla has determined that it shall participate in the multi-jurisdictional All Hazard Mitigation Plan to be prepared by the County, and further

RESOLVED, that all persons working on this plan will provide in-kind hours to the county planning department so the parameters of the grant can be met, and further

RESOLVED, that a Local Hazard Mitigation Committee is hereby created for purposes of preparing the multi-jurisdictional all hazard mitigation plan, and further

RESOLVED, that such Local Hazard Mitigation Committee shall be comprised of the following individuals and agencies:

Walter L. Campbell, Jr. – Superintendent – Village of Unadilla
Kevin Rickard – Village Trustee – Village of Unadilla
Carl French – Fire Chief Fire Department – Village of Unadilla

And further

RESOLVED, that such Local All Hazard Mitigation Committee shall have a chairman and a Secretary, as follows:

Chairman – Kevin Rickard – Village Trustee
Secretary – Carl French – Fire Chief

And further

RESOLVED, that the Clerk of this Board shall send a copy of this resolution to the County Planning Department, 197 Main Street, Cooperstown, NY 13326.

RESOLUTION SECOND BY TRUSTEE COLE

Appendix B-2

2005 Town and Village of Unadilla All-Hazards Mitigation Plan Adoption

JAN-25-2005 11:10 FROM: VILLAGE OF UNADILLA 6073694500

TO: 5474285

P.001-001

RESOLUTION AUTHORIZING ADOPTION OF THE ALL HAZARD MITIGATION PLAN

WHEREAS, The Otsego County Board of Representatives has determined that the County will prepare a multi-jurisdictional All Hazard Mitigation Plan that includes all Otsego County municipalities that want to participate;

WHEREAS, The County has requested that municipalities wishing to participate maintain records of their hours spent working on this effort so that "in-kind service" figures can be provided to meet the requirements of the grant;

WHEREAS, the ~~Township~~ Village of Unadilla Hazard Mitigation Committee has worked with the County Planning Department to prepare an All Hazard Mitigation Plan

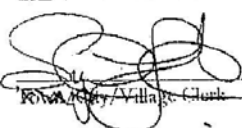
WHEREAS, the Hazard Mitigation Committee has presented said plan to the Town/City/Village;

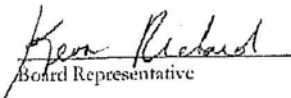
Now Therefore Be It
RESOLVED, That the ~~Township~~ Village of Unadilla has determined that it shall accept the All Hazard Mitigation Plan and further

RESOLVED, That all persons working on this plan have provided in-kind hours to the county planning department so the parameters of the grant can be met, and further

RESOLVED, That the Clerk of this Board shall maintain on file, a copy of the All Hazard Mitigation Plan in the office of the clerk, located at 193 Main St P.O. Box 386, Unadilla, New York, 13849, and further

RESOLVED, That the Clerk of this Board shall send a copy of this resolution to the County Planning Department, 197 Main Street, Cooperstown, NY 13326.


Suzanne E. Lortsch
Clerk / Trustee


Kevin Richard
Board Representative

Kevin Richard
Village Trustee

Adopted
1/18/05

Appendix B-3
RESOLUTION AUTHORIZING ADOPTION
OF THE AMENDED 2006 COPY OF THE
ALL HAZARDS MITIGATION PLAN

WHEREAS, The Otsego County Board of Representatives has determined that the County will prepare a multi-jurisdictional All Hazard Mitigation Plan that includes all Otsego County municipalities that want to participate;

WHEREAS, The County has requested that municipalities wishing to participate maintain records of their hours spent working on this effort so that “in-kind service” figures can be provided to meet the requirements of the grant;

WHEREAS, the **Town & Village of Unadilla** Hazard Mitigation Committee has worked with the County Planning Department to prepare an All Hazard Mitigation Plan

WHEREAS, the Hazard Mitigation Committee has presented said plan to the Town/City/Village;

Now Therefore Be It

RESOLVED, That the **Town and Village of Unadilla** has determined that it shall accept the All Hazard Mitigation Plan and further

RESOLVED, That all persons working on this plan have provided in-kind hours to the county planning department so the parameters of the grant can be met, and further

RESOLVED, That the Clerk of this Board shall maintain on file, a copy of the All Hazard Mitigation Plan in the office of the town clerk’s, located **P.O. Box 455 Unadilla, NY 13849 and the Village clerk’s at PO Box 386, Unadilla, NY 13849** and further

RESOLVED, That the Clerk of this Board shall send a copy of this resolution to the County Planning Department, 197 Main Street, Cooperstown, NY 13326.

Town Clerk

Village Clerk

Board Representative

Village Mayor

Appendix C-1

Copy of Public Notice

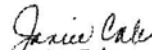
08/29/2006 05:41 6073693217

UNADILLA TOWNSHIP

PAGE 03

PUBLIC NOTICE

The Hazardous Mitigation Plan for the Town and Village of Unadilla is available for review and comment. A copy is available until September 18, 2006 at the Town Clerk's Office currently located in the Unadilla Public Library at the Community House, the Village Clerk's Office, and at the Otsego County Planning Department.


Janice Cole
Town Clerk

APPENDIX C-2

List of agencies

During the revision period the following organizations received an informative letter about the All-Hazard Mitigation Plan for the Town and Village of Unadilla.

- **Unatego Jr. Sr. School**
- **Methodist Church**
- **Presbyterian Church**
- **Catholic Church**
- **Baptist Church**
- **C&S Auto**
- **Red Apple gas and grocer**
- **Great American**
- **Brooks Machine**
- **Bassett Hospital**

Appendix C-3

Copy of letter sent to agencies

08/23/2005 05:41 6073693217

UNADILLA TOWNSHIP

PAGE 02

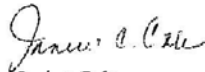
TOWN OF UNADILLA, Town Clerk's Office
1648 St. Hwy 7, P.O. Box 455, Unadilla, New York 13849
Phone: (607) 369-4433 * Fax: (607) 369-3217

September 6, 2006

Dear

The Hazardous Mitigation Plan for the Town of Unadilla is available for review and comment. A copy is available until September 18, 2006 at the Town Clerk's Office currently in the Unadilla Public Library at the Community House and at the Otsego County Planning Department. The Town Clerk's office hours are Monday through Friday 9 a.m. - 12 noon, 1 p.m. - 4 p.m.

Sincerely,



Janice Cole
Town Clerk

USDA Rural Development is an Equal Opportunity Lender, Provider and Employer. Complaints of discrimination should be sent to: USDA Director, Office of Civil Rights, Washington, DC 20250-9410. NYS T. D. D. Contact number is 1-800-662-1220

APPENDIX D
List of Critical Facilities and Vulnerable sites

Town and Village of Unadilla

| Critical Facility | Location | Parcel ID# |
|--|------------------------|--|
| Town Facilities | | |
| Town Highway Dept. | Co. Hwy 3 | 334.00-1-27.00, -30.00 |
| Town Fire Station | Co. Hwy 4 | 324.03-1-56.00 |
| Town Offices | St. Hwy 7, Main St. | 334.00-1-42.01, 334.19-2-44.00 |
| Village Facilities | | |
| Village Police/Fire Station | Clifton St. | 334.14-1-14.01, 334.19-1-19.00 |
| Village of Unadilla Water Works | Kilkenny Rd. | 334.14-1-22.00 |
| | Co. Hwy 3 | 329.00-1-59.00 |
| | Sheep Pen Rd. | 334.00-1-20.00 |
| Village Highway Dept. | Gregory St. | 334.15-1-19 |
| Public Services | Watson St. | 338.07-1-18.02 |
| Wells Bridge Hamlet | | |
| Wells Bridge Comm. House | Co. Hwy 4 | 324.03-1-55 |
| Wells Bridge Fire Dept. | Bridge St. | 324.03-1-40.03 |
| Wells Bridge Water Assoc. (located outside of county) | Poles Wires | 600.00-4-66.00, - 67.00, 700.00-2-97.00 |
| Village Library | Main St. | 334.19-1-26.00 |
| State Facilities | | |
| United States Postal Service | Bridge St. | 334.18-2-71.00 |
| State Police, Troop C | St. Hwy 7 | 337.00-1-21.00 |
| Churches/Religious | | |
| Episcopal Society | Main St. | 334.19-2-19.00 |
| First Baptist Church, Riverhead | Co. Hwy 3 | 334-1-18.01 |
| Friends Society | Co. Hwy 2 | 328.00-1-46.00, -52.00 |
| Methodist Society | Main St. | 334.18-2-76.00, -77.00 |
| | Butternut Rd | 314.00-1-26.00 |
| | Sand Hill Rd. | 323.00-1-37.00 |
| Presbyterian Society | Church St. | 334.18-2-31.00, -80.00 |
| St. Matthews Episcopal | Mill St. | 334.19-2-25 |

APPENDIX E
Annual Maintenance Report

APPENDIX E-1

Cover Letter



COUNTY OFFICE BUILDING • 197 MAIN STREET • COOPERSTOWN, NEW YORK 13326

PLANNING DEPARTMENT

PHONE: (607) 547-4225

FAX: (607) 547-4285

Terry Bliss, Planning Director

E-mail: blisst@otsegocounty.com

The Hazard Mitigation Plan is updated annually by the established committee regarding natural hazards that have affected local communities within the past year. The purpose of this is to make the appropriate changes to the communities' individual plan so that the information included is not outdated, and historical documentation is recorded.

The local Hazard Mitigation committee needs to withstand even if members are no longer active. The most useful way of maintaining an involved and helpful committee is having one representative from each of the following local branches:

- local fire department
- local highway department
- knowledgeable resident
- town/village administrator
- emergency squad

The committee is welcomed to add other members of the community that are reliable resources will be an asset in completing the annual survey.

The local Hazard Mitigation committee is responsible to complete the survey in the most detailed manner. Hazards listed already include; ice storms, severe storms (including wind storms), winter storms, flood, erosion, hazardous material in transit, Fire (including wild fire), tornado, flash flood, ice jams, and hurricane. Space is provided to include non listed hazards that have affected a community or another occurrence of a particular hazard from that year.

Below is an example of how the survey should be filled out.

Flood-

When-

April 14-16 2007

Detailed Location of Hazard-

Flooding occurred along Hill creek, the Florence River, Town stream, from Rose avenue to Baseball hill.

Detailed Description of Damages-

45% of our community was affected due to washed out roads and flood damage. 12 houses along the Florence river basements were flooded, resulting in damage to personal belongings, major repairs such as repairing pumps, and drainage systems.

Estimate amount in damages-

\$20,000

Amount rewarded from FEMA (if any)-

No FEMA assistance applied but not rewarded

Actions taken to mitigate impacts on community-

Replaced Culvert from 8' to 12' on Rose avenue. Scheduled cleaning of drainage ditches along highway 22.

Cost of mitigation measures-

34,000 for improvements

APPENDIX E-2

Annual Check List

Hazard Mitigation Annual Maintenance

The Hazard Mitigation Plan requires that the local Committee review, update, and make necessary changes to the plan that has occurred within the last year. In doing so the established committee must do the following:

- Identify which natural hazards have affected the community
- Exact locations where community were affected and for how long
- Cost in damages
- Amount if any received from FEMA
- Mitigation measures that were taken throughout the year in prevention of future destruction
- Provide signatures from each committee member

Below are potential hazards that may occur. Please fill in the needed information with the most detail. There is available space for those hazards that have not been listed but have affected your community and would like to include.

Potential hazards:

Ice Storms-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Severe Storms-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Winter Storms-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Flood-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Hurricane -

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Erosion/Landslide-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Haz Mat (in transit)-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Fire/ Wide Fire-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Tornado-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Flash Flood-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Ice Jams-

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Hazard_____

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Hazard_____ -

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Hazard _____ -

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

Hazard _____

When-

Detailed Location-

Detailed Description of Damages-

Estimate amount in damages-

Amount rewarded from FEMA (if any)-

Actions taken to mitigate impacts on community-

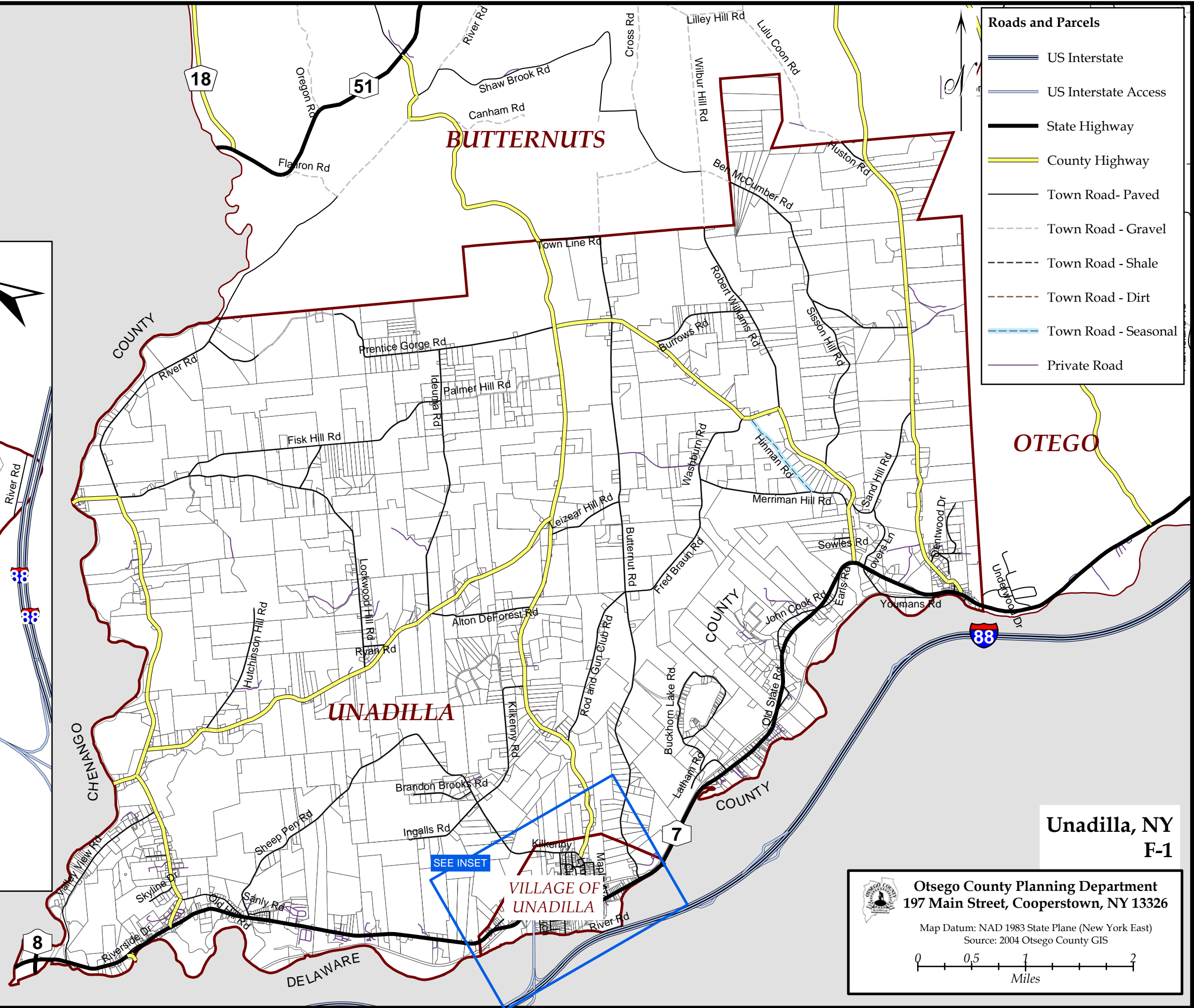
APPENDIX F

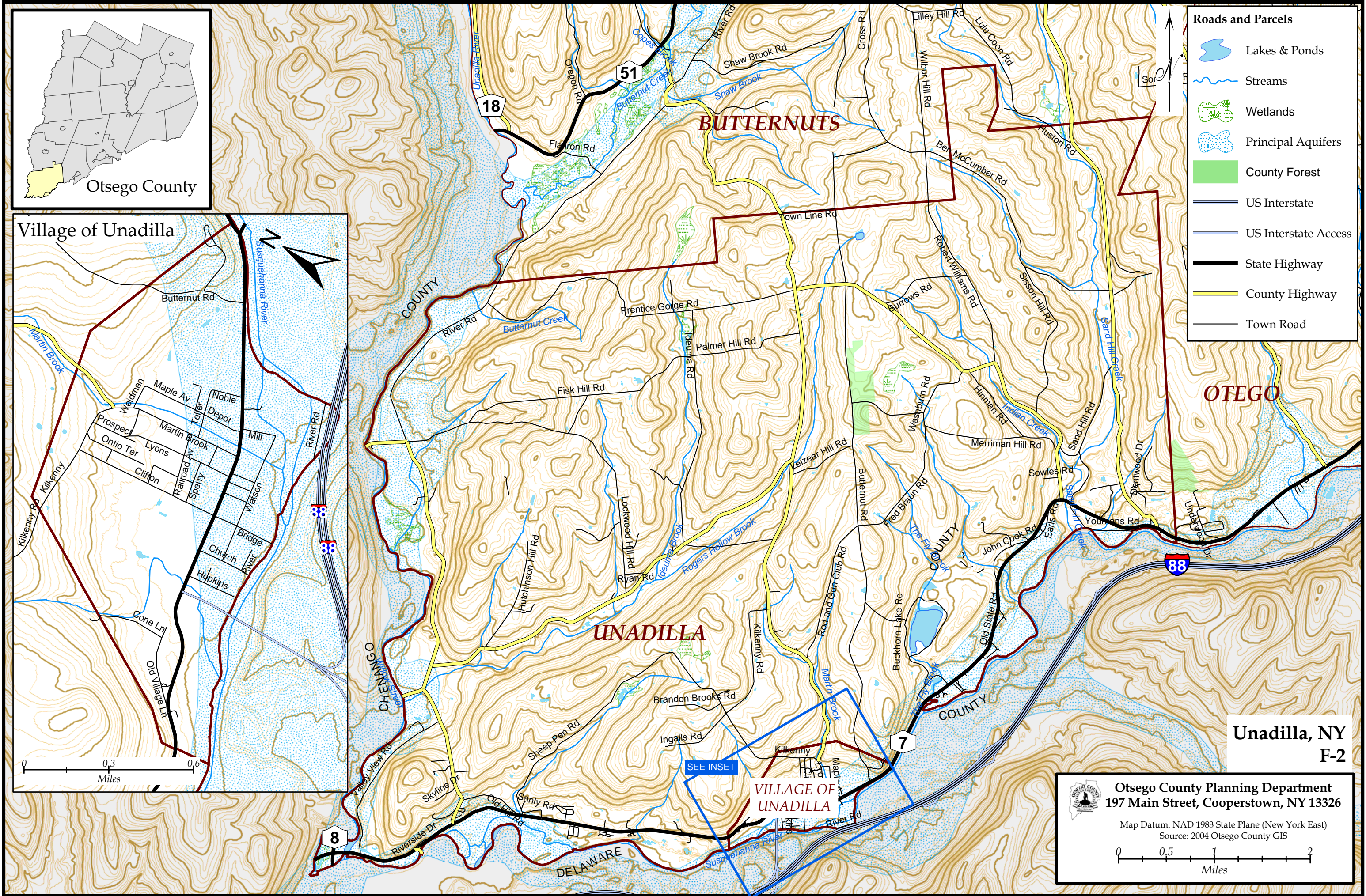
Hazard Maps

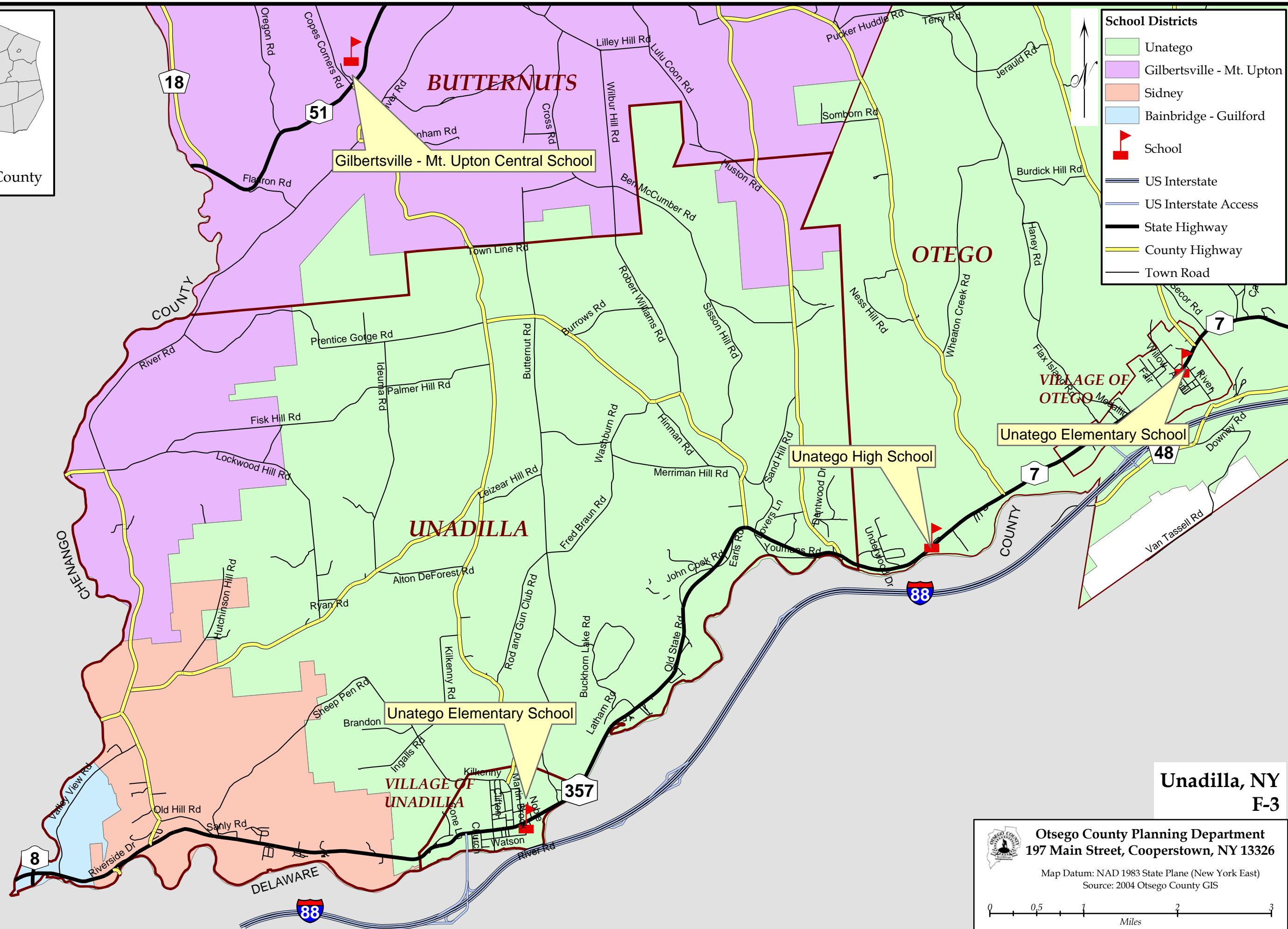
| | |
|-----|---------------------------|
| F-1 | Roads and Parcels |
| F-2 | Water & Forest Resources |
| F-3 | School Districts |
| F-4 | Fire Districts |
| F-5 | Transportation/Crashes |
| F-6 | Critical Facilities (T) |
| F-7 | Critical Facilities (V) |
| F-8 | 2006 Flood |
| F-9 | Potential Hazardous Areas |



A detailed map of the Village of Unadilla, Iowa. The map shows a grid of streets including Kilkenny Rd, Kilkenny, Prospect, Ontario Ter, Lyons, Clinton, Weidman, Maple Av, Martin Brook, Noble Depot, Telegraph, Railroad Av, Sperry, Mill, Watson, Bridge, Church, Hopkins, Cone Ln, and Old Village Ln. A red line outlines the village boundary. A yellow line runs along Kilkenny Rd. A black line runs through the center of the village. A blue line runs along the right side of the village. A scale bar at the bottom indicates distances of 0, 0.3, and 0.6 miles. A north arrow is located in the top right corner.

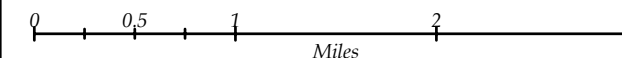




Unadilla, NY
F-3

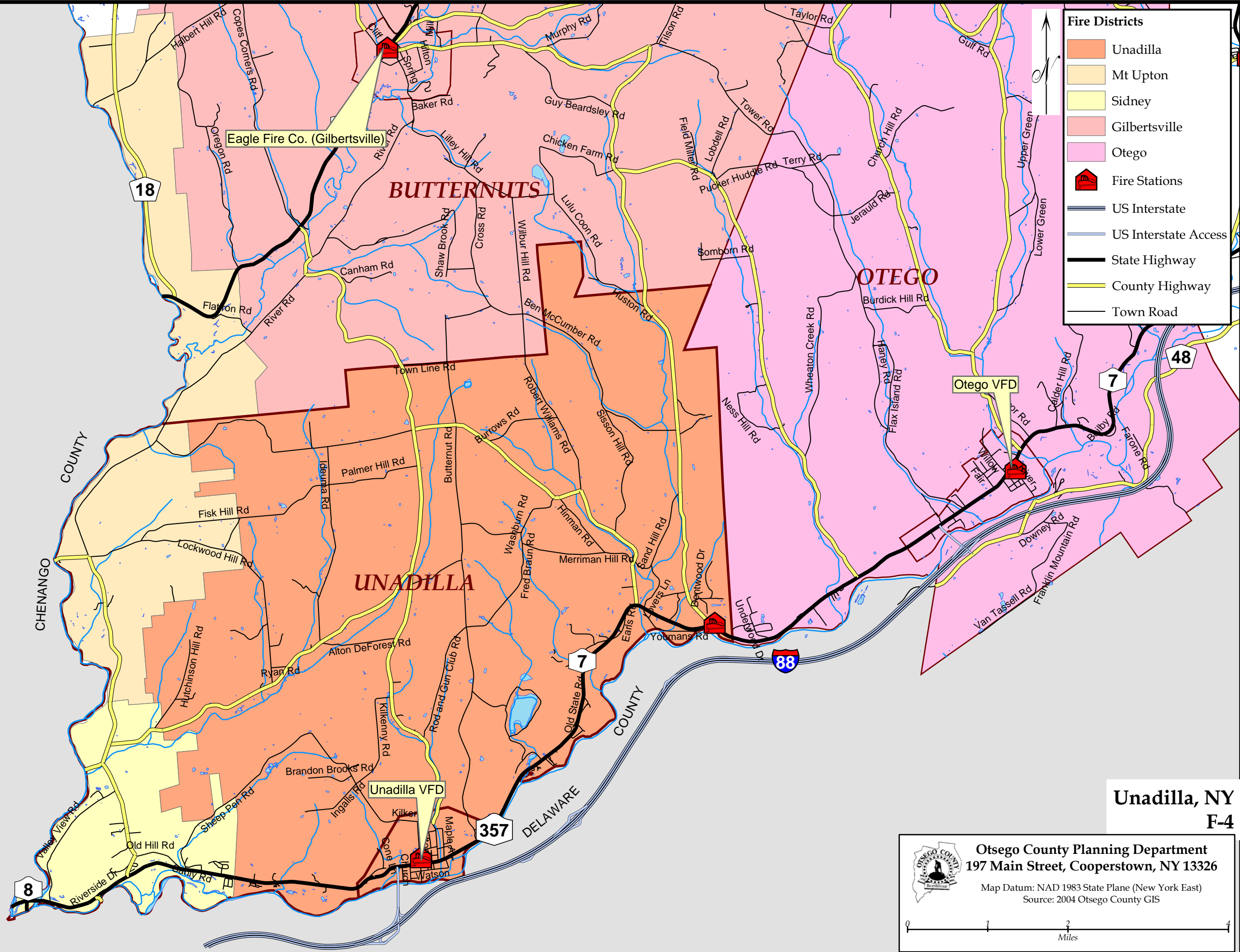
Otsego County Planning Department
197 Main Street, Cooperstown, NY 13326

Map Datum: NAD 1983 State Plane (New York East)
Source: 2004 Otsego County GIS






Otsego County



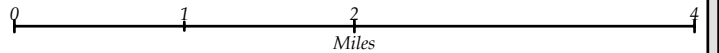
- Fire Districts**
- Unadilla
 - Mt Upton
 - Sidney
 - Gilbertsville
 - Otego
- Fire Stations**
- Fire Stations
- Roads**
- US Interstate
 - US Interstate Access
 - State Highway
 - County Highway
 - Town Road

Unadilla, NY
F-4

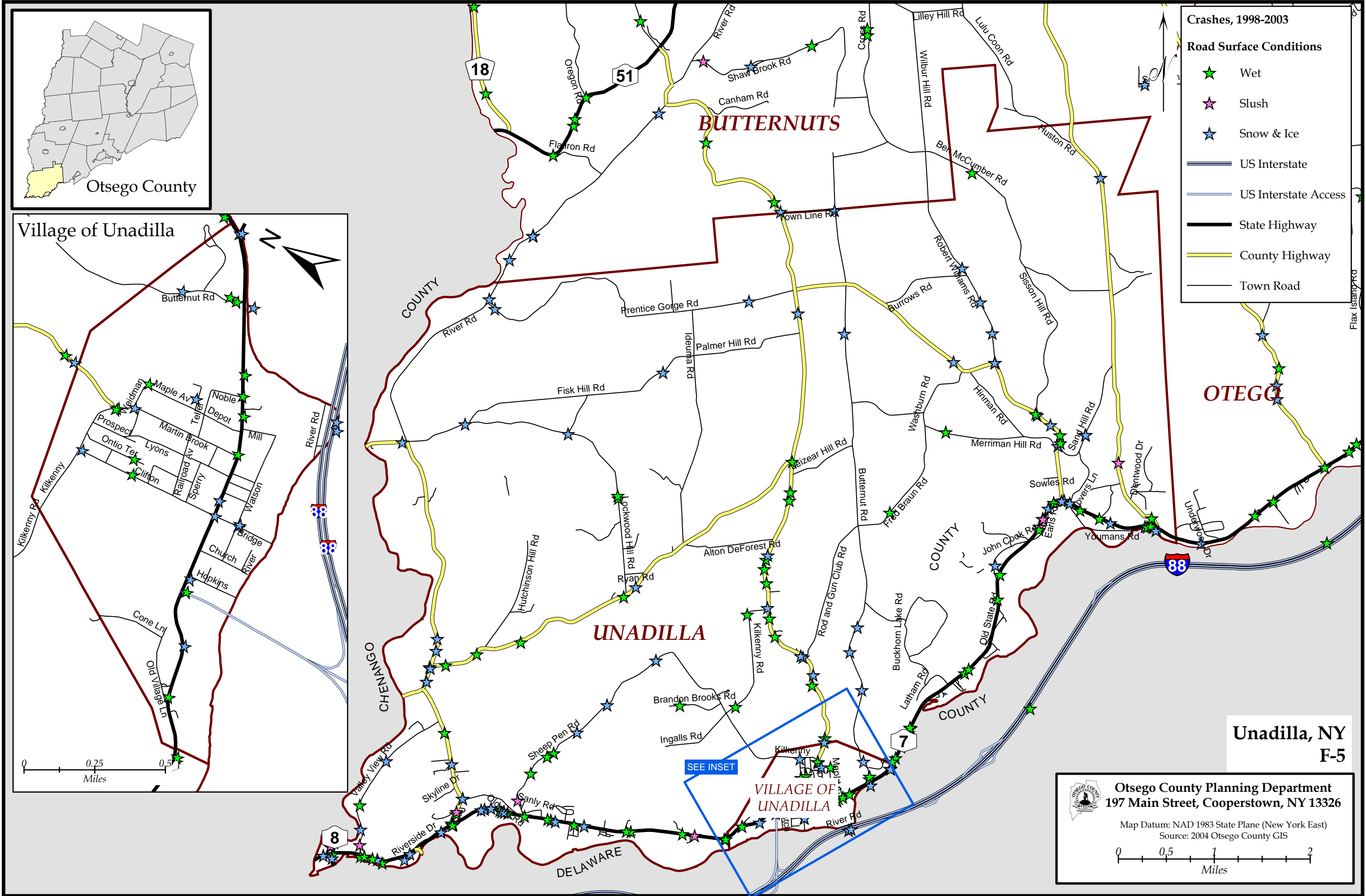


Otsego County Planning Department
197 Main Street, Cooperstown, NY 13326

Map Datum: NAD 1983 State Plane (New York East)
Source: 2004 Otsego County GIS



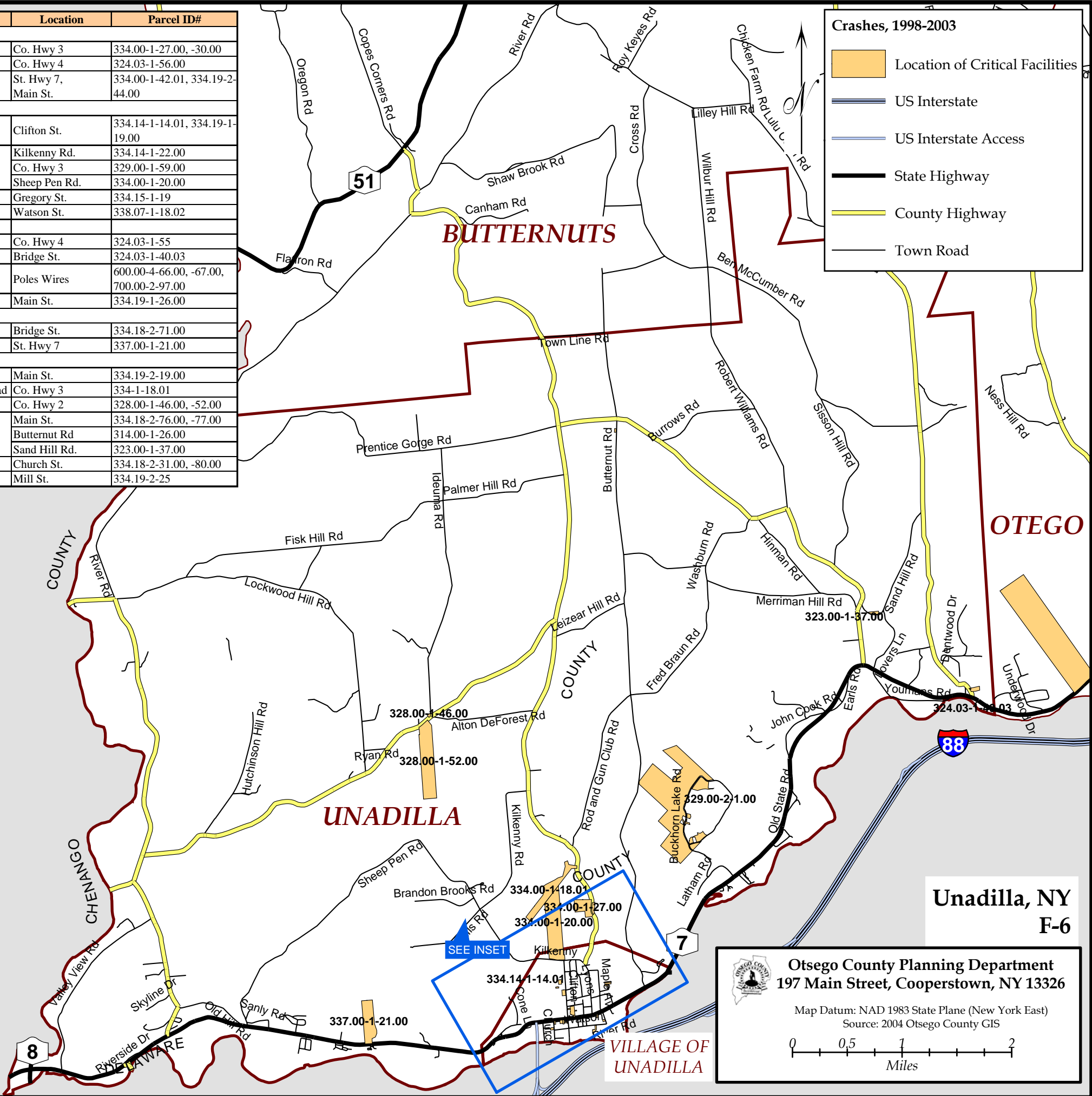
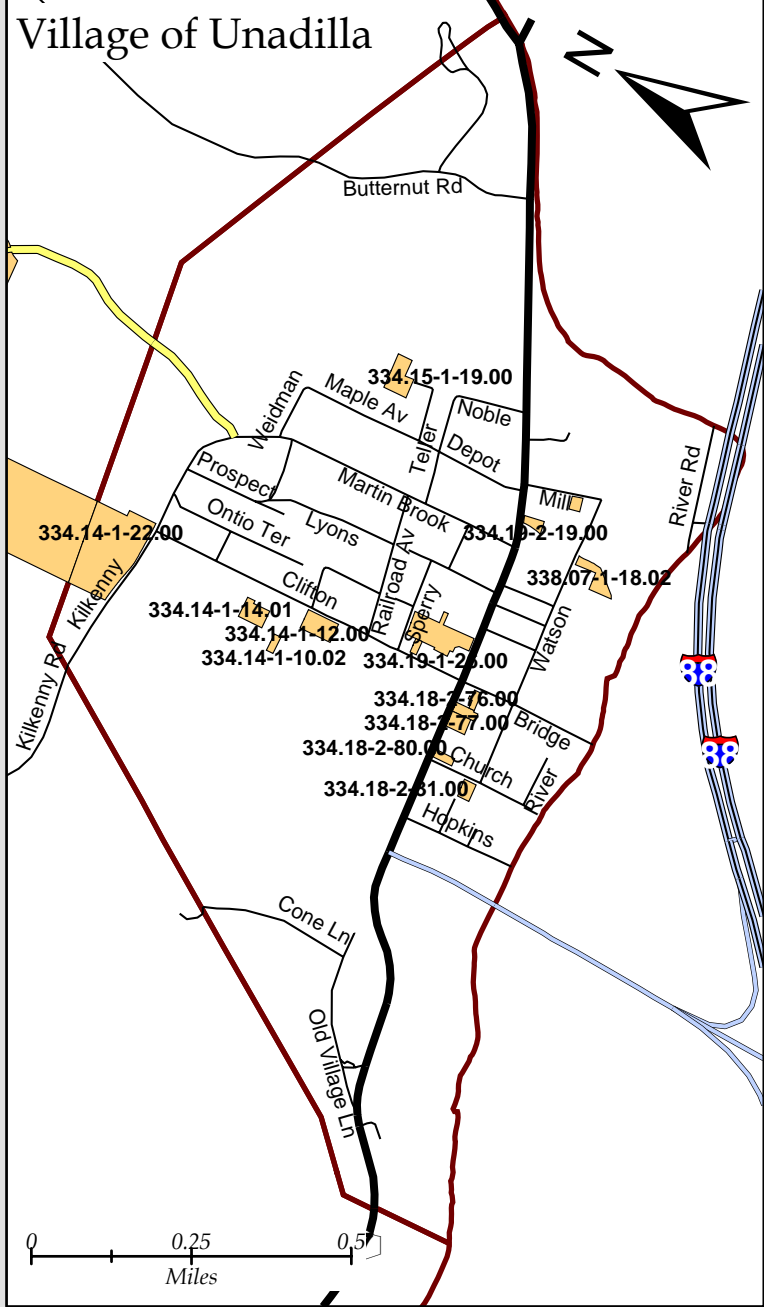
0 1 2 4
Miles





Parcels with critical facilities are identified by Tax ID and referenced in the chart above.

| Critical Facility | Location | Parcel ID# |
|---|---------------------------|---|
| Town Facilities | | |
| Town Highway Dept. | Co. Hwy 3 | 334.00-1-27.00, -30.00 |
| Town Fire Station | Co. Hwy 4 | 324.03-1-56.00 |
| Town Offices | St. Hwy 7, Main St. | 334.00-1-42.01, 334.19-2-44.00 |
| Village Facilities | | |
| Village Police/Fire Station | Clifton St. | 334.14-1-14.01, 334.19-1-19.00 |
| Village of Unadilla Water Works | Kilkenny Rd. Co. Hwy 3 | 334.14-1-22.00 329.00-1-59.00 |
| Village Highway Dept. | Gregory St. | 334.15-1-19 |
| Public Services | Watson St. | 338.07-1-18.02 |
| Wells Bridge Hamlet | | |
| Wells Bridge Comm. House | Co. Hwy 4 | 324.03-1-55 |
| Wells Bridge Fire Dept. | Bridge St. | 324.03-1-40.03 |
| Wells Bridge Water Assoc. (located outside of county) | Poles Wires | 600.00-4-66.00, -67.00, 700.00-2-97.00 |
| Village Library | Main St. | 334.19-1-26.00 |
| State Facilities | | |
| United States Postal Service | Bridge St. | 334.18-2-71.00 |
| State Police, Troop C | St. Hwy 7 | 337.00-1-21.00 |
| Churches/Religious | | |
| Episcopal Society | Main St. | 334.19-2-19.00 |
| First Baptist Church, Riverhead | Co. Hwy 3 | 334-1-18.01 |
| Friends Society | Co. Hwy 2 | 328.00-1-46.00, -52.00 |
| Methodist Society | Main St. | 334.18-2-76.00, -77.00 |
| | Butternut Rd | 314.00-1-26.00 |
| | Sand Hill Rd. | 323.00-1-37.00 |
| Presbyterian Society | Church St. | 334.18-2-31.00, -80.00 |
| St. Matthews Episcopal | Mill St. | 334.19-2-25 |



Crashes, 1998-2003

- Location of Critical Facilities
- US Interstate
- US Interstate Access
- State Highway
- County Highway
- Town Road

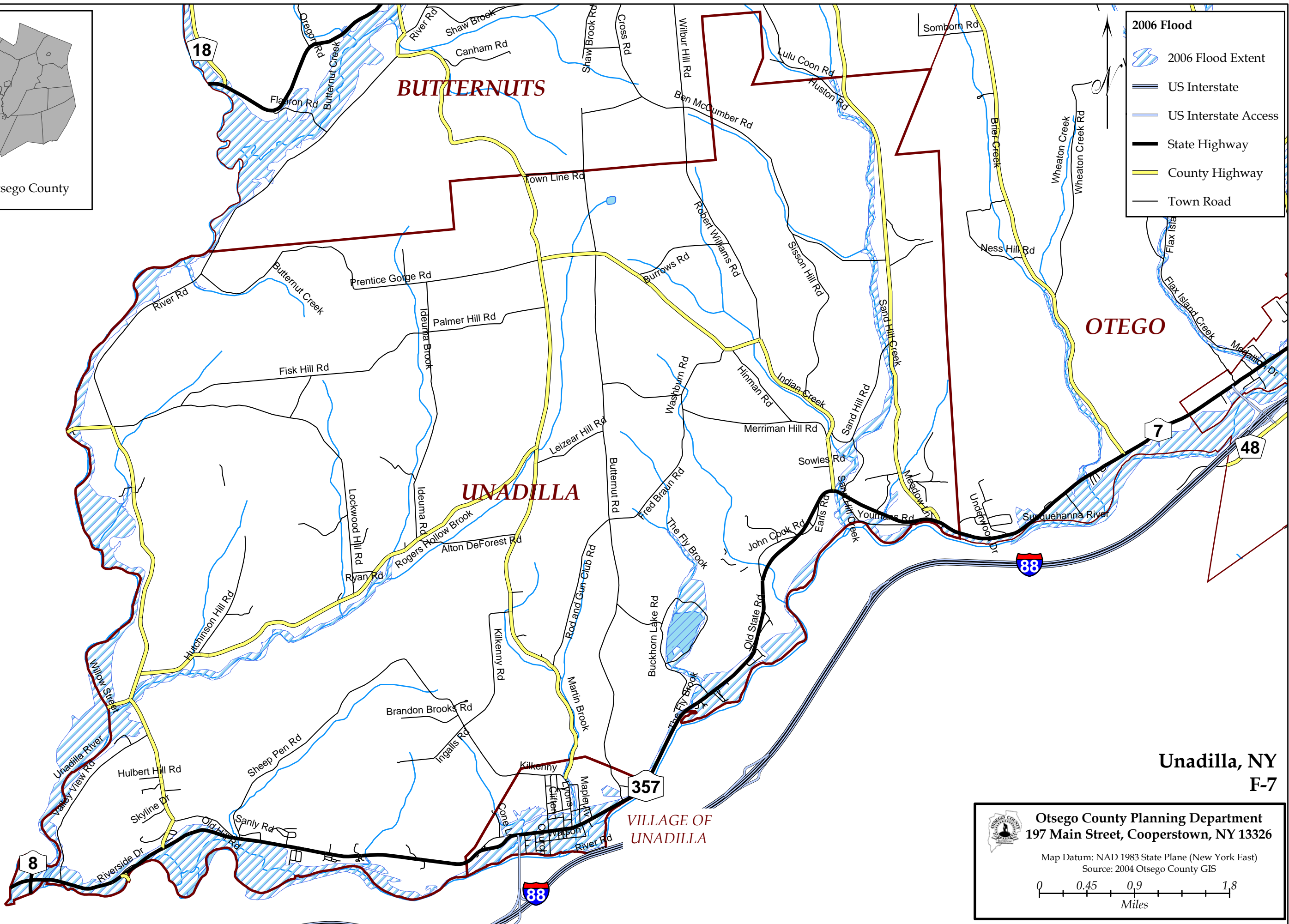
Otsego County Planning Department
197 Main Street, Cooperstown, NY 13326

Map Datum: NAD 1983 State Plane (New York East)
Source: 2004 Otsego County GIS

0 0.5 1 2
Miles

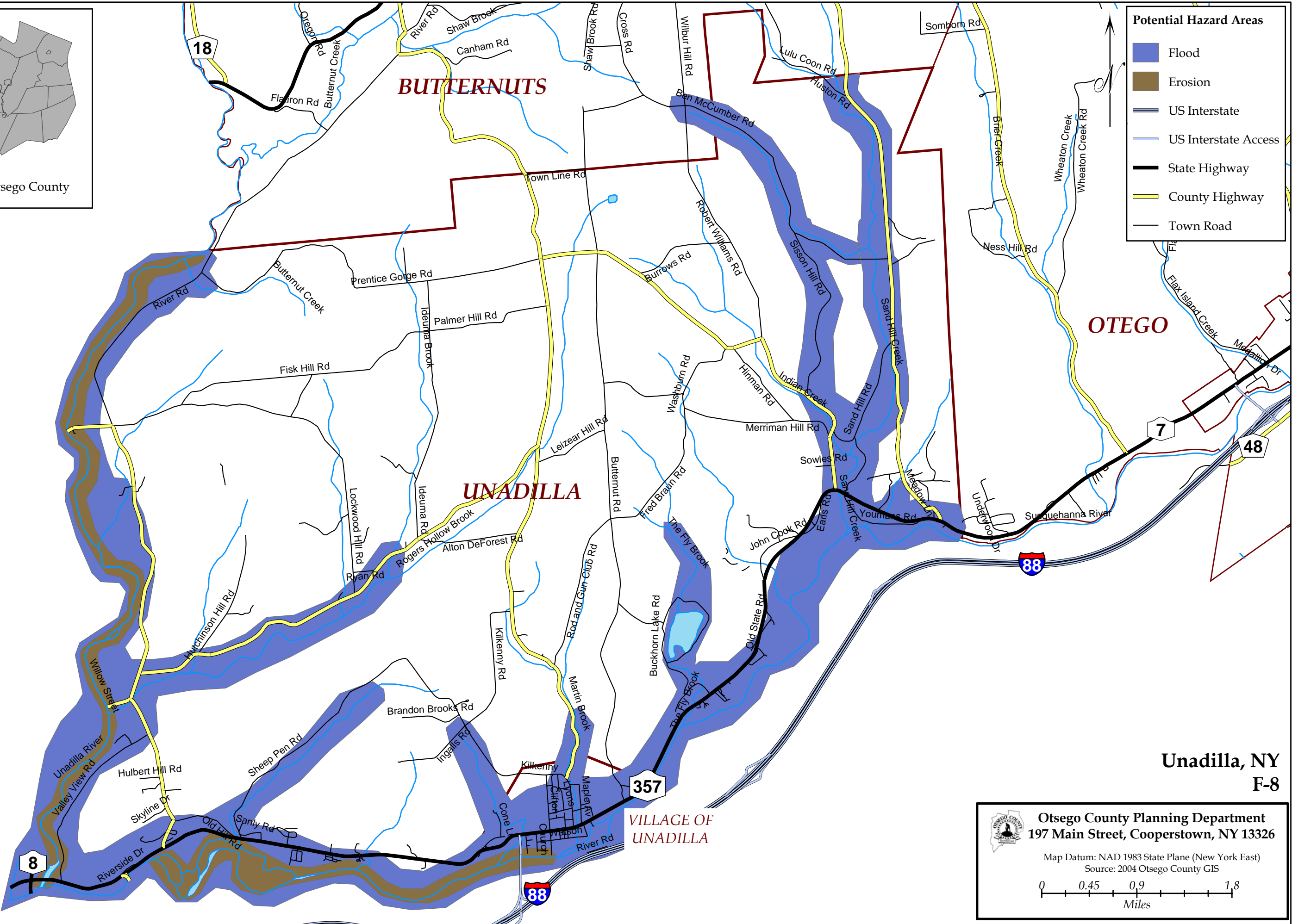


Otsego County





Otsego County



Otsego County Planning Department
197 Main Street, Cooperstown, NY 13326

Map Datum: NAD 1983 State Plane (New York East)
Source: 2004 Otsego County GIS

0 0.45 0.9 1.8
Miles