



**Washington County  
All-Hazards Mitigation Plan**

**Prepared by**

**The Washington County  
All-Hazards Mitigation Plan  
Task Force**

**v 18.0**

**October 6, 2009**

**Adopted by the Washington County Board of Supervisors  
Resolution #112 on April 16, 2010**

# Table of Contents

Washington County All-Hazards Mitigation Plan Executive Summary .....	11
1. Introduction.....	14
1.1. Purpose and scope of plan.....	14
1.2. Participating jurisdictions .....	14
1.3. Plan adoption .....	14
2. Planning process .....	17
2.1. Description of the planning process.....	17
2.2. Planning team and steering group.....	19
2.3. Coordination with agencies.....	19
2.4. Planning meetings .....	19
2.5. Public outreach.....	23
2.6. Involving key stakeholders .....	25
2.7. Review and incorporation of existing information .....	25
3. Risk assessment .....	25
3.1. Identifying hazards.....	25
3.1.1. Natural hazards identified.....	25
3.1.2. Natural hazards considered, but eliminated.....	26
3.1.3. Hazard Assessment – Analysis of Washington County.....	26
3.1.4. Comparison of HAZNY Report with Mitigation Planning Task Force Hazard Identification.....	28
3.2. Examination of Records.....	33
3.3. Assessing vulnerability by municipality.....	42
3.3.1. Argyle .....	42
3.3.2. Argyle, Village of .....	46
3.3.3. Cambridge.....	47
3.3.4. Dresden .....	55
3.3.5. Easton.....	58
3.3.6. Fort Ann .....	65
3.3.7. Fort Ann, Village of.....	68
3.3.8. Fort Edward .....	69
3.3.9. Granville .....	73
3.3.10. Granville, Village of .....	79
3.3.11. Greenwich.....	82
3.3.12. Greenwich, Village of.....	86
3.3.13. Hampton.....	87
3.3.14. Hartford.....	91
3.3.15. Hebron.....	96
3.3.16. Hudson Falls, Village of .....	102
3.3.17. Jackson.....	104
3.3.18. Kingsbury.....	108
3.3.19. Putnam .....	112
3.3.20. Salem.....	115
3.3.21. Salem, Village of .....	118
3.3.22. Washington County .....	119
3.3.23. White Creek .....	160
3.3.24. Whitehall.....	164

3.3.25. Whitehall, Village of.....	167
4. Mitigation Strategies.....	171
5. Plan Maintenance.....	176
5.1. Monitoring, Evaluation, and Updating the Plan .....	176
5.2. Continued Public Involvement .....	179
6. References.....	180

## APPENDICES

Appendix 1.	An Identification of the Characteristics and Sources of Flood Events in the Village of Salem, NY, compiled by Joseph Childs <i>(See separate file on CD – pgs. 184-240)</i>	183
Appendix 2.	Washington County All-Hazard Mitigation Plan Meeting: Invitations, Agendas, Minutes	241
Appendix 3.	Agencies Contacted Requesting Information Relating to Natural Hazards & Disasters within Washington County & Copy of Letter	320
Appendix 4.	Washington County All-Hazard Mitigation Planning Task Force Meeting Sign-In Sheets	325
Appendix 5.	Public Outreach: Media Outlets List; Press Releases; Letter to County Fire Chiefs	336
Appendix 6.	Agency Contacts (Responded to Request For Information Letter)	342
Appendix 7.	Copies of Resolutions From Towns/Villages Authorizing Washington County To Act As Proxy	344
Appendix 8.	Details Relating To: Record of Review of Jurisdictional Existing Plans	349
Appendix 9.	FEMA/SEMO Approval letter dated September 21, 2009.	355

## Figure List

Figure 1 – Wind Zones In The United States .....	30
Figure 2 – Landslide Inventory Map of New York.....	31
Figure 3 – Historic Hurricane Events Tracking Through NYS .....	32
Figure 4 – Argyle – NYS Interactive Mapping .....	42
Figure 5 – Argyle Referenced Map .....	43
Figure 6 – Argyle B&W Aerial View - NYS Interactive Mapping .....	45
Figure 7 – Argyle FIRM.....	45
Figure 8 – Argyle, Village of - Flood Map .....	46
Figure 9 – Cambridge - NYS Interactive Mapping .....	47
Figure 10 – Cambridge, Village of - NYS Interactive Mapping .....	48
Figure 11 - Cambridge Referenced Map .....	49
Figures 12a & 12b – Culvert Problems.....	51
Figures 13a & 13b – Stump Church Road Bridge & Dam.....	52
Figure 14 –Cambridge – B&W Aerial View - NYS Interactive Mapping .....	53
Figure 15 – Cambridge FIRM .....	54
Figure 16 – Dresden - NYS Interactive Mapping.....	55
Figure 17 – Dresden Map (not referenced).....	56
Figure 18 – Dresden B&W Aerial View - NYS Interactive Mapping .....	57
Figure 19 – Dresden FIRM .....	57
Figure 20 – Easton FIRM.....	58
Figure 21 – Easton Referenced Map .....	59
Figure 22 – Replaced roadway in Easton .....	61
Figure 23 – Corrected drainage, Easton.....	62
Figure 24 – Corrected culvert tubes; Easton, view 1 .....	63
Figure 25 – Corrected culvert tubes, Easton; view 2 .....	64
Figure 26 – Fort Ann - NYS Interactive Mapping.....	65
Figure 27 – Fort Ann Map (not referenced).....	66
Figure 28 – Fort Ann B&W Aerial View - NYS Interactive Mapping.....	67

Figure 29 – Fort Ann FIRM .....	67
Figure 30 – Fort Edward - NYS Interactive Mapping .....	69
Figure 31 – Fort Edward Referenced Map.....	70
Figure 32 – Fort Edward B&W Aerial View - NYS Interactive Mapping .....	72
Figure 33 – Fort Edward FIRM .....	72
Figure 34 – Granville - NYS Interactive Mapping.....	73
Figure 35 – Granville Referenced Map.....	74
Figure 36 – North Granville B&W Aerial - NYS Interactive Mapping.....	76
Figure 37 – Granville B&W Aerial View - NYS Interactive Mapping .....	76
Figure 38 – Middle Granville B&W Aerial - NYS Interactive Mapping .....	77
Figure 39 – West Granville B&W Aerial - NYS Interactive Mapping .....	77
Figure 40 – South Granville B&W Aerial - NYS Interactive Mapping .....	78
Figure 41 – Granville FIRM .....	78
Figure 42 – Granville, Village of FIRM.....	79
Figure 43 – Granville, Village of Referenced Map .....	80
Figure 44 – Greenwich - NYS Interactive Mapping .....	82
Figure 45 – Greenwich Referenced Map .....	83
Figure 46 – Greenwich B&W Aerial View - NYS Interactive Mapping.....	85
Figure 47 – Greenwich Firm.....	85
Figure 48 – Greenwich, Village of FIRM .....	86
Figure 49 – Hampton - NYS Interactive Mapping .....	87
Figure 50 – Hampton Referenced Map.....	88
Figure 51 – Hampton B&W Aerial View - NYS Interactive Mapping .....	90
Figure 52 – Hampton FIRM .....	90
Figure 53 – Hartford - NYS Interactive Mapping .....	91
Figure 54 – Hartford Referenced Map .....	92
Figure 55 – Hartford B&W Aerial View - NYS Interactive Mapping.....	94
Figure 56 – East Hartford B&W Aerial - NYS Interactive Mapping .....	94
Figure 57 – South Hartford B&W Aerial - NYS Interactive Mapping.....	95

Figure 58 – Hartford FIRM.....	95
Figure 59 – Hebron - NYS Interactive Mapping.....	96
Figure 60 – Hebron Referenced Map.....	97
Figure 61 – North Hebron B&W Aerial - NYS Interactive Mapping.....	100
Figure 62 – West Hebron B&W Aerial - NYS Interactive Mapping.....	100
Figure 63 – East Hebron B&W Aerial - NYS Interactive Mapping.....	101
Figure 64 – Hebron FIRM.....	101
Figure 65 – Hudson Falls, Village of - NYS Interactive Mapping.....	102
Figure 66 – Hudson Falls, Village of B&W Aerial - NYS Interactive Mapping.....	102
Figure 67 – Jackson - NYS Interactive Mapping.....	104
Figure 68 – Jackson Referenced Map.....	105
Figure 69 – Jackson B&W Aerial View - NYS Interactive Mapping.....	107
Figure 70 – Jackson FIRM.....	107
Figure 71 – Kingsbury - NYS Interactive Mapping.....	108
Figure 72 – Kingsbury Referenced Map.....	109
Figure 73 – Kingsbury B&W Aerial View - NYS Interactive Mapping.....	111
Figure 74 – Kingsbury FIRM.....	111
Figure 75 – Putnam - NYS Interactive Mapping.....	112
Figure 76 – Putnam Map (not referenced).....	113
Figure 77 – Putnam B&W Aerial View - NYS Interactive Mapping.....	114
Figure 78 – Putnam FIRM.....	114
Figure 79 – Salem - NYS Interactive Mapping.....	115
Figure 80 – Salem Map (not referenced).....	116
Figure 81 – Salem B&W Aerial View - NYS Interactive Mapping.....	117
Figure 82 – Salem FIRM.....	117
Figure 83 – Salem, Village of FIRM.....	118
Figure 84 – Washington County Map.....	119
Figure 85 – Washington County Referenced Map – Part 1.....	120
Figure 86 Embankment Failure.....	121

Figure 87 Embankment Failure .....	122
Figure 88 – Pool Caused by Beaver Dam .....	123
Figure 89 – Mill Pond-Concrete Header.....	123
Figure 90 – Mill Pond-Failing Box Culvert Inlet .....	124
Figure 91 – Mill Pond-Box Culvert Outlet .....	124
Figure 92 – CR 2 .....	125
Figure 93 – Washington County Referenced Map – Part 2 .....	126
Figure 94 – CR 21 Beaver Dam Failure-Post Flood Damage-View 1.....	127
Figure 95 – CR 21 Beaver Dam Failure-Post Flood Damage-View 2.....	128
Figure 96 – CR 21 Beaver Dam Failure-Post Flood Damage-View 3.....	129
Figure 97 – CR 21 Beaver Dam Failure-Post Flood Damage-View 4.....	130
Figure 98 – CR 10 – Guide Posts Down Gradient.....	131
Figure 99 – CR 10 – Utility Pole Undermined by Failing Slope .....	132
Figure 100 – CR 10-Condition of Roadway-View 1.....	133
Figure 101 – CR 10 – Condition & Slope of Roadway-View 2.....	133
Figure 102 – CR 10 – Condition of Roadway-View 3 .....	134
Figure 103 – CR 10 – Condition of Roadway-View 4 .....	134
Figure 104 – Washington County Referenced Map – Part 3 .....	135
Figure 105 – CR 25 – Flood Damage at Drake Road.....	136
Figure 106 – CR 25 – Flood Damage at Drake Road.....	137
Figure 107 – Washington County Referenced Map – Part 4 .....	138
Figure 108 - CR 47 – Road Washout-Beaver Dam Failure.....	139
Figure 109 CR 46 – View 1.....	140
Figure 110 – CR 46 – View 2.....	141
Figure 111 – CR 46 – View 3.....	141
Figure 112 – Cossayuna Lake Outlet Dams .....	142
Figure 113 – Cossayuna Lake Outlet Dams .....	143
Figure 114 – Cossayuna Lake Outlet Dams .....	144
Figure 115 – Cossayuna Lake Outlet Dams .....	145

Figure 116 – Cossayuna Lake Outlet Dams .....	146
Figure 117 – Cossayuna Lake Outlet Dams .....	146
Figure 118 – Cossayuna Lake Outlet Dams .....	147
Figure 119 – Cossayuna Lake Outlet Dams .....	148
Figure 120 – Washington County Referenced Map – Part 5 .....	149
Figure 121 – CR 59 – Asphalt Patch in Road.....	150
Figure 122 – CR 59 – Embankment Failure.....	151
Figure 123 – CR 59 – Embankment Failure.....	151
Figure 124 – CR 59 – Embankment Failure.....	152
Figure 125 – CR 59 – Embankment Failure.....	153
Figure 126 – Exposed Water Main - CR 74 Crosses Fly Creek.....	154
Figure 127 – Exposed Water Main – CR 74 Crosses Marshall Brook.....	155
Figure 128 – CR 54-View 1 .....	156
Figure 129 – CR 54-View 2 .....	157
Figure 130 – CR 54-View 3 .....	157
Figure 131 – CR 68 – Twin Culverts.....	158
Figure 132 – CR 68 – Twin Culverts & Eroded Plunge Pool.....	159
Figure 133 – White Creek - NYS Interactive Mapping.....	160
Figure 134 – White Creek Referenced Map.....	161
Figure 135 – White Creek B&W Aerial View - NYS Interactive Mapping.....	163
Figure 136 – White Creek FIRM.....	163
Figure 137 – Whitehall - NYS Interactive Mapping.....	164
Figure 138 – Whitehall Map (not referenced).....	165
Figure 139 – Whitehall B&W Aerial View - NYS Interactive Mapping.....	166
Figure 140 – Whitehall FIRM .....	166
Figure 141 – Whitehall, Village of FIRM .....	167
Figure 142 - Village of Whitehall – Business Flood .....	168
Figure 143 - Village of Whitehall – Traffic Flood.....	169

## Table List

Table 1 – Date of Plan Adoption by Jurisdiction .....	16
Table 2 – U.S. Census Bureau 2000 – Washington County, NY Census Subdivisions .....	41
Table 3 – Argyle Tax Information.....	42
Table 4 – Cambridge Tax Information.....	47
Table 5 – Dresden Tax Information.....	55
Table 6 – Easton Tax Information .....	58
Table 7 – Fort Ann Tax Information .....	65
Table 8 – Fort Edward Tax Information.....	69
Table 9 – Granville Tax Information.....	73
Table 10 – Greenwich Tax Information .....	82
Table 11 – Hampton Tax Information.....	87
Table 12 – Hartford Tax Information.....	91
Table 13 – Hebron Tax Information.....	96
Table 14 – Hebron, Town of FEMA Project Transactions Y/E 12/31/97.....	99
Table 15 – Jackson Tax Information .....	104
Table 16 – Kingsbury Tax Information .....	108
Table 17 – Putnam Tax Information.....	112
Table 18 – Salem Tax Information.....	115
Table 19 – White Creek Tax Information .....	160
Table 20 – Whitehall Tax Information .....	164
Table 21 – Washington County All-Hazard Mitigation Plan: Mitigation Activities .....	175
Table 22 – SEMO Worksheet #1: Identify the Hazards.....	269
Table 23 – SEMO Worksheet #2: Profile Hazard Events .....	270
Table 24 – SEMO Worksheet #3a: Inventory Assets.....	271
Table 25 – SEMO Worksheet #3b: Inventory Assets .....	272
Table 26 – SEMO Worksheet #4: Estimate Losses.....	273

## Washington County All-Hazards Mitigation Plan Executive Summary

Washington County received a grant from the New York State Emergency Management Office (SEMO) for guidance and funding under 44 CFR Sec. 201.6 Local Mitigation Plans on December 16, 2005. The local mitigation plan is the representation of the jurisdiction's commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. The plan will also serve as the basis for the State to provide technical assistance and to prioritize project funding. A resolution presented by the Washington County Department of Public Works to the County Board of Supervisors requested each jurisdiction within the County to approve of the application of funding in support of preparing the plan. The Board of Supervisors passed the resolution on April 21, 2006.

On April 13, 2006, the initial meeting of the Planning Team was held and the All-Hazard Mitigation Planning Task Force was formed (See Section 2.1). The Task Force committed many hours to meetings to address the various stages of developing the plan: Risk Identification, Examination of Records, Assessment of Vulnerability by Jurisdiction, Estimating Potential Losses, Recommending Mitigation Strategies, Plan Maintenance, and Listing References.

The mitigation planning approach used to develop this plan is based on the FEMA publication, Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies (FEMA 386-3) and input provided by NYSEMO. The FEMA document and NYSEMO guidance

include four steps, which were used to support mitigation planning. These steps are summarized below and presented in more detail in the following sections.

- **Develop mitigation goals and objectives:** Mitigation goals were developed using the hazard characteristics, inventory, and findings of the risk assessment. By review these outputs and other municipal policy documents, objectives tying to these overarching goals were identified and characterized into similar themes.
- **Identify and prioritize mitigation actions:** Based on the risk assessment outputs, the mitigation goals and objectives, existing literature and resources, and input from the participating entities, alternative mitigation activities were identified for each hazard of concern and across multiple jurisdictions and hazards. The alternative mitigation activities are presented in a series of hazard-specific tables. The potential mitigation activities were qualitatively evaluated against the mitigation goals and objectives and other evaluation criteria. They were then prioritized into three categories: high, medium, and low.
- **Document the mitigation planning process:** The mitigation planning process is documented throughout this plan (see minutes of Mitigation Planning Task Force meetings).
- **Prepare an implementation strategy:** High priority mitigation activities are recommended for first consideration for implementation. Planning meetings in 2007-

### Task Force Members

**Robert W. Humiston**, Town of Argyle  
**Hugh Dewey**, Town of Greenwich  
**Floyd Pratt**, Town of Hebron  
**Ken Talkington**, Town of Hebron  
**Doug Brownell**, Easton Volunteer Fire Co.  
**William H. Cook**, County Public Safety  
**Chris Rieben**, Town of White Creek  
**Sean Carney**, Town of Jackson  
**Ray Rathbun**, Telescope Casual Furniture  
**Joseph Childs**, Village of Salem  
**Maureen Van Buren**, Ft. Ann Central School  
**John Boyce**, Fort Hudson Nursing Center  
**Willy Grimmke**, Washington County DPW  
**Kyle Vandewater**, Washington County DPW  
**Dr. Thomas D. Phelan**, Strategic Teaching Associates, Inc.

2008 will support further evaluation and selection of mitigation activities. In addition, input from FEMA and NYSEMO will be considered as the activities are evaluated further.

Input was gained largely from Town Highway Superintendents, County DPW personnel, a representative from the Village of Salem, and communication to state and Federal agencies dealing with transportation, agriculture, public health and weather. The majority of historical data on natural disasters was provided by Federal sources.

It was clear that the most recurring damage from natural hazards has been from rain causing flooding, road washouts and land subsidence (mud slides). Task Force members noted 103 incidents of damage to roadway or drainage infrastructure. The damage has largely been to roadways, particularly those with culvert pipes and drainage ditches too small to carry the load of a serious rainfall or storm. There has been little reported damage to structures with the exception of the Hadlock Pond Dam failure in July of 2005 and the recurrent flooding in the Village of Salem. The most serious concern of the Task Force has been the loss of road access due to washouts. This creates immediate concerns for the provision of emergency services when washouts prevent ambulances and fire apparatus from traveling over the roads, delays in transporting crops and milk from farms to processing plants, and delays and potential hazards to school busses. The cost of repairing washed out drainage ditches, culvert pipes and road surfaces has been challenging for local jurisdictions' budgets. The repairs are very costly and relatively unpredictable.

The special concern of the recurring flooding in the Village of Salem has presented costly repairs to both the Village and the County as well as to residents. Attempts to secure funding for hydrological studies to discover possible solutions have been unsuccessful. The Task Force recommends that funding be either budgeted or provided by the State or Federal sources for a thorough hydrological study so that mitigation measures can be considered for implementation, and ultimately implemented to prevent further flooding in the Village.

In preparing the draft of the All-Hazard Mitigation Plan, few sources of information were available in electronic format. For example, unlike many other counties in New York State, the State Mitigation Plan does not contain a Washington County map displaying Building Inventory within 100 Year Floodplain

<http://www.semo.state.ny.us/programs/planning/cemp/appendix1.pdf> . Gathering data for the plan was largely a matter of discussions, meetings, and reviewing of maps with the Task Force, State DOT personnel, town supervisors and highway superintendents, data collections on forms distributed to all jurisdictions through their highway superintendent, and letters and reports received from State and Federal agencies, such as the National Weather Service, USDA, and the State Health Department.

As required, public input was sought. As the Task Force planned its meetings, notices were sent in advance to all local newspapers and minutes of the Task Force meetings were posted on the County's website. The Task Force plans to have copies of the draft plan distributed to all jurisdictions through the chief executive to be made available to each jurisdiction's constituents prior to adoption at the local level. Public review, comment and recommendations are an important part of the mitigation planning process.

#### **Media Outlets Utilized**

*The Eagle*  
*Main Street*  
*Granville Sentinel*  
*Post Star (Glens Falls)*  
*Greenwich Journal*  
*Whitehall Times*

The recommendations of the Task Force are largely related to flooding in the Village of Salem and infrastructure damage to roads caused by inadequate drainage. In addition, the Task Force recognizes the ability of local workforces to mitigate the damage to roadways and the serious problems such damage creates for emergency services and agriculture. With proper equipment, local workers may be able to embark upon a program to do the work to make the drainage systems more efficient.

Upon review of all the data available, the recommended mitigation strategies of the Task Force are as follows: (See Section 4, Table 21)

- 4.1 Improve drainage at sites where roads have washed out due to natural hazards in the past**
- 4.2 Purchase equipment to provide for local personnel to conduct the drainage improvement**
- 4.3 Engineering assessment to determine feasibility of each site improvement**
- 4.4 Improve dams to prevent flooding causing roads to wash out.**
- 4.5 Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.**
- 4.6 Complete a hydrological study of flooding conditions in the Village of Salem to determine appropriate mitigation strategies.**

The Task Force recognizes that these strategies are subject to review of the draft plan by FEMA, SEMO, the public, and the elected bodies of each jurisdiction in the County. It is further recognized that strategies are not program requests for funding, nor are they programs. Programs and program funding may be developed once the All-Hazard Mitigation Plan is reviewed, approved and adopted.

The Task Force wishes to acknowledge the input of everyone who participated in developing this plan, and in the leadership demonstrated by members of the County Board of Supervisors, the Public Works Committee, the Finance Committee, and the personnel from the Department of Public Works and from the New York State Emergency Management Office.

Respectfully,

Thomas D. Phelan, Ed.D.

## 1. Introduction

### 1.1. Purpose and scope of plan

The All-Hazard Mitigation Plan is intended to identify the potential natural hazards which have in the past caused damage to people, property, and the environment in Washington County; to examine the potential for future occurrences of such natural hazards; and to propose mitigation measures to prevent future damage.

### 1.2. Participating jurisdictions

(1 County, 17 Towns, and 9 Villages)

Argyle, Town of  
Argyle, Village of  
Cambridge, Town of  
Cambridge, Village of  
Dresden, Town of  
Easton, Town of  
Fort Ann, Town of  
Fort Ann, Village of  
Fort Edward, Town of  
Fort Edward, Village of  
Granville, Town of  
Granville, Village of  
Greenwich, Town of  
Greenwich, Village of  
Hampton, Town of  
Hartford, Town of  
Hebron, Town of  
Hudson Falls, Village of  
Jackson, Town of  
Kingsbury, Town of  
Putnam, Town of  
Salem, Town of  
Salem, Village of  
Washington County  
White Creek, Town of  
Whitehall, Town of  
Whitehall, Village of

### 1.3. Plan adoption

The All-Hazard Mitigation Plan was adopted by each participating jurisdiction with final approval by the Washington County Board of Supervisors on **xxxxx xx, 2008**.

A uniform Adoption Resolution form has been prepared for completion and consideration for adoption by each jurisdiction. Copies of executed adoption resolutions will be appended to the plan following adoption by each jurisdiction.

Adoption Resolution (uniform form)

(Name of Jurisdiction) \_\_\_\_\_

(Governing Body) \_\_\_\_\_

(Address) \_\_\_\_\_

RESOLUTION

WHEREAS, the Washington County Multi-Hazard Mitigation Plan has been prepared in accordance with FEMA requirements at 44 C.F.R. 201.6; and,

WHEREAS, (insert jurisdiction), participated in the preparation of a multi-jurisdictional plan, Washington County Multi-Hazard Mitigation Plan; and,

WHEREAS, (insert jurisdiction) is a local unit of government that has afforded the citizens an opportunity to comment and provide input in the Plan and the actions in the Plan; and

WHEREAS, (insert governing body) has reviewed the Plan and affirms that the Plan will be updated no less than every five years.

NOW THEREFORE, BE IT RESOLVED by (insert governing body) that (insert jurisdiction) adopts the Washington County Multi-Hazard Mitigation Plan as the jurisdiction's Multi-Hazard Mitigation Plan, and resolves to execute the actions in the Plan.

ADOPTED this xx day of xxxxxxxx, 2008, at the meeting of the (insert governing body).

\_\_\_\_\_  
Signed (Chief Executive Officer, Mayor, Supervisor, etc.)

<b>JURISDICTION</b>	<b>DATE OF ADOPTION OF PLAN</b>
Argyle, Town of	
Argyle, Village of	
Cambridge, Town of	
Cambridge, Village of	
Dresden, Town of	
Easton, Town of	
Fort Ann, Town of	
Fort Ann, Village of	
Fort Edward, Town of	
Fort Edward, Village of	
Granville, Town of	
Granville, Village of	
Greenwich, Town of	
Greenwich, Village of	
Hampton, Town of	
Hartford, Town of	
Hebron, Town of	
Hudson Falls, Village of	
Jackson, Town of	
Kingsbury, Town of	
Putnam, Town of	
Salem, Town of	
Salem, Village of	
Washington County	
White Creek, Town of	
Whitehall, Town of	
Whitehall, Village of	

**Table 1 – Date of Plan Adoption by Jurisdiction**

## 2. Planning process

### 2.1. Description of the planning process

The Planning Process was started with an application by Washington County to the NYS Emergency Management Office for guidance and funding available under 44 CFR Sec. 201.6 Local Mitigation Plans. “The local mitigation plan is the representation of the jurisdiction’s commitment to reduce risks from natural hazards, serving as a guide for decision makers as they commit resources to reducing the effects of natural hazards. Local plans will also serve as the basis for the State to provide technical assistance and to prioritize project funding.”<sup>1</sup> A resolution was presented by the Washington County Department of Public Works to the County Board of Supervisors requesting each jurisdiction within the County to approve of the application for funding in support of preparing an All-Hazard Mitigation Plan. Resolution No. 136 was passed on April 21, 2006.

Following approval of the application, Washington County retained the services of Strategic Teaching Associates, Inc. of Liverpool, New York to facilitate the preparation of an All-Hazard Mitigation Plan that will be multi-jurisdictional, involving all towns and villages in Washington County.

An orientation meeting to begin the planning process was held on April 13, 2006 with a presentation by the Hazard Mitigation Planner from the New York State Emergency Management Office. A Planning Task Force was formed including representatives from several stakeholders throughout the County. They included the County Department of Public Works and the Emergency Management Office, towns, villages, a business, a public school, a health care facility, and a consultant. (*See Appendix 2: Washington County All-Hazard Mitigation Plan Meeting: Invitations, Agendas, Minutes; all Originals on file.*)

Washington County received a \$30,000 grant from SEMO and FEMA to prepare an All-Hazard Mitigation Plan covering all jurisdictions within the County. Completion of the plan and approval by SEMO and FEMA will qualify the County and each town and village to make application for Hazard Mitigation Grant Program funding for mitigation projects in the future. It could also allow residents to obtain National Flood Insurance Program premium reductions.

Work began on the plan in March 2006, and the first meeting was held on April 13, 2006. Letters announcing the meeting, the grant, and the formation of the Mitigation Planning Task Force were sent to all town supervisors, village mayors, fire chiefs, highway superintendents, school superintendents, and business leaders in the County.

The All-Hazard Mitigation Plan Task Force was formed on April 13, 2006, with 14 members volunteering to assist in drafting the plan. Subsequent meetings were also held in May, June and July with about 10 – 12 members attending. They have provided information about the sites of past damage to infrastructure, primarily roads, and information pertaining to flooding in the Village of Salem. The Task Force published its meeting minutes on the County Website to increase participation in drafting the plan and to provide specific information to the public as

---

<sup>1</sup> 44 CFR Sec. 201.6 quoted in a letter from Michael J. Dabney, Director, Federal Insurance and Mitigation Division, FEMA to Mr. John Agostino, Alternate Governor’s Authorized Representative, New York State Emergency Management Office, dated December 16, 2005, p. 5 of 7.

required by the guidelines of the grant. In addition, press releases were sent periodically to five local newspapers serving the County.

The highway superintendents in Argyle, Jackson, White Creek, Kingsbury, Hampton, Granville, Greenwich, Hebron, Fort Edward, and members of the County DPW and Department of Public Safety, and representatives from the Village of Salem, Fort Ann Central School, Fort Hudson Nursing Center, Telescope Casual Furniture, and other members of the fire service and the public have attended one or more of the meetings and have assisted in the planning process.

Presentations were made to the Public Works Committee of the Board of Supervisors and to the Highway Superintendent's Association. When requested, meetings were held in towns with State Department of Transportation officials and a town supervisor and highway superintendent. Site visits by the consultant were made to roads where previous infrastructure damage had occurred due to natural hazards.

Recognizing the need for a hydrological study in the Village of Salem, three colleges in New York State were contacted for assistance – RPI, SUNY ESF, and Clarkson. None have yet replied that they could provide assistance.

The Task Force followed the guidelines through vulnerability analysis, requests to local, state and Federal agencies for historical data, analysis of the responses, damage assessment to infrastructure, and discussions of strategies for mitigating damage in the future. There were no significant reports of structural damage, only damage to infrastructure, primarily roads, drainage systems, and bridges.

Upon review of the data collected, the Task Force made recommendations of possible mitigation strategies, listing objectives, sub-objectives, and responsibilities of stakeholders to achieve each strategic goal.

Throughout the process, Quarterly Reports were filed on time at each required interval with the State Emergency Management Office. A draft of the plan was filed on March 16, 2006, after which calendar dates were set for presentations to the Public Works Committee of the Board of Supervisors, the Finance Committee, and the full Board. Following consideration for adoption by the County Board of Supervisors, the plan will be sent to each jurisdiction for public review and comment and local adoption. Formal adoption is expected by late October 2007.

The plan was approved conditionally by FEMA as noted in the letter from Richard M. Lord, Chief of Mitigation Programs and Agency Preservation Officer dated September 21, 2009. The conditional approval will be finalized when the plan is adopted locally.

## 2.2. Planning team and steering group

At the April 13, 2006, meeting, the following Planning Team was created and named the **All-Hazard Mitigation Planning Task Force**. Members included the following:

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

## 2.3. Coordination with agencies

The County's consultant, Dr. Thomas D. Phelan, met with Ed Lips of the New York State Emergency Management Office for guidance starting on January 6, 2006, and in several subsequent meetings. Mr. Lips, or his designee, attended several of the Planning Task Force meetings and provided verbal, printed and electronic information in support of the County's planning process.

In addition, Strategic Teaching Associates, Inc., contacted several local, state and Federal agencies in search of documentation of prior natural disasters in Washington County. A list of agencies contacted in writing is attached in Appendix 3 (*Agencies Contacted Requesting Information Relating to Natural Hazards & Disasters within Washington County & Copy of Letter*).

## 2.4. Planning meetings

Meetings of the Planning Task Force were held periodically throughout the planning process period. Specifically, meetings were held on the following dates:<sup>2</sup>

April 13, 2006	February 27, 2007
May 8, 2006	March 12, 2007
June 12, 2006	May 15, 2007
July 10, 2006	June 28, 2007
October 30, 2006	November 28, 2007

---

<sup>2</sup> See Appendix 4: Washington County All-Hazard Mitigation Planning Task Force Meeting Sign-in Sheets.

In addition, meetings between the consultant and the County's Mitigation Planning Officer, Kyle Vandewater were held on the following dates:

January 6, 2006\*

March 17, 2006

April 13, 2006

October 10, 2006\*

January 12, 2007

\*Followed by a meeting with Ed Lips at SEMO in Albany.

Kyle Vandewater, Willie Grimmke, and Dr. Tom Phelan met on October 31, 2006, with the Public Works Committee of the County Board of Supervisors. Dr. Phelan presented a letter of request to the Committee for assistance for the Town Highway Superintendents in gathering additional historical information for the Mitigation Plan. A summary explanation and direction sheet for Supervisors and Highway Superintendents was presented. The Committee appeared to be very supportive of the mitigation planning process. A copy of the letter and the summary explanation appear below.



Washington County All-Hazard Mitigation Planning Task Force

Meeting of the Public Works Committee of the Board of Supervisors  
October 31, 2006

Items for Consideration

The All-Hazard Mitigation Planning Task Force was formed on April 13, 2006, shortly following the action by the Board of Supervisors to participate in the state and Federal program to provide funding for the preparation of the plan (FEMA-1564-DR-NY, HMPG Project #1564-001 Washington County by letter of approval dated December 16, 2005 from FEMA).

Several meetings have been held at which Town Highway Superintendents and others have presented information required by the rules for creating such a plan. To date, only a few towns and villages have participated directly in the planning process.

The Task Force is requesting your support in gaining broader participation to make the plan complete and useful to all towns and villages within the County. Specifically we need the following support:

1. A representative from each town and village to assist the Task Force in gathering information about past natural hazards and the damage caused.
2. Records, including maps of the affected areas, types of structures or agricultural assets damaged, and estimated cost of damage.
3. Once hazards and affected assets have been identified, we will seek suggestions and recommended actions for mitigating the impact of such natural hazards going forward.
4. An opportunity for public input and review is required.
5. Formal adoption of the completed plan by resolution of each municipality is also requested. Towns and villages seeking funds for mitigation projects in the future must participate in and formally adopt the completed plan.

As the consultant assisting with the plan, I would be happy to meet with each town or village representative to discuss the best way to gather the required information to complete the plan.

Respectfully,

Dr. Tom Phelan, President

Strategic Teaching Associates, Inc.

Office: (315) 622-5924

Cell: (315) 243-7605

E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)



Washington County All-Hazard Mitigation Planning Task Force

Meeting of the Highway Superintendents  
November 2, 2006

Information is needed to complete the All-Hazard Mitigation Plan.

You can help by providing the following information:

1. Where are the spots in your town or village which have been damaged by natural disasters (high winds, flooding, ice storms, forest fires, dam failures, and so forth)?
2. Can you help us by marking the spots on the County Map.
3. On a separate sheet, describe each spot and the damage. If possible, include the year and the cost of the repair.

Number on Map	Road and Location	Description of Damage	Year	Cost
1				
2				
3				
4				

With this information, we can begin to complete the damage assessment portion of the plan. Your assistance is extremely valuable to this planning process. All of your information can be handed to Kyle Vandewater who will forward it to the Task Force.

Is there someone you know in your town or village that we should contact for more information? Please give us their contact information.

Name: \_\_\_\_\_ Position: \_\_\_\_\_

Address or Phone: \_\_\_\_\_

Respectfully,

Dr. Tom Phelan, President  
Strategic Teaching Associates, Inc.

Office: (315) 622-5924      Cell: (315) 243-7605      E-mail: sta@twcny.rr.com

## Highway Superintendent's Meeting, Cambridge, November 2, 2006

On Thursday, November 2, 2006, Dr. Phelan, Kyle Vandewater, Willie Grimmke, and Chair of the Public Works Committee of the Board of Supervisors, Town of Putnam, John Lapointe, attended the monthly meeting of the Washington County Highway Superintendents at Foggy Hollow in Cambridge. Dr. Phelan spoke to the superintendents and presented County maps and the above summary form to those superintendents who had not previously responded. The presentation was well received and prompted John Rymph, Supervisor, Town of Easton, to request a follow-up, on site meeting with Dr. Phelan. This was exactly the result sought. Dr. Phelan met with Supervisor Rymph and the Easton Superintendent of Highways in Easton on November 20, 2006. Several natural hazard damage sites where repairs had been completed were visited.

### 2.5. Public outreach

Announcements of meetings of the Task Force appeared in articles submitted to local media as press releases. A Media Outlets list appears in Appendix 5, along with copies of the text of the press release as submitted. In addition, letters were sent to the County Fire Chiefs' monthly meeting. Excerpts from both letters and press releases are printed below.<sup>3</sup>

#### Excerpt from Letter to County Fire Chiefs for distribution:

“June 1, 2006

Dear Washington County Citizen:

We need your help! Washington County, together with all municipalities in the county, is embarking on an initiative to assist communities in reducing risk from natural hazards: the All-Hazard Mitigation Plan. The goal is to reduce costly damage and inconvenience to County residents and businesses caused by natural disasters.

We are seeking information about local hazards that have impacted Washington County communities, no matter how long ago. We will research information from village, town and county records, libraries, newspapers, and historical societies.

The County is seeking volunteers to serve on the Mitigation Plan Task Force, and information on hazards or disasters you may recall. Attached is a two-page form on which we ask that you identify any hazards known to have occurred in your municipality, and that you note those that are most likely to re-occur (most prevalent).”

---

<sup>3</sup> See Appendix 5: Public Outreach: Media Outlets List; Press Releases; Letter to County Fire Chiefs

Excerpt from a Press Release:

“October 17, 2006

For Immediate Release

WASHINGTON COUNTY MITIGATION PLAN TASK FORCE MEETING

Ft. Edward: The next Washington County All-Hazard Mitigation Planning Task Force will meet on October 30, 2006, from 9:00 – 11:00 a.m. at the County Municipal Center, 2<sup>nd</sup> Floor Classroom, Building B, 383 Broadway, Fort Edward.

The Task Force is moving from the vulnerability assessment phase into the mitigation planning phase. Public input is encouraged, specifically relating to any flooding which has occurred in the past.

Washington County received a \$30,000 grant from the New York State Emergency Management Office (NYSEMO) to complement local funding to develop an All-Hazard Risk Reduction Plan for all jurisdictions within the county – county, towns, and villages.”

## 2.6. Involving key stakeholders

Key stakeholders expressing an interest in the All-Hazard Mitigation Plan were the County Board of Supervisors, consisting of all Town Supervisors; the County Department of Public Works; the County Department of Public Safety; several town highway superintendents; a superintendent of schools; a representative of the business community; a representative from a senior health care organization; fire chiefs; and a representative of the Village of Salem. In addition, the Task Force was joined at meetings by a representative of the investor-owned electric and gas utility, a local member of an emergency medical services organization, and representatives from regional and state offices of the NYS Office of Emergency Management.

## 2.7. Review and incorporation of existing information

Task Force members were asked to review their local records for any information pertaining to natural hazards. At meetings of the Task Force, specific damage caused by natural hazards was reported and located on a County map. Descriptions of the damage to infrastructure were recorded in the meeting minutes and used for further research.

In addition, several agencies were contacted, local, state, and Federal, for any information pertaining to natural hazard damage in Washington County. A complete list of contacts and those who responded is in Appendix 6: *Agency Contacts (Responded to Request for Information Letter)*.

A Memorandum was mailed to all Town Supervisors and Village Mayors requesting they complete the attached Record of Review of Jurisdictional Existing Plans. A complete list of responding/non-responding jurisdictions is contained in Appendix 8, along with a matrix relating to existing plans.

Once specific sites of damage from natural hazards were identified, a request was made of the County Real Property office for clear, official, electronic maps.

Applications made to NYSEMO or FEMA for emergency public assistance were also reviewed for specific information.

## 3. Risk assessment

### 3.1. Identifying hazards

#### 3.1.1. Natural hazards identified

See SEMO Worksheet #1 Attached

Task A: Hazards that may occur

- Dam Failure (including Beaver Dam)
- Earthquake
- Expansive Soils
- Extreme Heat
- Flood
- Hailstorm
- Hurricane
- Land Subsidence
- Landslide
- Severe Winter Storm

- Tornado
- Wildfire
- Windstorm
- Ice Storm
- Extreme Cold
- Disease (human, plant, and animal)

Task B: Focus on the most prevalent hazards

- Flood
- Severe Winter Storm
- Windstorm
- Ice Storm
- Disease (animal, human)
- Dam Failure
- Earthquake
- Tornado

3.1.2. Natural hazards considered, but eliminated

- Expansive Soils
- Extreme Heat
- Hailstorm
- Hurricane
- Land Subsidence
- Landslide
- Wildfire
- Extreme Cold

The elimination of potential natural hazards considered (3.1.2) was due to little or no evidence discovered or presented regarding history of or damage from such hazards.

3.1.3. Hazard Assessment – Analysis of Washington County

On March 19, 2002, the Washington County Office of Emergency Services, in conjunction with the New York State Emergency Management Office, conducted a hazard analysis using the automated program *HAZNY* (Hazards New York). *HAZNY* was developed by the American Red Cross and the New York State Emergency Management Office. The results of this hazard analysis are as follows:

***HAZNY and Washington County:***

*HAZNY* is an automated interactive spreadsheet that asks specific questions on potential hazards in a community and records and evaluates the responses to these questions. *HAZNY* also includes historical and expert data on selected hazards. *HAZNY* is designed specifically for groups, rather than individual use. The County assembled a Group of 25 local officials to consider and discuss the questions and issues raised by the *HAZNY* program. Representatives from the State Emergency Management Office facilitated the meeting and recorded the results.

**Results:**

The Group analyzed 27 hazards potentially affecting the County. *HAZNY* rated each hazard based on the assessment and assigned a numerical value. These values are categorized as follows:

321 to 400	High Hazard
241 to 320	Moderately High Hazard
161 to 240	Moderately Low Hazard
44 to 160	Low Hazard

The analysis rated the 27 hazards as follows: [Emphasis, underlines, and categories added.]

<b>Hazardous Materials in Transit</b>	<b>306.2</b>	
<b>Tornado</b>	<b>303.5</b>	
<b>Ice Storm</b>	<b>268.8</b>	<b>Moderately High Hazard</b>
<b>Fire</b>	<b>267.8</b>	
<b>Radiological Fixed Site</b>	<b>263.3</b>	
<b>Severe Storm</b>	<b>260.2</b>	
<b>Oil Spill</b>	<b>251.8</b>	
<hr/>		
<i>Flood</i>	234.2	
<i>Terrorism</i>	231.7	
<i>Utility Failure</i>	230.8	
<i>Hazardous Materials Fixed Site</i>	222.7	
<i>Wildfire</i>	218.8	
<i>Winter Storm (Severe)</i>	216.2	
<i>Dam Failure</i>	211.8	
<i>Ice Jam</i>	204.2	
<i>Civil Unrest</i>	203.5	<i>Moderately Low Hazard</i>
<i>Epidemic</i>	189.5	
<i>Infestation</i>	188.2	
<i>Landslide</i>	186.8	
<i>Transportation Accident</i>	180.8	
<i>Earthquake</i>	174.8	
<i>Water Supply Contamination</i>	174.8	
<i>Explosion</i>	170.8	
<i>Structural Collapse</i>	170.2	
<hr/>		
<b>Radiological In Transit</b>	<b>152.2</b>	
<b>Drought</b>	<b>151.5</b>	<b>Low Hazard</b>
<b>Extreme Temperature</b>	<b>146.8</b>	

**High Hazards:** The analysis did not yield a High Hazard.

**Moderately High Hazards:** Seven hazards were determined Moderately High. These are Hazardous Materials in Transit, Tornado, Ice Storm, Fire, Radiological Fixed Site, Severe Storm, and Oil Spill.

**Moderately Low Hazards:** Seventeen hazards were determined to be Moderately Low. These are Flood, Terrorism, Utility Failure, Hazardous Materials Fixed Site, Wildfire, Winter Storm (Severe), Dam Failure, Ice Jam, Civil Unrest, Epidemic, Infestation,

Landslide, Transportation Accident, Earthquake, Water Supply Contamination, Explosion, and Structural Collapse.

**Low Hazards:** The analysis produced three Low Hazards. These are Radiological In Transit, Drought, and Extreme Temperature.

**Recommendations:**

Based upon this analysis, the State Emergency Management Office recommends that Washington County consider mitigation measures for Hazardous Materials In Transit and Tornado, the two highest rated hazards. In addition, the County may wish to examine mitigation measures for other Moderately High Hazards identified by the analysis, including Ice Storm, Fire, Radiological Fixed Site, Severe Storm, and Oil Spill.

3.1.4. Comparison of HAZNY Report with Mitigation Planning Task Force Hazard Identification

The HAZNY report recommendations included consideration of mitigation measures for Hazardous Materials in Transit and Tornado, the two highest rated hazards. Since the Mitigation Planning Task Force focus was limited to natural hazards, Hazardous Materials in Transit was not considered for mitigation under this plan. Tornado, rated 303.5 (Moderately High Hazard) by HAZNY was considered by the Mitigation Planning Task Force under the term “Windstorm” as a most prevalent hazard.

There were three other hazards rated as Moderately High Hazards by HAZNY which were not listed as Most Prevalent Hazards by the Mitigation Task Force. They are (1) Fire, (2) Radiological Fixed Site, and (3) Oil Spill. All three were not considered as natural hazards, so not included in the Mitigation Plan.

Inconsistencies between the two hazard identification efforts included three hazards identified by HAZNY as Moderately High Hazards (Tornado 303.5), and as Moderately Low Hazards (Dam Failure 211.8, and Earthquake 174.8). As mentioned above, Tornado was considered as Windstorm, whereas Dam Failure and Earthquake were listed as “Natural hazards considered but eliminated” on Worksheet #1. After the initial review by SEMO, both were re-classified as “Most prevalent hazards.”

Date: *What kinds of natural hazards can affect you?*

**Task A. List the hazards that may occur.**

1. Research newspapers and other historical records.
2. Review existing plans and reports.
3. Talk to the experts in your community, state, or region.
4. Gather information on Internet Websites.
5. Next to the hazard list below, put a check mark in the Task A boxes beside all hazards that may occur in your community or state.

**Task B. Focus on the most prevalent hazards in your community or state.**

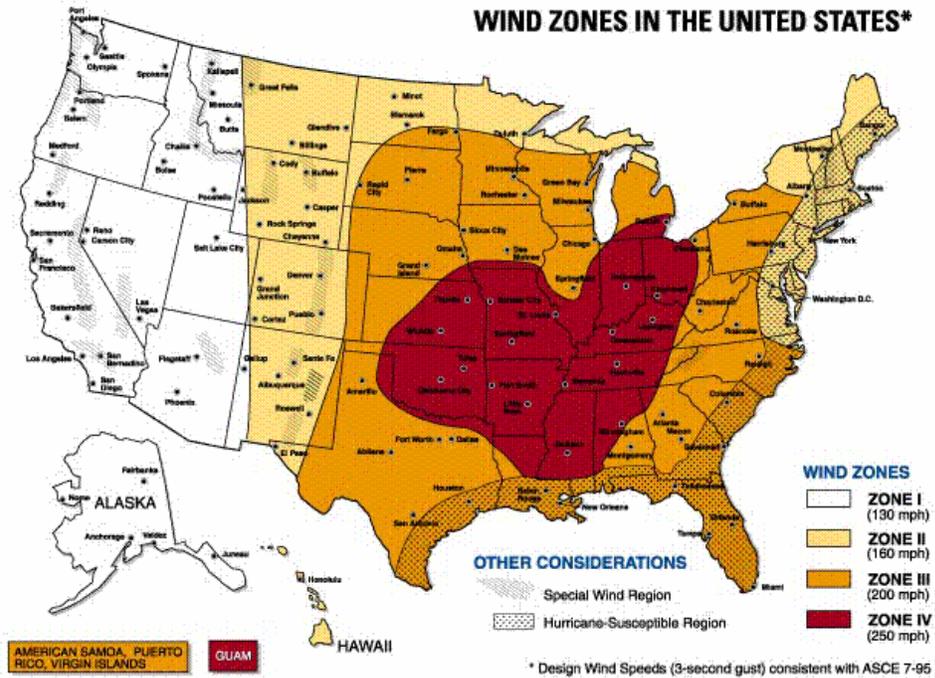
1. Go to hazard Websites.
2. Locate your community or state on the Website map.
3. Determine whether you are in a high-risk area. Get more localized information if necessary.
4. Next to the hazard list below, put a check mark in the Task B boxes beside all hazards that pose a significant threat.

	Task A	Task B
Avalanche		
Coastal Erosion		
Coastal Storm		
<b>Dam Failure</b>	✓	✓
Drought		
<b>Earthquake</b>	✓	✓
Expansive Soils	✓	
Extreme Heat	✓	
<b>Flood</b>	✓	✓
Hailstorm	✓	
<b>Hurricane</b>	✓	
Land Subsidence	✓	
<b>Landslide</b>	✓	
Severe Winter Storm	✓	✓
<b>Tornado</b>	✓	✓
<b>Tsunami</b>		
Volcano		
<b>Wildfire</b>	✓	
Windstorm	✓	✓
Other: Ice Storm	✓	✓
Extreme Cold	✓	
Disease	✓	✓

Note: **Bolded** hazards are addressed in this How-To Guide.

Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.

Hazard or Event Description (type of hazard, date of event, number of injuries, cost & type of damage, etc.)	Source of Information	Map Available for this Hazard?	Scale Of Map
<b>Dam Failure</b> 7/2/2005 Hadlock Dam Failure, \$5 million property damage, non-weather related	National Weather Service (NWS)		
<b>Earthquake</b> 4/20/2002 north of County, minimal damage, 5.1 Magnitude	Indiana University PEPP		
<b>Flood</b> 1984, 1998, 2000, 2002,2004	National Weather Service		
<b>Severe Winter Storm</b> Winter 2006	NWS		
<b>Tornado (Windstorm)</b> 5/31/98 Microburst 2/17/2006 Wind; power outage	National Weather Service		
<b>Ice Storm</b> Annual, power outages	Task Force		
<b>Disease</b> 8-9/1999 E.Coli & C.Jejuni outbreak at County Fairgrounds, 2 deaths, 781 persons affected	NYSDOH		

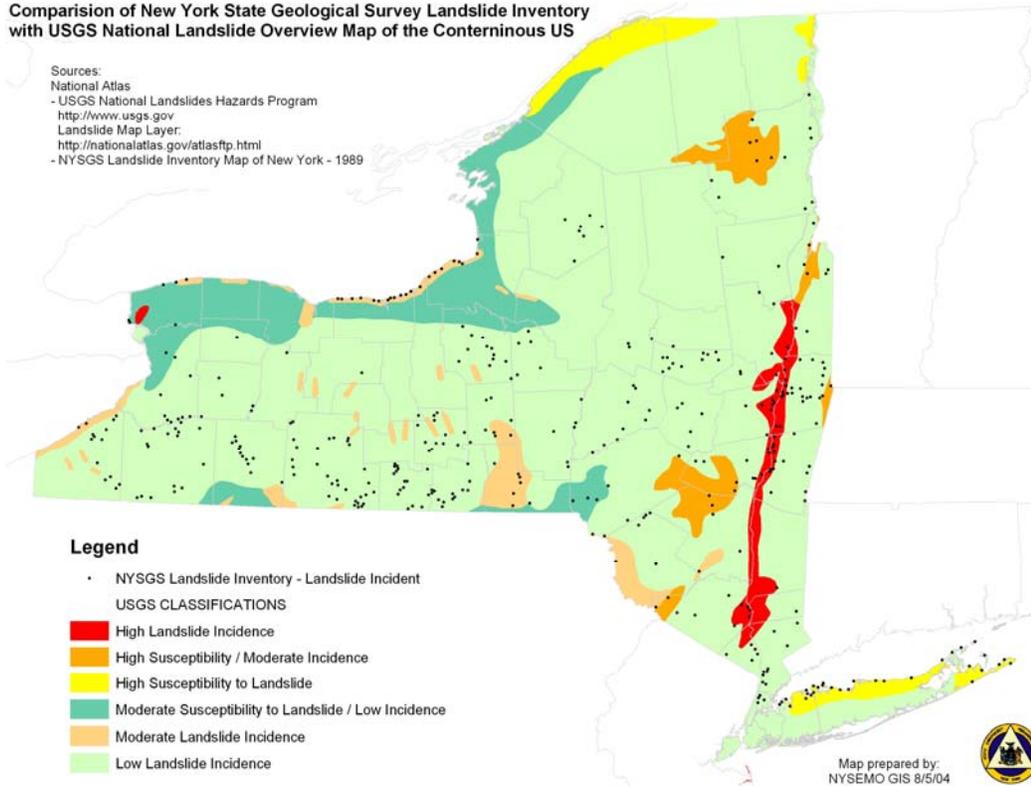


**Figure 1 – Wind Zones In The United States**

Source: FEMA

**Comparison of New York State Geological Survey Landslide Inventory  
with USGS National Landslide Overview Map of the Conterminous US**

Sources:  
National Atlas  
- USGS National Landslides Hazards Program  
<http://www.usgs.gov>  
Landslide Map Layer  
<http://nationalatlas.gov/atlasftp.html>  
- NYSGS Landslide Inventory Map of New York - 1989



**Figure 2 – Landslide Inventory Map of New York**

Source: FEMA



**Figure 3 – Historic Hurricane Events Tracking Through NYS**

Source: NOAA (FEMA HAZUS Database)

### 3.2. Examination of Records

Requests were sent to the County and all towns and villages within the County for records of past natural disasters. A written request was also sent to several local, state, and Federal agencies for records. Several replies were received, and they are summarized in the following report, "Historical Hazards by Town/Village."

The remainder of the research of historical events is summarized by town/village as reported by superintendents of highways in each jurisdiction. Several interviews and meetings were held to gather the information. Highway superintendents noted the events both in text and by locating the events on county maps.

In most cases, damage was to roadways. With the exception of the Village of Salem, there were no structures damaged, other than culverts, drainage ditches, roadways or bridges. Damage to structures in the Village of Salem is detailed in Appendix 1.



## **Historical Hazards by Town/Village**

**Compilation  
Prepared by:**

**Richard Deitchman  
Geosciences Department  
Hamilton College '07**

**Prepared for:**

**Strategic Teaching Associates, Inc.  
Dr. Thomas D. Phelan, Ed.D.**

**February 1, 2007**

**Participating Jurisdictions:** (1 County, 17 Towns, and 9 Villages)

- Argyle, Town of
- Argyle, Village of
- Cambridge, Town of
- Cambridge, Village of
- Dresden, Town of
- Easton, Town of
- Fort Ann, Town of
- Fort Ann, Village of
- Fort Edward, Town of
- Fort Edward, Village of
- Granville, Town of
- Granville, Village of
- Greenwich, Town of
- Greenwich, Village of
- Hampton, Town of
- Hartford, Town of
- Hebron, Town of
- Hudson Falls, Village of
- Jackson, Town of
- Kingsbury, Town of
- Putnam, Town of
- Salem, Town of
- Salem, Village of
- Washington County
- White Creek, Town of
- Whitehall, Town of
- Whitehall, Village of

**Comment [TDP1]:** should this be Village of?

### **Argyle, Town of**

- *April 16, 2001* Wild/forest fire caused by a homeowner burning trash in high winds. Considered the worst brush fire in seven years in Washington County, the fire burned 34 acres of land and caused \$95,000 in estimated property damage. (NWS)
- *August 3, 2001* Thunderstorm/wind took down numerous trees and wires in Argyle. Total estimated property damage of \$25,000. (NWS)
- *June 29, 2003* Thunderstorm/wind produced a microburst and cloud to ground lightning in Argyle. Thunderstorm winds reached an estimated 70 – 90 mph and produced three clusters of damage within the town. During the storm, a man was struck by lightning in his garage in Argyle and survived after transport to Glens Falls Hospital. The storms caused many power outages. Total estimated property damage of \$50,000. (NWS)

### **Cambridge, Town of**

- *July 15, 1997* Humid air mass produced thunderstorms and lightning, causing \$15,000 in estimated property damage. Extensive hail and lightning damage was also reported in nearby Herkimer, Ulster and Saratoga Counties. (NWS)
- *June 5, 2002* Thunderstorms/wind produced macro burst and high winds that affected southern Washington County. Total estimated property damage of \$17,000. (NWS)
- *May 24, 2004* Hail storm caused an estimated \$40,000 loss to hay crop due to its high severity. At Lee's Crossing Road, 75 to 100 pine trees were snapped or uprooted by winds. Damage to sidings of homes by thunderstorms/wind and other damage to property estimated at \$400,000. Additional (non-hay) crop damage estimated at \$250,000. (NWS)

### **Dresden, Town of**

- *August 18, 2002* Crusher Hill Fire (structural fire) burned 2 acres of land in Dresden. Incident command was assumed by Indian Lake. (New York State Department of State)
- *2006* Dresden Town Historian noted two significant winter storms as large natural hazards. In winter 2006, Dresden had a four day power outage with loss of heat, refrigeration, water and electricity (light). A few winters prior, a freezing rain/ice storm covered power lines and trees throughout the town. Road washouts and winter storms pose the greatest concerns in Dresden. (Agnes Peterson, Dresden Town Historian).

### **Easton, Town of**

- *July 9, 1996* Thunderstorm/Wind caused \$40,000 in estimated property damage. (NWS)
- *May 31, 1998* Microburst produced 100 mile/hour winds and took the roof off the Easton firehouse. Additionally, the storm leveled a barn after carrying it 60 yards. Property damage from the microburst with thunderstorms/winds estimated at \$60,000. (NWS)
- *May 24, 2004* Hailstorm damaged an estimated 25 farms on 2,500 acres of damage. Total estimated crop loss of \$1 million. Total estimated property damage of \$500,000. (NWS)

### **Fort Ann, Town of**

- *June 11, 2001* Lightning strike on a home at Travis Point Way started a fire that took three fire companies, about two and one-half hours to extinguish. Estimated property damage of \$100,000. (NWS)
- *August 11, 2002* Bald Knob Fire covered 28 acres of land before containment. The fire was caused by lightning and Hail (fire-company) assumed incident command. (New York State Department of State)
- *July 2-3, 2005* Flash flood produced an estimated \$5 million in estimated property damage. Hadlock Pond breached, which caused road wash-outs and destroyed homes below the dam. The flood did not occur due to weather (occurred under a clear sky); rather it resulted from the disintegration of the dam structure over an extended period of time. (NWS)

### **Fort Edward, Town of**

- *May 1, 1997* Cold front produced thunderstorms and high winds across eastern New York. Winds downed several power poles and caused damage to a roof and chimney in Fort Edward with estimated property damage of \$15,000. (NWS)
- *July 9, 2001* thunderstorm/wind produced hail and blew down limbs and branches on a golf course in Fort Edward, causing the golf course to close for 24 hours. Total estimated property damage of \$20,000. (NWS)

### **Granville, Town of**

- September 21, 2000 Thunderstorm/wind produced an estimated \$75,000 worth of damage. A line of thunderstorms, associated with a cold front, moved from Battenville across to Granville. Microburst in the Town of Jackson blew down an estimated 1,000 trees. (NWS)

### **Greenwich, Town of**

- *July 1, 2001* Thunderstorm/wind caused an estimated \$23,000 in property damage. Storm system resulted from a powerful cold front combined with an upper level disturbance and affected the entire eastern New York region. (NWS)
- *July 4, 2001* Independence Day thunderstorms/wind created locally severe conditions bringing down trees along Route 372. Total estimated property damage of \$30,000. (NWS)
- *August 19, 2002* Granville Fire burned one acre of land in Granville. Incident command was assumed by Indian Lake. (New York State Department of State)

### **Hampton, Town of**

- *July 1, 2001* Thunderstorm/wind caused an estimated \$18,000 in property damage. Storm system resulted from a powerful cold front combined with an upper level disturbance and affected the entire eastern New York region. (NWS)
- *July 10, 2001* Thunderstorm/wind knocked down trees and wires in Hampton. Total estimated property damage of \$22,000. (NWS)

### **Hebron, Town of**

- For the year ending *December 31, 1997*, FEMA Project Transactions Recorded on Damage Survey Reports (DSR's) totaled \$113,513.74. The DSR's accounted for road damage and repair of 31 roads in the Town of Hebron. (Town of Hebron)

### **Hudson Falls, Village of**

- *July 9, 2001* Thunderstorm/wind produced quarter size hail, which covered the ground in Hudson Falls. Total property damage estimated at \$100,000. (NWS)
- *July 6, 1999* Thunderstorm/wind damaged 400 to 500 trees in Putnam. Total estimated property damage of \$110,000. (NWS)

### **Salem, Town of**

- *July 1, 2001* Thunderstorm/wind caused an estimated \$15,000 in property damage. Storm system resulted from a powerful cold front combined with an upper level disturbance and affected the entire eastern New York region. (NWS)

### **Washington County**

- *December 28-30, 1984* Significant precipitation with unseasonably warm temperatures caused severe snowmelt and flooding throughout northern New York State. Damage to highways and properties was greater than \$5 million throughout the northern region. In some areas, up to 6.5 inches of rain fell in the three-day period. Though the greatest intensity centered on the Tug Hill region, Washington County still received substantial winter rains. (USGS Report 86-4191)
- *January 8-10, 1998* Flooding caused by significant rain and snowmelt affected the entire county. In Granville, the Mettawee River flooded to a stage believed to be the highest ever recorded, cresting at 10.68 feet (three feet over flood stage). Twenty roads closed due to the flooding and washouts, most occurred between Greenwich and Whitehall. (NWS)
- *August – September 1999* E. coli and C.jejuni outbreak at the Washington County Fair resulted in at least 2 deaths. 781 persons were identified with culture-confirmed or suspected infections. At the time, it was considered the largest water-borne E.coli outbreak on record. Estimates of unreported cases ranged to at least 2,800 persons. New York State DOH studies indicate that the outbreak probably resulted from contaminated water in Well 6 at the fair. The contamination occurred from runoff from a manure storage area, promoted by a period of drought and then heavy rains. A report by the New York State DOH indicates that closer oversight of public events is needed to avoid similar outbreaks in the future. (The Washington County Fair Outbreak Report, March 2000)

- *April 1, 2000 – July 1, 2000* Excessive rainfall was blamed for crop losses throughout county. 43 % of farmers report less than 20 % loss, 29 % report 20 to 29 % loss, 29 % report 30 to 39 % loss. (Washington County SWCD)
- *December 17, 2000* Flooding produced an estimated \$1 million worth of damage countywide. A complex storm system brought record-breaking rains to much of eastern New York with an average of 2-4 inches of rain (locally higher amounts). At Shushan, 3.96 inches of rain fell a 24-hour period. Washington County was the hardest hit. Heavy rains in Salem caused the rise of White Creek, resulting in evacuations and the declaration of a state of emergency. Residents of 80 homes had to be evacuated and Route 149 was washed out near Granville. The Mettawee River in Granville crested at 13.5 feet (the highest stage on record). Route 147 washed out near Argyle and significant damage was done to buildings, notably the Salem Central School. At the storm's peak, over 50 roads were closed throughout Washington County. (NWS)
- *May 31, 2002* Thunderstorm/wind produced largest widespread severe weather event in eastern New York in four years. Large hail, strong winds and powerful rain downed trees and power lines all over the county. Property damage totaled about \$50,000. (NWS)
- *June 1, 2002 – August 2002* Extremely hot and dry weather, with rainfall 45 % below normal, resulted in crop losses up to 59 % of normal production. (Washington County SWCD)
- *May 2003* Frequent rainfall, cold temperatures and lack of sun result in loss of at least 14 % of hay acres. (Washington County SWCD)
- *August 14, 2003* East coast blackout affected all of eastern New York region. 75-100 percent of Washington County homes had power restored by midnight of August 14<sup>th</sup>. (New York State Department of State)
- *May 22-24, 2004* Severe thunderstorms dropped at least 3.5 inches of rain on the county in a three day period. Most of the county was hit with high winds, flash flooding and large hail. Erosion damaged many fields, resulting in crop losses. In addition, the hay harvest was delayed as a result of the erosion. Land damages estimated at \$107,000 and dwelling/service building damage at \$25,000. 30 farms reported physical losses, two of which reported 100 % loss. (Washington County SWCD)
- *September 28, 2004* Hazard mitigation proposal completed for washed out road shoulder and cleaning of a culvert crossing Route 59. Damage resulted from spring storms over the period May 13 through June 17, 2004. The proposed mitigation called for the creation of a new, deeper culvert south of the existing culvert in order to efficiently direct runoff from the roadway to ditches on the west side of Morris Road and the north side of CR 59. The New York State Emergency Management Office estimated the project to cost \$15,960. (NYS Emergency Management Office)

- *February 17, 2006* All of Washington County lost power as the result of high winds. Many farmers suffered structural damage to barns and silos. Some homes were reported without power four days following the storm, on February 21, 2006. (Washington County SWCD)
- *April 1, 2006* Entire County infested by Eastern Tent and Forest Tent caterpillars. Caterpillars of this type prefer maple trees, leading to concern of the impact to the approximately 15 maple sugar producers in the county. 2006 was the most severe caterpillar year, though they've been a perennial concern in Washington County. (Washington County SWCD)
- *April – June 2006* Continuing rainy season (4.56" in April, 4.5" in May, and 3.03" in the first two weeks of June) resulted in farmers having to re-plant corn crops. Additionally, rains delayed hay, soybean and vegetable crops. Most fields were too wet to spray with agricultural products as a result of the rains. (Washington County SWCD)

#### **White Creek, Town of**

- *July 1, 2001* Thunderstorm/wind caused an estimated \$27,000 in property damage. Storm system resulted from a powerful cold front combined with an upper level disturbance and affected the entire eastern New York region. (NWS)
- *May 24, 2004* Hailstorm produced \$200,000 in estimated property damage and \$100,000 in estimated crop damage. Hail was estimated at up to two inches in diameter. (NWS)

#### **Whitehall, Town of**

- *December 2, 1996* Flash flooding caused \$50,000 in estimated property damage. (NWS)
- *May 25, 1998* Thunderstorms/wind downed trees, destroyed a desk and caused power outages for many homes over a 24 hour period in Whitehall. Total estimated property damage of \$18,000. (NWS)

#### **NOTES:**

- The towns/villages that did not have available information on historical hazards are not included in this listing
- Sources were identified parenthetically after each historical hazard

<b>Washington County, New York – Census Subdivisions 2000</b>							
<b>Name Type</b>	<b>Population</b>	<b>Housing Units</b>	<b>Area in square miles</b>			<b>Density per square mile of Land Area</b>	
			<b>Land</b>	<b>Water</b>	<b>Total</b>	<b>Population</b>	<b>Housing Units</b>
<b>Argyle</b> town	3,688	1,798	56.69	1.11	57.80	65.05	31.72
<b>Argyle</b> village	289	132	0.36	0.00	0.36	810.9	370.4
<b>Cambridge</b> town	2,152	868	36.38	0.12	36.50	59.16	23.86
<b>Dresden</b> town	677	630	53.37	1.64	55.01	12.69	11.80
<b>Easton</b> town	2,259	953	62.27	0.91	63.18	36.28	15.30
<b>Fort Ann</b> town	6,417	1,957	109.47	1.33	110.80	58.62	17.88
<b>Fort Ann</b> village	471	212	0.30	0.00	0.30	1,570.8	707.0
<b>Fort Edward</b> town	5,892	2,487	26.80	0.60	27.40	219.87	92.81
<b>Granville</b> town	6,456	2,635	56.08	0.03	56.12	115.11	46.98
<b>Granville</b> village	2,644	1,130	1.58	0.00	1.58	1,668.5	713.1
<b>Greenwich</b> town	4,896	2,101	44.00	0.36	44.36	111.27	47.75
<b>Greenwich</b> village	1,902	852	1.49	0.00	1.49	1,280.4	573.6
<b>Hampton</b> town	871	435	22.56	0.08	22.64	38.61	19.28
<b>Hartford</b> town	2,279	885	43.43	0.04	43.47	52.47	20.38
<b>Hebron</b> town	1,773	906	56.24	0.18	56.42	31.53	16.11
<b>Hudson Falls</b> village	6,927	3,120	1.88	0.04	1.84	3,763.5	1,695.1
<b>Jackson</b> town	1,718	1,077	37.16	0.31	37.47	46.23	28.98
<b>Kingsbury</b> town	11,171	4,823	39.87	0.15	40.01	280.22	120.98
<b>Putnam</b> town	645	611	33.16	2.30	35.46	19.45	18.43
<b>Salem</b> town	2,702	1,285	52.47	0.05	52.52	51.50	24.49
<b>Salem</b> village	964	412	2.93	0.00	2.93	329.2	140.7
<b>White Creek</b> town	3,411	1,466	47.86	0.06	47.93	71.26	30.63
<b>Whitehall</b> town	4,035	1,877	57.61	1.14	58.75	70.04	32.58

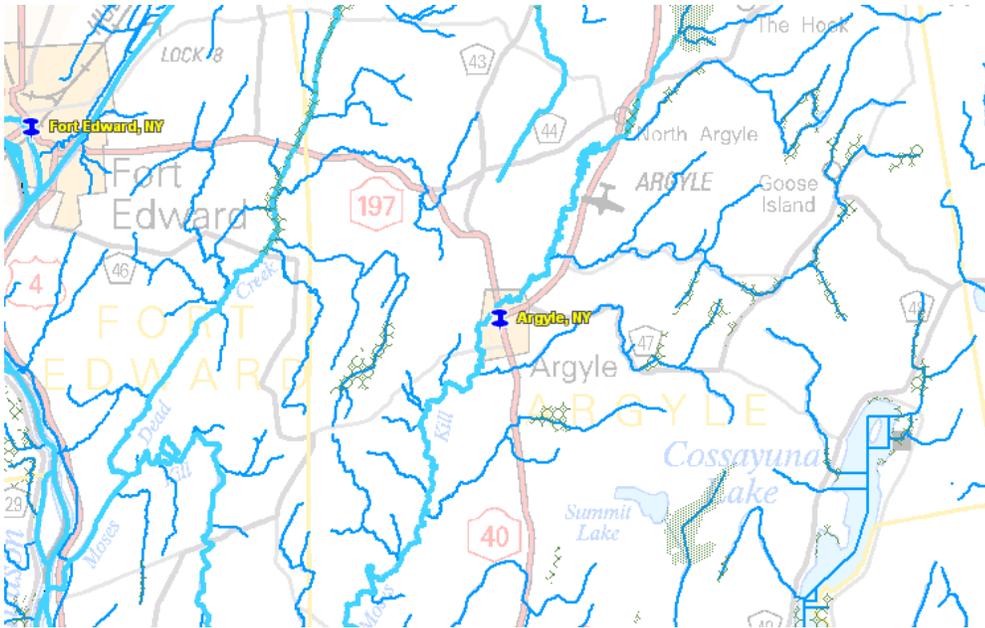
Table 2 – U.S. Census Bureau 2000 – Washington County, NY Census Subdivisions

### 3.3. Assessing vulnerability by municipality

#### 3.3.1. Argyle

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,531	41	7	70	16	24	3	15	1,707
163,585,970	5,677,800	3,761,800	10,486,500	2,107,000	6,284,200	6,999,500	5,717,244	204,620,014

**Table 3 – Argyle Tax Information**



**Figure 4 – Argyle – NYS Interactive Mapping**

**NOTE:** Since there are no GIS maps or Building Inventory within 100 Year Floodplain maps of Washington County currently available, the NYS Interactive Mapping maps are included to show the numerous streams and tributaries that exist in each municipality. Additional maps are included to show specific locations of sites where damage has been caused by natural hazards, particularly road washouts due to rapid runoff or flooding. Numbers are place on each site corresponding to the site descriptions following each map. When available, aerial photographs are included to show the proximity of structures to bodies of water. No permanent damage to structures (with the exception of the Village of Salem and the Hadlock Dam Failure) has been reported other than to roadways and drainage infrastructure. Therefore, there are no estimates of costs due to structural damage.

Formatted: Font: Not Bold

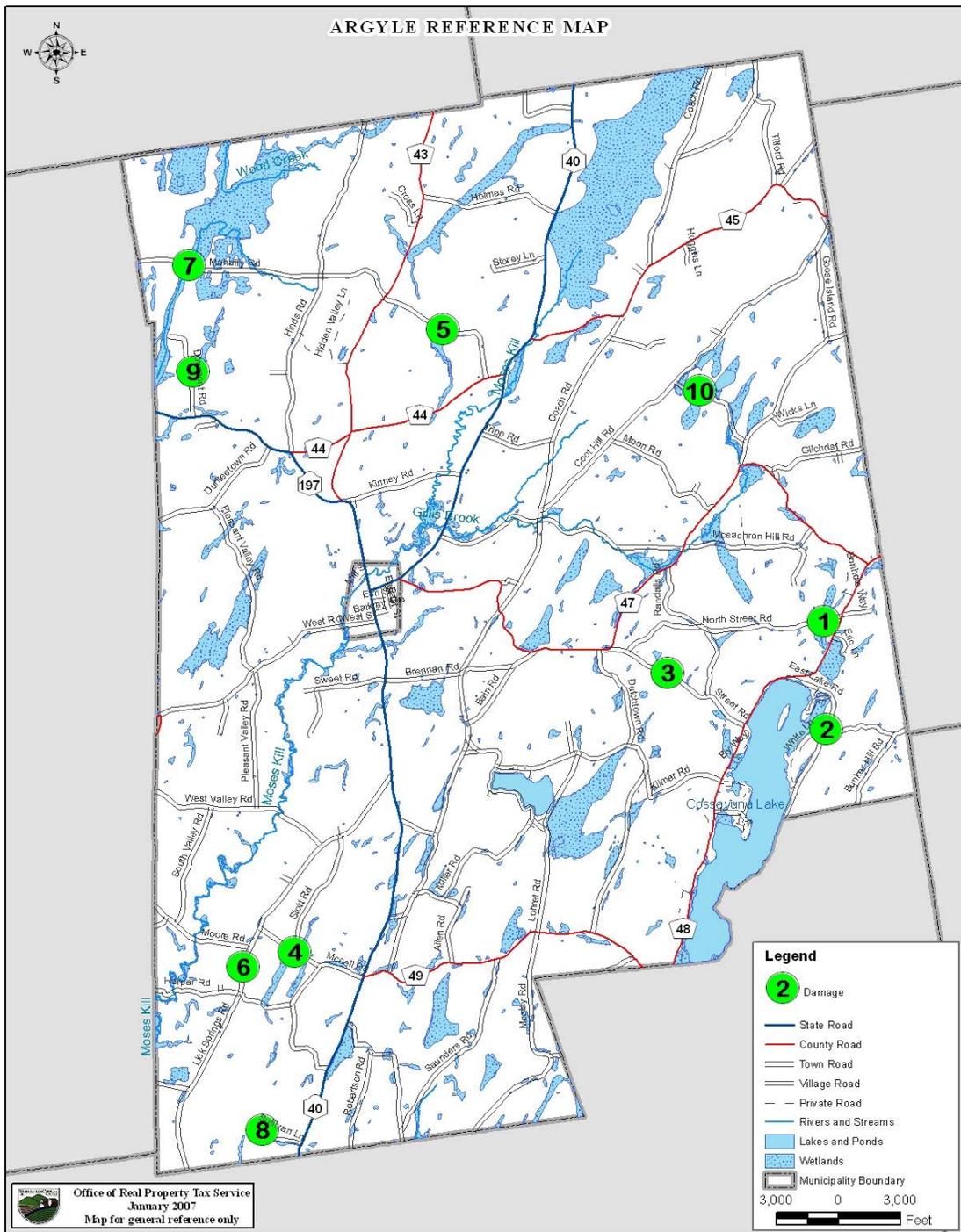


Figure 5 – Argyle Referenced Map

## Argyle

1. North Street Road (near County Route 48) – dirt road, culvert too small, flooding
2. Gordon Road (at East Lake) – grant underway; impacts Cossayuna Lake
3. Street Road – shoulder erosion
4. McNeil Road – stream overwashes near Stott Road (2 - 5' culverts)
5. Archaun Lane – needs tubes, road needs to be moved
6. Mahaffey Road (between road #43 and #44 at 90 degree turn) -
7. Hinds Road #42 –
8. Sullivan Lane (between County Road 40 and Greenwich line) – 5' tube, January 2006
9. Dowmont Road – water washes over; dead end, only one way in or out
10. Mud Lake Road – beaver dam breaks, washes out road

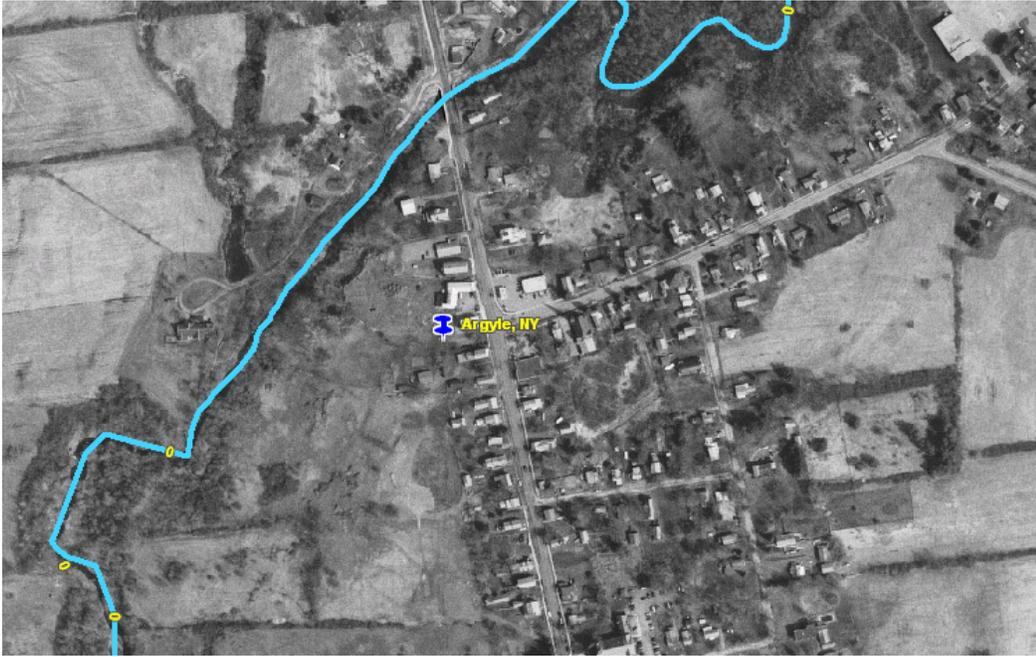


Figure 6 – Argyle B&W Aerial View - NYS Interactive Mapping

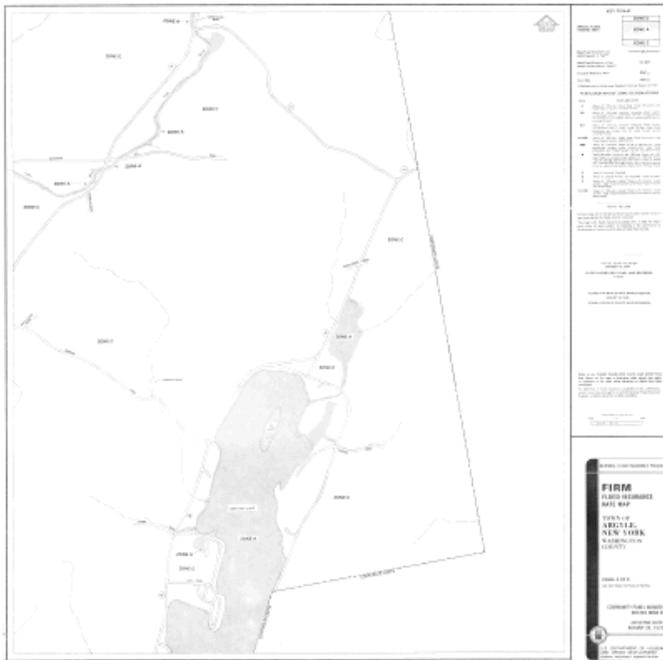


Figure 7 – Argyle FIRM

3.3.2. Argyle, Village of

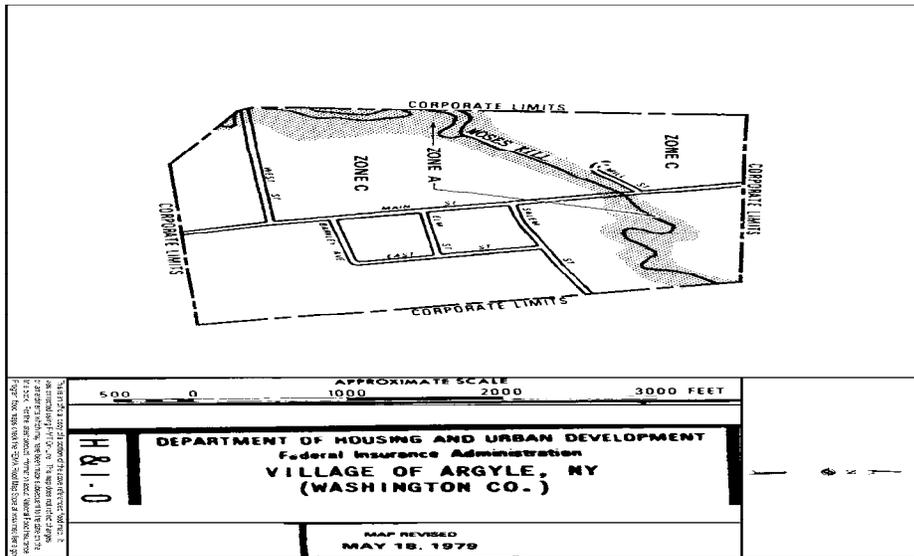
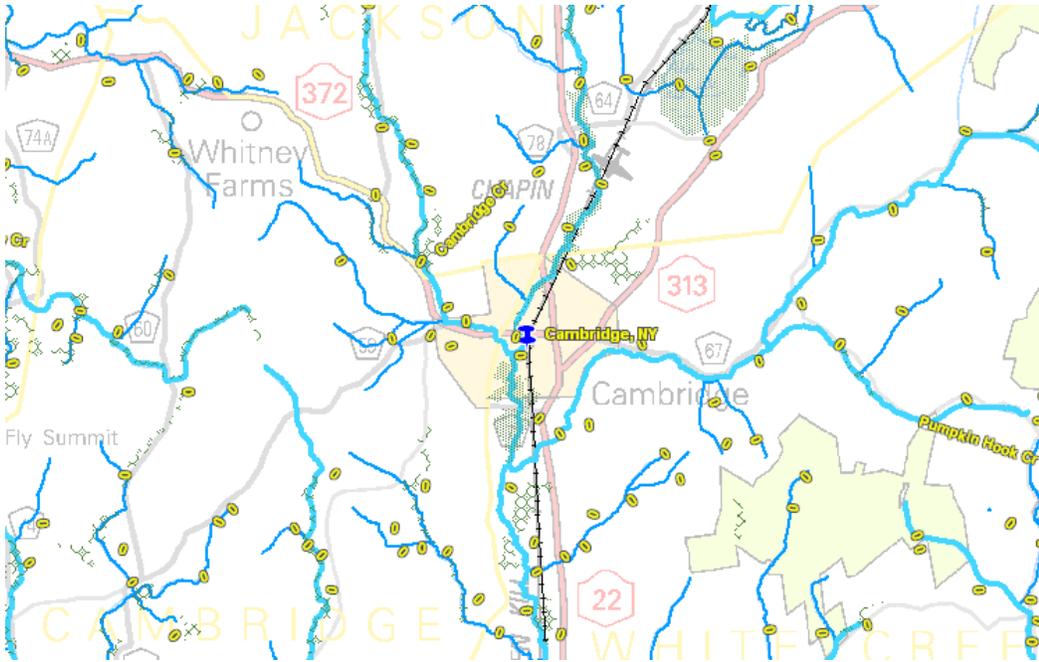


Figure 8 – Argyle, Village of - Flood Map

### 3.3.3. Cambridge

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/Non- profit	Government	Education	Utilities	Totals
							R/S 5,6,7	
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
710	31	3	96	10	8	0	31	889
65,057,694	2,298,845	644,900	11,427,213	838,850	423,700	0	3,555,684	84,246,886

**Table 4 – Cambridge Tax Information**



**Figure 9 – Cambridge - NYS Interactive Mapping**

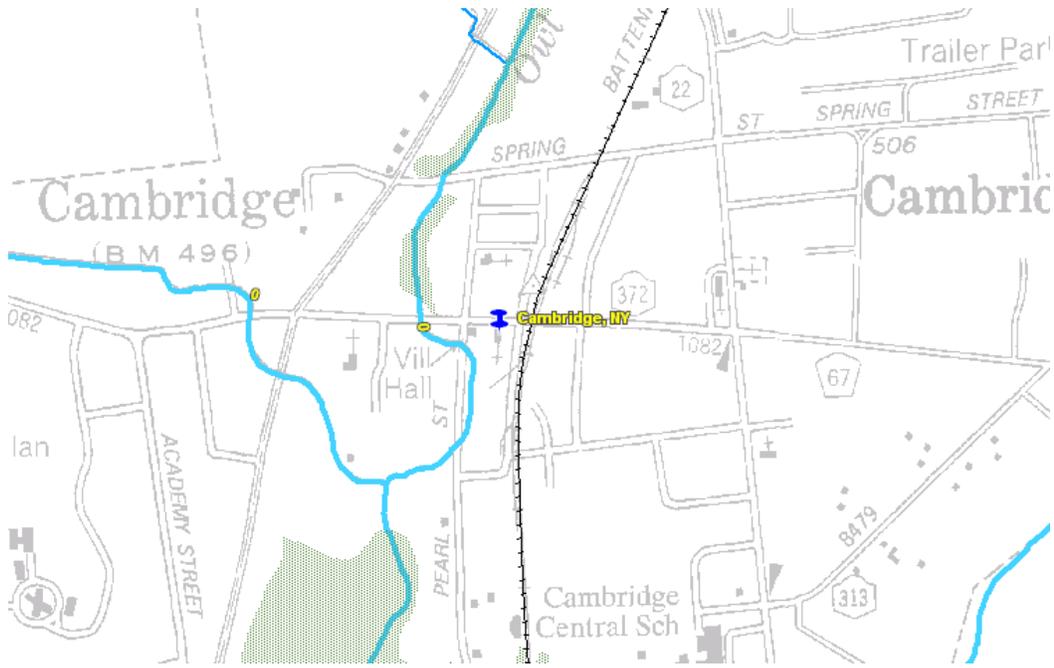


Figure 10 – Cambridge, Village of - NYS Interactive Mapping

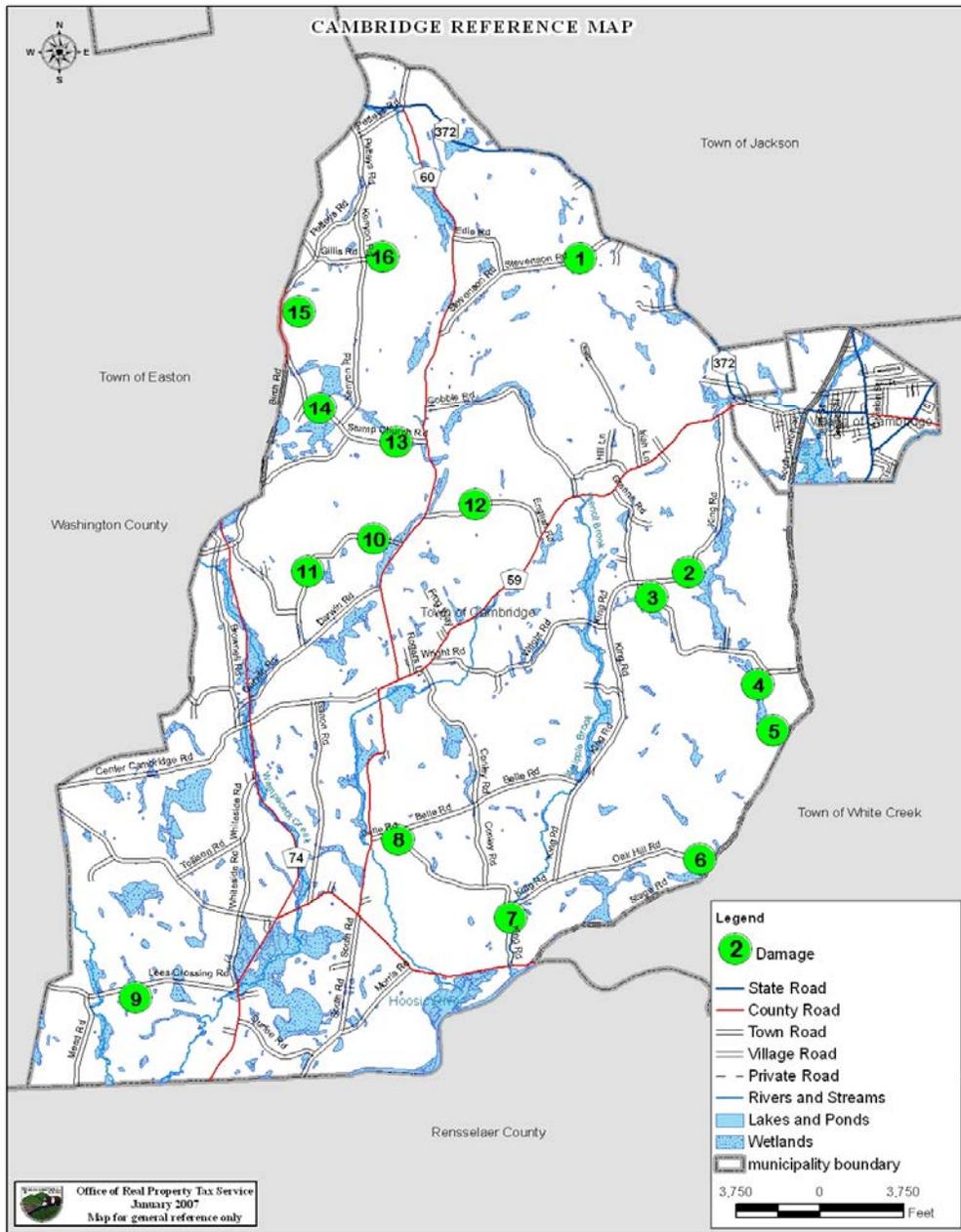


Figure 11 - Cambridge Referenced Map

Cambridge

<b>Location</b>	<b>Damage</b>	<b>Year</b>	<b>Cost</b>
1. Stevenson Road	Washout of culvert		
2. King Road	Washout of stone culvert		
3. Duell Hollow Road	Washout due to pond overflow		
4. Tabor Lane	Washout of culvert		
5. Turnpike Road	Washout due to culvert overflow		
6. Oak Hill Road	Washout along road	2004	
7. King Road	Washout due to culvert	2004	
8. Dickensen Road	Washout along roadway/long bank		
9. Lees Crossing Road	Washout due to bridge overflow		
10. Tingue Road	Washout on steep hill		
11. Tingue Road	Tree removal from windstorm		
12. English Road	Washout along both sides of road & steep hill		
13. Stump Church Road	Bridge problem		
14. Stump Church Road	Culvert & dam problem		
15. Stump Church Road	Bridge problem from dam		
16. Kenyon Road	Tree problem from wind		



**Figures 12a & 12b – Culvert Problems**



**Figures 13a & 13b – Stump Church Road Bridge & Dam**

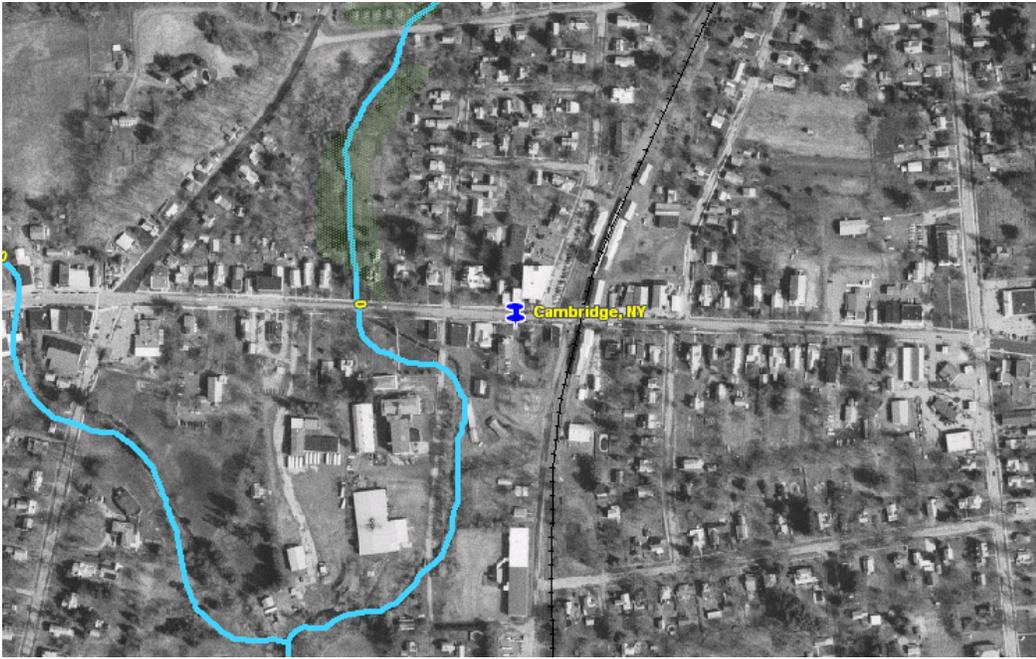


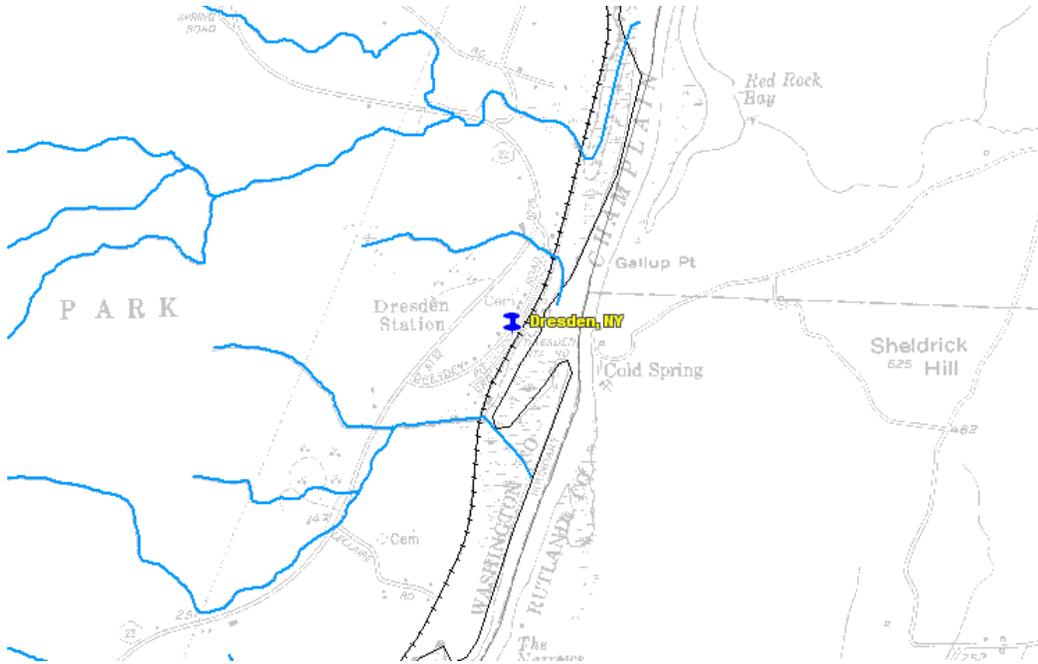
Figure 14 –Cambridge – B&W Aerial View - NYS Interactive Mapping



3.3.4. Dresden

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
518	9	3	7	11	11	0	14	573
84,545,800	4,403,400	310,200	596,600	579,100	462,400	0	6,071,391	93,968,891

**Table 5 – Dresden Tax Information**



**Figure 16 – Dresden - NYS Interactive Mapping**

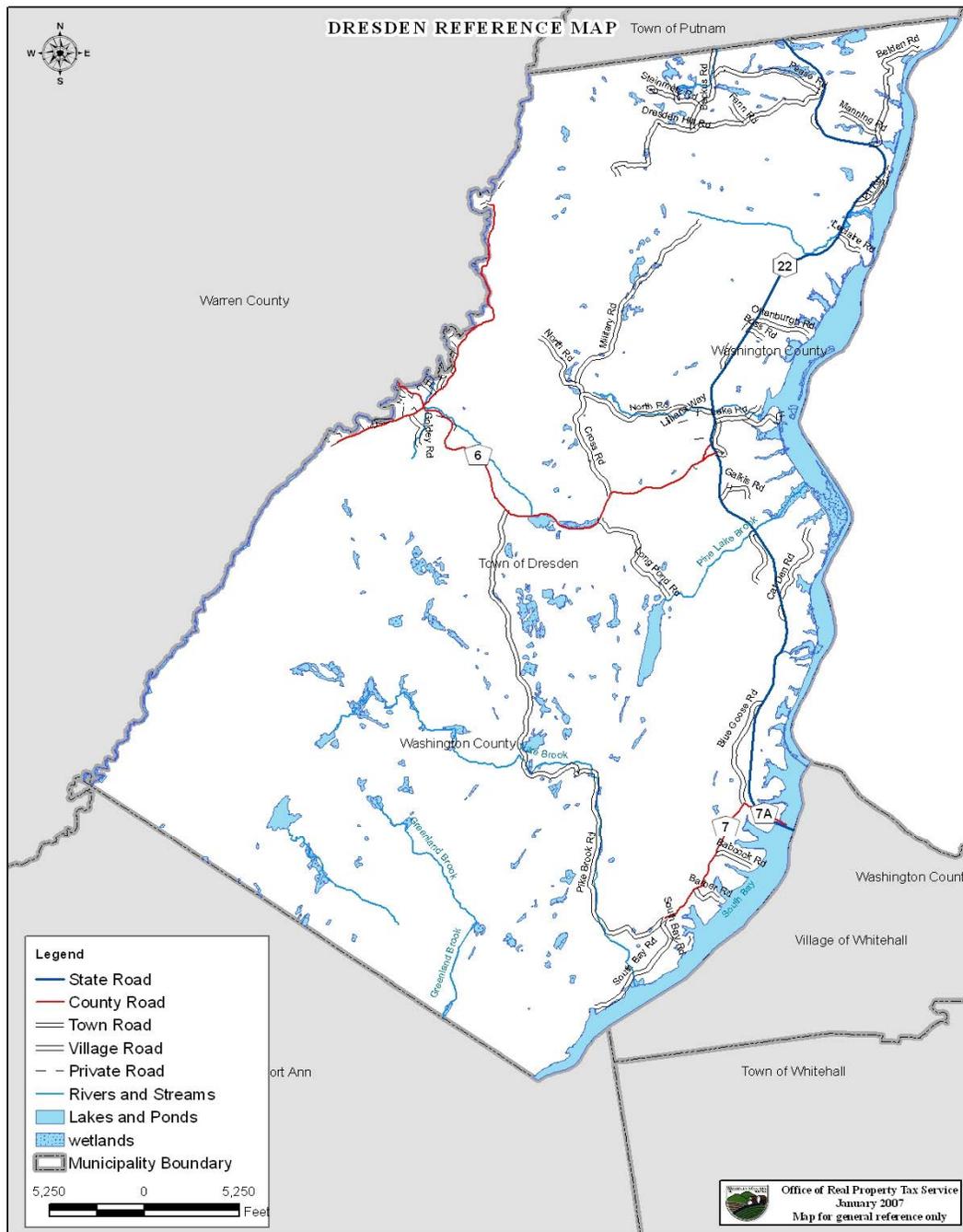


Figure 17 – Dresden Map (not referenced)



Figure 18 – Dresden B&W Aerial View - NYS Interactive Mapping

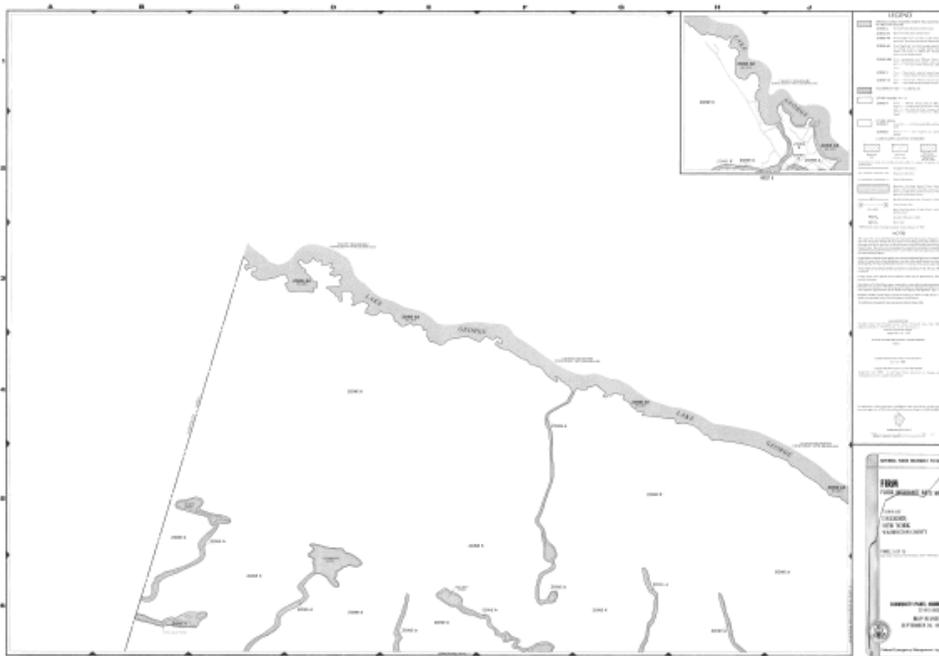


Figure 19 – Dresden FIRM

3.3.5. Easton

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
755	34	19	230	16	35	1	41	1,131
2,808,294	250,600	493,855	1,227,180	211,200	410,400	100	334,671	5,736,300

**Table 6 – Easton Tax Information**



**Figure 20 – Easton FIRM**

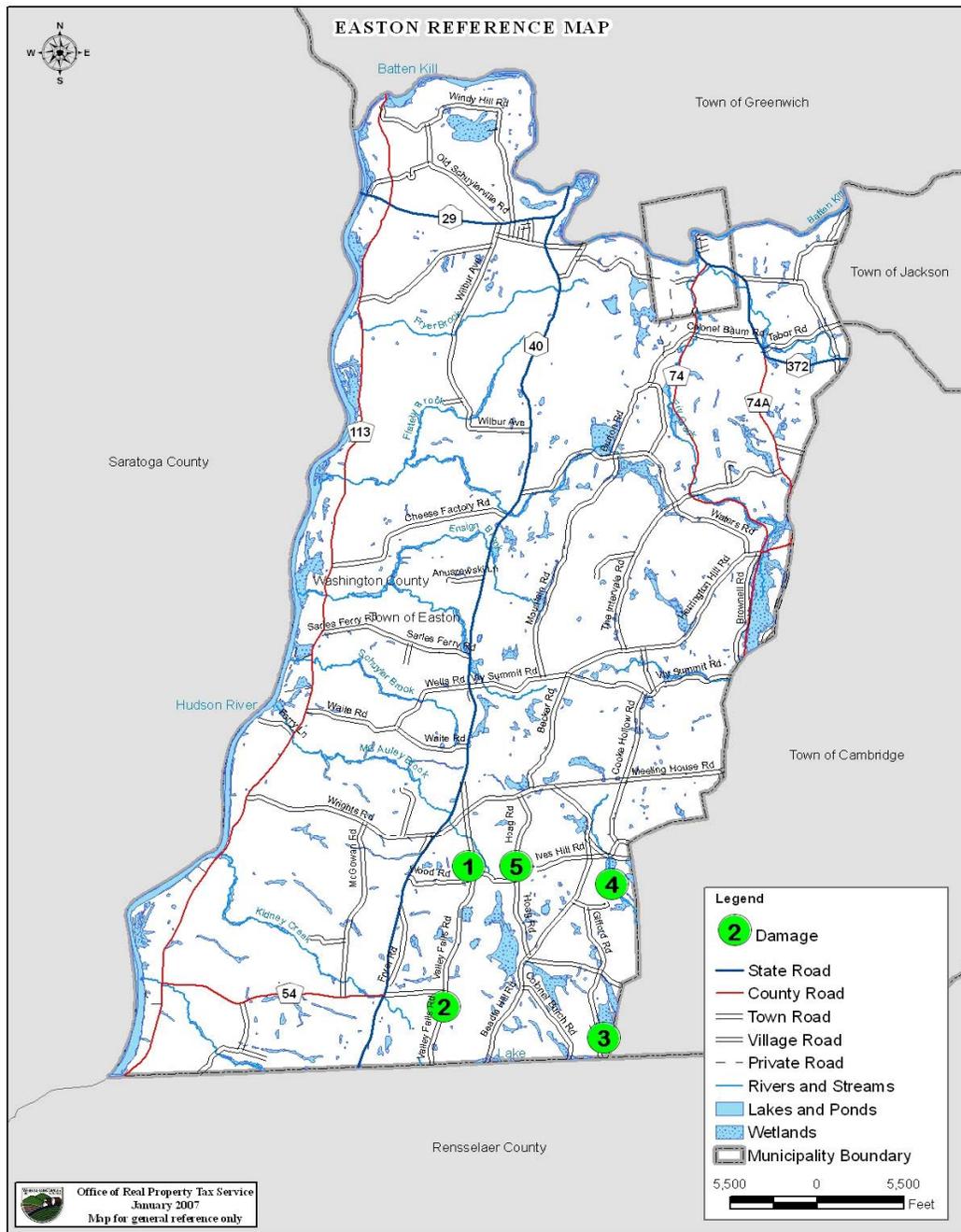


Figure 21 – Easton Referenced Map

Easton

1. Valley Falls Road & Meeting House Road – FEMA funding 2004
2. Valley Falls Road – FEMA 85%, 2004, completed 2006
3. Lee's Crossing – windstorm washout; move road north
4. Washout probable
5. Hoag Road – washout probable

A meeting was held at the Easton Town Hall on November 20, 2006, with Supervisor John Rymph, Highway Superintendent Dave English, and Dr. Tom Phelan. An hour-long tour of the southern sector of the town revealed prior damage to roadways caused by flash flooding. Efforts by the Town to mitigate against further damage and to correct damage included adding hundreds of feet of rick rack to drainage ditches along roadsides and altering the angle of streams passing under roadbeds with larger culvert tubes. In one case an entire roadway was washed out from such flash flooding. The washed out road was replaced and due to a formal disaster declaration, FEMA approved funding for road and drainage system replacement.

See photos below.



**Figure 22 – Replaced roadway in Easton**



Figure 23 – Corrected drainage, Easton

In other instances, Town Highway crews replaced culvert pipes to alter the direction water passes under the roadway. This type of work changes two right-angle bends in a stream just before the roadway to two oblique angles, reducing the probability that pressure from the stream will impact the road bed.



Figure 24 – Corrected culvert tubes; Easton, view 1

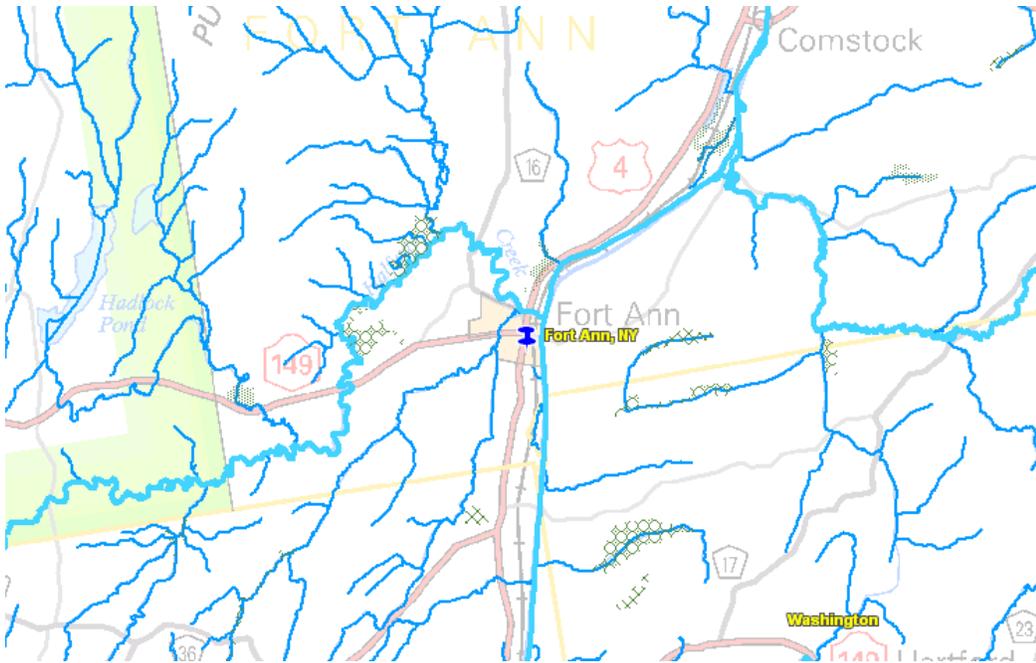


Figure 25 – Corrected culvert tubes, Easton; view 2

3.3.6. Fort Ann

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels Assessed Value	# of Parcels Assessed Value	# of Parcels Assessed Value	# of Parcels Assessed Value	# of Parcels Assessed Value	# of Parcels Assessed Value	# of Parcels Value of Parcels	# of Parcels Value of Parcels	
1,743	54	9	72	35	45	4	49	2,011
369,188,774	7,960,547	1,472,083	8,698,876	10,805,463	2,025,129	5,481,607	10,797,199	416,429,678

**Table 7 – Fort Ann Tax Information**



**Figure 26 – Fort Ann - NYS Interactive Mapping**

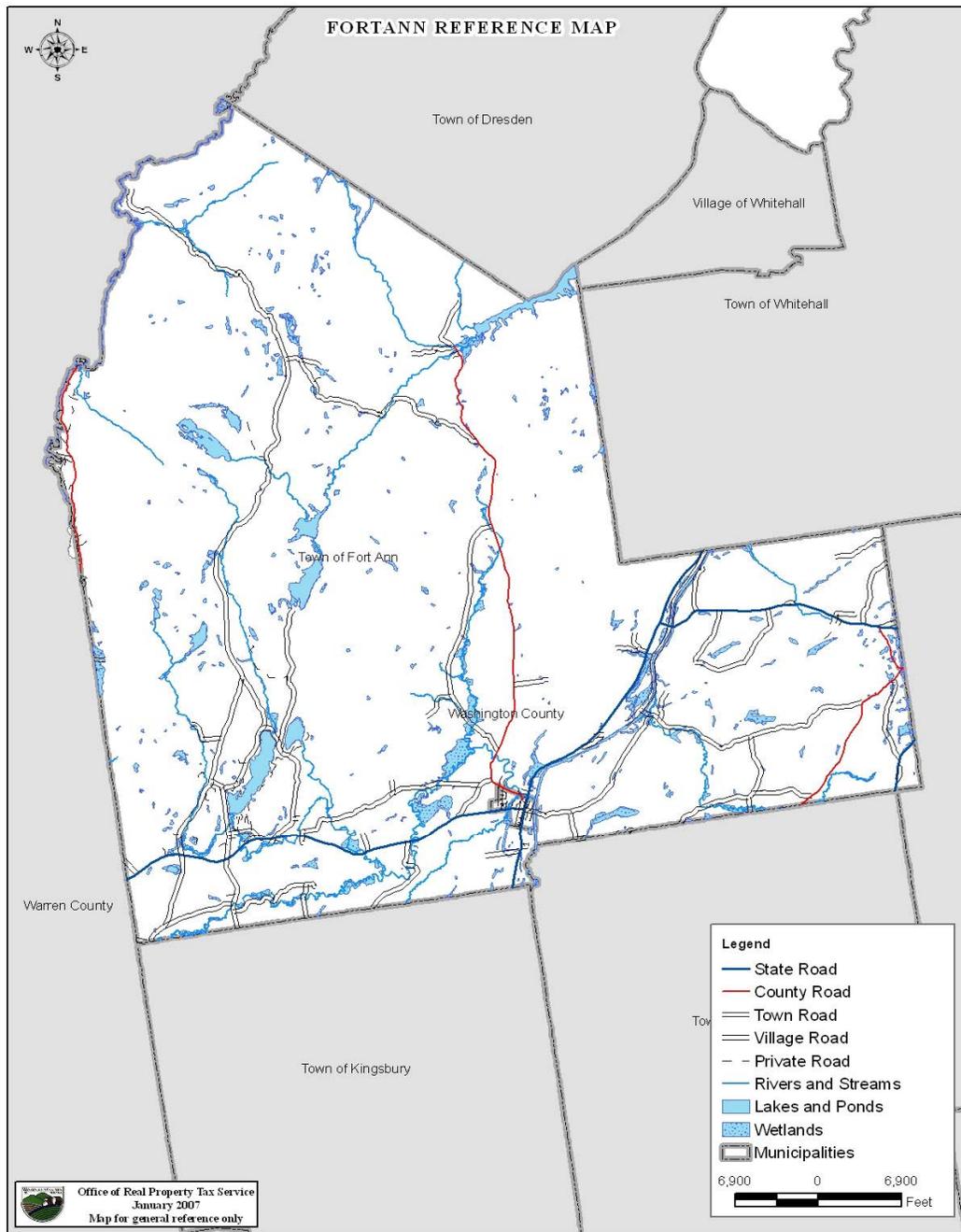


Figure 27 – Fort Ann Map (not referenced)



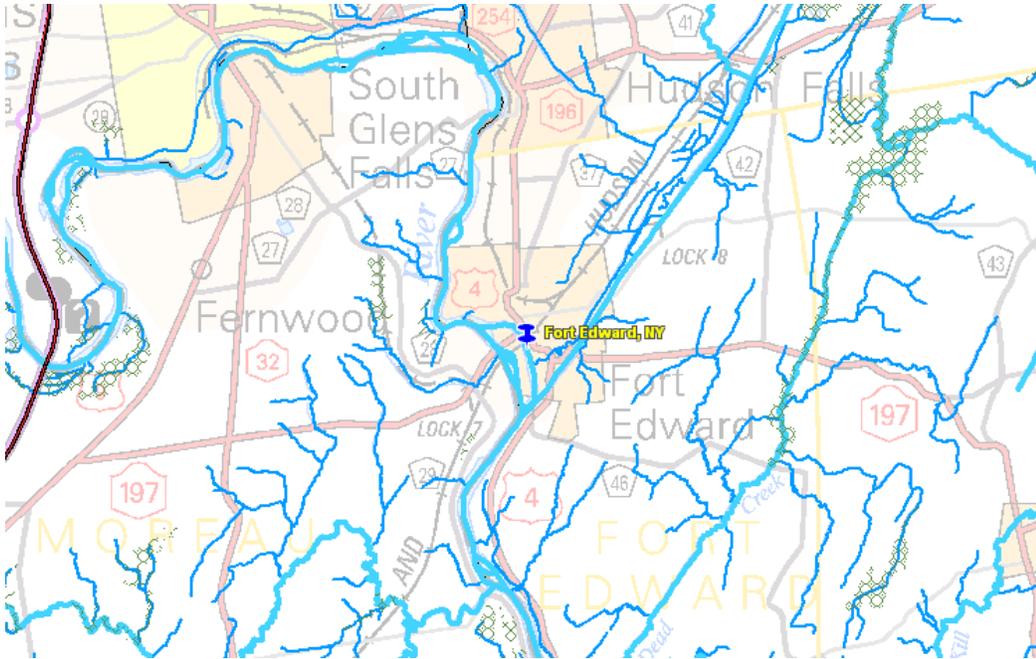
3.3.7. Fort Ann, Village of

FIRM is Unmapped  
Resolution for Authorized Representation (Proxy) Submitted

3.3.8. Fort Edward

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,931	131	17	73	30	64	3	77	2,326
178,188,755	20,227,800	30,924,500	13,394,948	16,238,900	43,072,200	6,110,900	10,258,475	318,416,478

**Table 8 – Fort Edward Tax Information**



**Figure 30 – Fort Edward - NYS Interactive Mapping**

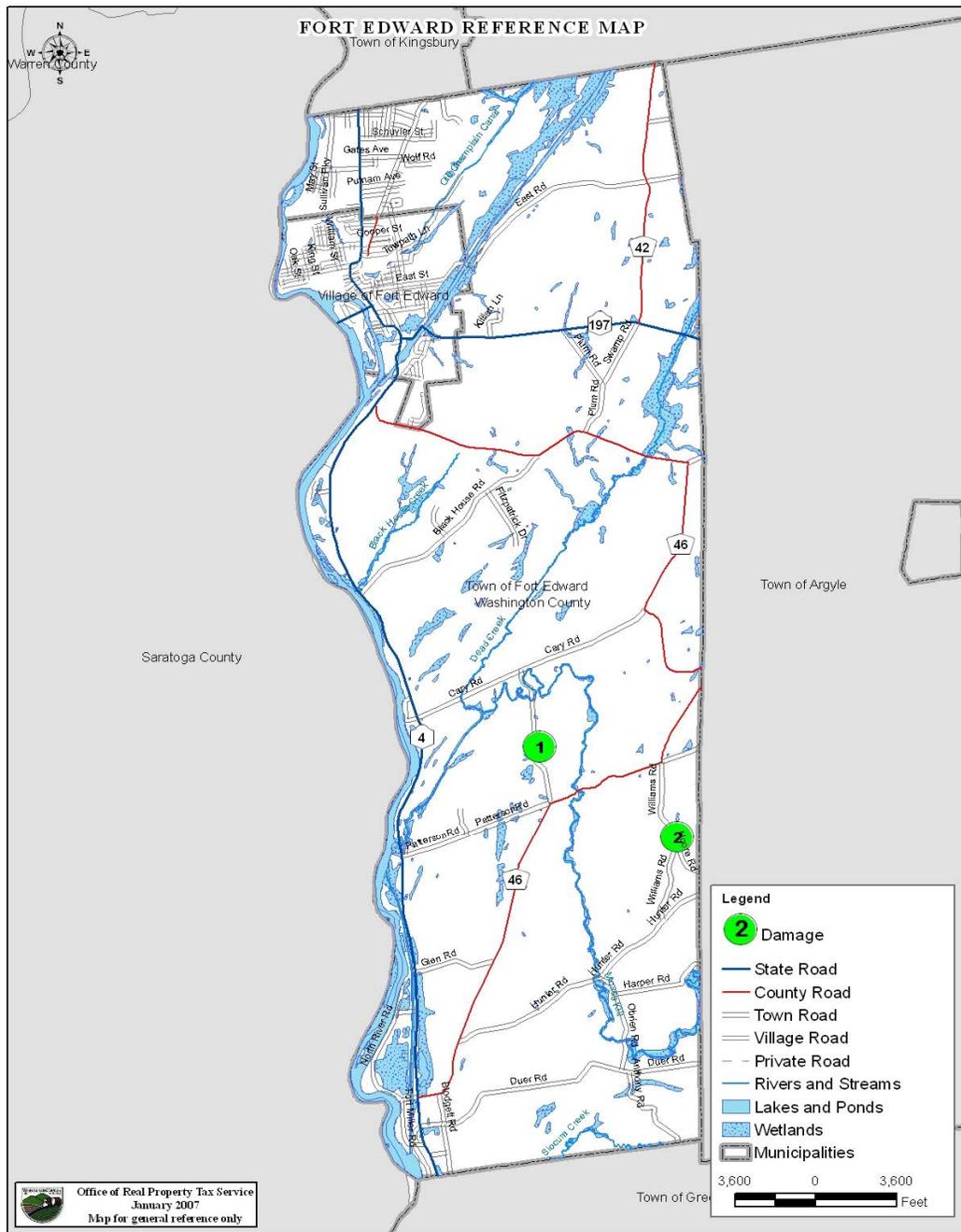


Figure 31 – Fort Edward Referenced Map

Fort Edward

	<b><u>Location</u></b>	<b><u>Damage</u></b>	<b><u>Year</u></b>	<b><u>Cost</u></b>
1.	Woodward Road	Washed Out	2000	\$4000
2.	Moore Road	Washed Out	2004	\$3000

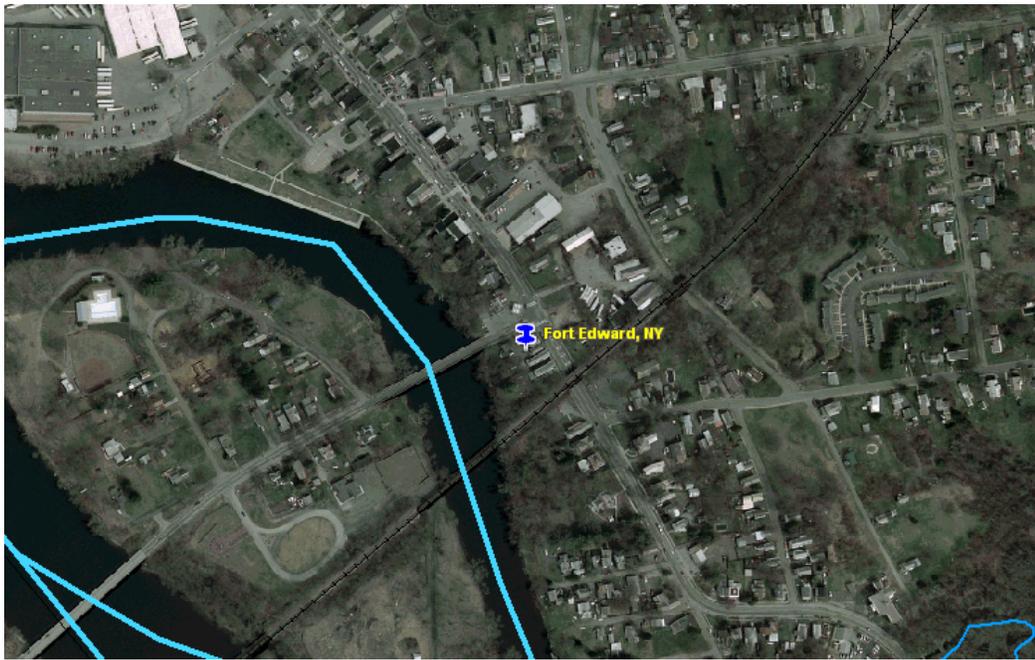


Figure 32 – Fort Edward B&W Aerial View - NYS Interactive Mapping

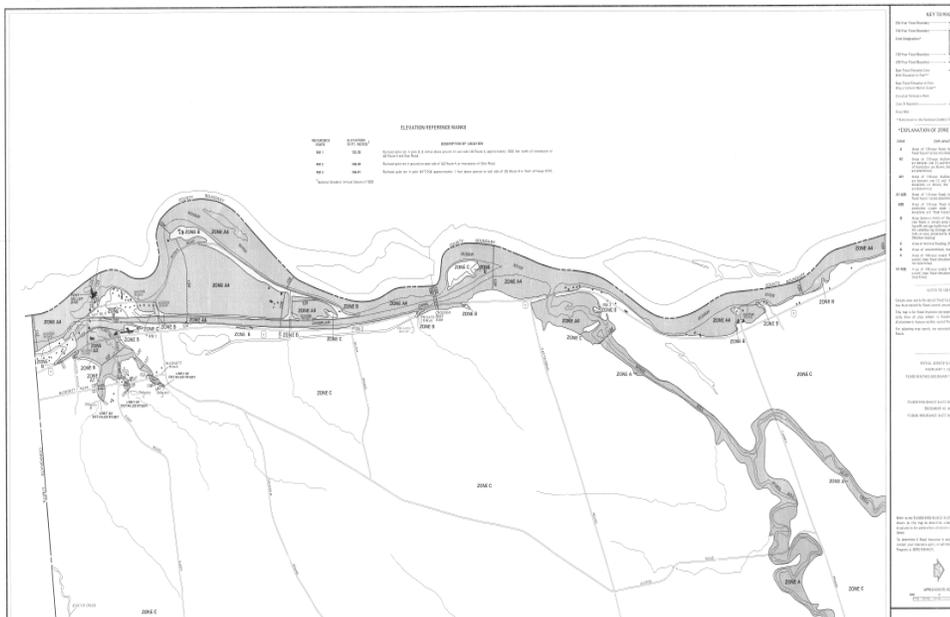


Figure 33 – Fort Edward FIRM

3.3.9. Granville

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
2,180	151	27	58	53	52	5	23	2,549
213,942,450	22,873,880	9,323,300	12,009,350	9,948,100	6,056,500	12,803,900	8,541,997	295,499,477

**Table 9 – Granville Tax Information**



**Figure 34 – Granville - NYS Interactive Mapping**

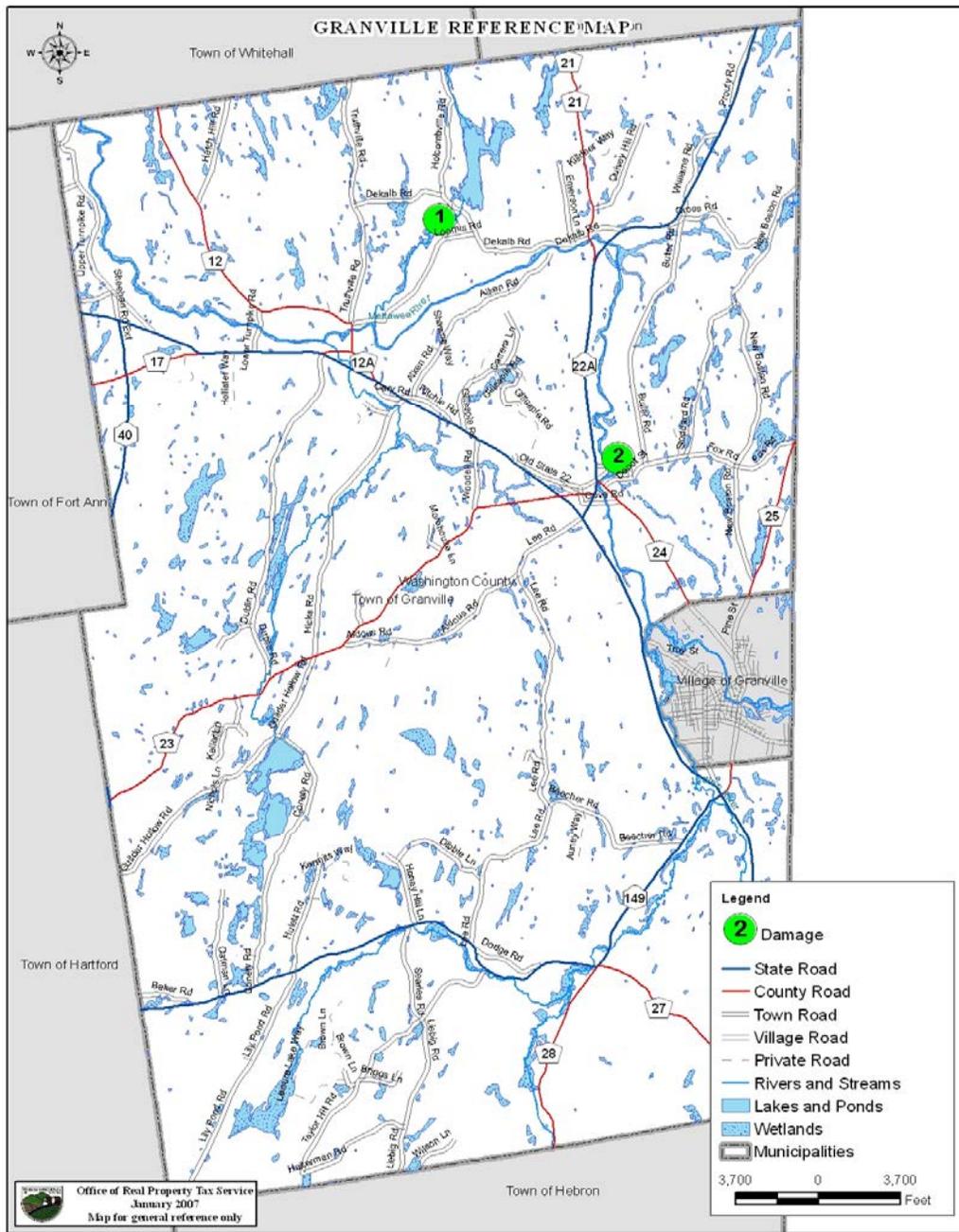


Figure 35 – Granville Referenced Map

## Town of Granville

1. DeKalb Road –1980's Washed out completely; 2005 flooding; shoulder and partial lane washout; culverts under road are too small
2. Cove Road - Single lane bridge; flooding (Mettawee River); 1 home evacuated



Figure 36 – North Granville B&W Aerial - NYS Interactive Mapping



Figure 37 – Granville B&W Aerial View - NYS Interactive Mapping



Figure 38 – Middle Granville B&W Aerial - NYS Interactive Mapping



Figure 39 – West Granville B&W Aerial - NYS Interactive Mapping



Figure 40 – South Granville B&W Aerial - NYS Interactive Mapping

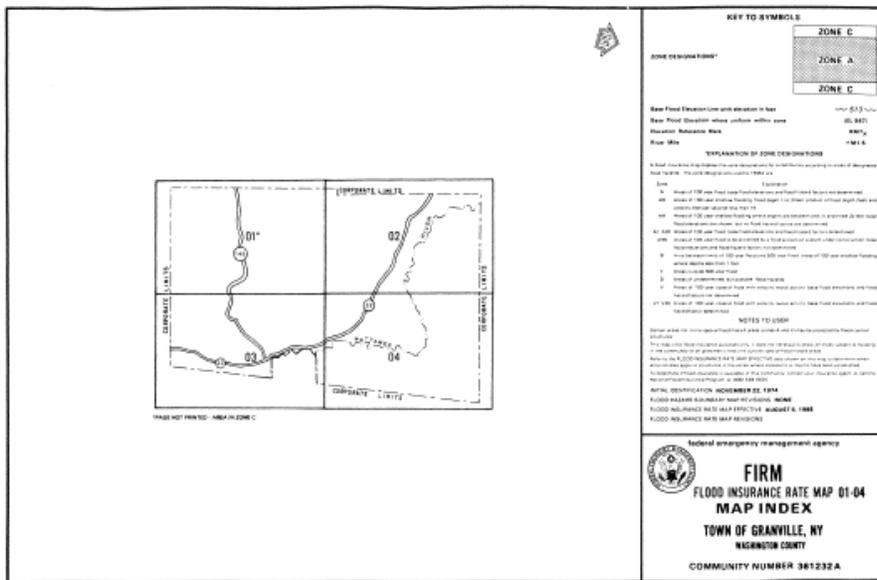


Figure 41 – Granville FIRM

3.3.10. Granville, Village of

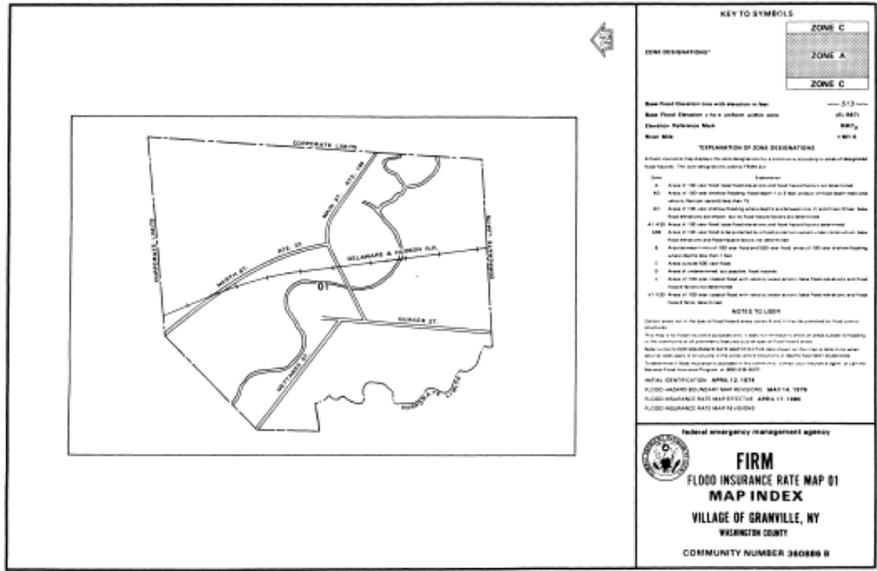


Figure 42 – Granville, Village of FIRM

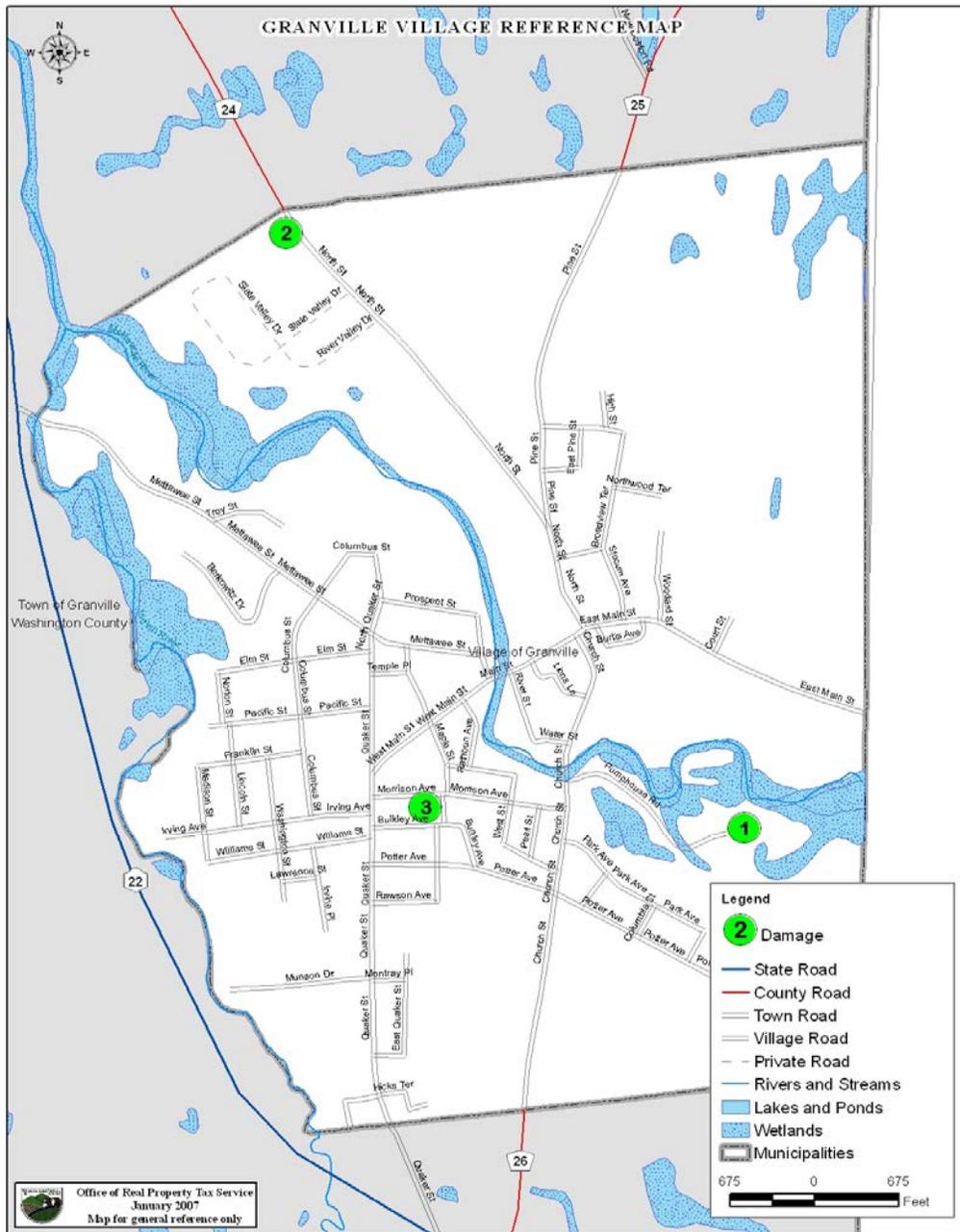


Figure 43 – Granville, Village of Referenced Map

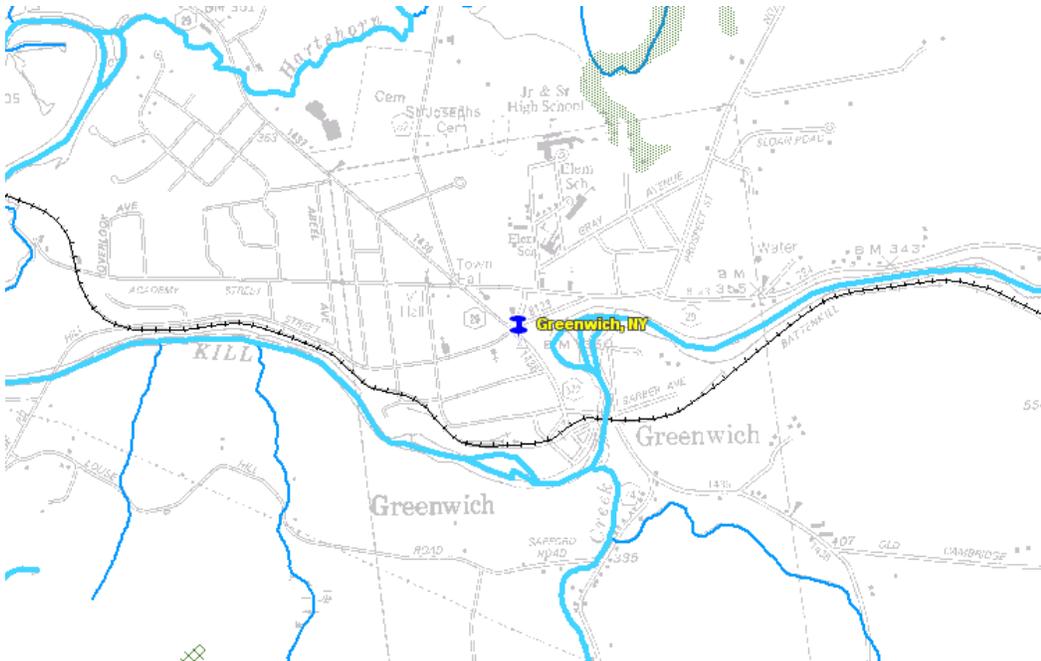
Village of Granville

1. Pumphouse Road – Riverbank erosion
2. North Street – Culvert backed up 1996 \$1,670.00
3. Morrison Avenue – Storm drain too small

### 3.3.11. Greenwich

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,710	141	10	107	40	39	4	40	2,091
238,782,000	32,362,000	8,164,490	18,977,400	8,477,500	12,633,200	17,252,200	8,527,684	345,176,474

**Table 10 – Greenwich Tax Information**



**Figure 44 – Greenwich - NYS Interactive Mapping**

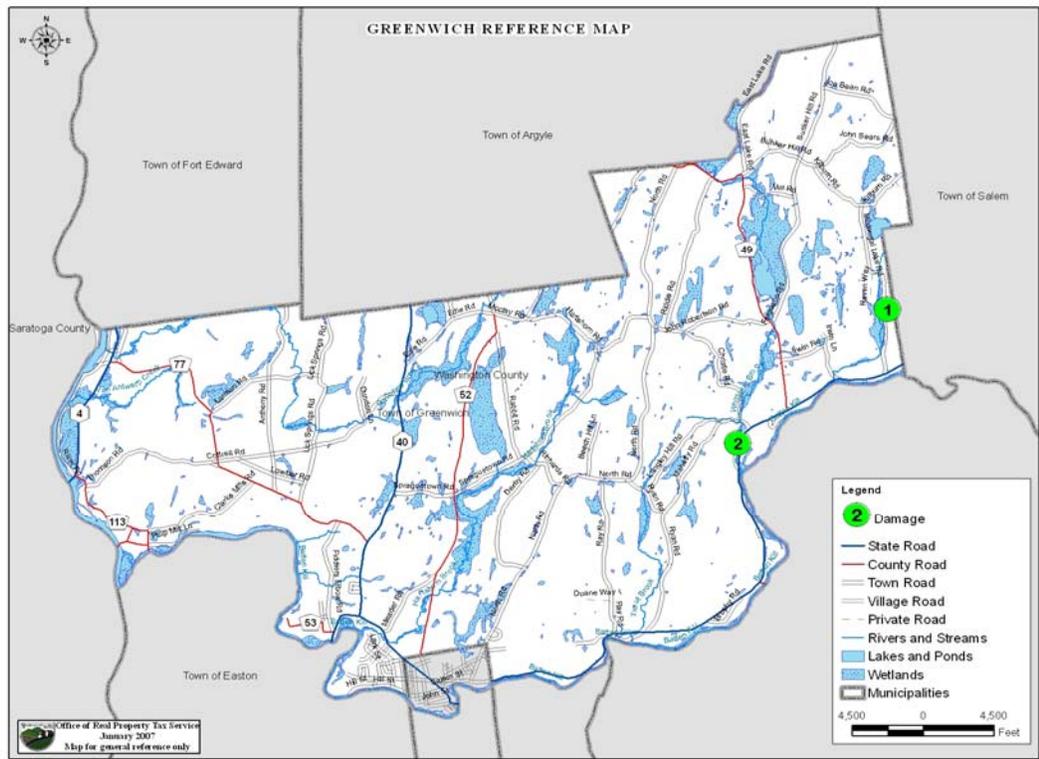


Figure 45 – Greenwich Referenced Map

## Greenwich

1. McDougal Lake Road – 36" culvert inside concrete I culvert; too small, floods road for ¼ mile in spring runoff. Heavy rain outlet to McDougal Lake .9 mile from north end McDougal Lake Road – needs 4' x 60' flat bottom culvert.
2. Boundsville Road – North end bridge closed; disrepair. Outlet to Cossayuna Lake – Rte. NYS 29 floods next to this road; need road for detour; culvert to get road open also needed.



Figure 46 – Greenwich B&W Aerial View - NYS Interactive Mapping

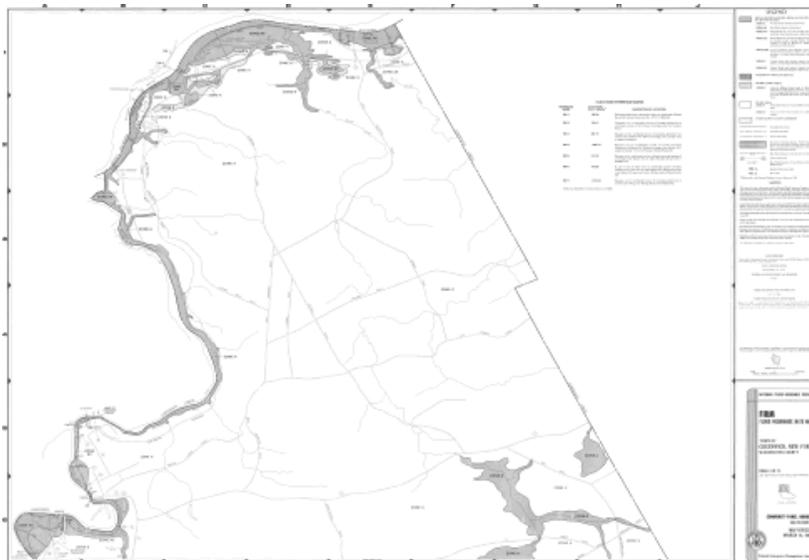
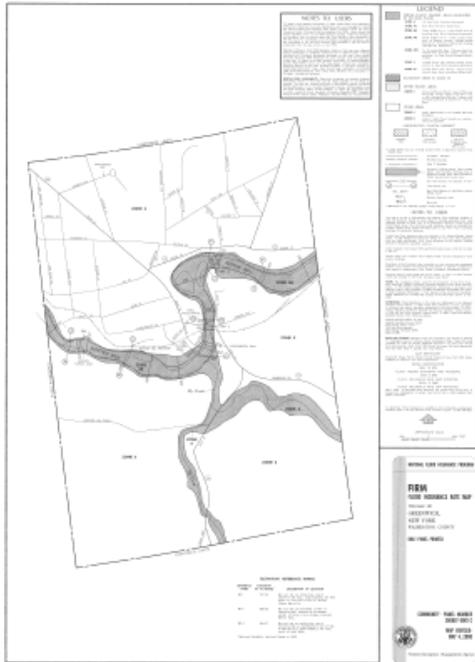


Figure 47 – Greenwich Firm

3.3.12. Greenwich, Village of



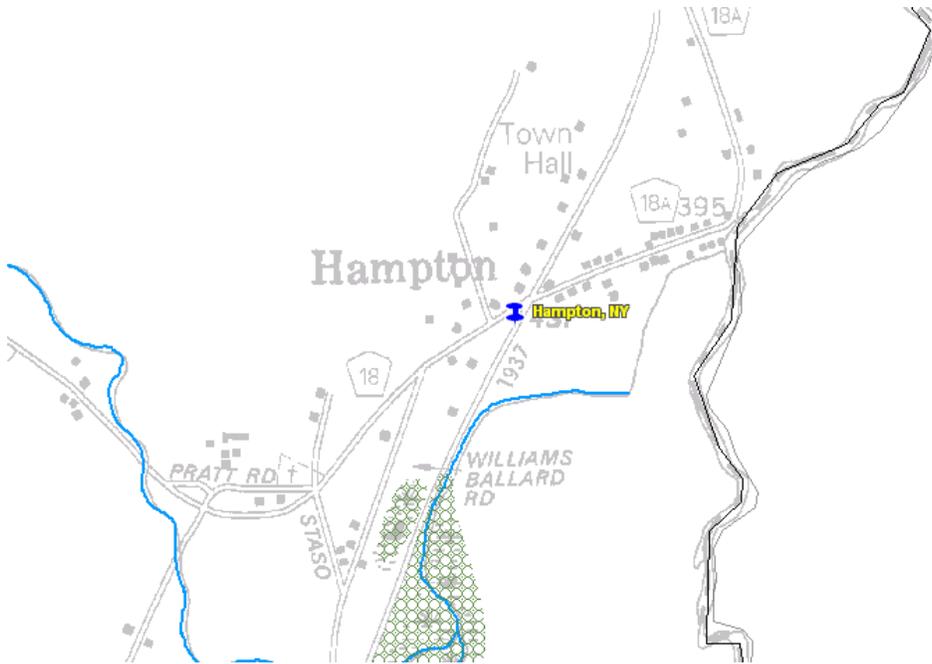
**Figure 48 – Greenwich, Village of FIRM**

No report

3.3.13. Hampton

Residential	Commercial	Industrial	Agricultural	Religious/ Non-profit	Government	Education	Utilities	Totals
200 Prop Class	400 Prop Class	700 Prop Class	100 Prop Class				R/S 5,6,7	
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
416	11	7	18	4	8	1	22	487
44,731,400	1,315,200	521,700	3,360,300	286,600	247,400	12,600	4,815,128	55,290,328

**Table 11 – Hampton Tax Information**



**Figure 49 – Hampton - NYS Interactive Mapping**

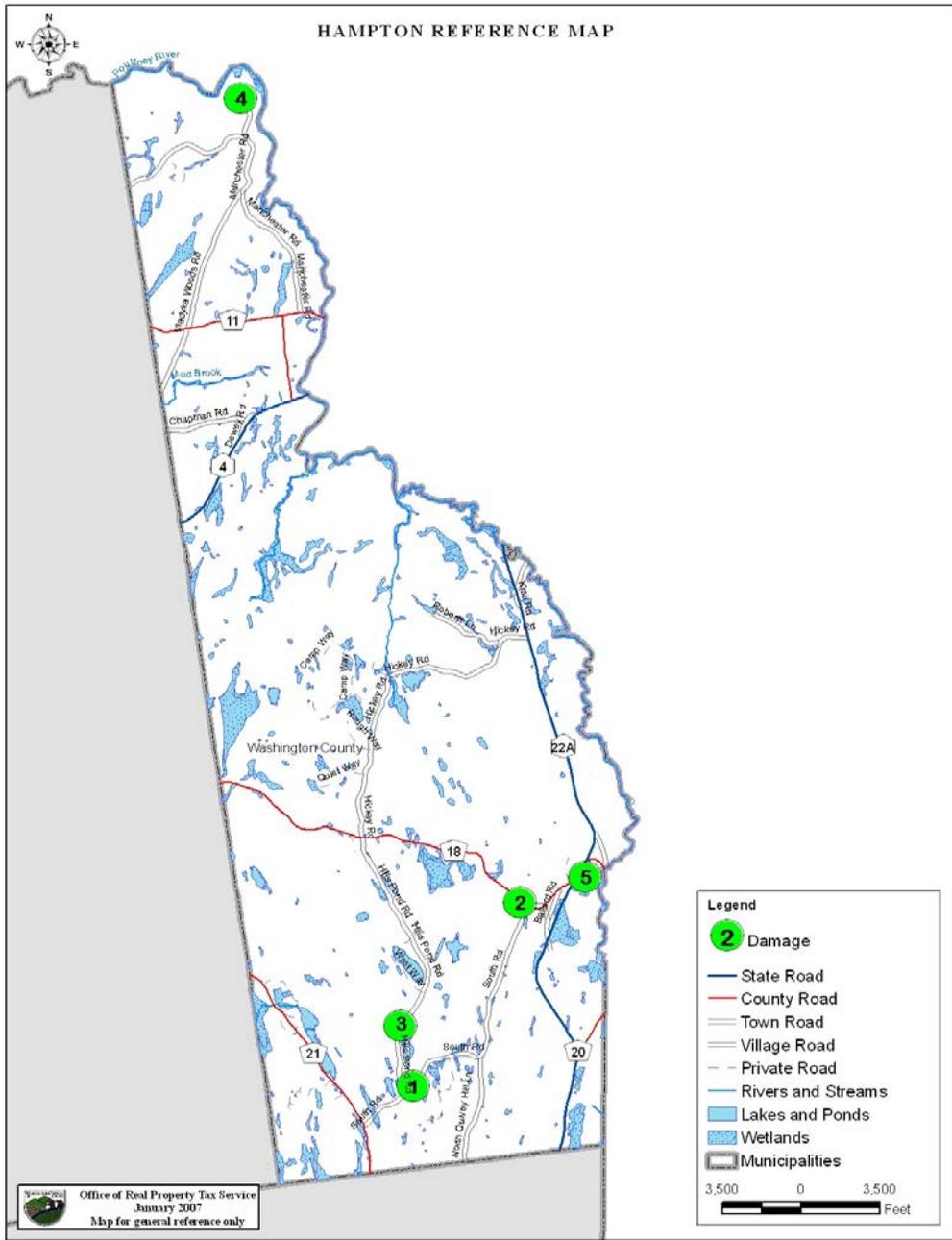


Figure 50 – Hampton Referenced Map

## Hampton

1. South Road (1/4 mile east of County Route 21) - some FEMA funds received c.1996
2. South Road at intersection of County Route 18 - flooding
3. Hills Pond road, near pond - flooding near Stone Quarry
4. Manchester Road and Carvers Falls Lane (#194) - Landslide 1 acre of land displaced.
5. Route 22A south of County Route 18 - landslide.

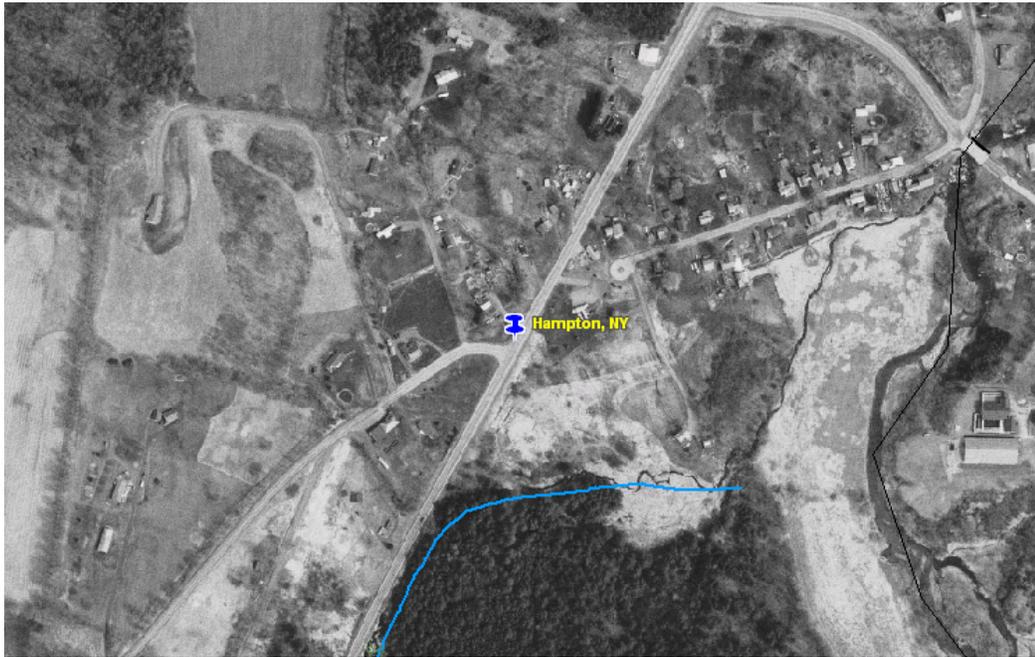


Figure 51 – Hampton B&W Aerial View - NYS Interactive Mapping

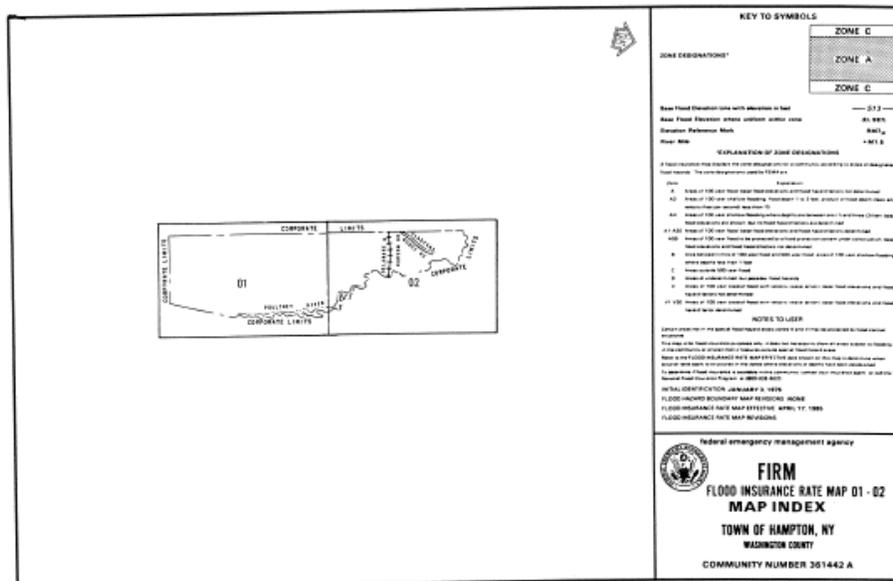
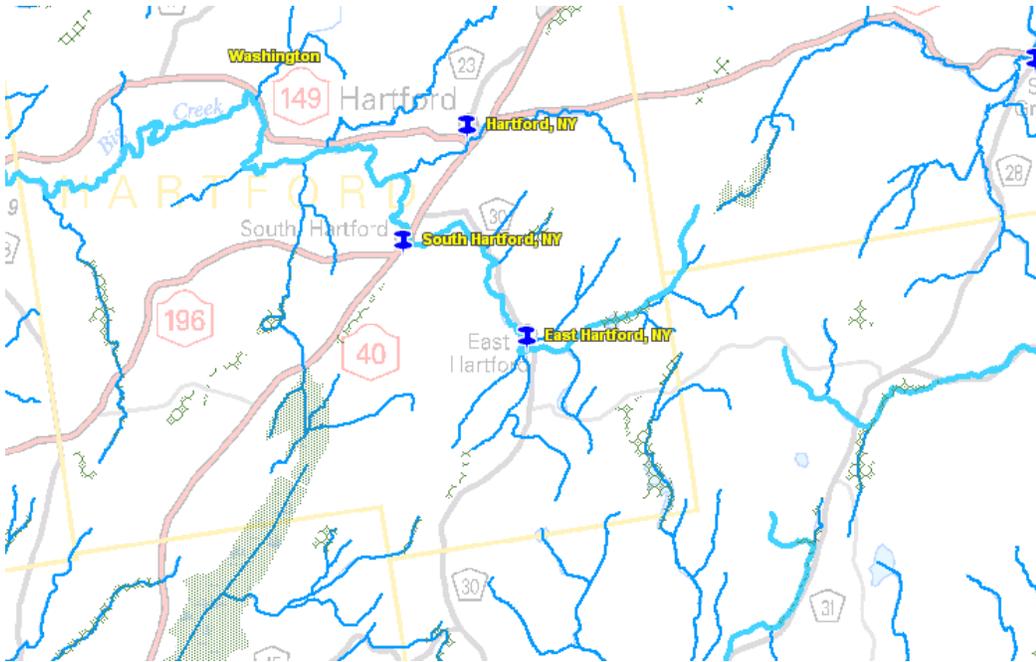


Figure 52 – Hampton FIRM

3.3.14. Hartford

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
781	19	2	59	7	16	2	20	906
103,545,400	2,391,300	372,500	9,967,100	1,146,400	3,052,300	20,069,100	3,455,855	143,999,955

**Table 12 – Hartford Tax Information**



**Figure 53 – Hartford - NYS Interactive Mapping**

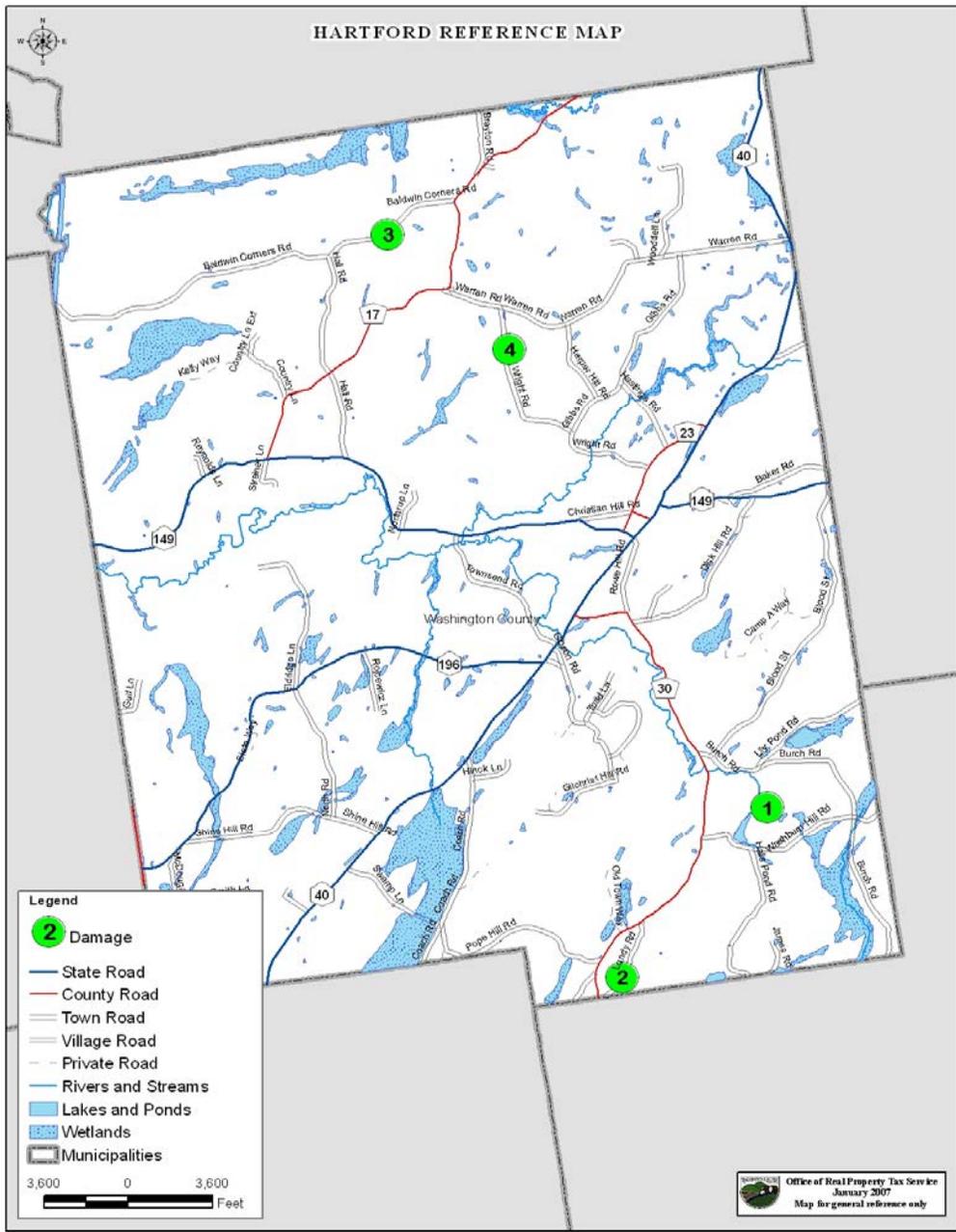


Figure 54 – Hartford Referenced Map

## Hartford

1. Lily Pond Road – Dam needs repair
2. Lundy Road – Culvert washed out
3. Baldwin Corners Road – Bigger culvert
4. Warren Road – Bigger culvert

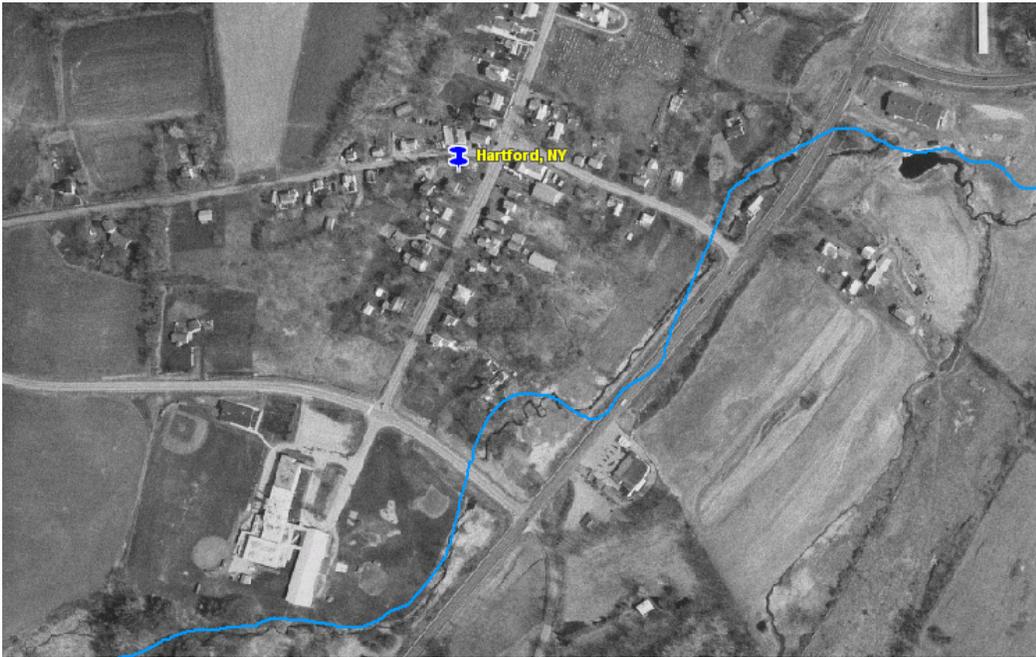


Figure 55 – Hartford B&W Aerial View - NYS Interactive Mapping

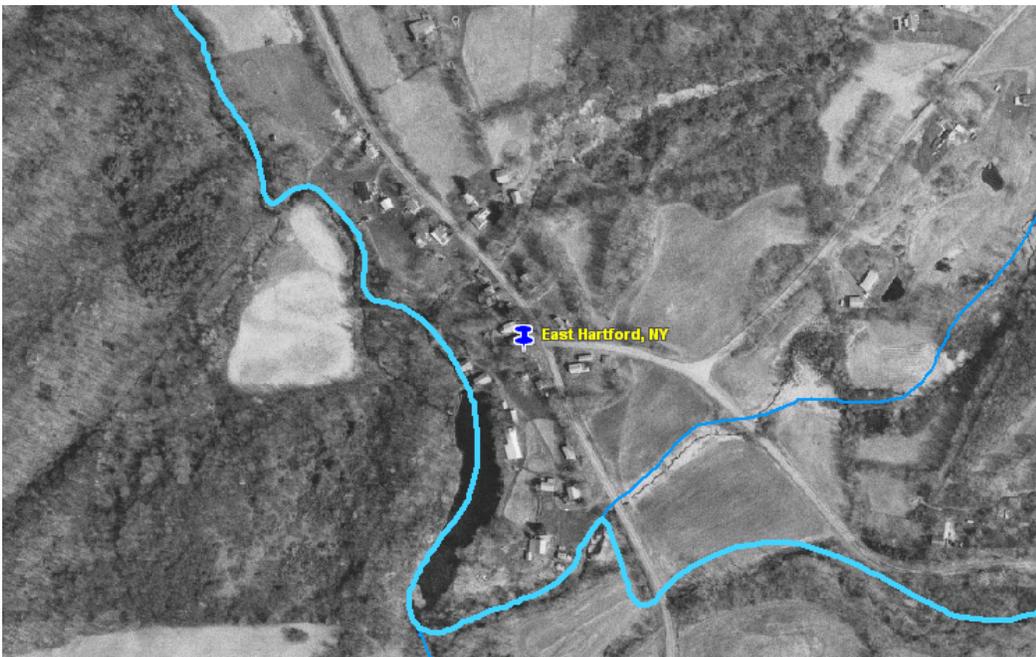


Figure 56 – East Hartford B&W Aerial - NYS Interactive Mapping



Figure 57 – South Hartford B&W Aerial - NYS Interactive Mapping

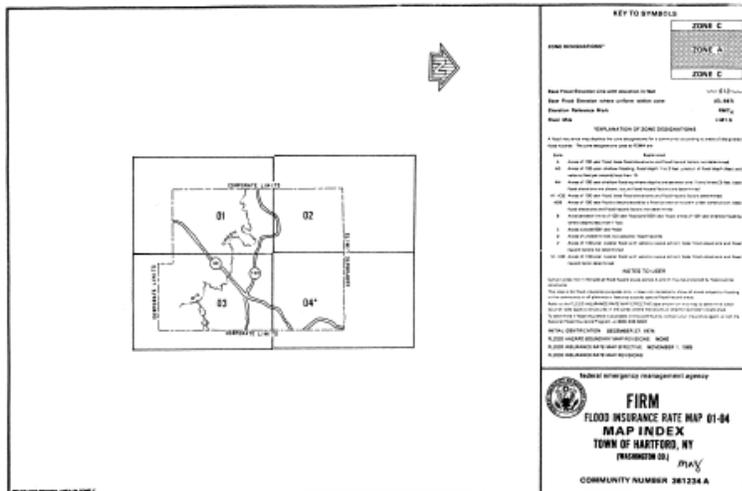
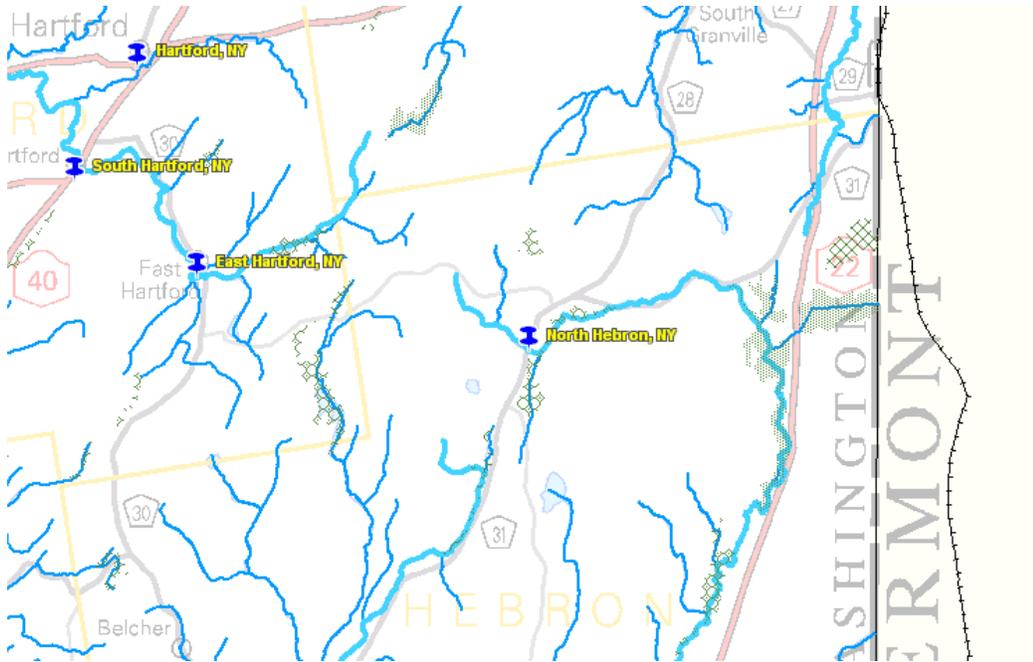


Figure 58 – Hartford FIRM

3.3.15. Hebron

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
851	32	3	70	15	13	3	27	1,014
62,801,270	2,186,000	123,000	8,371,400	1,291,810	200,970	78,500	3,052,421	78,105,371

**Table 13 – Hebron Tax Information**



**Figure 59 – Hebron - NYS Interactive Mapping**

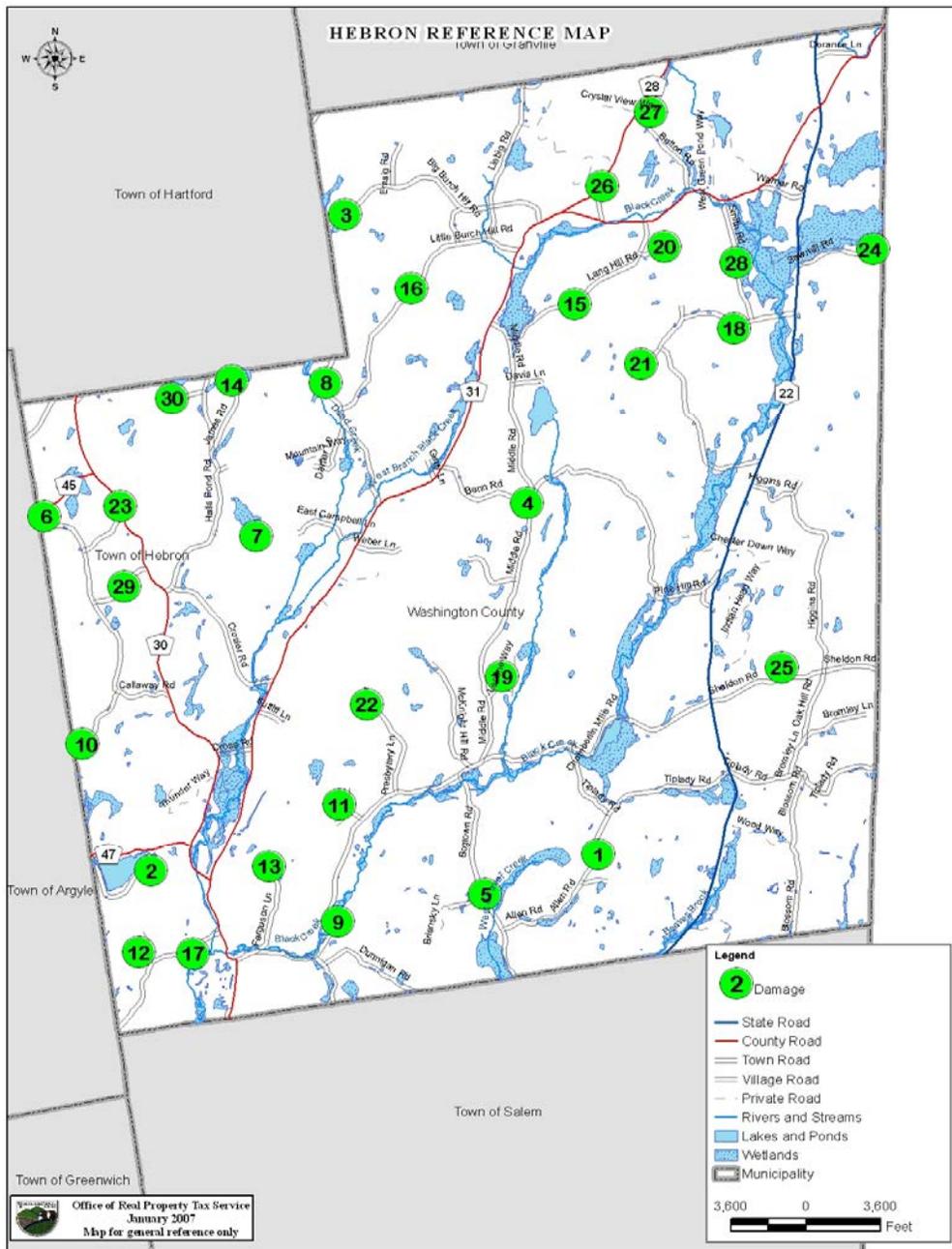


Figure 60 – Hebron Referenced Map

**Town of Hebron**

Map #	Road/ Project Name	DSR #	Geo Code	FEMA Project	Transactions	December	31, 1997	Total
				Recorded For the	On Year			
				Labor	Equipment	Material	Fringe Benefits	
5	Bogtown Road	47647	35593	61.00	63.00	1,068.00	24.40	1,216.40
			35592	560.75	1,305.50	931.00	224.30	3,021.55
			35591	291.75	611.50		116.70	1,019.95
			35590	214.95	533.50	698.30	85.98	1,532.73
			35583	570.00	1,265.00		228.00	2,063.00
6	Callaway Road	63023	35529	520.00	1,220.00	374.50	208.00	2,322.50
			35766	85.00	250.00	122.50	34.00	491.50
			35752	109.50	291.00	140.00	43.80	584.30
			35690	514.00	1,194.00	171.50	205.60	2,085.10
			35691	546.00	1,246.00	941.50	218.40	2,951.90
16	Little Burch Hill	66746	35544	81.75	223.00	147.00	32.70	484.45
			35618	175.25	267.50	294.00	70.10	806.85
13	Ferguson Lane	63009	35586	45.25	123.00	73.50	18.10	259.85
18	North Grimes Hill	62809	35662	286.25	632.50		114.50	1,033.25
17	Patterson Hill	62895	35607	262.75	553.00		105.10	920.85
			35564	163.50	372.00	196.00	65.40	796.90
N/A	Pine Hill	47610	35640	564.50	1,249.00	478.00		2,291.50
1	Allen Road	47639	35639	458.25	1,023.00	985.00		2,466.25
			35697	381.50	926.00	759.50	152.60	2,219.60
			35592	75.50	178.00	122.50	30.20	406.20
			35571	477.50	1,025.00		191.00	1,693.50
			35570	770.00	1,755.00	1,566.96	308.00	4,399.96
			35569	191.00	410.00		76.40	677.40
			35558	722.00	1,575.00	941.56	288.80	3,527.36
			35557	592.50	1,195.00	1,094.94	237.00	3,119.44
			35531	414.00	946.00	911.40	165.60	2,437.00
			35530	216.25	415.00	421.96	86.50	1,139.71
2	Barkley Lake	47655	35516	64.75	171.00	98.00	25.90	359.65
4	Benn Road	62811	35703	277.00	610.00	923.50	110.80	1,921.30
			35684	540.00	1,344.00	1,323.00	216.00	3,423.00
			35683	370.00	882.00	255.50	148.00	1,655.50
3	Big Burch Hill	47641	35653	640.50	1,216.00	654.00	256.20	2,766.70
			35648	259.00	677.00	899.50	103.60	1,939.10
			35635	336.00	771.00	465.50	134.40	1,706.90
			35634	195.00	475.00	105.00	78.00	853.00
			35626	278.75	527.50	393.00	111.50	1,310.75
7	Campbell Road	62805	35625	446.00	1,028.00	717.50	178.40	2,369.90
			35527	198.00	419.50	439.86	79.20	1,136.56
			35606	196.00	510.00	294.00	78.40	1,078.40
8	Castle Green	62898	35564	146.75	338.50	343.00	58.70	886.95
			35578	241.25	595.00	631.56	96.50	1,564.31
9	Dunnigan Road	47648	35586	247.25	513.00	2,503.50	98.90	3,362.65
			35585	650.00	1,525.00	1,098.68	260.00	3,533.68
			35542	446.00	1,023.00	791.00	178.40	2,438.40
10	Gilchrist Road	63022	35565	211.75	491.00	392.00	84.70	1,179.45
11	Heaphy/Henderson	47640	35604	272.50	627.50	588.00	109.00	1,597.00
12	Hebron Hill	62894	35604	156.50	370.50	245.00	62.60	834.60
			35598	88.00	183.00	257.53	35.20	563.73
14	James Road	66773	35613	231.00	540.00	343.00	92.40	1,206.40

			35584	65.50	168.00	139.00	26.20	398.70
15	Lang Hill Road	63010	35599	220.25	500.50	171.50	88.10	980.35
			35587	152.00	314.00	372.73	60.80	899.53
			35572	194.25	476.00	318.50	77.70	1,066.45
19	Lee Brook Lane	66757	35612	270.75	572.50	1,151.14	108.30	2,102.69
			35593	82.25	201.50	171.50	32.90	488.15
20	Piccininni Lane	62899	35599	205.50	499.00	441.00	82.20	1,227.70
21	Potter Road	66768	35577	110.50	257.00	245.00	44.20	656.70
22	Presbytery Lane	47645	35611	270.75	572.50	867.53	108.30	1,819.08
			35605	222.25	532.50	308.00	88.90	1,151.65
23	Reid Road	47646	35611	111.50	242.00	269.50	44.60	667.60
			35599	78.00	189.00	323.73	31.20	621.93
24	Saw Mill Road	62801	35536	477.00	1,132.00	626.60	190.80	2,426.40
			35535	504.00	1,136.00	945.82	201.60	2,787.42
25	Sheldon Road	62961	35634	358.50	717.00	188.00	143.40	1,406.90
			35627	480.00	956.00	278.00	192.00	1,906.00
			35626	159.75	259.50	45.00	63.90	528.15
26	Shepard Road	62813	35606	231.00	540.00	392.00	92.40	1,255.40
27	Scott Hill Road	63013	35698	261.00	610.00	490.00	104.40	1,465.40
28	Smith Road	62807	35702	326.25	755.00	301.00	130.50	1,512.75
			35662	229.00	506.00		91.60	826.60
29	Warnick Road	62812	35565	163.50	372.00	220.50	65.40	821.40
30	Wolfe Lane	63007	35613	54.00	130.50	49.00	21.60	255.10
			35584	423.00	963.50	805.86	169.20	2,361.56
	TOTALS:			21,528.70	48,387.00	35,395.66	8,202.38	113,513.74
						Proof		113,513.74
1996	Transactions Per	IPA		31,027.78	70,154.50	60,112.76	11,606.23	172,901.27
	TOTAL 1996-1997			52,556.48	118,541.50	95,508.42	19,808.61	286,415.01

**Table 14 – Hebron, Town of FEMA Project Transactions Y/E 12/31/97**

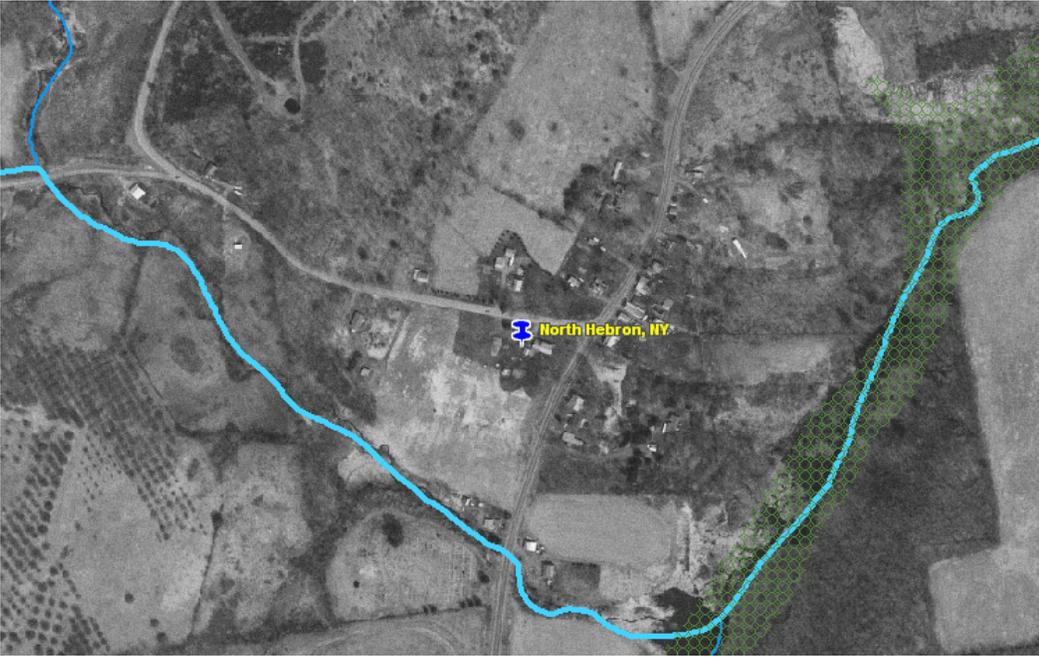


Figure 61 – North Hebron B&W Aerial - NYS Interactive Mapping



Figure 62 – West Hebron B&W Aerial - NYS Interactive Mapping



Figure 63 – East Hebron B&W Aerial - NYS Interactive Mapping

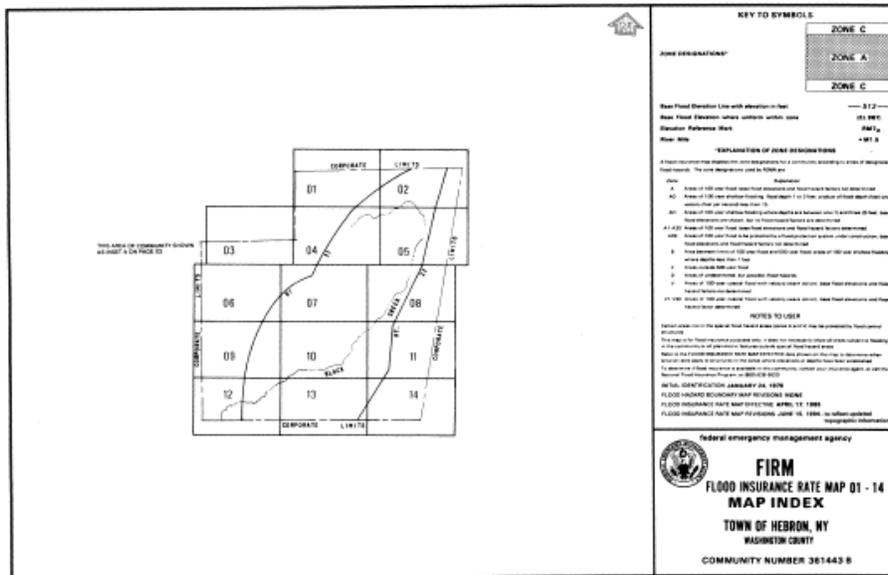


Figure 64 – Hebron FIRM

3.3.16. Hudson Falls, Village of

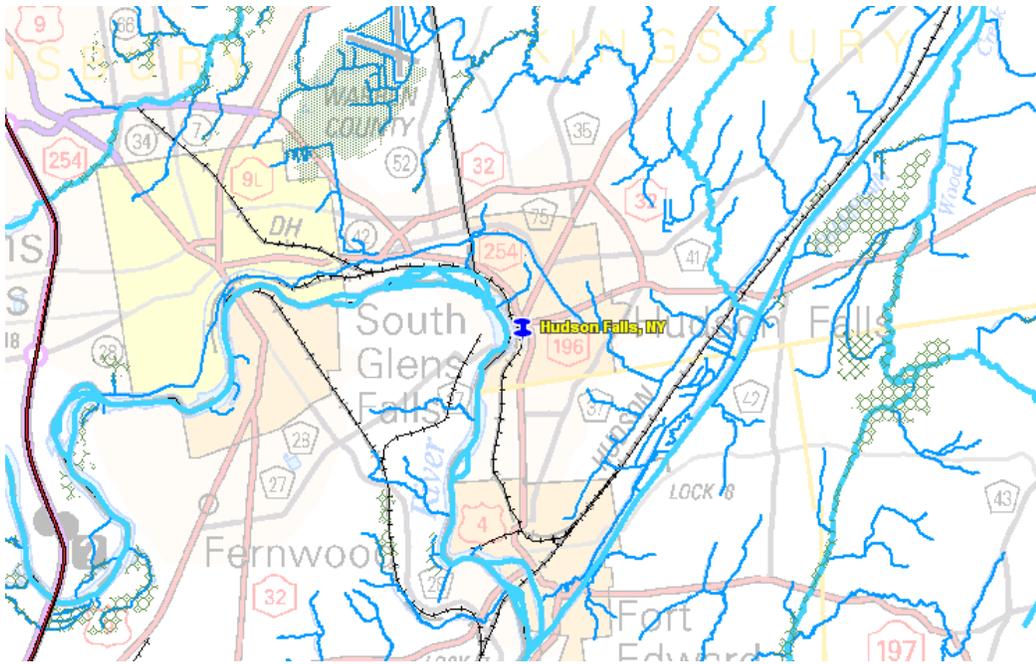


Figure 65 – Hudson Falls, Village of - NYS Interactive Mapping

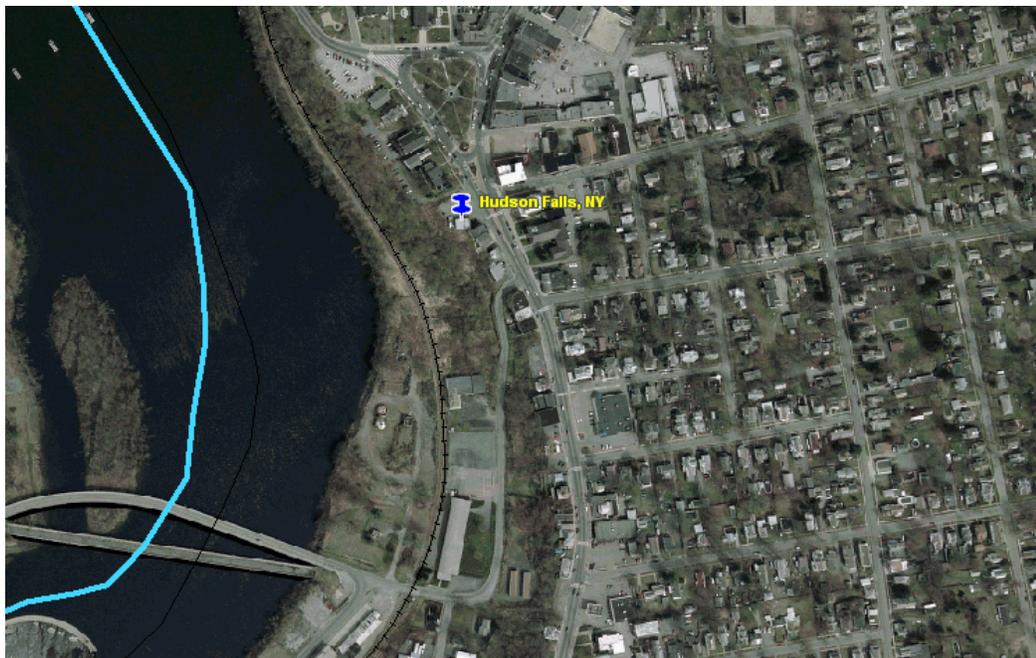


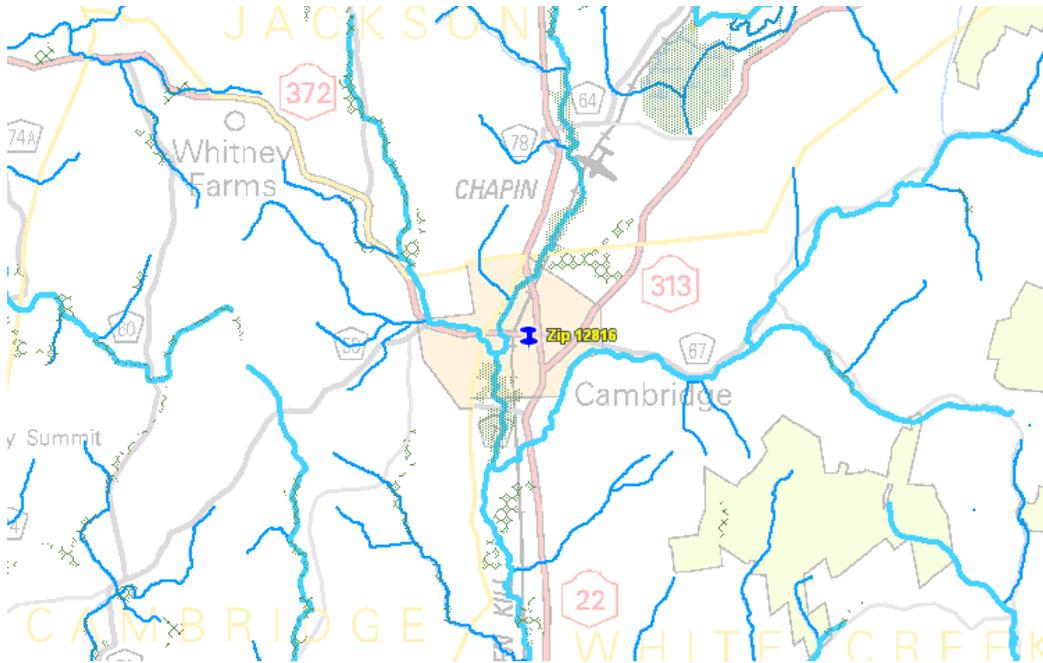
Figure 66 – Hudson Falls, Village of B&W Aerial - NYS Interactive Mapping

**No FIRM available**

3.3.17. Jackson

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
954	32	0	88	10	12	1	25	1,122
47,408,691	2,005,932	0	7,504,921	2,336,900	889,708	60,000	2,240,001	62,446,153

**Table 15 – Jackson Tax Information**



**Figure 67 – Jackson - NYS Interactive Mapping**

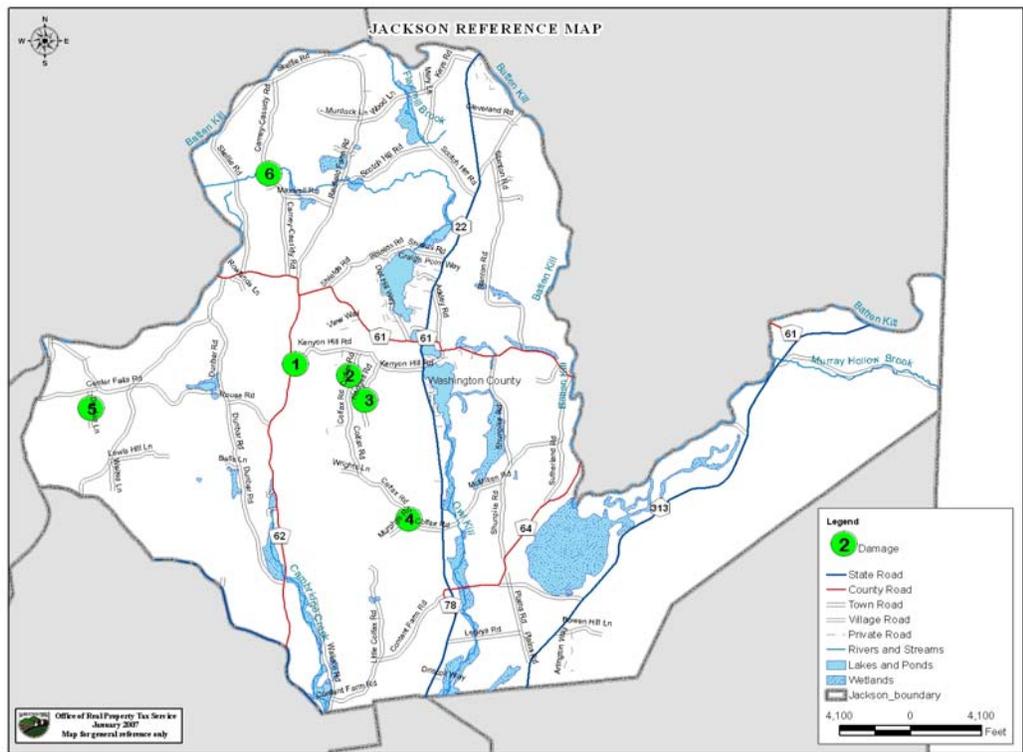


Figure 68 – Jackson Referenced Map

Jackson

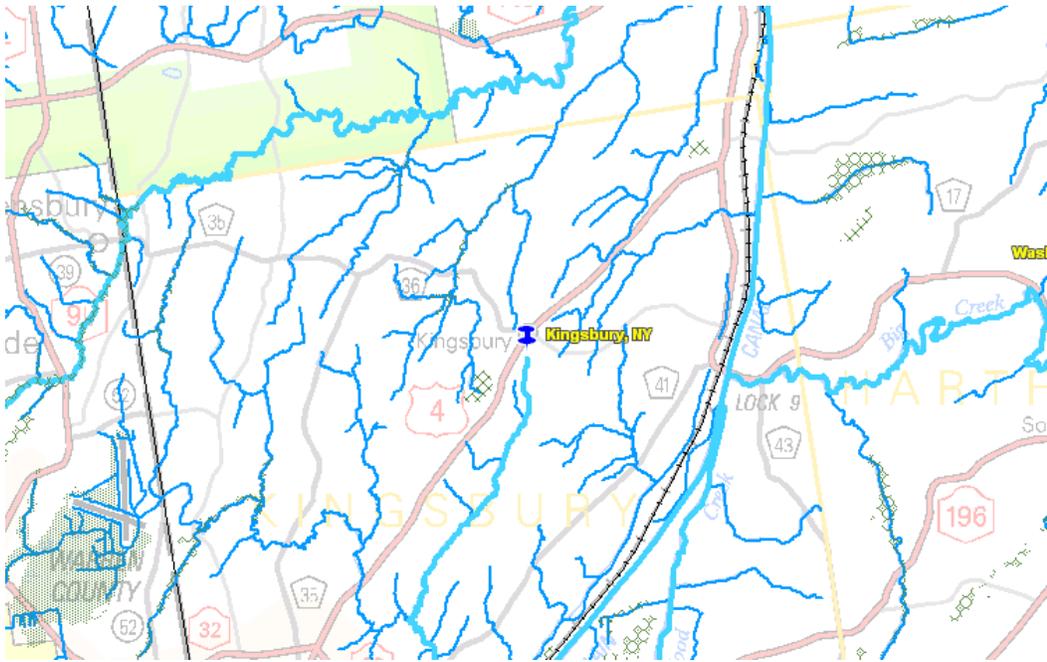
1. Kenyon Hill of County Route 62 – 1996
2. Colfax Road – washout
3. Hedges – washout
4. Murphy’s Road – 1996 FEMA funding
5. Duells Road -
6. Carney & Cassidy Road (north end) –



3.3.18. Kingsbury

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
3,492	317	23	92	51	60	16	50	4,101
380,152,621	69,940,900	12,216,900	16,968,400	15,304,500	45,890,200	25,562,455	16,624,819	582,660,795

**Table 16 – Kingsbury Tax Information**



**Figure 71 – Kingsbury - NYS Interactive Mapping**

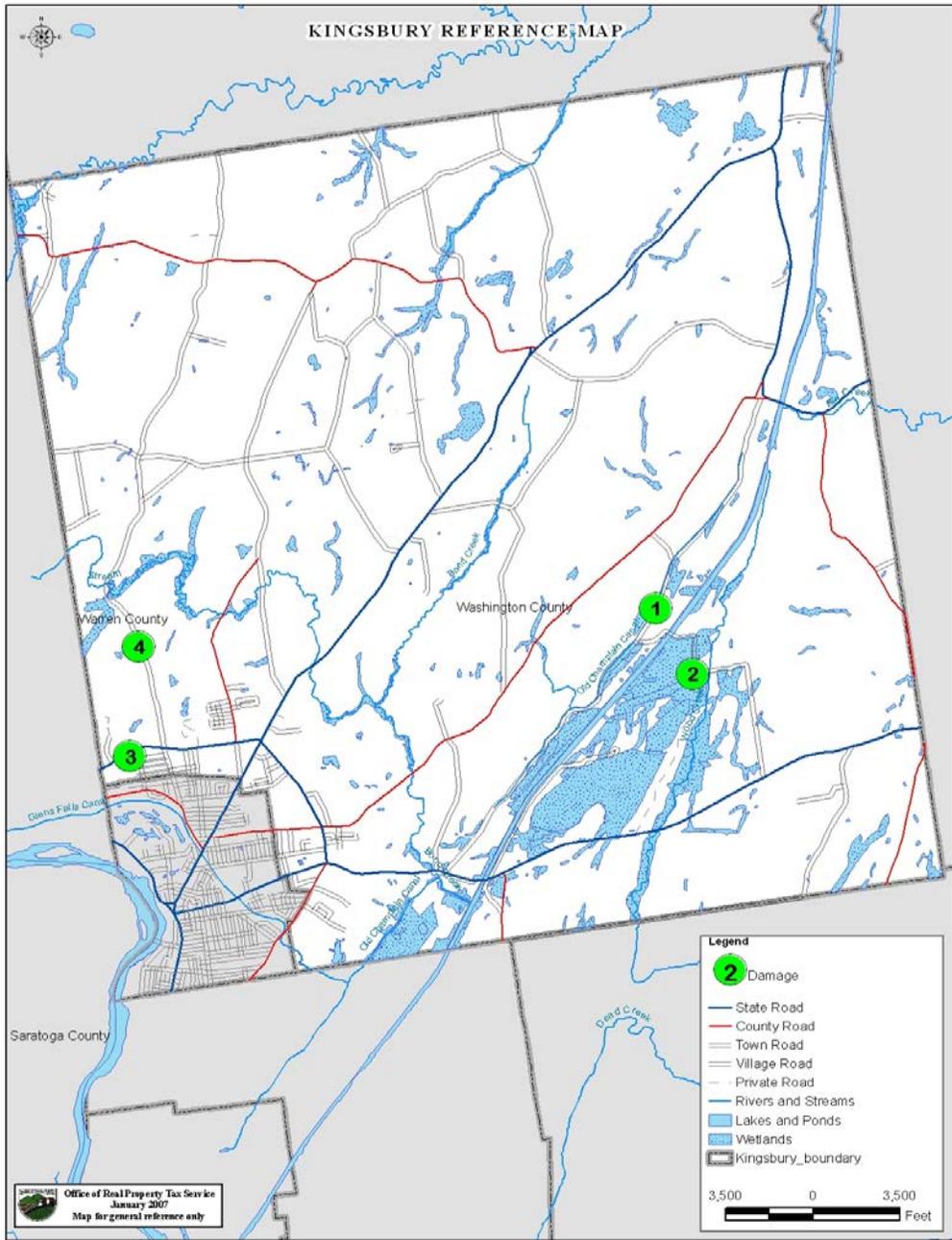


Figure 72 – Kingsbury Referenced Map

Kingsbury

1. Champlain Canal Towpath - flooding annually near New Swamp Road.
2. New Swamp Road and Wood Creek –1996 \$500,000 damage;  
2004 \$326,000 w FEMA funding.
3. State Road 32 – runoff; flooding.
4. Dean Road – high ground; water close to flooding.



Figure 73 – Kingsbury B&W Aerial View - NYS Interactive Mapping

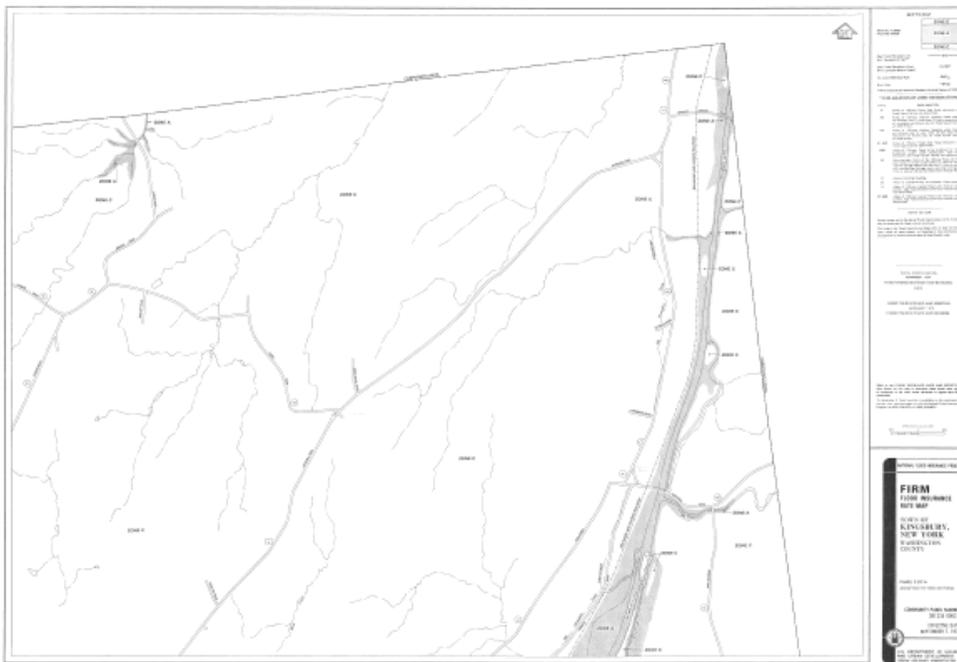


Figure 74 – Kingsbury FIRM

### 3.3.19. Putnam

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
590	3	0	11	5	12	5	12	638
103,813,874	540,000	0	1,257,000	561,000	685,700	2,211,100	5,497,176	114,565,850

**Table 17 – Putnam Tax Information**



**Figure 75 – Putnam - NYS Interactive Mapping**

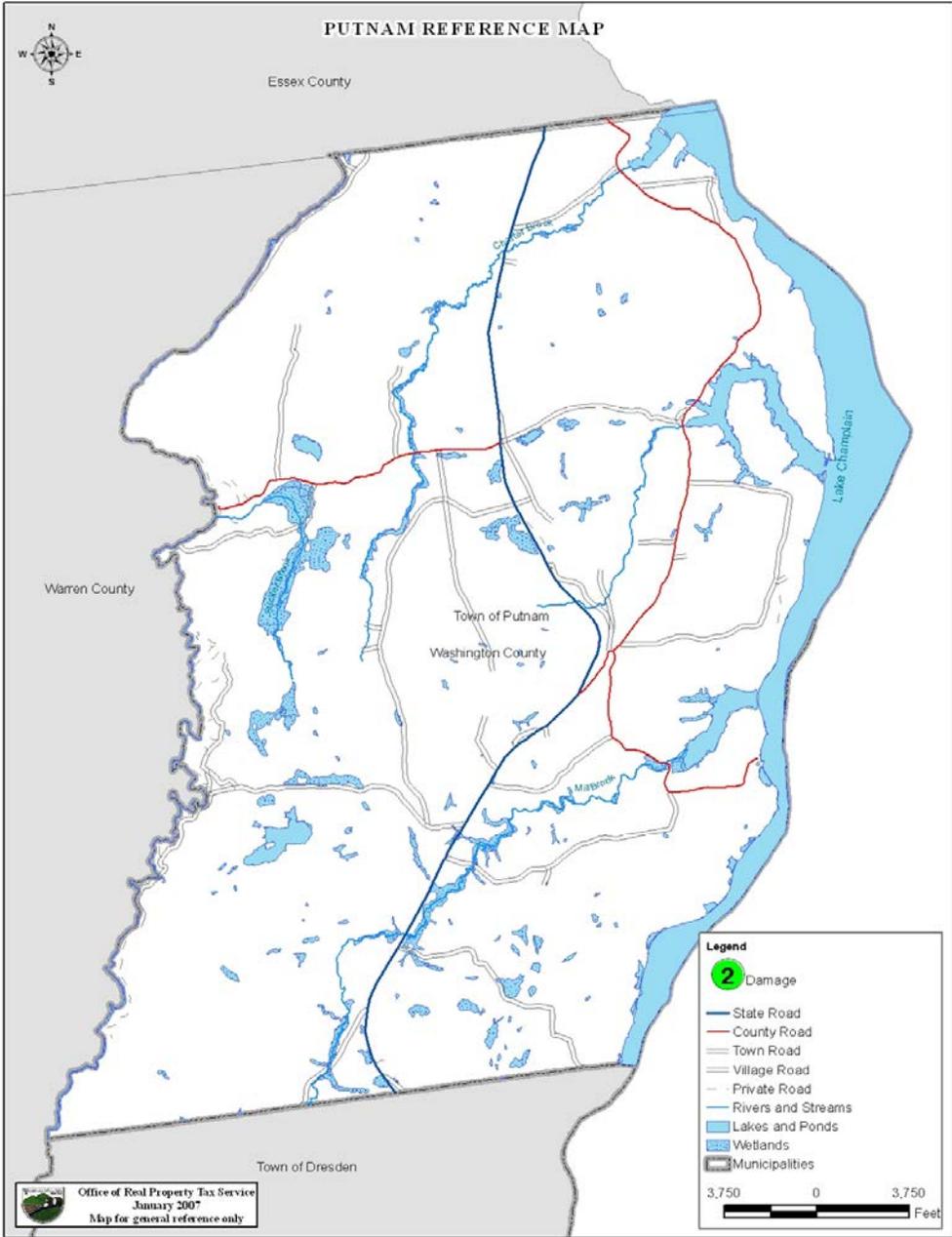


Figure 76 – Putnam Map (not referenced)

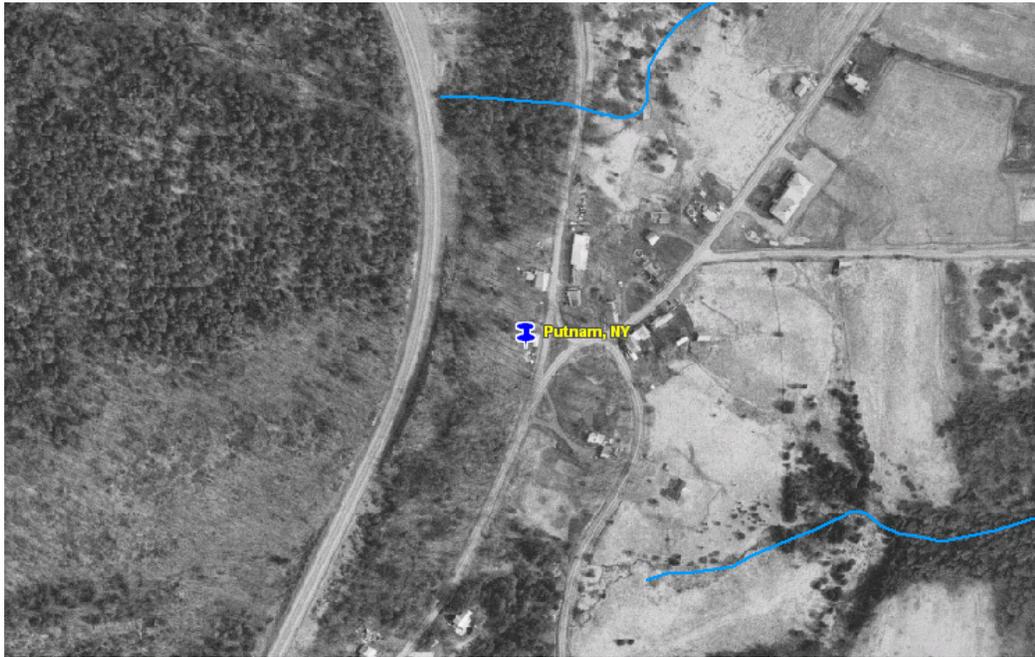


Figure 77 – Putnam B&W Aerial View - NYS Interactive Mapping



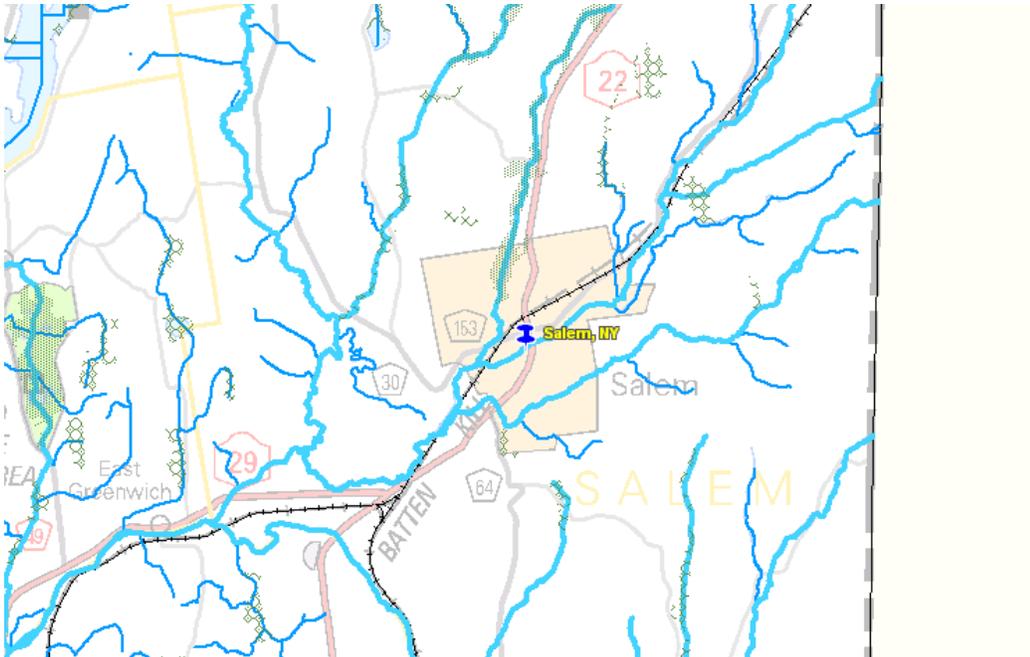
Figure 78 – Putnam FIRM

No report

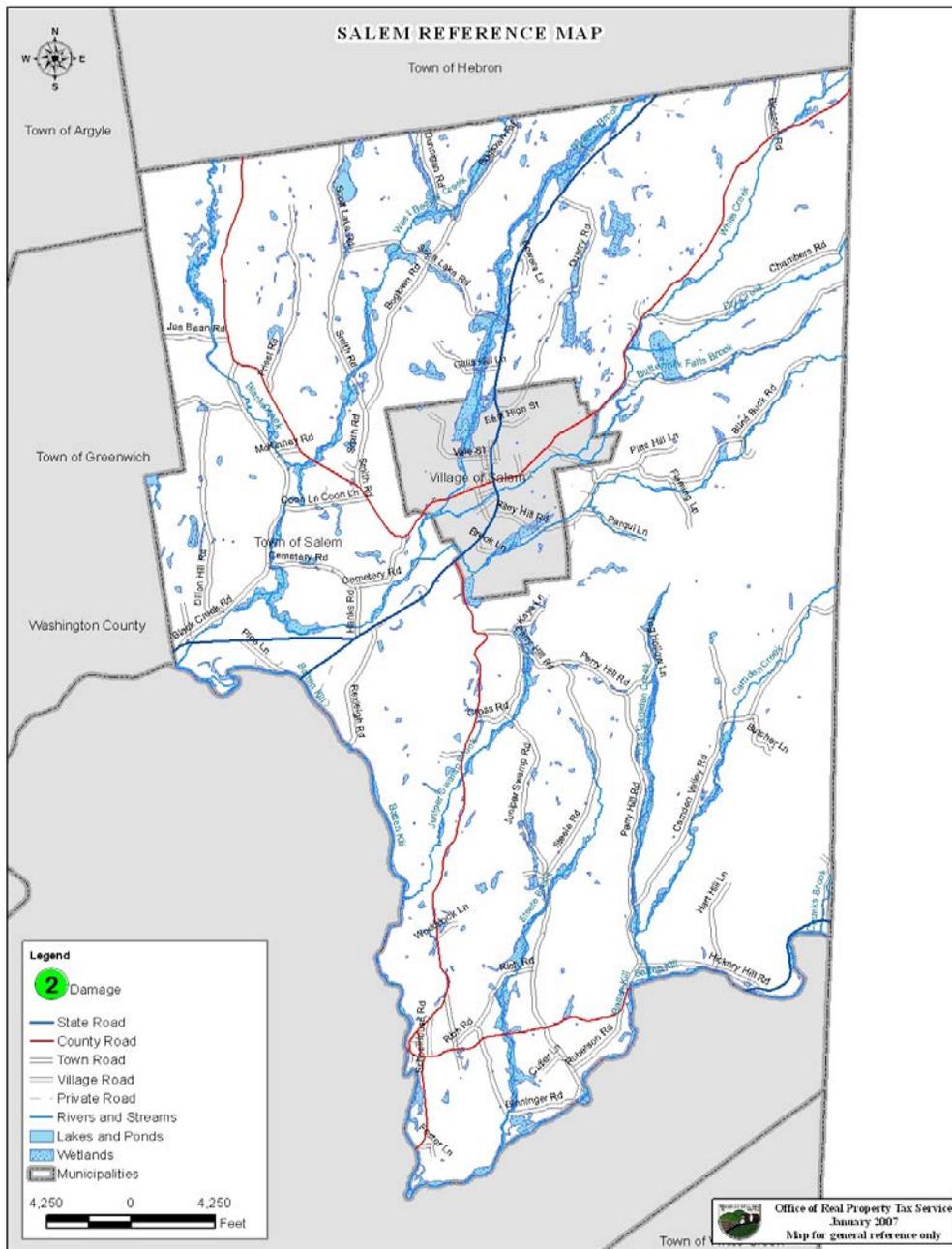
3.3.20. Salem

Residential	Commercial	Industrial	Agricultural	Religious/ Non-profit	Government	Education	Utilities	Totals
200 Prop Class	400 Prop Class	700 Prop Class	100 Prop Class				R/S 5,6,7	
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,121	71	3	87	24	17	3	25	1,351
92,807,776	7,402,300	324,300	10,242,850	1,635,100	976,600	8,736,800	5,479,335	127,605,061

**Table 18 – Salem Tax Information**



**Figure 79 – Salem - NYS Interactive Mapping**



**Figure 80 – Salem Map (not referenced)**  
*(See Appendix 1 for details of flood events in Village of Salem)*

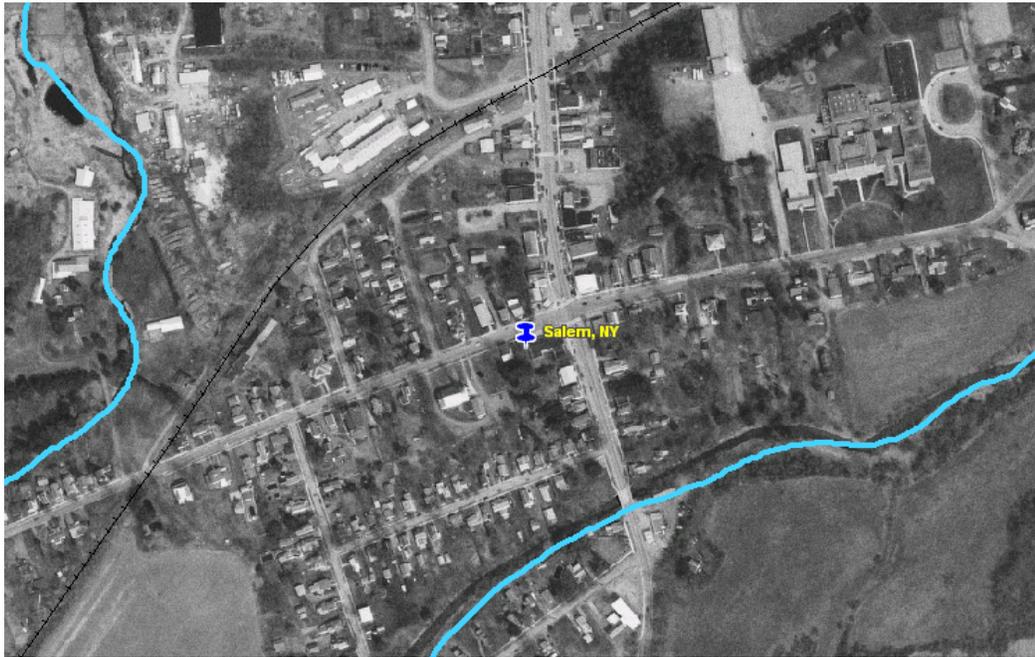


Figure 81 – Salem B&W Aerial View - NYS Interactive Mapping

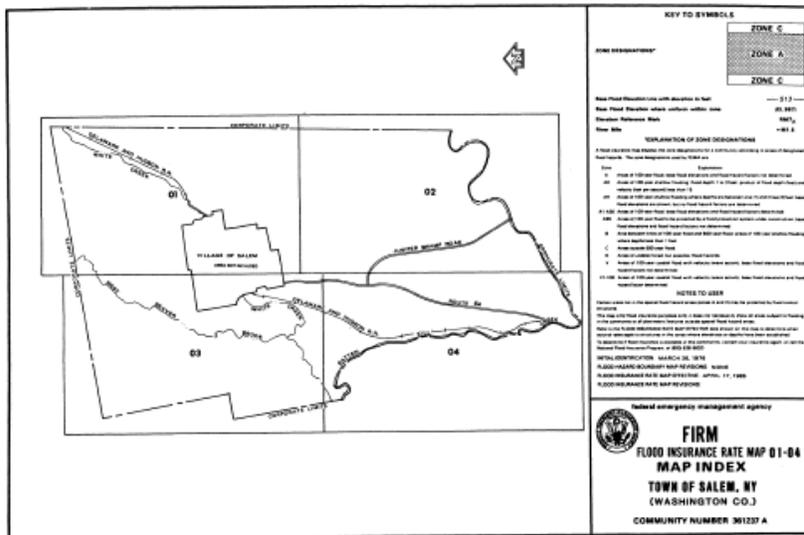


Figure 82 – Salem FIRM

No report

3.3.21. Salem, Village of

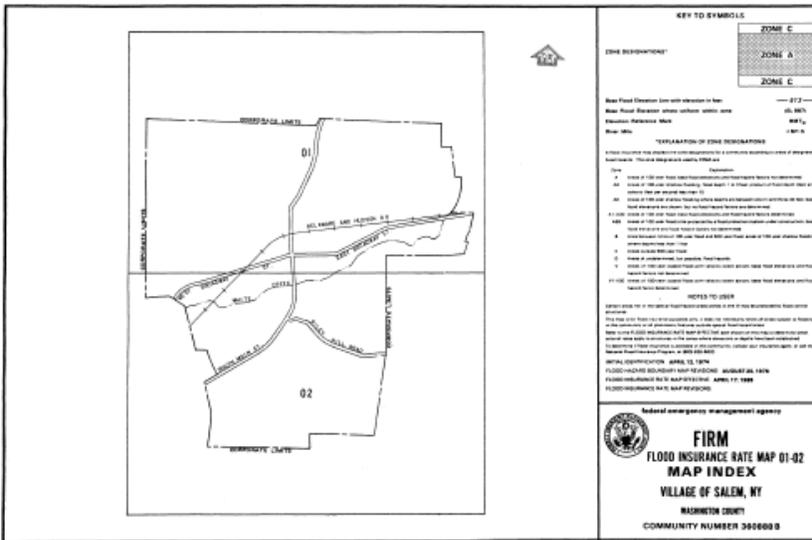


Figure 83 – Salem, Village of FIRM

See detailed report from the Village – APPENDIX 1

3.3.22. Washington County



Figure 84 – Washington County Map

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

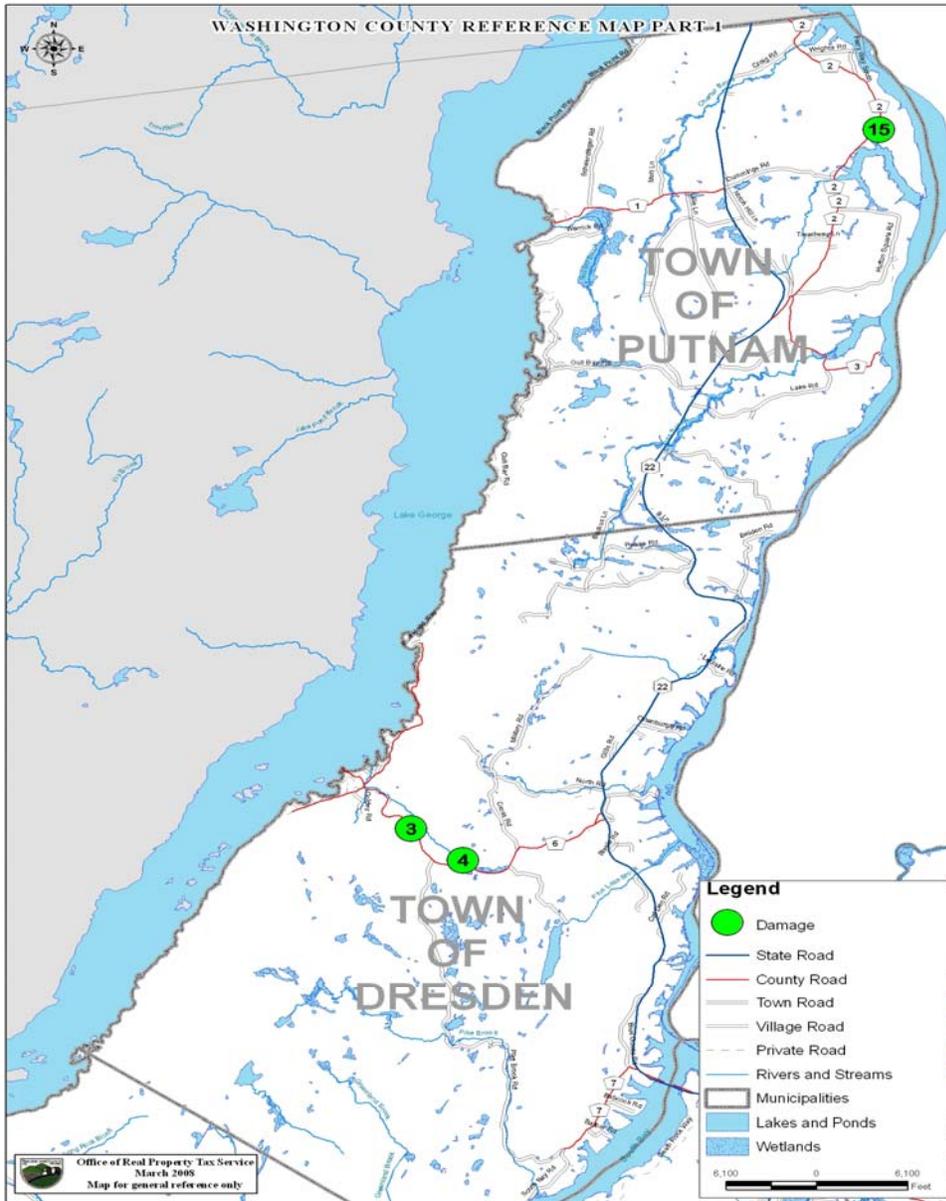


Figure 85 – Washington County Referenced Map – Part 1

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Dresden – Referenced Map Part 1**

3. CR 6 landslide. *Propose major engineered project to stabilize embankment above CR 6; sandy soils continually slump, blocking drainage ditch and roadway, and divert drainage into roadway causing erosion, and icing.* Figures 86 & 87 show the embankment failure.



**Figure 86 Embankment Failure**



**Figure 87 Embankment Failure**

*4. Mill Pond. Existing 6'-0" dia. Culvert blocked by beaver dam. Pond water currently pipes through road embankment and pools in an area contained by a former, abandoned road alignment before draining through a failing box culvert under the old alignment, Propose reconstructing pond outlet with precise drop-inlet with "beehive" style grate to deter beaver activity, and extend outlet pipe and remove old alignment. This design will regulate pond elevations and prevent excessive hydraulic gradients against the road embankment.*

Figure 88 shows the pool between CR 6 looking toward the old alignment.

Figure 89 shows the concrete header (usually submerged) at the 6 ft. diameter culvert outlet under CR 6.

Figure 90 shows the failing box culvert inlet under the old alignment.

Figure 91 shows box culvert outlet under the old alignment.

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 88 – Pool Caused by Beaver Dam**



**Figure 89 – Mill Pond-Concrete Header**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 90 – Mill Pond-Failing Box Culvert Inlet**



**Figure 91 – Mill Pond-Box Culvert Outlet**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Putnam – Referenced Map Part 1**

**15. CR 2 landslide.** *Habitual slope stability issues compromise the north bound lanes at this location annually. Propose a slope stabilization project at this location.* Figure 92 shows the down gradient slope and the asphalt patches where the roadway is undermined seasonally.



**Figure 92 – CR 2**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

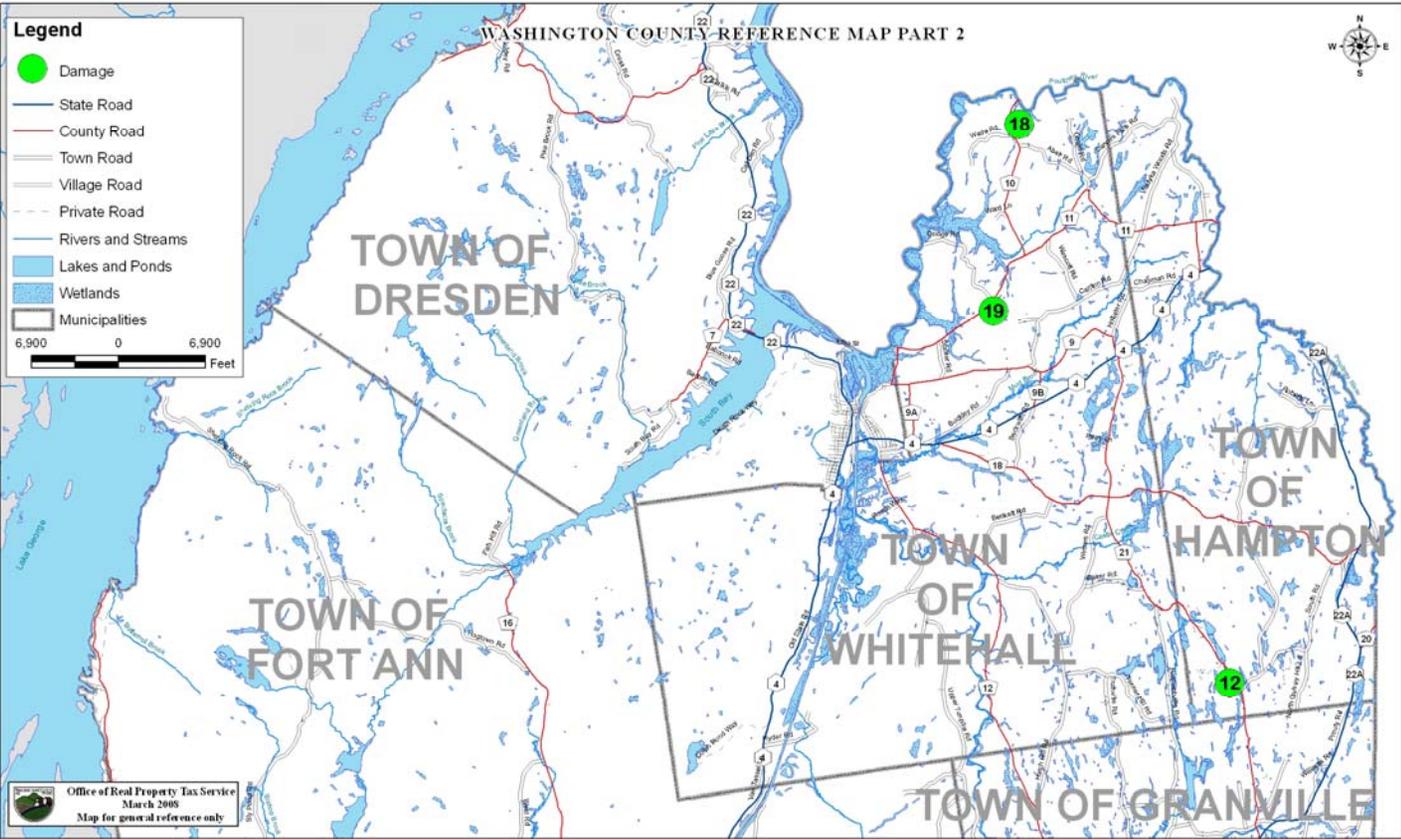


Figure 93 – Washington County Referenced Map – Part 2

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Hampton – Referenced Map Part 2**

**12.** CR 21 beaver dam failure, 1,000 ft. of County highway lost. *Propose increasing waterway opening by replacing culvert pipe with concrete box culvert or small bridge; armor banks and shoulders with crushed stone to mitigate damage to road if overtopped in the future.* Figures 94, 95, 96, & 97 show post flood damage. While asphalt appears intact, it is cantilevered; the ditches and shoulders were eroded and the roadway undermined up to 5 ft. under the asphalt.



**Figure 94 – CR 21 Beaver Dam Failure-Post Flood Damage-View 1**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 95 – CR 21 Beaver Dam Failure-Post Flood Damage-View 2**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 96 – CR 21 Beaver Dam Failure-Post Flood Damage-View 3**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 97 – CR 21 Beaver Dam Failure-Post Flood Damage-View 4**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Whitehall – Referenced Map Part 2**

**18.** CR 10, landslide south of Poultney River bridge. Figure 98 shows the guide posts down gradient that have migrated out of alignment with the shoulder. Figure 99 shows the utility pole undermined by the failing slope.



**Figure 98 – CR 10 – Guide Posts Down Gradient**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 99 – CR 10 – Utility Pole Undermined by Failing Slope**

**19.** CR 10, landslide west of Dodge Road. Figures 100, 101, 102, & 103 show patched asphalt and asphalt failures where settlement continually creates a hazard on the roadway. *Habitual slope stability issues compromise the travel lanes at these locations annually. Propose slope stabilization projects at these locations.*

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 100 – CR 10-Condition of Roadway-View 1**



**Figure 101 – CR 10 – Condition & Slope of Roadway-View 2**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 102 – CR 10 – Condition of Roadway-View 3**



**Figure 103 – CR 10 – Condition of Roadway-View 4**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

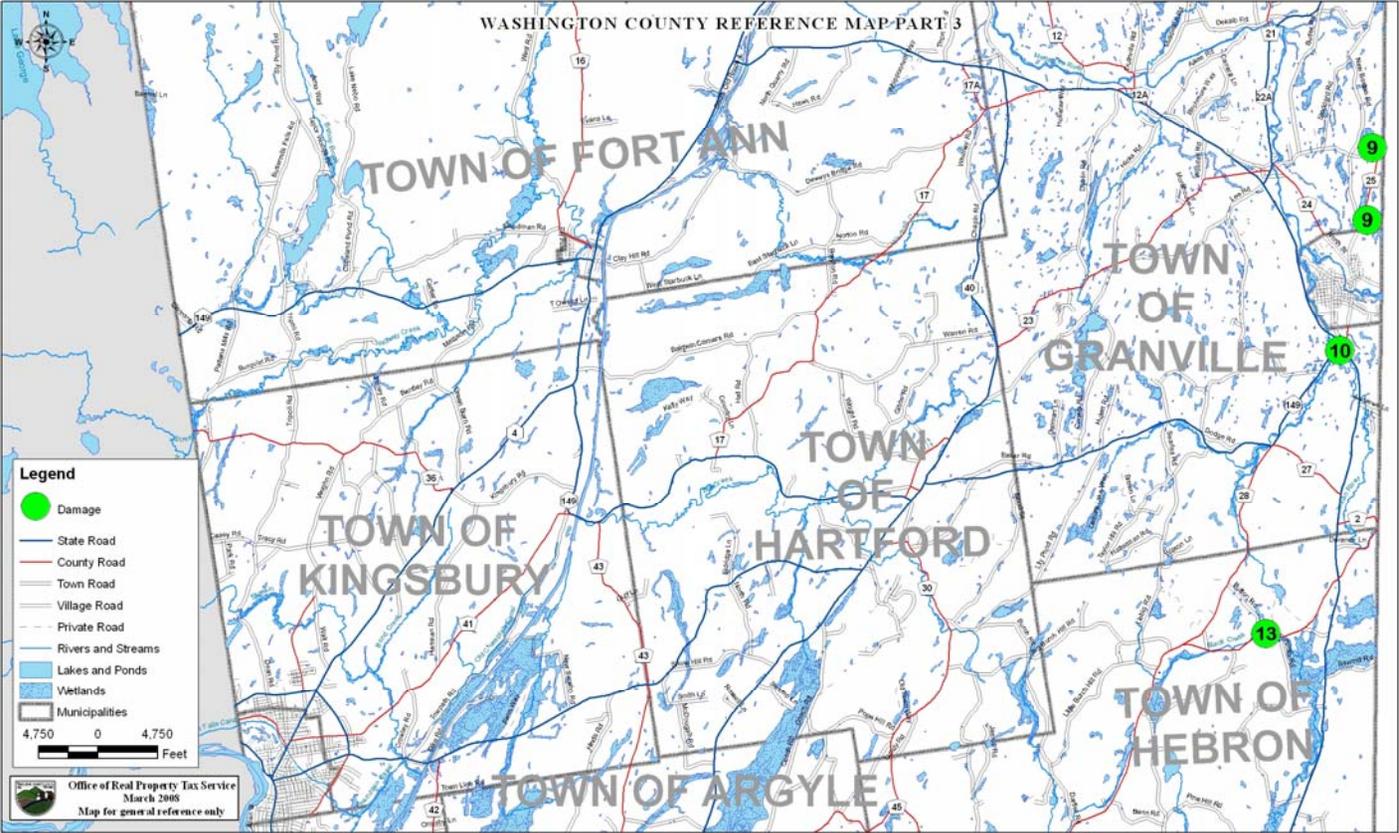


Figure 104 – Washington County Referenced Map – Part 3

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Granville – Referenced Map Part 3**

9. CR 25, beaver dams. *Beaver dams at New Boston Road, and Drake Road have caused washouts and erosion damage to town and county roads and drainage system. Propose armoring roadside ditches with crushed stone and increasing the waterway opening of existing culverts.* Figures 105 and 106 show flood damage at Drake Road.



**Figure 105 – CR 25 – Flood Damage at Drake Road**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 106 – CR 25 – Flood Damage at Drake Road**

**10.** CR 26, annual flooding at CR 26 and State Route 22. *Propose increasing the waterway opening of the culvert under State Route 22.*

**Town of Hebron – Referenced Map Part 3**

**13.** CR 31, flooding in the hamlet of Slateville.

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

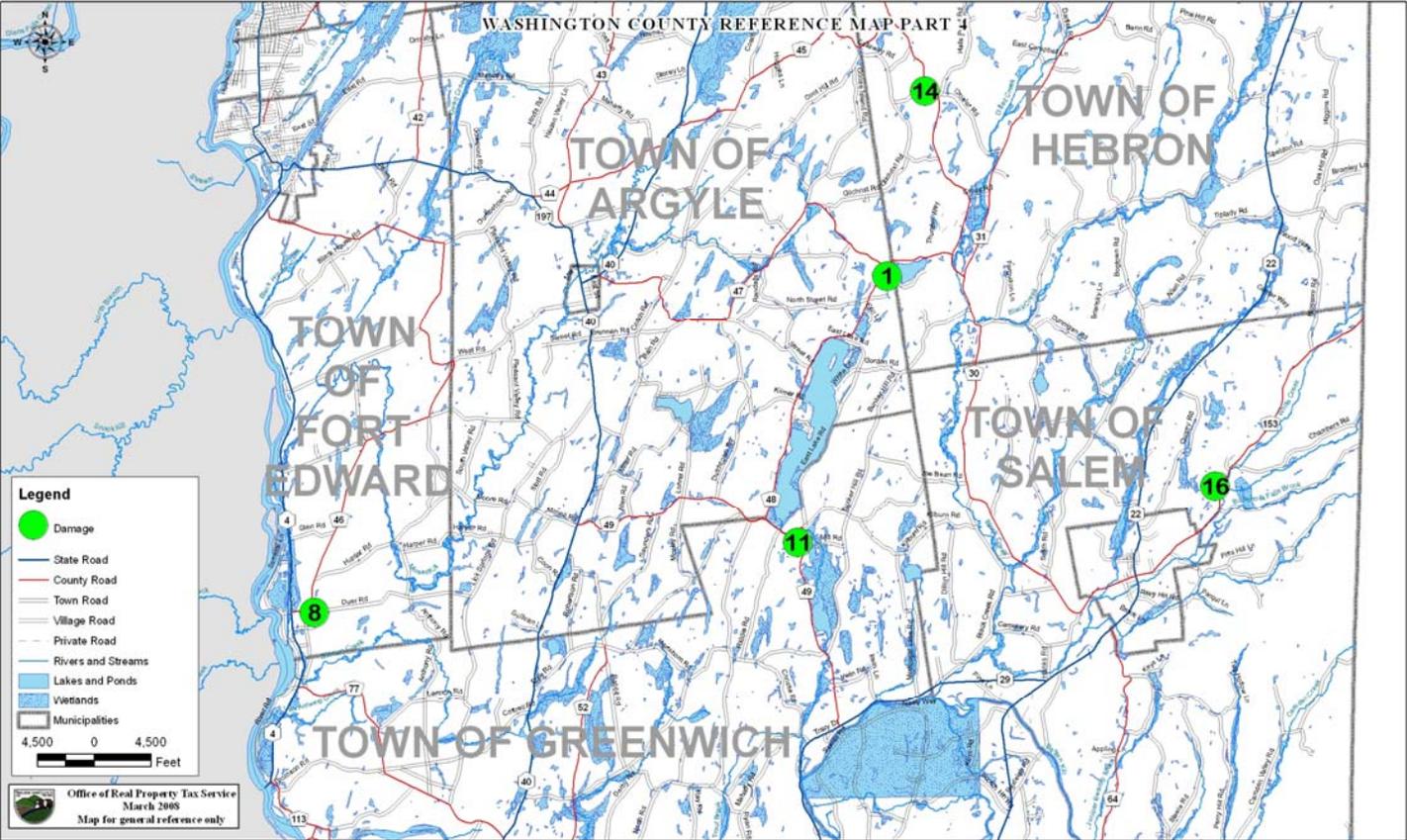


Figure 107 – Washington County Referenced Map – Part 4

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Argyle – Referenced Map Part 4**

1. CR 47 road washout; beaver dam failure. *Propose replacing pipe-arch with concrete box culvert or small bridge; armor banks and shoulders with crushed stone to mitigate damage to road if overtopped in the future.* Figure 108 – the unnamed brook crosses CR 47 just before the intersection shown. Keyed asphalt joints show the approximate 100 ft. of roadway that was undermined and replaced.



**Figure 108 - CR 47 – Road Washout-Beaver Dam Failure**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Fort Edward – Referenced Map Part 4**

8. CR 46, landslide. *Habitual slope stability issues compromise the south bound lanes at this location annually. Propose a slope stabilization project at this location.* Figures 109, 110, and 111 show the down gradient slope and the asphalt patches where the roadway is undermined seasonally.



**Figure 109 CR 46 – View 1**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 110 – CR 46 – View 2**



**Figure 111 – CR 46 – View 3**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Greenwich – Referenced Map Part 4**

**11.** CR 49, Cossayuna Lake Outlet Dams. *While the dams are directly under CR 49, they are nominally owned by Cossayuna Volunteer Fire Company. Structures are in poor condition, and require total replacement.* Figures 112-119 show the two structures and their state of disrepair.



**Figure 112 – Cossayuna Lake Outlet Dams**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 113 – Cossayuna Lake Outlet Dams**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 114 – Cossayuna Lake Outlet Dams**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 115 – Cossayuna Lake Outlet Dams**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 116 – Cossayuna Lake Outlet Dams**

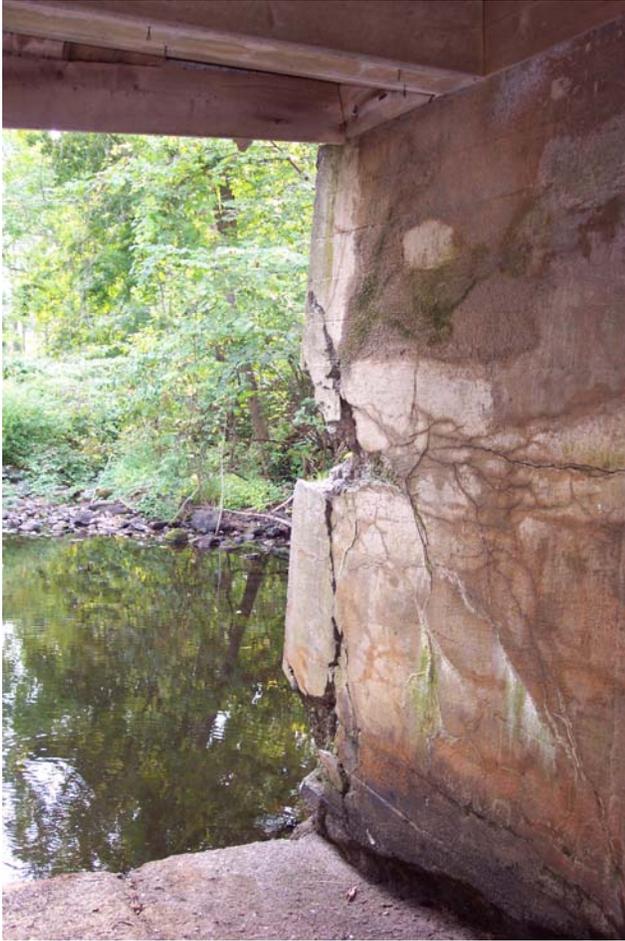


**Figure 117 – Cossayuna Lake Outlet Dams**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 118 – Cossayuna Lake Outlet Dams**



**Figure 119 – Cossayuna Lake Outlet Dams**

**Town of Hebron – Referenced Map Part 4**

**14.** CR 30 & Warnick Rd., Belcher. *Propose increasing culvert sizes in this area to mitigate flooding damage.*

**Town of Salem – Referenced Map Part 4**

**16.** CR 153, habitual flooding related to the Village of Salem.

WASHINGTON COUNTY DPW - Hazard Mitigation Sites on County Highway System

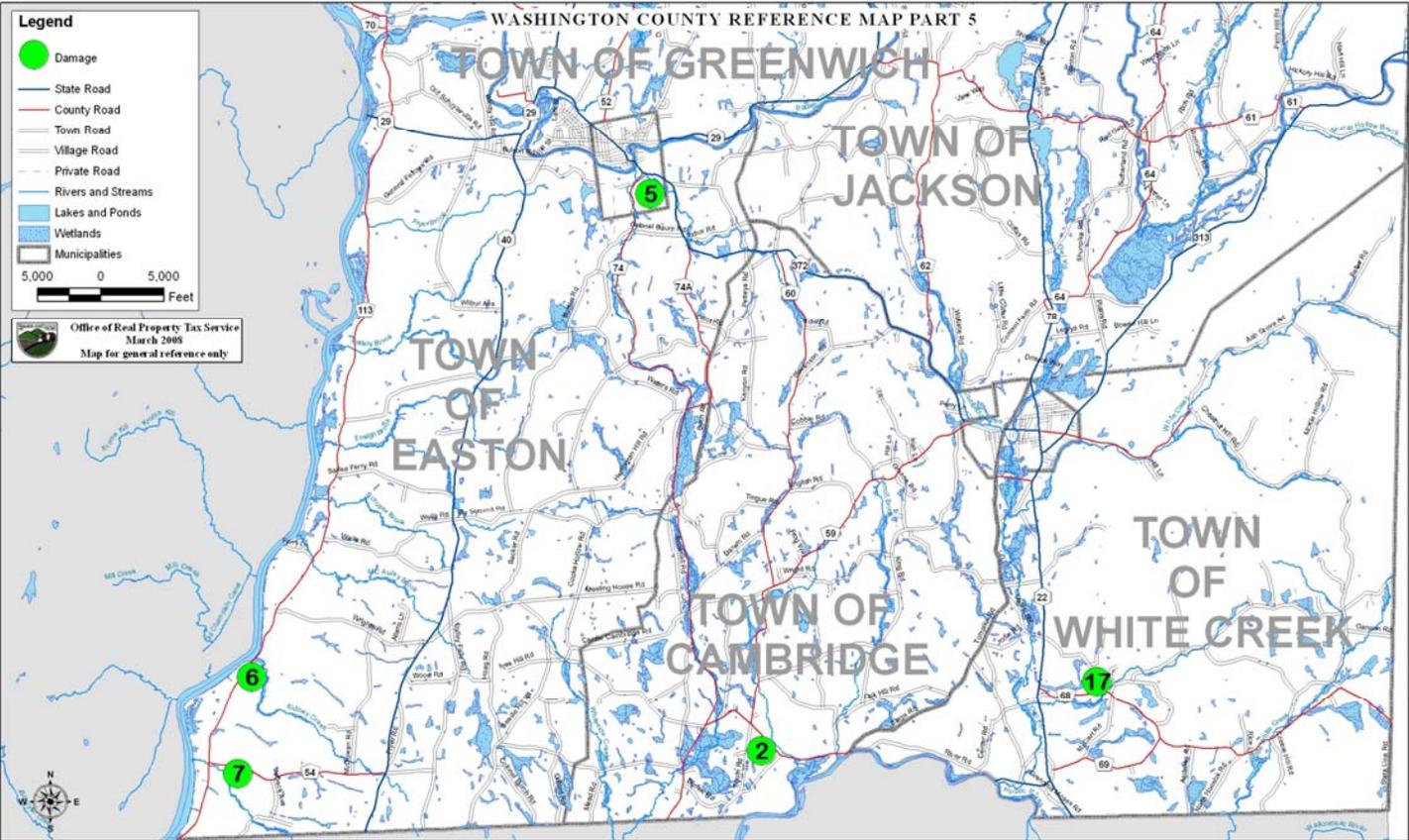


Figure 120 – Washington County Referenced Map – Part 5

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Cambridge - Referenced Map Part 5**

2. CR 59 landslide; .25 mile west of Morris Road intersection. *Propose major engineered project to stabilize embankment continually eroded by meandering stream at the base of the slope.* Figure 121 shows the asphalt patch in road where westbound lane is continually undermined. Figures 122-125 show the embankment failure.



**Figure 121 – CR 59 – Asphalt Patch in Road**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 122 – CR 59 – Embankment Failure**



**Figure 123 – CR 59 – Embankment Failure**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 124 – CR 59 – Embankment Failure**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

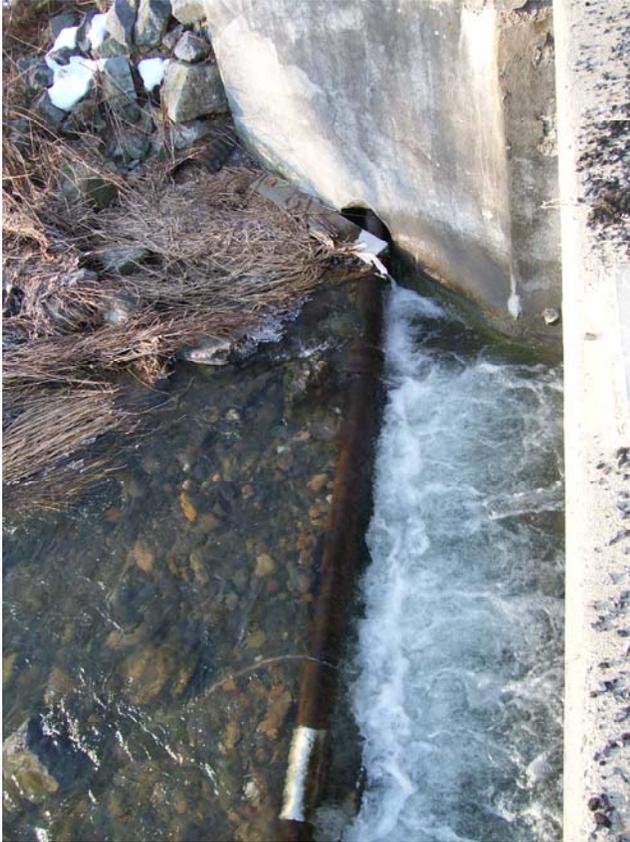


**Figure 125 – CR 59 – Embankment Failure**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of Easton – Referenced Map Part 5**

5. CR 74, water main. *Village of Greenwich water supply main runs through the bridge wingwalls and directly on the creek bottom where CR 74 crosses Fly Creek and Marshall Brook. The existing condition compromises the integrity of the two county bridges, and the exposed water main is vulnerable to debris and ice. Failure of the pipe would compromise the only supply to the storage tank that supports a village of 1,900 residents. Propose a project to install new water mains under the creek bed. Figure 126 and Figure 127 show the water main at each respective stream crossing.*



**Figure 126 – Exposed Water Main - CR 74 Crosses Fly Creek**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 127 – Exposed Water Main – CR 74 Crosses Marshall Brook**

**6.** CR 113, habitual flooding .25 mile south of Kidney Creek. *Propose hydraulic analysis of this area to mitigate frequency and severity of flood damage.*

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**7. CR 54 landslide.** *Habitual slope stability issues compromise the west bound lanes at this location annually. The County acquired property to potentially re-align the highway. Propose engineering to determine if slope stabilization of the existing highway alignment, or realigning the highway is the most economical solution.*

Figures 128-130 show the down gradient slope and the asphalt patches where the roadway is undermined seasonally.



**Figure 128 – CR 54-View 1**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System



**Figure 129 – CR 54-View 2**



**Figure 130 – CR 54-View 3**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

**Town of White Creek – Referenced Map 5**

**17.** CR 68 twin culverts. *The waterway opening is theoretically adequate, but the twin structures easily trap debris, obstructing the culverts and topping the road. Propose replacing culvert pipe with concrete box culvert or small bridge; armor banks and shoulders with crushed stone to mitigate damage to road if overtopped in the future.*

Figure 131 and Figure 132 show the structures and eroded plunge pool at outlet.



**Figure 131 – CR 68 – Twin Culverts**

**WASHINGTON COUNTY DPW**  
Hazard Mitigation Sites on County Highway System

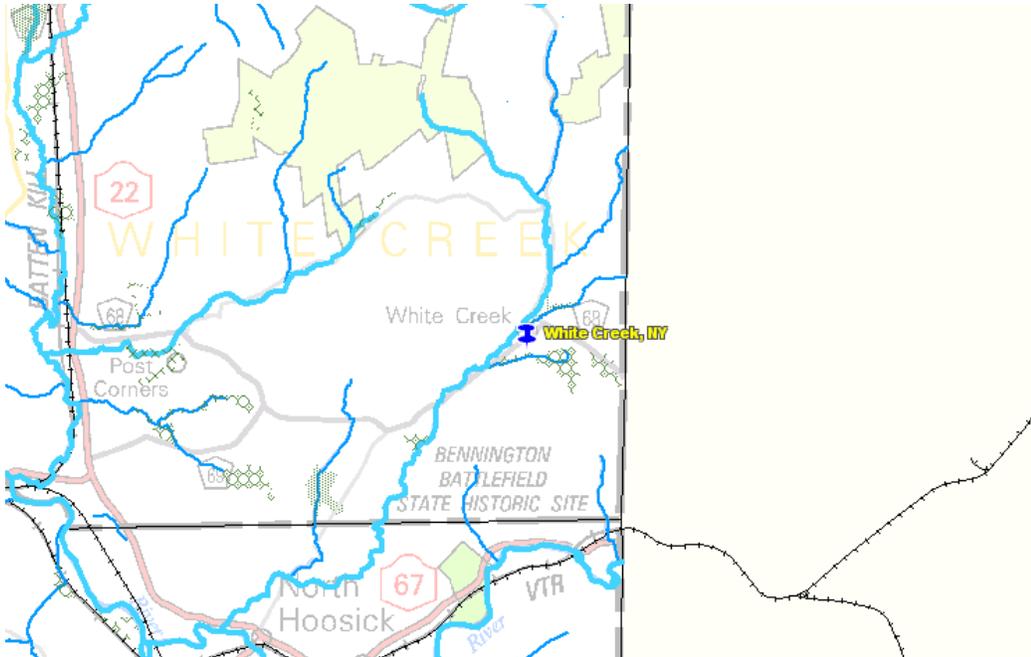


**Figure 132 – CR 68 – Twin Culverts & Eroded Plunge Pool**

3.3.23. White Creek

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities R/S 5,6,7	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,164	84	11	93	32	27	6	21	1,438
98,574,127	15,643,023	2,976,800	7,605,879	10,510,296	2,201,500	19,613,000	2,923,221	160,047,846

**Table 19 – White Creek Tax Information**



**Figure 133 – White Creek - NYS Interactive Mapping**

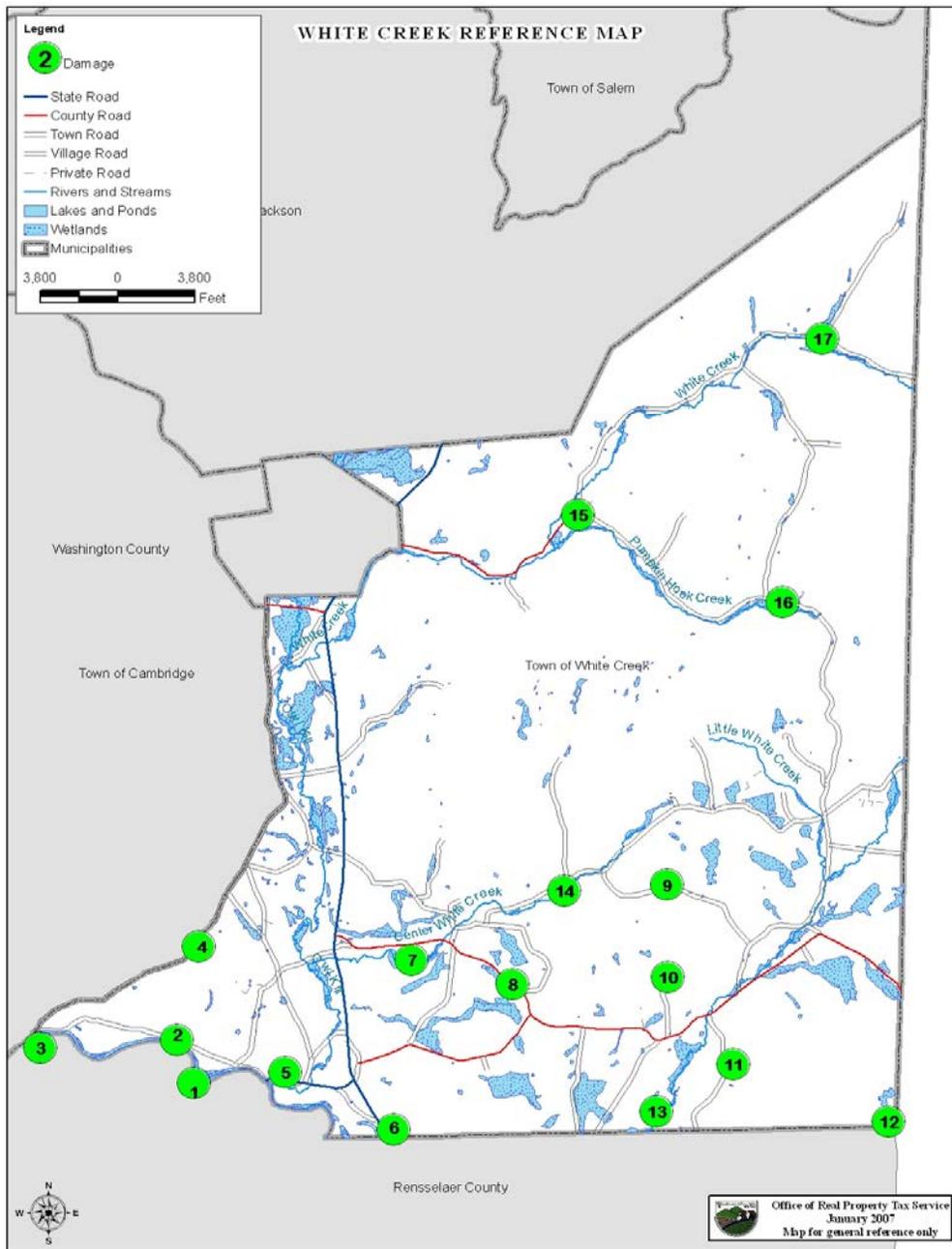


Figure 134 – White Creek Referenced Map

## White Creek

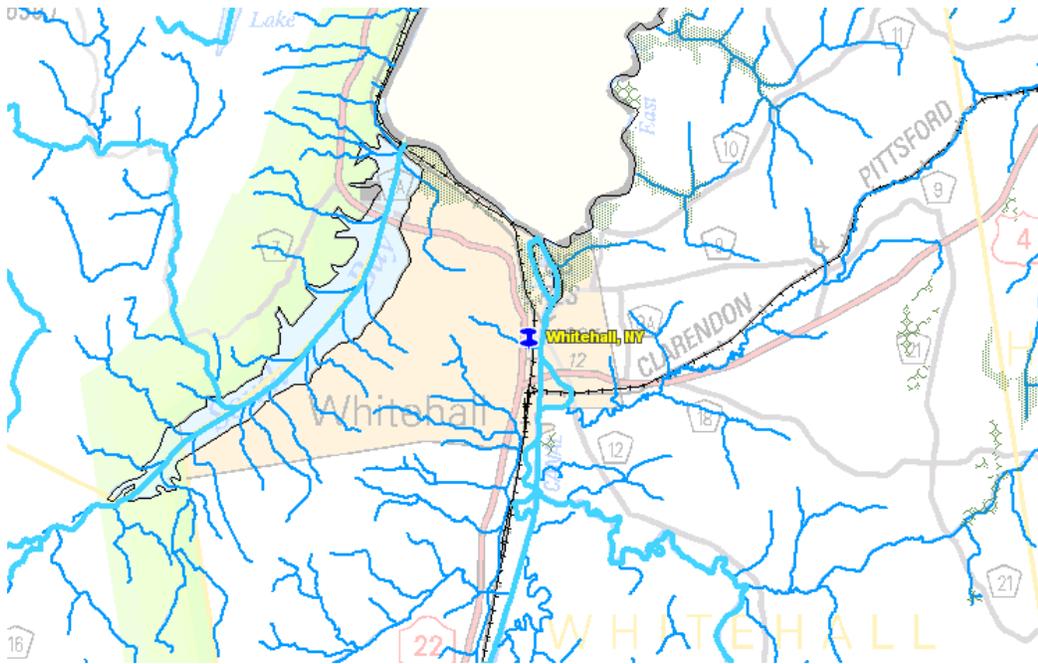
1. River Road – flooding at Buskirk Bridge; 3 washouts, 1996 FEMA funds, 2004
2. Stage Road (south of Oak Hill Road) – washout, 1996, 2000 Winter, and 2004
3. Stage Road at River Road – washout
4. Stage Road at Dinny Road – washout
5. Turnpike (south of Center Road)
6. Mc Cart Road – tube too small
7. Bonestab Road – tube washes out
8. Lincoln Hill (south of Shaker Hollow)
9. Lincoln Hill (near Hunt Lane, ½ mile south)
10. Quaker Hill – 2000 and 2004, ½ mile of road lost
11. Meeting House Road – 400 feet washed out
12. State Line Road – ¼ mile section washed out
13. Rice Lane - culvert, road washout 1996 and 2004
14. Shaker Hollow Road (near Lincoln Hill)
15. Ash Grove – man-made dam overflows and threatens 4 houses
16. McKie Hollow –
17. Bates Road – ¼ - ½ mile, culvert too small



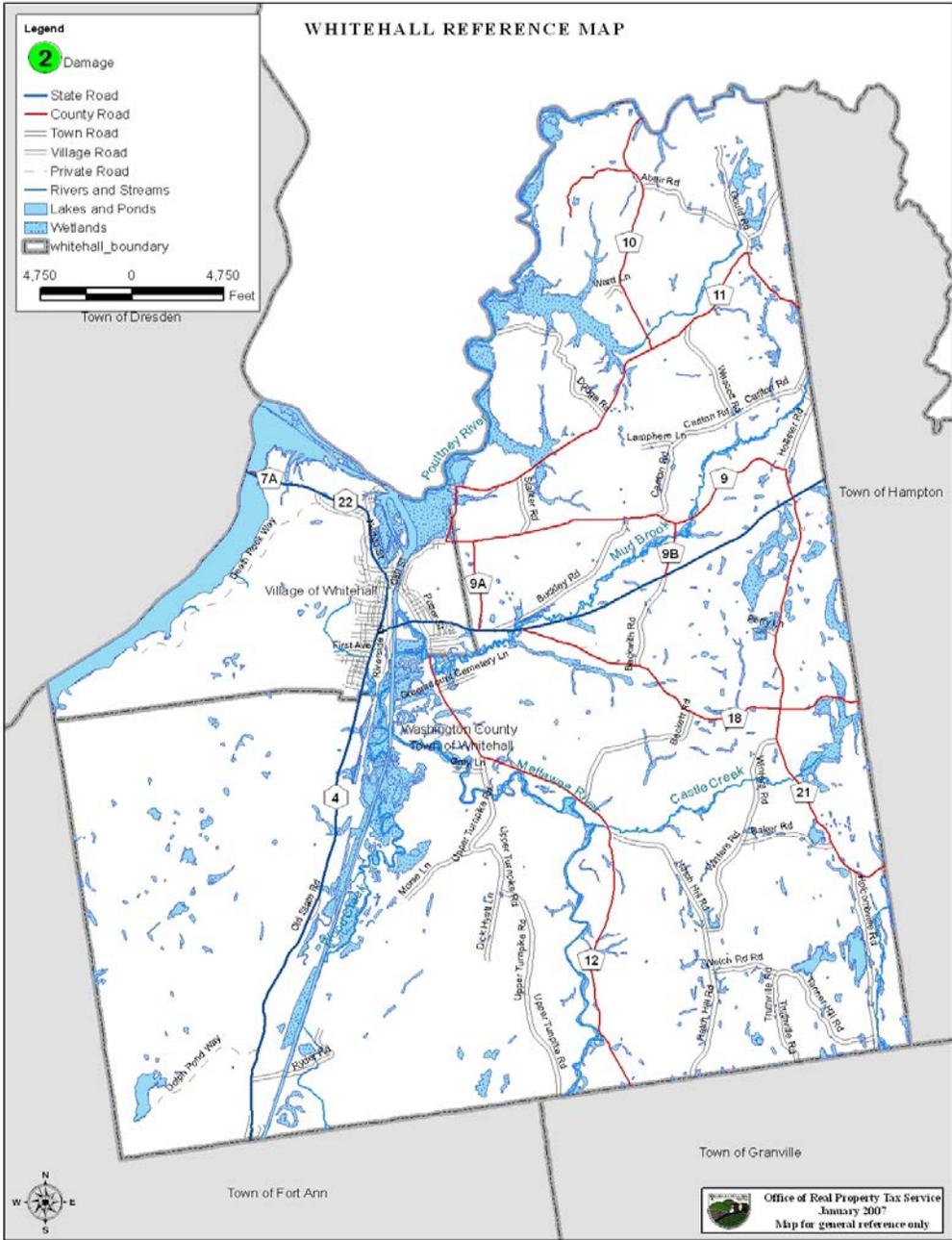
3.3.24. Whitehall

Residential 200 Prop Class	Commercial 400 Prop Class	Industrial 700 Prop Class	Agricultural 100 Prop Class	Religious/ Non-profit	Government	Education	Utilities	Totals
# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	# of Parcels	
Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Assessed Value	Value of Parcels	Value of Parcels	
1,394	136	11	55	66	54	4	37	1,757
73,952,661	10,441,916	2,020,510	6,288,670	5,234,350	5,122,900	7,175,600	11,991,884	122,228,491

**Table 20 – Whitehall Tax Information**



**Figure 137 – Whitehall - NYS Interactive Mapping**



**Figure 138 – Whitehall Map (not referenced)**  
 Resolution for Authorized Representation (Proxy) Submitted



Figure 139 – Whitehall B&W Aerial View - NYS Interactive Mapping



Figure 140 – Whitehall FIRM

3.3.25. Whitehall, Village of

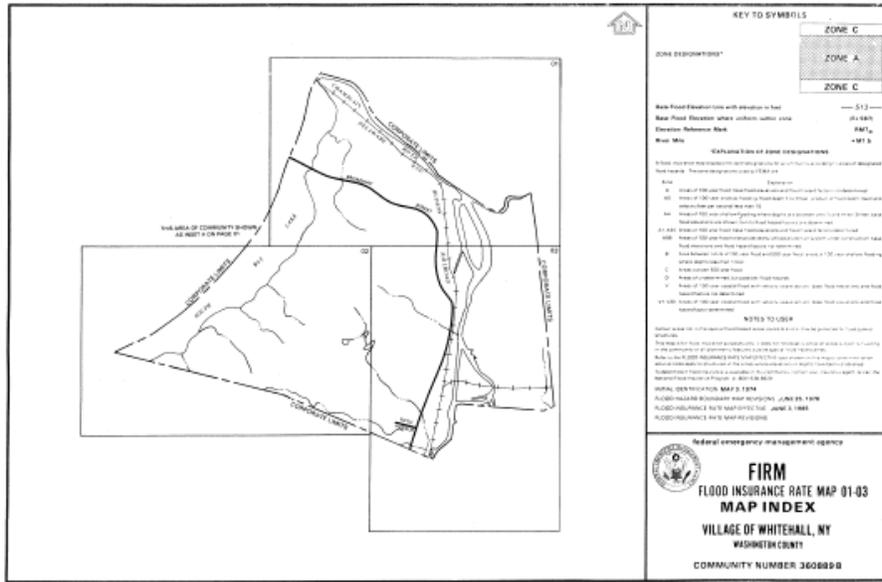


Figure 141 – Whitehall, Village of FIRM

Resolution for Authorized Representation (Proxy) Submitted



**Figure 142 - Village of Whitehall – Business Flood**



Figure 143 - Village of Whitehall – Traffic Flood

### Village of Whitehall

Route 22 @ RM 22-18081524+/- in the Village of Whitehall. This area of Route 22 has been prone to flooding in the past depending upon climatic conditions. The Village of Whitehall has an existing closed drainage system on a number of the Village streets west of this area that feed into a couple of x-culverts under 22 at this location & then under the RR tracks and into the canal.

#### 4. Mitigation Strategies

The mitigation planning approach used to develop this plan is based on the FEMA publication, *Developing the Mitigation Plan: Identifying Mitigation Actions and Implementing Strategies* (FEMA 386-3) and input provided by NYSEMO. The FEMA document and NYSEMO guidance include four steps, which were used to support mitigation planning. These steps are summarized below and presented in more detail in the following sections.

- **Develop mitigation goals and objectives:** Mitigation goals were developed using the hazard characteristics, inventory, and findings of the risk assessment. By reviewing these outputs and other municipal policy documents, objectives tying to these overarching goals were identified and characterized into similar themes.
- **Identify and prioritize mitigation actions:** Based on the risk assessment outputs, the mitigation goals and objectives, existing literature and resources, and input from the participating entities, alternative mitigation activities were identified for each hazard of concern and across multiple jurisdictions and hazards. The alternative mitigation activities are presented in a series of hazard-specific tables. The potential mitigation activities were qualitatively evaluated against the mitigation goals and objectives and other evaluation criteria. They were then prioritized into three categories: high, medium, and low.
- **Prepare an implementation strategy:** High priority mitigation activities are recommended for first consideration for implementation. Planning meetings in 2007-2008 will support further evaluation and selection of mitigation activities. In addition, input from FEMA and NYSEMO will be considered as the activities are evaluated further.
- **Document the mitigation planning process:** The mitigation planning process is documented throughout this plan (see minutes of Mitigation Planning Task Force meetings).

#### Mitigation Goals and Objectives

The four mitigation goals with their respective objectives are presented below:

##### **Goal 1: Protect Life and Property**

- Objective 1-1: Implement mitigation activities that will assist in protecting lives and property by making homes, businesses, infrastructure, and critical facilities more resistant to hazards.
- Objective 1-2: Encourage homeowners and businesses to take preventive actions in areas that are especially vulnerable to hazards.
- Objective 1-3: Build upon past efforts to characterize flood events by conducting additional flood studies and creating flood models (especially in the Village of Salem).
- Objective 1-4: Review existing local ordinances, building codes, safety inspection procedures, and applicable rules to help ensure that they employ the most recent and generally accepted standards for the protection of buildings.

- Objective 1-5: Ensure that public and private facilities and infrastructure meet established building codes and immediately enforce the codes to address any identified deficiencies.
- Objective 1-6: Incorporate hazard considerations into land-use planning and natural resource management.
- Objective 1-7: Encourage homeowners, renters, and businesses to purchase insurance coverage for damages caused by hazards.
- Objective 1-8: Integrate the recommendations of this plan into existing local and county programs.
- Objective 1-9: Implement mitigation activities that encourage environmental stewardship and protection of the environment.

## **Goal 2: Increase Public Awareness**

- Objective 2-1: Develop and implement additional education and outreach programs to increase public awareness of the risks associated with hazards and to educate the public on specific, individual preparedness activities.
- Objective 2-2: Provide information on tools, partnership opportunities, funding resources, and current government initiatives to assist in implementing mitigation activities.
- Objective 2-3: Implement mitigation activities that enhance the technological capabilities of the jurisdictions and agencies in the County to better profile and assess exposure of hazards.

## **Goal 3: Encourage Partnerships**

- Objective 3-1: Strengthen inter-jurisdiction and inter-agency communication, coordination, and partnerships to foster hazard mitigation strategies and/or projects designed to benefit multiple jurisdictions.
- Objective 3-2: Identify and implement ways to engage public agencies with individual citizens, non-profit organizations, business, and industry to implement mitigation activities more effectively.

## **Goal 4: Provide for Emergency Services**

- Objective 4-1: Encourage the establishment of policies at the local level to help ensure the prioritization and implementation of mitigation strategies and/or projects designed to benefit essential facilities, services, and infrastructure.
- Objective 4-2: Where appropriate, coordinate and integrate hazard mitigation activities with existing local emergency operations plans.

- Objective 4-3: Identify the need for, and acquire, any special emergency services and equipment to enhance response capabilities for specific hazards.
- Objective 4-4: Review and improve, if necessary, emergency traffic routes; communicate such routes to the public and communities.

Washington County All-Hazard Mitigation Plan Mitigation Activities									
Mitigation Activity	Goal/Objective	Priority	Jurisdictions	Funding Source	Budget	Implementation Timing	Existing Policies, Programs, etc.	Lead Agency	Support Agency
4.1: Improve drainage at sites where roads have washed out due to natural hazards in the past	Goal: 1 Objective: 1-1 1-5 1-6 1-8 1-9	H	All	Federal, State, Local	M	Ongoing		County	NYSEMO
4.2: Purchase equipment to provide for local personnel to conduct the drainage improvement	Goal: 1 1-1 1-5 1-6 1-8 1-9	H	All in 5 Groups: 1: Easton Cambridge White Creek Jackson 2: Greenwich Salem Hebron 3: Ft. Edward Argyle Kingsbury 4: Hartford Hebron Granville Ft. Ann 5: Putnam Dresden Whitehall Hampton	Federal, State, Local	M	3 Years		County	NYSEMO
4.3: Engineering assessment to determine feasibility of each site improvement	Goal: 1 Objective: 1-1 1-5 1-6 1-8 1-9	M	All	Federal, State, Local	L	1 Year		County	NYSEMO

Washington County All-Hazard Mitigation Plan Mitigation Activities									
Mitigation Activity	Goal/Objective	Priority	Jurisdictions	Funding Source	Budget	Implementation Timing	Existing Policies, Programs, etc.	Lead Agency	Support Agency
4.4: Improve dams to prevent flooding causing roads to wash out.		M	All	Federal, State, Local	M	5 Years		County	NYSEMO
4.5 Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.	Goal: 1 Objective: 1-1 1-5 1-6 1-8 1-9	M	All	Federal, State, Local	M	3 Years		County	NYSEMO
4.6 Complete a hydrological study of flooding conditions in the Village of Salem to determine appropriate mitigation strategies.	Goal: 1 Objective: 1-1 1-5 1-6 1-8 1-9	H	Village of Salem	Federal, State, Local	M	1 Year	See Appendix 1	County	NYSEMO NYSDEC

**Table 21 – Washington County All-Hazard Mitigation Plan: Mitigation Activities**

## 5. Plan Maintenance

This section describes the system that Washington County and the participating jurisdictions have established to monitor, evaluate and update the mitigation plan and to facilitate public involvement with plan maintenance.

### 5.1. Monitoring, Evaluation, and Updating the Plan

This section presents the procedures for monitoring, evaluating, and updating the plan.

#### Monitoring

To monitor the implementation of the mitigation plan, the Task Force will collect and process the annual reports from the agencies involved in implementing mitigation projects or activities identified in Section 4 of this plan or conduct phone calls and meetings with persons responsible for overseeing the mitigation projects; they also will discuss the plan's status at the annual meeting of the Task Force. An annual report summarizing the previously mentioned activities will be written and maintained. These annual reports will provide data for the 5-year update of this plan and will assist in pinpointing implementation challenges. By monitoring the implementation of the plan on an annual basis, the Task Force will be able to assess which projects are completed, which are no longer feasible, and what projects may require additional funding. Finally, the Task Force will periodically inform the public about the progress and success of its efforts through the mitigation planning website and newspaper announcements.

#### Evaluation

The evaluation of the mitigation plan is an assessment of whether the planning process and actions have been effective, if the communities' goals are being achieved, and whether changes are needed. The mitigation plan will be evaluated on an annual basis to determine the effectiveness of the programs, and to reflect changes that may affect mitigation priorities or available funding. The County Hazard Mitigation Coordinator will be responsible for coordinating the annual meeting with the Task Force. The group will reconvene in the first quarter of each year. Prior to the meeting, each of the participating jurisdictions will gather data to assess progress toward meeting plan objectives and goals. The evaluation will assess whether:

- Goals and objectives address current and expected conditions.
- The nature or magnitude of the risks has changed.
- Current resources are appropriate for implementing the plan and if different or additional resources are now available.
- Actions were cost-effective.
- Schedules and budgets are feasible.
- Implementation problems, such as technical, political, legal or coordination issues with other agencies are present.
- Outcomes have occurred as expected.
- Changes in county/town/village resources impacted plan implementation (e.g., funding, personnel, and equipment).
- Changes in programming or government structures warrant changes to the plan.
- New agencies/departments/staff should be included.

Specifically, the Task Force will review the mitigation goals, objectives, and activities using performance-based indicators, including:

- Project completion
- Percent complete versus percent of resources allocated
- Under/over spending
- Achievement of the goals and objectives
- Resource allocation (e.g., If there had been more money would the activity have been more successful?)

Additionally, the group will review the mitigation implementation strategy using performance-based indicators including:

- Timeframes
- Budgets
- Lead/support agency commitment
- Resources (funding, personnel [have people been reassigned or left?])

- Feasibility (Is it still an appropriate measure?)

Finally, they will evaluate how other programs and policies have conflicted, or augmented, planned or implemented measures. Other programs and policies can include those that address:

- Sustainability
- Economic development
- Water quality management
- Environmental protection
- Historic preservation
- Redevelopment
- Health and/or safety
- Recreation
- Land use/current and comprehensive planning
- Transportation
- Public education and outreach

To summarize, indicators of success for short term projects will include performance-based indicators such as: mitigation project completion; completion of mitigation projects within the allotted budget and schedule; funding status; and dollar amounts in losses avoided (when available) or change in number of households, businesses, critical facilities, and environmental assets at risk. Long-term projects will include clear milestones such as grant application, funding awards, construction kick-off and interim deliverables. For projects and programs that were not successful, the Task Force will consider lessons learned so that more appropriate alternatives can be developed next time.

The plan will also be evaluated and revised following any major disasters to determine if the recommended mitigation strategies remain relevant. The risk assessment will also be revisited to see if any changes are necessary based on the pattern of disaster damages or if data listed in Section 3.3 of this plan has been collected to facilitate the risk assessment. This is an opportunity to increase the community's disaster resistance and build a stronger community.

Following the annual plan evaluation process, each jurisdiction will provide input to the annual report describing: (1) the status of current mitigation activities or projects and (2) any plan changes deemed necessary.

The long-term vision for the Task Force is to integrate its efforts into the Washington County Emergency Management Office (identified in Section 2 of this plan). As a long-term strategy, the Task Force recommends integrating the goals, purposes, and membership of the hazard mitigation Task Force with the Emergency Management Office.

By doing so, Task Force members anticipate that:

- 1) Hazard mitigation planning will be formally recognized as an integral part of overall emergency management efforts;
- 2) The Washington County Multi-Jurisdictional All Hazard Mitigation Plan and the Washington County Comprehensive Emergency Management Plan will become mutually supportive documents that work in concert to meet the goals and needs of Washington County residents; and
- 3) Duplication of effort can be minimized.

Once this integration occurs, the Emergency Management Office meeting will become the forum for the annual mitigation plan evaluation meeting.

### Updating

The mitigation plan will be updated every five years and will reflect the results of the annual plan evaluations. The Task Force will initiate the next revision process for the plan during its annual review meeting in 2012. Following an update of the mitigation plan, the plan will be distributed for public comment. After all comments are addressed, the plan will be revised and distributed to all Task Force members, to each jurisdiction, and the New York State Hazard Mitigation Officer.

#### 5.2. Continued Public Involvement

Washington County and the participating jurisdictions are committed to the continued involvement of the public in the hazard mitigation process. Copies of the Washington County Multi-Jurisdictional All Hazard Mitigation Plan will be kept and made available for review at the following locations:

- Washington County Department of Public Works
- Washington County Department of Emergency Services
- Town and Village Halls
- Public Libraries throughout Washington County

A notice regarding the existence and location of copies of the mitigation plan will be publicized annually in the Post Star of Glens Falls, and posted on the Washington County web site. This announcement will follow the Task Force's annual review effort (1<sup>st</sup> quarter of each year). The public will have an opportunity to comment on the plan at a public meeting following the organizational meeting of the Task Force which will be held as a part of the annual planning evaluation process and the 5-year plan update. The purpose of this meeting will be to provide the public an opportunity to express concerns, opinions, and ideas about the mitigation plan. The Washington County Hazard Mitigation Coordinator is 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. Members of the Task Force will assist the Coordinator, as necessary. Contact information for the Washington County Planning Department is included in the Point of Contact information at the end of the Executive Summary of this document.

## 6. References

Agostino, John A. (Date to be inserted.) Letter from John Agostino, New York State Emergency Management Office, to Consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

Baker, Frank. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Town of Hampton damaged by natural disasters. July 10.

Bennett, Wayne. 2006. Letter from Wayne Bennett, NY State Police to Consultant Thomas Phelan regarding request for information relating to natural hazards & disasters within Washington County. September 15.

Childs, Joseph. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Village of Salem damaged by natural disasters. July 10.

Childs, Joseph. 2006. Correspondence and CD containing the Flood Investigation Report for the Village of Salem. November 4.

Cook, William. 2007. Washington County Department of Public Safety. E-mail containing copy of Hazard Assessment-Analysis of Washington County, contained in County Comprehensive Emergency Management Plan. (Original source SEMO. HAZNY, March 19, 2002.) August 3.

Dabney, Michael J. 2005. Director, Federal Insurance and Mitigation Division, FEMA to Mr. John Agostino, Alternate Governor's Authorized Representative, New York State Emergency Management Office. December 16.

Driscoll, Joseph. (Date to be inserted.) Letter from Joseph Driscoll, Washington County Soil and Water Conservation District, to consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

FEMA. 2001. "Understanding Your Risks – identifying hazards and estimating losses." State and Local Mitigation Planning How-To Guide. FEMA Document No. 386-2. August.

FEMA. 2002. "Getting Started – building support for mitigation planning." State and Local Mitigation Planning How-To Guide. FEMA Document No. 386-1. September.

FEMA. 2003a. "Developing the Mitigation Plan – identifying mitigation actions and implementation strategies." State and Local Mitigation Planning How-To Guide. FEMA Document No. 386-3. April.

FEMA. 2003b. "Bringing the Plan to Life – implementing the hazard mitigation plan." State and Local Mitigation Planning How-To Guide. FEMA Document No. 386-4. August.

FEMA. 2004. FEMA Region II Hazard Mitigation Plan Toolkit: Risk Assessment. Comparison of New York State Geological Survey Landslide Inventory with USGS National Landslide Overview Map of the Conterminous US. On-line address:  
<http://www.fema.gov/doc/about/regions/regionii/3-risk-6-ny-landslide.doc>

FEMA. 2006a. "Multi-Jurisdictional Mitigation Planning." State and Local Mitigation Planning How-To Guide. FEMA Document No. 386-8. August.

FEMA. 2006b. Wind Zones In The United States. On-line address: [http://www.fema.gov/plan/prevent/saferoom/tsfs02\\_wind\\_zones.shtm](http://www.fema.gov/plan/prevent/saferoom/tsfs02_wind_zones.shtm) . Last modified November 1.

Fox, Roberta. 2006. Letter from Roberta Fox, NYS Department of Transportation to Consultant Thomas Phelan regarding request for information relating to natural hazards & disasters within Washington County. September 1.

Graham, Walter. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Town of Kingsbury damaged by natural disasters. July 10.

Humiston, Bob. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Village of Argyle damaged by natural disasters. July 10.

Kolb, Sgt. David. 2007. Email response from Sgt. David Kolb, NY State Police, regarding request for information relating to natural hazards & disasters within Washington County. March 12.

LoCicero, Robert. (Date to be inserted.) Letter from Robert LoCicero, Esq., Records Access Office, State of New York Department of Health, to Consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

National Oceanic and Atmospheric Agency (NOAA). No date. Historic Hurricane Events Tracking Through New York State. (FEMA HAZUS Database. On-line address: <http://www.fema.gov/doc/about/regions/regionii/3-risk-5b-ny-hurricane-tracks.doc> ).

New York State Emergency Management Office (NYSEMO). 2006. Copy of correspondence re: Hazard Mitigation Grant Program (HMGP) DR-NY-1564 – Washington County – Multi-jurisdictional Multi-Hazard Mitigation Planning Grant. February 20.

New York State Interactive Mapping Gateway. No date. On-line address: <http://www1.nysgis.state.ny.us/mainmap.cfm> .

New York State Office of Cyber Security and Critical Infrastructure Coordination, Geographic Information Systems Clearinghouse. No Date. On-line address: <http://www.nysgis.state.ny.us/>

O'Keefe, Raymond. (Date to be inserted.) Letter from Raymond O'Keefe, NOAA/National Weather Service to Consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

Petersen, Agnes. (Date to be inserted.) Letter from Agnes Petersen, Historian, Town of Dresden, to Consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

Phillips, Margaret. (Date to be inserted.) Letter from Margaret Phillips, U.S. Geological Survey/New York Water Science Center, Troy, NY to Consultant Thomas Phelan regarding request for historical information relating to natural hazards & disasters within Washington County.

Rieben, Chris. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Town of White Creek damaged by natural disasters. July 10.

Sombke, Laurence. 2006. Letter from Laurence Sombke, NYS Department of State to Consultant Thomas Phelan regarding request for information relating to natural hazards & disasters within Washington County. October 3.

Tanner, John. 2006. Discussion at Mitigation Planning Task Force Meeting identifying sites in Town of Granville damaged by natural disasters. July 10.

U.S. Census Bureau-American Factfinder. 2000. Population, Housing Units, Area, & Density: 2000 – Washington County, New York

Vandewater, Kyle. 2007. Email from Kyle Vandewater to Lyn Mura, STA regarding date of referenced resolution to approval of funding in support of preparing an All-Hazard Mitigation Plan. July 31.

Washington County Department of Public Works. No Date. All-Hazard Mitigation Planning Task Force Members & Meeting Minutes. On-line address:  
[http://www.co.washington.ny.us/Departments/dpw/dpw\\_haz.htm](http://www.co.washington.ny.us/Departments/dpw/dpw_haz.htm)

Washington County Office of Emergency Services. 2002. Hazard Analysis Report. Washington County OES, in conjunction with New York State Emergency Management Office. March 19.

Washington County Real Property Tax Services. 2006. Inventory Assets – Washington County; Based on the 2006 Final Assessment Roll. October 13.

Winters, Frank. 2006. NYS Office of Cyber Security, Critical Infrastructure. Telephone conversation between Frank Winters and Consultant Tom Phelan's office regarding request for information of past/current natural hazards & disasters in Washington County. September 12.

# **APPENDIX 1**

## **An Identification of the Characteristics and Sources of Flood Events in the Village of Salem, NY**

**By Joseph Childs**

The Village Of Salem  
White Creek Flood Control Committee  
September 2006

Flood Investigation Report 01-2006  
*(Separate File on CD-pgs. 184-240)*

Village Of Salem  
181 Main Street  
Salem, NY 12865

## **APPENDIX 2**

### **Washington County All-Hazard Mitigation Plan Meeting:**

**Invitations**

**Agendas**

**Minutes**



Department of Public Works  
Highways Solid Waste Engineering

Willy F. Grimmke, P.E. - Superintendent  
Kyle M. Vandewater - Public Works Manager

**MEMORANDUM**

TO: Town Supervisors & Councilmen, Village Mayors & Trustees, School Superintendents, Fire/Rescue Service, Law Enforcement, Business Leaders, Not-for-Profit Organization Leaders

FROM: Kyle M. Vandewater, COUNTY HAZARD MITIGATION COORDINATOR

DATE: **28 March 2006**

re: All-Hazard Mitigation Plan Orientation Meeting

**Save the Date:** 13 April 2006  
7:00 – 8:30 p.m.  
Washington County Office Complex  
Fort Edward, New York

Representatives of Washington County, towns, villages, emergency response organizations, schools, not-for-profit organizations, and private sector businesses are invited to participate in the Orientation Meeting for the Washington County Hazard Mitigation Grant Program (HMGP) on Thursday evening, 13 April 2006, 7:00 – 8:30 p.m.

Approval has been granted to engage in the process of mitigation planning and to produce a multi-jurisdictional County mitigation plan. The approval requires the County to produce a mitigation plan that will satisfy the requirements of 44 CFR Part 201. Conditions of this approval and a copy of these regulations are attached and will be available at the Orientation Meeting.

The goal of the meeting is to inform representatives of all 17 Towns and 9 Villages, schools, businesses, fire and law enforcement departments, and not-for-profit agencies of the benefits of creating a mitigation plan, the requirement to form a planning committee, and the process to be followed in developing the plan. At all stages in the development, the public will be invited to participate in the process.

Washington County has engaged the professional services of Dr. Thomas D. Phelan, president, Strategic Teaching Associates, Inc., to facilitate the planning process. He will be introduced at the April 13<sup>th</sup> Orientation Meeting.

**WASHINGTON COUNTY ALL-HAZARD MITIGATION PLAN ORIENTATION MEETING**  
13 April 2006

To confirm the attendance of a representative from your organization, please complete the contact information below and fax a copy of this page to Kyle Vandewater at (518) 746-2441 by April 6, 2006.

ORGANIZATION: \_\_\_\_\_

REPRESENTATIVE: \_\_\_\_\_

TITLE: \_\_\_\_\_

CONTACT NUMBER: \_\_\_\_\_

EMAIL: \_\_\_\_\_

Thank you, and we look forward to working with you on this important plan.



**Washington County All-Hazard Mitigation Plan Orientation Meeting  
April 13, 2006**

**Agenda**

1. Welcome and Introductions Kyle Vandewater 7:00 p.m.
  
2. Program Management Dr. Tom Phelan  
  
Official Designation of Planning Task Force  
Consider becoming a member at tonight's meeting.
  
3. Approval Letter Ed Lips, SEMO  
  
Key Requirements  
Calendar and Deadlines  
Administrative Reports  
Local Plans
  
4. Mitigation Planning Grant Programs Administrative Handbook
  
5. The Planning Process  
  
Disaster Mitigation Act (DMA) 2000 – Requirement for approved plan to get  
“Project” funding  
Planning Team  
Risk Assessment  
Mitigation Strategy  
Plan Adoption (pending approval)  
FEMA Approval
  
6. Three Programs  
  
FMA Flood Mitigation Assistance, flood specific, funded from National Flood  
Insurance program (NFIP)  
HMGP Hazard Mitigation Grant Program (Washington County grant), tied to  
declared disaster  
PDM Pre-Disaster Mitigation (competitive) most common program
  
7. Washington County Mitigation Planning Task Force formation
  
8. Questions
  
9. Next meeting: \_\_\_\_\_
  
10. Adjournment 8:30 p.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Orientation Meeting Minutes

April 13, 2006

### Call to Order:

The meeting was called to order by Kyle Vandewater at 7:05 p.m. in Training Rooms 1 & 2 at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (23):

Kyle Vandewater	Washington County DPW, Mitigation
Robert W. Humiston	Town of Argyle, Highway Supt. VP Board of Educ.
Hugh Dewey	Town of Greenwich, Highway Supt.
Floyd Pratt	Town of Hebron, Highway Supt., Fire Chief
Paul Zinn	Washington County, Deputy EMS Coordinator
Guy Capuano	Village of Salem
Ken Talkington	Hebron
Doug Brownell	Easton Vol. Fire. Co.
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
William H. Cook	Washington County Public Safety
Leon R. Clark, Jr.	Town of Hampton
Chris Rieben	Town of White Creek, Highway Supt.
Sean Carney	Town of Jackson, Highway Supt.
Gordon Aubry, Sr.	Town of Argyle
Jim Woodcock	Town of Hartford
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem, Trustee
Al Dunlop	Pilot Knob Fire Department
Maureen Van Buren	Ft. Ann Central School, Superintendent
Willy Grimmke	Washington County DPW, Superintendent
Walter Graham	Town of Kingsbury, Supt.of Highways
John Boyce	Fort Hudson Nursing Center, Dir. of Plant Oper.
Edward Lips	State Emergency Management Office, Planning

### Introductions:

Kyle Vandewater introduced Dr. Tom Phelan and Ed Lips. Dr. Phelan is a consultant retained by Washington County to facilitate the preparation of an All-Hazard Mitigation Plan that will be multi-jurisdictional, involving all towns and villages in Washington County. Ed Lips is experienced in assisting local governments in preparing All-Hazard Mitigation Plans and will serve as the point of contact with the State Emergency Management Office (SEMO). Attendees introduced themselves giving name, position, and jurisdiction.

### Presentations and Discussion:

Dr. Phelan explained that a goal of this meeting would be to form Mitigation Planning Task Force that will be officially designated as such by the County. He asked those present to consider becoming a member of the Task Force after listening to the presentation, getting questions answered, and sharing their ideas about the need for mitigation planning in their jurisdictions. Dr. Phelan reflected upon a question Kyle Vandewater had been asked when communicating the purpose of the meeting to an invitee. "Why do we need another disaster

plan?" Dr. Phelan explained the differences between the existing Comprehensive Emergency Management Plan (CEMP) and a mitigation plan. The CEMP addresses emergency/disaster response, whereas a mitigation plan addresses prevention and efforts to reduce the impact of all-hazards before they happen.

Discussion centered around the notion that local residents and officials are best prepared to provide input into an All-Hazard Mitigation Plan because they are most familiar with the history of local disasters such as flooding, ice storms, wind storms, mud slides, and earthquakes. They are also acutely aware of potential man-made, biological, and technical hazards. The history of past disasters is critical to mitigation planning. Attendees spoke of past experience with flooding, wind, and ice storms.

Mention was made of a study currently underway in the Village of Salem that is addressing concerns over flooding. Dr. Phelan indicated that the work done in that study could be incorporated into the All-Hazard Mitigation Plan. Such a study would provide required evidence in support of possible mitigation projects in the future.

Discussion included possible mitigation plans for schools, the nursing center, businesses, and highways with histories of flooding causing damage to infrastructure.

Ed Lips distributed copies of the grant approval letter dated December 16, 2005, from FEMA. He reviewed the contents of the approval letter and the attachments including the Conditions of Approval, FEMA-1564-DR-NY, HMPG Project # 1564-001 Washington County and 44 CFR Sec. 201.6 Local Mitigation Plans. Mr. Lips also made available several reference materials from FEMA and SEMO to assist attendees with understanding the mitigation plan process. In addition, he provided copies of "Integrating Historic Property and Cultural Resource Considerations Into Hazard Mitigation Planning: State and Local Mitigation Planning How-To Guide," FEMA 386-6/May 2005. These materials will assist the Task Force going forward.

Mr. Lips also discussed three programs: FMA Flood Mitigation Assistance, HMGP Hazard Mitigation Grant Program (the Washington County grant), and PDM Pre-Disaster Mitigation (competitive).

Several questions regarding the role of highway superintendents in the mitigation planning process were discussed. Dr. Phelan suggested that the leadership of highway superintendents in this planning process would be welcome since so much damage from disasters is centered on highways, bridges, and drainage systems.

It was made clear that public involvement and participation in the planning process is a requirement of the grant. It was suggested that meeting minutes be posted on the County's new website. Attendees whose organizations have boards of directors or advisory boards were encouraged to ask members of those boards to encourage participation in the planning process.

**All-Hazard Mitigation Planning Task Force Formation:**

Dr. Phelan offered Monday May 1, 2006, as a possible date for a next meeting and asked attendees who wished to participate in the Planning Task Force to so indicate by placing a check next to their name on the sign-in sheet. Fourteen (14) attendees indicated a desire to serve on the Planning Task Force and to receive information about the next meeting. All were encouraged to communicate the formation of the Task Force to others in the community who might wish to be involved.

**All-Hazard Mitigation Planning Task Force Members**

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

Monday May 1, 2006, 7:00 – 8:30 p.m. Washington County Municipal Center

**Adjournment:**

The meeting was adjourned at 8:45 p.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

-----Original Message-----

**From:** Strategic Teaching Associates [mailto:sta@twcny.rr.com]

**Sent:** Thursday, May 04, 2006 2:17 PM

**To:** Kyle Vandewater; Willy Grimmke; William Cook; Dr. Tom Phelan; Ken Talkington; Doug Brownell; Ray Rathbun; Joseph Childs; Maureen VanBuren; John Boyce

**Cc:** Dr. Roger McQuain

**Subject:** Reminder-Next Wash. Co. Planning Task Force Meeting May 8th 7:00 pm

**Importance:** High

Dear Planning Task Force Members:

Just a quick reminder - the **next Washington County All-Hazard Planning Task Force meeting is Monday, May 8th**, from 7:00-8:30 pm at the Washington County Municipal Center.

If you haven't already responded by reply email with your availability to attend, please do so by the end of the day Friday.

Thank you for your cooperation.

Lyn (for Dr. Tom Phelan)

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwthdrtom.com](http://www.drpwthdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090

## Washington County All-Hazard Mitigation Plan Meeting Minutes

May 8, 2006

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 7:05 p.m. in the Second Floor Conference Room at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (8):

Kyle Vandewater	Washington County DPW, Mitigation
Hugh Dewey	Town of Greenwich, Highway Supt.
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Leon R. Clark, Jr.	Town of Hampton
Chris Rieben	Town of White Creek, Highway Supt.
Sean Carney	Town of Jackson, Highway Supt.
Joseph Childs	Village of Salem, Trustee
John Murphy	National Grid

### Introductions:

Each attendee introduced himself and stated his jurisdiction or position. John Murphy, National Grid, attended for the first time.

### Approval of the Minutes:

The minutes of the April 13, 2006, Orientation meeting were distributed and unanimously approved. Dr. Phelan noted that the "Next Meeting" date had been changed from May 1 to May 8, 2006.

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The Quarterly Progress Report dated 3/31/2006, was distributed and reviewed.

### Committee Reports:

As yet there are no committees, but this space on the agenda will be used after committees or sub-committees have been formed.

### Old Business:

Planning Task Force Formation: Eight (8) of the fourteen (14) people who agreed to serve on the Task Force attended the meeting. Discussion led to a decision to hold the next meeting during the work day. It will be June 12, from 9:00 – 11:00 a.m. at the Washington County Municipal Center (room TBD).

Recommendations for Community Involvement: The Task Force members present discussed use of the County's website for posting information about the Mitigation Plan and the Task Force. Kyle Vandewater reported that discussion with the webmaster had begun and procedures for

uploading Mitigation Planning information would be forthcoming soon. Joseph Childs asked for a clearer definition of “public involvement.” What constitutes the “public.” Dr. Phelan replied that all County residents should be made aware of the mitigation planning process and should have access to all records. The term “public” means all residents, businesses, schools, etc.

From the April 13, 2006, meeting: “ It was made clear that public involvement and participation in the planning process is a requirement of the grant. It was suggested that meeting minutes be posted on the County’s new website. Attendees whose organizations have boards of directors or advisory boards were encouraged to ask members of those boards to encourage participation in the planning process.”

Chris Rieben agreed to distribute information about the Mitigation Planning Task Force and the grant at the next meeting of the Highway Superintendents. He also agreed to forward information to a representative who would be attending the County Fire Chiefs’ meeting. Material will be mailed to Chris by Dr. Phelan in time for the June 1, 2006, meeting (15 copies each for highway and fire). Chris provided his mailing address.

Review of Disaster Mitigation Act 2000: A copy of the Act was distributed. Joseph Childs asked if we could discussion it section by section. Dr. Phelan agreed, and stated that many of the forms attached to the agenda would help clarify the intention of the Act.

#### **New Business:**

Attached to the Agenda was a sample Table of Contents from a Mitigation Plan. This was presented to make Task Force members aware of what would be contained in the final plan document.

Also distributed were Worksheets 1, 2, 3a, 3b, and 4. Discussion ensued about Worksheet 1: Identify the Hazards. Dr. Phelan explained how the worksheet is to be used. It is to be completed for each municipality in the County. Task A is a list of hazards that may occur. Task B focuses on the most prevalent hazards in your community. Space on the sheet is provided to list certain details about each of the hazards checked in Task B. In addition to the hazards listed on the worksheet, Task Force Members added Ice Storm, Extreme Cold, and Disease.

The Task Force briefly reviewed Worksheets 2, 3a, 3b, and 4 to see the progression of the process. There was a question about FIRM maps which went temporarily unanswered. FIRM is Flood Insurance Rate Maps, found on the web at <http://mapserver2.esri.com> The maps present the 100 year and 500 year flood histories and histories of other disasters. They can be viewed, printed, or e-mailed from the website.

Formation of Committees: This item was tabled until the June 12, 2006, meeting.

#### **Program/Discussion:**

There was no program scheduled for this meeting.

Reprinted from the April 13, 2006, meeting:

**All-Hazard Mitigation Planning Task Force Formation:**

Dr. Phelan offered Monday May 1, 2006, as a possible date for a next meeting and asked attendees who wished to participate in the Planning Task Force to so indicate by placing a check next to their name on the sign-in sheet. Fourteen (14) attendees indicated a desire to serve on the Planning Task Force and to receive information about the next meeting. All were encouraged to communicate the formation of the Task Force to others in the community who might wish to be involved.

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

Monday June 12, 2006, 9:00 – 11:00 a.m. Washington County Municipal Center

**Adjournment:**

The meeting was adjourned at 8:45 p.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

**From:** "Strategic Teaching Associates" <sta@twcny.rr.com>  
**To:** Washington County All-Hazard Mitigation Planning Task Force Members  
**Sent:** Thursday, June 08, 2006 11:51 AM  
**Attach:** Minutes 5-8-2006 MitigationPlanning Task Force Mtd.doc; Agenda 6-12-2006 Task Force Meeting.doc  
**Subject:** REMINDER – Planning Task Force Meeting June 12, 2006 9:00 am

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for Monday, June 12th from 9:00 am - 11:00 am, to be held at the County Municipal Center, Training Room 1, Building B, basement.

We hope that by changing the time all will be available to attend. Please respond by reply email or a call to 315-622-5924 with your availability to attend.

Thank you for your participation.

Lyn (for Dr. Tom Phelan)  
Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwithdrtom.com](http://www.drpwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
June 12, 2006  
Meeting Number 3  
Training Room 1, Building B, Basement County Municipal Center**

**Agenda**

1. Call to Order 9:00 a.m.
2. Roll Call (Please be certain to sign in on the attendance sheet.)
3. Minutes of the May 8, 2006, Meeting ( Attached)
4. Treasurer's Report (used to report on Quarterly Reports due SEMO)  
  
Next Quarterly Progress Report is due June 30, 2006.
5. Committee Reports  
  
County Highway Superintendent's Meeting  
  
County Fire Chief's Association Meeting
6. Old Business  
  
Planning Task Force Formation  
  
Recommendations for Community Involvement  
  
Worksheet #1: Hazard Identification
7. New Business  
  
Task Force Expansion  
  
Public Involvement
8. Program/Discussion
9. Next Meeting: Set Date
10. Adjournment 11:00 a.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

June 12, 2006

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:05 a.m. in Training Room 1 at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (12):

Kyle Vandewater	Washington County DPW, Mitigation
Willy Grimmke	Washington County DPW
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Chris Rieben	Town of White Creek, Highway Supt.
Sean Carney	Town of Jackson, Highway Supt.
Joseph Childs	Village of Salem, Trustee
Bob Humiston	Argyle Highway
Gordon Aubrey	Town of Argyle
John Boyce	Fort Edward Nursing Center
Robert A. Baccari	NYSEMO
William H. Cook	Washington County Public Safety
Brian Brockway	Town of Fort Edward

### Introductions:

Each attendee introduced himself and stated his jurisdiction or position.

### Approval of the Minutes:

The minutes of the May 8, 2006, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The next report is due June 30, 2006.

### Committee Reports:

Two new sub-committee chairs volunteered to begin work. Chris Rieben and Willy Grimmke will form a committee to research highway and infrastructure damage and to conduct outreach with municipal highway superintendents.

Brian Brockway and Floyd Pratt will conduct outreach to fire chiefs throughout the county.

In addition, Dr. Phelan will contact the following list of media outlets for the County will prepare a press release to be approved by the County Attorney:

The Eagle  
Main Street  
Granville Sentinel  
Post Star (Glens Falls)  
Greenwich Journal  
Whitehall Times

**Old Business:**

Joe Childs has a report (in progress) regarding flooding in the Village of Salem. He agreed to meet with Dr. Phelan following this meeting to review the entire document. A copy of the completed sections will be mailed to Dr. Phelan later in the week.

Recommendations for Community Involvement: The Task Force members present discussed use of the County's website for posting information about the Mitigation Plan and the Task Force. Kyle Vandewater reported that discussion with the webmaster had begun and procedures for uploading Mitigation Planning information would be forthcoming soon.

Chris Rieben distributed information about the Mitigation Planning Task Force and the grant at the June meeting of the Highway Superintendents. There was no immediate response at the meeting.

**New Business:**

Considerable discussion was held on the specifics required in reporting prior damage caused by natural disasters. Joe Childs presented an overview of the flooding in the Village of Salem, particularly the history dating back to 1810 with data and photos from 1913, 1927 and 2000. He also had done research on the watershed using topographical and political maps. Real property maps were overlaid showing the number and locations of properties affected by flooding. There was also discussion of upstream problems on White Creek that may be contributing factors. A healthy discussion followed regarding County attempts to mitigate flooding in Salem. The importance of public input surfaced as an issue in any form of mitigation program.

The public water system in Salem was constructed between 2000 and 2003, prompted by an e-coli event.

A description of the bridge work completed by the County was offered by Willy Grimmke. The Archibald Street Bridge was replaced and raised. Culverts and channels were added along Route 153. There was discussion of the situation regarding the Route 22 bridge replacement.

There was discussion about specific locations of highway and infrastructure damage. In Argyle, village flooding may have been a result of inadequate storm drains. There was flooding in apartments and homes on Main Street (Route 40) and East Street where it is believed that sewage and septic run into storm drains. Concern relates to the Indian River Valley and the Mettowee River.

In the Indian River Valley, concern was raised about County Route 26 near State Route 149 in Granville and on County Route 12 in Whitehall.

Other discussion of historical natural disaster damage indicated concern about snowslides containing debris in Fort Edward and in Jackson on Colfax Mountain causing approximately \$500,000 in damage. In 2000, flood damage did NOT result in FEMA assistance for the County Route 47 wash out (nearly 200 feet). In May 2004, in White Creek, River Road washed out including the culvert.

It was agreed by all that records must be reviewed of all of these incidents to complete the history required by the mitigation planning process. The committee suggested sources of damage assessment data (files) and all agreed to drill down for the level of detail required on Worksheets 2, 3, and 4.

This was a productive discussion with everyone recognizing the degree of detail we are going to need to complete the plan.

**Program/Discussion:**

There was no program, but information was distributed on preparing your community for floods.

**All-Hazard Mitigation Planning Task Force Formation:**

Dr. Phelan offered Monday July 10, 2006, as the date for the next meeting and suggested the Task Force meet in multiple locations to get closer to communities. Those present recommended meeting in Ft. Edward, Hudson Falls and Argyle. The Salem Village Board meets in August, and that might be a good meeting to attend.

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

Monday July 10, 2006, 9:00 – 11:00 a.m. Washington County Municipal Center and in other locations as time and arrangements permit.

**Adjournment:**

The meeting was adjourned at 11:15 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

**From:** Strategic Teaching Associates [mailto:sta@twcny.rr.com]  
**Sent:** Friday, July 07, 2006 11:22 AM  
**To:** Kyle Vandewater; Willy Grimmke; William Cook; Dr. Tom Phelan; Ken Talkington; Doug Brownell; Ray Rathbun; Joseph Childs; Maureen VanBuren; John Boyce  
**Cc:** SEMORegion3 Distribution Group  
**Subject:** REMINDER: WASHINGTON CO. TASK FORCE MEETING - MONDAY JULY 10, 2006 9:00 AM

Dear Planning Task Force Members:

**Just a quick reminder that the next Washington County All-Hazard Planning Task Force Meeting is Monday, July 10th, from 9:00 am - 11:00 am, to be held at the County Municipal Center, Training Room 1 (basement level).**

The agenda will be distributed at the beginning of the meeting. Please feel free to let me know by reply email if you need another copy of the minutes from the June 12th meeting.

As discussed in the meeting of June 12th, a press release was approved by the County Attorney and sent to the following on June 26: *The Eagle* (Cambridge), *Main Street News*, *Granville Sentinel*, *Post Star* (Glens Falls), *Greenwich Journal*, and *Whitehall Times*.

As always, it would be helpful if you could respond by reply email or a call to (315) 622-5924 with your availability to attend.

Your input is valued and your commitment to the success of this project is appreciated.

Thank you.

Lyn for Dr. Tom Phelan

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwthdrtom.com](http://www.drpwthdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090

## Washington County All-Hazard Mitigation Plan Meeting Minutes

July 10, 2006

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:10 a.m. in Training Room 1 at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (13):

Kyle Vandewater	Washington County DPW, Mitigation
Willy Grimmke	Washington County DPW
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Chris Rieben	Town of White Creek, Highway Supt.
Sean Carney	Town of Jackson, Highway Supt.
Joseph Childs	Village of Salem, Trustee
Bob Humiston	Argyle Highway
Ted Berndt	Citizen, Town of Cambridge
Bruce Jordan	NYSEMO
William H. Cook	Washington County Public Safety
Walter Graham	Town of Kingsbury
Frank Baker	Town of Hampton
John Tanner	Town of Granville

### Introductions:

Each attendee introduced himself and stated his jurisdiction or position.

### Approval of the Minutes:

The minutes of the June 12, 2006, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The next report, due June 30, 2006, will be filed following this meeting.

### Committee Reports:

Chris Rieben and Willy Grimmke from the sub-committee to research highway and infrastructure damage and to conduct outreach with municipal highway superintendents reported they had conducted meetings at the highway garages in some of the towns and would continue to reach out to the others. Representatives were reporting that they wanted support from their town supervisors and assistance with completing the Worksheets required by the grant program.

Dr. Phelan agreed to communicate to the Town Supervisors through the Board of Supervisors meeting and to invite any supervisor who requested a meeting with the Town Board to invite the Task Force to send a member to their meetings this fall. Copies of the Worksheets will be sent to each Supervisor with a letter of explanation.

There was no report from Brian Brockway and Floyd Pratt whose sub-committee will conduct outreach to fire chiefs throughout the county.

A press release, approved by the County Attorney, was sent to the following news outlets (copy attached). Ted Berndt attended the meeting due to his reading of the article in The Eagle newspaper.

The Eagle  
Main Street  
Granville Sentinel  
Post Star (Glens Falls)  
Greenwich Journal  
Whitehall Times

**Old Business:**

Joe Childs has updated a report (in progress) regarding flooding in the Village of Salem. He agreed to meet with Dr. Phelan following this meeting to review the entire document. A copy of the completed sections was delivered to Dr. Phelan.

Kyle Vandewater reported that progress was being made on posting Task Force meeting minutes on the County's website.

**New Business:**

This was a productive discussion with everyone recognizing the degree of detail we are going to need to complete the plan.

County maps were distributed to each Task Force member. Highway superintendents were asked to mark on the map each location in their respective towns or villages where damage has occurred in the past. The work session was productive, and numerous sites were identified. Each member present reported on each site giving their best recollection of the damage, the date, and noting those where FEMA funds had been received in the past. Dr. Phelan collected the maps and agreed to list all of the sites. Kyle Vandewater will ask the planning department to prepare accurate maps of each site (see the attached list of identified sites).

Ted Berndt showed the Task Force a County set of maps prepared in 2001 and currently used by emergency responders in emergencies. The maps were prepared by the County's Real Property Tax Department. Bill Cook reported that the maps were no longer available in book format. The County is currently preparing new books. Kyle Vandewater agreed to research obtaining a copy for the Task Force.

**Program/Discussion:**

There was no formal program. Joseph Childs met with Dr. Phelan to review the updated report from the Village of Salem. Dr. Phelan met following the meeting with Kyle Vandewater and Willie Grimmke to discuss plans for contacting the Board of Supervisors. The next meeting of

the Board is July 21, 2006. Dr. Phelan's schedule prohibits his attending, but he agreed to prepare a letter with copies of Worksheets 1-4 for distribution to the Board. The distribution date is July 13, 2006.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting will be scheduled following a presentation to the Board of Supervisors and response from each town supervisor and village mayor regarding attending their fall meetings.

**Adjournment:**

The meeting was adjourned at 11:25 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

Attachments:

Site List  
Press Release  
Letter to the Board of Supervisors

At the July 10, 2006, meeting of the Mitigation Plan Task Force, the following sites were identified as having been damaged by natural disasters in Washington County.

**The Village of Salem (Source – Joseph Childs)**

( a comprehensive report is being drafted with detailed maps, descriptions and a public questionnaire regarding damage assessment). A second draft of the report was presented in hard copy and will soon be available in electronic copy.

**Town of Granville ( Source – John Tanner)**

De Kalb Road – 1980's flooding washed out completely; 2005 washed out shoulder and partial lane, culverts under the road are too small.

Cove Road (Detour) – single lane bridge, flooding (Mettowee River), one home evacuated.

**Town of Hampton (Source – Frank Baker)**

South Road (1/4 mile east of County Route 21) – 1996 FEMA funded repair.

South Road near County Route 18

Hills Pond Road – near pond, flooding near Stone Quarry

Manchester Road and Carvers Falls Lane – Landslide, one acre of farmland.

State Route 22A south of County Route 18 – Landslide

**Town of Kingsbury (Source – Walter Graham)**

Champlain Canal Towpath – flooding annually near New Swamp Road

New Swamp Road and Wood Creek

**Town of White Creek (Source – Chris Rieben)**

1996 - \$500,000 estimated damage

2004 - \$326,000 estimated damage (FEMA funded)

Stage Road – 1996, Winter 2000, and 2004, south of Oak Hill Road at River Road washout and at Dinney Road

Turnpike, south of Center Road

McCart Road – tube too small

Bonestab Lane – tube washes out

Lincoln Hill – south of Shaker Hollow near Hunt Lane ½ mile south

Quaker Hill – 2000 and 2004, ½ mile of road lost

Meeting House Road – 400 feet washed out

State Line Road – ¼ mile section

Rice Lane – culvert, road washed out 1996, 2004

Shaker Hollow Road – near Lincoln Hill

Ash Grove – man-made dam overflows, four houses threatened

McKee Hollow –

Bates Road – ¼ to ½ mile washout, culvert too small

**Town of Jackson (Source – Sean Carney)**

Kenyon Hill off Route 62, 1996 FEMA funded repair

Colfax Road wash out

Hedges Road wash out

Murphy's Road

Duells Road

Carney & Cassidy Road, north end

**Town of Argyle (Source – Bob Humiston)**

North Street Road near County Route 48, dirt road, culvert too small, flooding

Gordon Road at East Lake (grant underway, impacts Cassayuna Lake)

Street Road – shoulder erodes

McNeil Road – stream overwashes near Stott Road (2 five foot culverts)

Archand Lane – needs tubes road needs to be moved

Mahaffey Road between Routes 44 and 43 at 90 degree turn and near Route 42, Hinds Road, swamp

Sullivan Lane near Route 40 and Greenwich line, 5 foot tube, January 2006

Dowmont Road – water washes over, road dead ends, only one way in or out.

Mud Lake Road- beaver dam breaks and takes out the road

**Village of Argyle (Source – Bob Humiston)**

East Street at Elm, 6-10 houses flood annually

Press Release

Washington County Mitigation Plan Task Force Formed

Ft. Edward: Washington County has formed an All-Hazard Mitigation Planning Task Force to develop a plan to reduce the damage that can be caused by natural disasters such as floods and ice storms. The Task Force will hold a meeting on July 10, 2006, from 9:00 – 11:00 a.m. at the County Municipal Center, Training Room 1, 383 Broadway, Fort Edward. The Task Force wishes to extend opportunities for public input in the planning process.

Washington County received a \$30,000 grant from the New York State Emergency Management Office (NYSEMO) to complement local funding to develop an All-Hazard Risk Reduction Plan for all jurisdictions within the county -- county, towns and villages.

Dr. Tom Phelan, president, Strategic Teaching Associates, Inc., has been retained as a consultant to facilitate the planning process. “Public input into this process is so important. I really hope people will come to the meeting to report to the Task Force those situations where damage has been caused in the past by flooding, ice storms, power outages, or other natural disasters.” In the mitigation planning process, information is collected about prior disasters which will then be used to determine steps that might be recommended for preventing further damage in the future.

Arrangements are being made to make all minutes of Task Force meetings available on the County’s website. The process of building the plan should continue into the fall of 2006.

The process begins with a complete and thorough risk assessment including detailed descriptions of all hazards that could affect the County, locations of prior hazards, the extent of the hazard, probability that the hazard could reoccur, maps detailing the information about the hazards, an analysis of the area’s vulnerability to the hazards (residences, businesses, infrastructure, or critical facilities), specific information about the numbers and types of structures , potential casualties, and potential dollar losses for each hazard.

With public input, the Task Force will include all potentially hazardous conditions in the Mitigation Plan. Once the plan is completed and approved by NYSEMO and the Federal Emergency Management Agency (FEMA), the County will be eligible to apply for government assistance in projects to reduce the potential impacts of future disasters.

Questions about the All-Hazard Mitigation Planning Task Force can be directed to the Washington County Department of Public Works, 383 Broadway, Fort Edward, New York 12828, ATTN: Mitigation Planning Task Force or by e-mail to Dr. Phelan at [sta@twcny.rr.com](mailto:sta@twcny.rr.com).

###

Contact: Dr. Thomas Phelan, (315) 622-5924 or e-mail to [sta@twcny.rr.com](mailto:sta@twcny.rr.com)

To: Washington County Board of Supervisors  
From: Dr. Tom Phelan, All-Hazard Mitigation Plan Consultant  
Re: Status of the Mitigation Plan Task Force  
Date: July 11, 2006

Washington County received a \$30,000 grant from SEMO and FEMA to prepare an All-Hazard Mitigation Plan covering all jurisdictions within the County. Completion of the plan and approval by SEMO and FEMA will qualify the County and each town and village to make application for Hazard Mitigation Grant Program funding for mitigation projects in the future. It could also allow residents to obtain National Flood Insurance Program premium reductions.

Work began on the plan in March 2006, and the first meeting was held on April 13, 2006. Letters announcing the meeting, the grant, and the formation of the Mitigation Planning Task Force were sent to all town supervisors, village mayors, fire chiefs, highway superintendents, school superintendents, and business leaders in the County.

The All-Hazard Mitigation Plan Task Force was formed on April 13 with 14 members volunteering to assist in drafting the plan. Meetings were also held in May, June and July with about 10 – 12 members attending. They have provided information about the sites of past damage to infrastructure, primarily roads, and information pertaining to flooding in the Village of Salem. At this point, the Task Force is seeking to increase participation in drafting the plan and in providing more specific information as required by the guidelines of the grant.

The highway superintendents in Argyle, Jackson, White Creek, Kingsbury, Hampton, Granville, Greenwich, Hebron, Fort Edward, and members of the County DPW and Department of Public Safety, and representatives from the Village of Salem, Fort Ann Central School, Fort Hudson Nursing Center, Telescope Casual Furniture, and other members of the fire service and the public have attended one or more of the meetings and have assisted in the planning process.

The Task Force is requesting your assistance to enlist the support of additional Task Force members who can carry the process forward by providing the more detailed information required. Attached are the worksheets that should be completed for each site identified where there has been damage from natural disasters. We will need to gather information about structures that have sustained damage, estimated cost of the damage and repair, and suggestions about how to mitigate or prevent damage in the future.

As the consultant on the Mitigation Planning process, I would be happy to schedule meetings in each jurisdiction, possibly with Town and Village Boards, if you would like a presentation about the grant and the requirements and benefits of completing the plan. Scheduling meetings in the fall will give you time to address this with your Boards and time for us to set aside the appropriate time to meet with you at your regularly scheduled meetings.

Your assistance in making this planning process known to the public in your jurisdiction, letting the public know that the Task Force meetings are open meetings, and asking for public participation in providing details about prior natural disasters will be extremely valuable. It will help the Task Force complete the plan in a timely fashion. It must be completed by November 2007.

For additional information or to schedule a meeting with your Town or Village Board, please contact Kyle Vandewater at 746-2440.

Best regards,

Thomas D. Phelan, Ed.D.  
President  
Strategic Teaching Associates, Inc.  
(315) 622-5924

Attachments:

All-Hazard Mitigation Plan Task Force Membership List  
Worksheets 1, 2, 3a, 3b, 4

## All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Worksheet #1**

**Identify the Hazards**

**step 1**

Date: \_\_\_\_\_ What kinds of natural hazards can affect you?

**Task A. List the hazards that may occur.**

1. Research newspapers and other historical records.
2. Review existing plans and reports.
3. Talk to the experts in your community, state, or region.
4. Gather information on Internet Websites.
5. Next to the hazard list below, put a check mark in the Task A boxes beside all hazards that may occur in your community or state.

**Task B. Focus on the most prevalent hazards in your community or state.**

1. Go to hazard Websites.
2. Locate your community or state on the Website map.
3. Determine whether you are in a high-risk area. Get more localized information if necessary.
4. Next to the hazard list below, put a check mark in the Task B boxes beside all hazards that pose a significant threat.

	Task A	Task B	<i>Use this space to record information you find for each of the hazards you will be researching. Attach additional pages as necessary.</i>			
	<input type="checkbox"/>	<input type="checkbox"/>	<b>Hazard or Event Description</b> (type of hazard, date of event, number of injuries, cost and types of damage, etc.)	<b>Source of Information</b>	<b>Map Available for this Hazard?</b>	<b>Scale of Map</b>
Avalanche	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Coastal Erosion</b>	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Coastal Storm</b>	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Dam Failure</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Drought	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Earthquake</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Expansive Soils	<input type="checkbox"/>	<input type="checkbox"/>				
Extreme Heat	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Flood</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Hailstorm	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Hurricane</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Land Subsidence	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Landslide</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Severe Winter Storm	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Tornado</b>	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Tsunami</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Volcano	<input type="checkbox"/>	<input type="checkbox"/>				
<b>Wildfire</b>	<input type="checkbox"/>	<input type="checkbox"/>				
Windstorm	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				
Other _____	<input type="checkbox"/>	<input type="checkbox"/>				

*Note: Bolded hazards are addressed in this How-To Guide.*

**Table 22 – SEMO Worksheet #1: Identify the Hazards**

**Worksheet #2**

**Profile Hazard Events**

**step 2**

Date: \_\_\_\_\_

*How Bad Can It Get?*

**Task A. Obtain or create a base map.**

You can use existing maps from:

- Road maps
- USGS topographic maps or Digital Orthophoto Quarter Quads (DOQQ)
- Topographic and/or planimetric maps from other agencies
- Aerial topographic and/or planimetric maps

OR you can create a base map using:

- Field surveys
- GIS software
- CADD software
- Digitized paper maps

Title of Map	Scale	Date

 Flood	<input type="checkbox"/> 1. Get a copy of your FIRM. _____ <input type="checkbox"/> 2. Verify the FIRM is up-to-date and complete. _____	<input type="checkbox"/> 1. Transfer the boundaries from your FIRM onto your base map (floodway, 100-yr flood, 500-yr flood). <input type="checkbox"/> 2. Transfer the BFEs onto your base map.
 Earthquake	<input type="checkbox"/> 1. Go to the <a href="http://geohazards.cr.usgs.gov">http://geohazards.cr.usgs.gov</a> Website. <input type="checkbox"/> 2. Locate your planning area on the map. <input type="checkbox"/> 3. Determine your PGA.	<input type="checkbox"/> 1. Record your PGA: _____ <input type="checkbox"/> 2. If you have more than one PGA print, download or order your PGA map.
 Tsunami	<input type="checkbox"/> 1. Get a copy of your tsunami inundation zone map. _____	<input type="checkbox"/> 1. Copy the boundary of your tsunami inundation zone onto your base map.
 Tornado	<input type="checkbox"/> 1. Find your design wind speed. _____	<input type="checkbox"/> 1. Record your design wind speed: _____ <input type="checkbox"/> 2. If you have more than one design wind speed, print, download, or copy your design wind speed zones, copy the boundary of your design wind speed zones on your base map, then record the design wind speed zones on your base map.
 Coastal Storm	<input type="checkbox"/> 1. Get a copy of your FIRM. _____ <input type="checkbox"/> 2. Verify that the FIRM is up-to-date and complete. <input type="checkbox"/> 3. Determine the annual rate of coastal erosion. <input type="checkbox"/> 4. Find your design wind speed. _____	<input type="checkbox"/> 1. Transfer the boundaries of your coastal storm hazard areas onto your base map. <input type="checkbox"/> 2. Transfer the BFEs onto your base map. <input type="checkbox"/> 3. Record the erosion rates on your base map: <input type="checkbox"/> 4. Record the design wind speed here and on your base map: _____
 Landslide	<input type="checkbox"/> 1. Map location of previous landslides. _____ <input type="checkbox"/> 2. Map the topography. _____ <input type="checkbox"/> 3. Map the geology. _____ <input type="checkbox"/> 4. Identify the high-hazard areas on your map. _____	<input type="checkbox"/> 1. Mark the areas susceptible to landslides onto your base map.
 Wildfire	<input type="checkbox"/> 1. Map the fuel models located within the urban-wildland interface areas. <input type="checkbox"/> 2. Map the topography. _____ <input type="checkbox"/> 3. Determine your critical fire weather frequency. _____ <input type="checkbox"/> 4. Determine your fire hazard severity. _____	<input type="checkbox"/> 1. Draw the boundaries of your wildfire hazard areas onto your base map.
<b>Other</b>	<input type="checkbox"/> 1. Map the hazard. _____	<input type="checkbox"/> 1. Record hazard event info on your base map.

**Table 23 – SEMO Worksheet #2: Profile Hazard Events**

Date: \_\_\_\_\_ *What will be affected by the hazard event?*

**Task A. Determine the proportion of buildings, the value of buildings, and the population in your community or state that are located in hazard areas.**

Hazard \_\_\_\_\_

Type of Structure (Occupancy Class)	Number of Structures			Value of Structures			Number of People		
	# in Community or State	# in Hazard Area	% in Hazard Area	\$ in Community or State	\$ in Hazard Area	% in Hazard Area	# in Community or State	# in Hazard Area	% in Hazard Area
Residential									
Commercial									
Industrial									
Agricultural									
Religious/ Non-profit									
Government									
Education									
Utilities									
<b>Total</b>									

**Task B. Determine whether (and where) you want to collect additional inventory data.**

	Y	N
1. Do you know where your greatest damages may occur in your hazard areas?	_____	_____
2. Do you know whether your critical facilities will be operational after a hazard event?	_____	_____
3. Is there enough data to determine which assets are subject to the greatest potential damages?	_____	_____
4. Is there enough data to determine whether significant elements of the community are vulnerable to potential hazards?	_____	_____
5. Is there enough data to determine whether certain areas of historic, environmental, political, or cultural significance are vulnerable to potential hazards?	_____	_____
6. Is there concern about a particular hazard because of its severity, repetitiveness, or likelihood of occurrence?	_____	_____
7. Is additional data needed to justify the expenditure of community or state funds for mitigation initiatives?	_____	_____

**Table 24 – SEMO Worksheet #3a: Inventory Assets**



Date: \_\_\_\_\_ How will these hazards affect you?

Hazard \_\_\_\_\_

Structure Loss (Task A.1.)					Contents Loss (Task A.2.)					
Name/ Description of Structure	Structure Replacement Value (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Structure (\$)	Replacement Value of Contents (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Contents (\$)
			x			=			x	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
<b>Total Loss to Structure</b>						<b>Total Loss to Contents</b>				

Structure Use and Function Loss (Task A.3.)							Structure Loss + Content Loss + Function Loss (\$)		
Name/ Description of Structure	Average Daily Operating Budget (Step 3) (\$)	x	Functional Downtime (Step 4) (# of days)	+	Displacement Cost per Day (Step 3) (\$)	x		Displacement Time (Step 4) (\$)	=
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
<b>Total Loss to Structure Use &amp; Function</b>									
								<b>Total Loss for Hazard Event (Task B.2.)</b>	

Table 26 – SEMO Worksheet #4: Estimate Losses

**From:** Strategic Teaching Associates [mailto:sta@twcny.rr.com]  
**To:** Kyle Vandewater; Willy Grimmke; William Cook; Dr. Tom Phelan; Ken Talkington; Doug Brownell; Ray Rathbun; Joseph Childs; Maureen VanBuren; John Boyce  
**Sent:** Friday, October 20, 2006 3:05 PM  
**Attach:** Minutes 7-10-2006 Mitigation Planning Task Force Mtg.doc; Agenda 10-30-2006  
**Subject:** REMINDER: Planning Task Force Meeting October 30, 2006 9:00 a.m.

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for Monday, October 30th from 9:00 am - 11:00 am, to be held in the County Municipal Center, 2nd Floor Classroom, Building B.

I look forward to seeing you all at the meeting. Please respond by reply email or a call to 315-622-5924 with your availability to attend. (We seem to be having a problem with our phone line today - if the call doesn't complete, call 315-622-5775.)

Thank you for your participation.

Lyn, for Dr. Tom Phelan

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwithdrtom.com](http://www.drpwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
October 30, 2006  
Meeting Number 5  
2<sup>nd</sup> Floor Classroom, Building B, County Municipal Center**

**Agenda**

1. Call to Order 9:00 a.m.
2. Roll Call (Please be certain to sign in on the attendance sheet.)
3. Minutes of the July 10, 2006 Meeting
4. Treasurer's Report (used to report on Quarterly Reports due SEMO)  
    3rd Quarter Progress Report filed
5. Old Business  
    Project Update  
    Report of communications received  
    Vulnerability Assessment Progress
6. New Business  
    Format for the Mitigation Plan  
    Input needed from some towns  
    Next Steps
7. Program/Discussion
8. Next Meeting: Set Date
9. Adjournment 11:00 a.m.

Strategic Teaching Associates, Inc., [sta@twcnr.com](mailto:sta@twcnr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

October 30, 2006

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:00 a.m. in Second Floor Classroom at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (9):

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Chris Rieben	Town of White Creek, Highway Supt.
Sean Carney	Town of Jackson, Highway Supt.
Joseph Childs	Village of Salem, Trustee
Bruce Jordan	NYSEMO
Francis Baker	Town of Hampton
Leon Clark	Supervisor, Town of Hampton
Sharon Tefft Bozovsky	Reporter, Main Street News

### Introductions:

Each attendee introduced himself/herself and stated his jurisdiction or position.

### Approval of the Minutes:

The minutes of the July 10, 2006, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent reports, due July 30 and September 30, 2006, were available for review.

### Committee Reports:

Chris Rieben from the sub-committee to research highway and infrastructure damage and to conduct outreach with municipal highway superintendents reported they had conducted meetings at the highway garages in some of the towns and would continue to reach out to the others. They still had a couple scheduled. Representatives were reporting that they wanted support from their town supervisors and assistance with completing the Worksheets required by the grant program. Dr. Phelan agreed to attend the Board of Supervisors Public Works committee meeting on October 31 and to attend the County Highway Superintendents' meeting on November 2 in Cambridge to enlist their support. Copies of a memo and a Worksheet will be presented to each meeting by Dr. Phelan.

There was no report from Brian Brockway and Floyd Pratt whose sub-committee will conduct outreach to fire chiefs throughout the county.

Following up on our press release and meeting announcement, Sharon Tefft Bozovsky , a reporter for the Main Street News attended this meeting.

**Old Business:**

Joe Childs has further updated a report (in progress) regarding flooding in the Village of Salem. Kyle Vandewater reported that progress was being made on posting Task Force meeting minutes on the County’s website. This remains an open issue.

**New Business:**

Communication received from State and Federal agencies in response to Dr. Phelan’s request for information were reviewed. The information provided will be analyzed and included in the plan.

**Program/Discussion:**

The discussion centered on Dr. Phelan’s attending the two upcoming meetings with the Public Works Committee and the Highway Superintendents.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting will be scheduled following a presentation to the Board of Supervisors and response from each town supervisor and village mayor regarding attending their fall meetings.

**Adjournment:**

The meeting was adjourned at 10:50 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

Attachments:

Memo to the Public Works Committee  
Memo to the Highway Superintendents



Washington County All-Hazard Mitigation Planning Task Force

Meeting of the Public Works Committee of the Board of Supervisors  
October 31, 2006

Items for Consideration

The All-Hazard Mitigation Planning Task Force was formed on April 13, 2006, shortly following the action by the Board of Supervisors to participate in the state and Federal program to provide funding for the preparation of the plan (FEMA-1564-DR-NY, HMPG Project #1564-001 Washington County by letter of approval dated December 16, 2005 from FEMA).

Several meetings have been held at which Town Highway Superintendents and others have presented information required by the rules for creating such a plan. To date, only a few towns and villages have participated directly in the planning process.

The Task Force is requesting your support in gaining broader participation to make the plan complete and useful to all towns and villages within the County. Specifically we need the following support:

1. A representative from each town and village to assist the Task Force in gathering information about past natural hazards and the damage caused.
2. Records, including maps of the affected areas, types of structures or agricultural assets damaged, and estimated cost of damage.
3. Once hazards and affected assets have been identified, we will seek suggestions and recommended actions for mitigating the impact of such natural hazards going forward.
4. An opportunity for public input and review is required.
5. Formal adoption of the completed plan by resolution of each municipality is also requested. Towns and villages seeking funds for mitigation projects in the future must participate in and formally adopt the completed plan.

As the consultant assisting with the plan, I would be happy to meet with each town or village representative to discuss the best way to gather the required information to complete the plan.

Respectfully,

Dr. Tom Phelan, President

Strategic Teaching Associates, Inc.

Office: (315) 622-5924

Cell: (315) 243-7605

E-mail: sta@twcny.rr.com



Washington County All-Hazard Mitigation Planning Task Force

Meeting of the Highway Superintendents  
November 2, 2006

Information is needed to complete the All-Hazard Mitigation Plan.

You can help by providing the following information:

1. Where are the spots in your town or village which have been damaged by natural disasters (high winds, flooding, ice storms, forest fires, dam failures, and so forth)?
2. Can you help us by marking the spots on the County Map.
3. On a separate sheet, describe each spot and the damage. If possible, include the year and the cost of the repair.

Number on Map	Road and Location	Description of Damage	Year	Cost
1				
2				
3				
4				

With this information, we can begin to complete the damage assessment portion of the plan. Your assistance is extremely valuable to this planning process. All of your information can be handed to Kyle Vandewater who will forward it to the Task Force.

Is there someone you know in your town or village that we should contact for more information? Please give us their contact information.

Name: \_\_\_\_\_ Position: \_\_\_\_\_

Address or Phone: \_\_\_\_\_

Respectfully,

Dr. Tom Phelan, President  
Strategic Teaching Associates, Inc.

Office: (315) 622-5924      Cell: (315) 243-7605      E-mail: sta@twcny.rr.com

----- Original Message -----

**From:** [Strategic Teaching Associates](#)

**To:** [Kyle Vandewater](#) ; [Willy Grimmke](#) ; [William Cook](#) ; [Dr. Tom Phelan](#) ; [Ken Talkington](#) ; [Doug Brownell](#) ; [Ray Rathbun](#) ; [Joseph Childs](#) ; [Maureen VanBuren](#) ; [John Boyce](#)

**Cc:** [Lips, Edward](#) ; [Sergeant David Kolb](#) ; [imiller@dot.state.ny.us](mailto:imiller@dot.state.ny.us)

**Sent:** Friday, February 09, 2007 1:55 PM

**Subject:** REMINDER-Wash.Co. Planning Task Force Meeting February 27, 2007 9:00 am

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for Tuesday, February 27th from 9:00 am - 11:00 am, to be held in the County Municipal Center, 2nd Floor Classroom, Building B.

The minutes from the last meeting of October 30, 2006 are attached for your review.

I look forward to seeing you all at the meeting. Please respond by reply email or a call to 315-622-5924 with your availability to attend.

Thank you for your participation.

Lyn, for Dr. Tom Phelan

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.

E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)

[www.drpwithdrtom.com](http://www.drpwithdrtom.com)

Phone: (315) 622-5924

Fax: (315) 622-5775

4158 Forestbrook Drive

Liverpool, NY 13090



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
February 27, 2007  
Meeting Number 6  
2<sup>nd</sup> Floor Classroom, Building B, County Municipal Center**

**Agenda**

1. Call to Order 9:00 a.m.
2. Roll Call (Please be certain to sign in on the attendance sheet.)
3. Minutes of the October 30, 2006 Meeting
4. Treasurer's Report (used to report on Quarterly Reports due SEMO)  
    4<sup>th</sup> Quarter Report filed
5. Old Business  
    Project Update and Presentation of Current Draft of the Plan  
    Report of communications received  
    Vulnerability Assessment Progress
6. New Business  
    Input needed from some towns  
    Next Step: Mitigation Strategies
7. Program/Discussion
8. Next Meeting: Set Date
9. Adjournment 11:00 a.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

February 27, 2007

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:00 a.m. in Second Floor Classroom at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (5):

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Joseph Childs	Village of Salem, Trustee
Ed Lips	NYSEMO
Hugh Dewey	Town of Greenwich Highway Superintendent

### Approval of the Minutes:

The minutes of the October 30, 2006, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent report due January 15, 2007 was available for review.

### Committee Reports:

There were no committee reports.

### Old Business:

Kyle Vandewater reported that progress was being made on posting Task Force meeting minutes on the County's website. This remains an open issue.

Dr. Phelan attended the two meetings with the Public Works Committee and the Association of Street and Highway Officials on October 31 and November 2 respectively.

There are 10 towns or villages that have still not provided input to the Task Force. They are

Dresden	Hartford
Fort Ann	Village of Hudson Falls
Village of Fort Ann	Putnam
Village of Granville	Whitehall
Village of Greenwich	Village of Whitehall

Dr. Phelan will draft a letter to each jurisdiction informing them of the March 16, 2007, first draft deadline and requesting them to either send information or complete an Authorized Representation form (proxy).

Dr. Phelan presented three copies of a 209-page draft plan for review. Copies were given to Kyle Vandewater and Ed Lips. Kyle will make additional copies as needed, but specifically one for Joe Childs of Salem.

**New Business:**

Communication received from State and Federal agencies in response to Dr. Phelan's request for information were reviewed by Richard Deitchman, a senior geosciences student from Hamilton College. His review is contained in the draft of the plan.

Dr. Phelan noted that our next step is Mitigation Strategies. He suggested two.

1. An aggregate purchase of materials required to increase the size of culvert pipes running under roadways that have washed out in the past.
2. Constructing water retention ponds north of the Village of Salem to reduce the impact of water run-off and flooding.

**Program/Discussion:**

Ed Lips discussed the first draft deadline of March 16, 2007. He presented a form for reviewing the plan and some examples from other counties. He answered questions and made suggestions helpful to the Task Force.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting is scheduled for Monday, March 12, 2007, at 9:00 a.m.

**Adjournment:**

The meeting was adjourned at 11:30 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

**Attachments:**

Draft letter to towns and villages which have not provided input (with attachments)

March 1, 2007

Supervisor  
Town of  
Street  
City, State Zip



Dear \_\_\_\_\_:

The Washington County All-Hazard Mitigation Plan Task Force is requesting your assistance in providing information regarding your municipality. The Mitigation Planning process requires that the Task Force seek any and all information about damage from natural hazards that has affected your jurisdiction.

We have a deadline of March 16, 2007, for a first draft of the plan. As yet, we have not received any input from your municipality. Other towns and villages have provided information about road washouts, flooding, mudslides, winter storms, and diseases which have caused very costly repairs.

There are two options for providing the required information.

1. Highway superintendents have been provided the attached form and a County map on which they can report damage to roadways, dams, and bridges. Maps and forms are also available from Kyle Vandewater at the County DPW.
2. You may submit a form granting permission to the County to report on your behalf (attached). If you do not have the resources to provide the information in a timely fashion, you may grant Authorized Representation to the County.

Once the entire plan is completed, it will be made available to you for review and public comment. Each jurisdiction will be asked to pass a resolution adopting the final plan. Sample resolutions will be sent once your review is completed.

The Task Force appreciates your participation in this program. The ultimate goal is to mitigate or limit the impact of any future natural disasters.

Please send your completed forms to Kyle Vandewater, Washington County Department of Public Works, 383 Upper Broadway, Fort Edward, New York 12828.

Best regards,

Dr. Thomas D. Phelan  
Project Consultant

Enc. (4)

SAMPLE RESOLUTION:

**PLAN PARTICIPATION**

**Sample Exhibit 2: Resolution for Authorized Representation**

Resolution for authorizing the Plan Author to act on behalf of Local Jurisdiction

(Name of Jurisdiction) Town A

(Governing Body) Town Council

(Address) 100 Main Street, Town A

**RESOLUTION**

WHEREAS, Town A has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and

WHEREAS, X is able to act on behalf of Town A in the analysis and development of a hazard mitigation plan; and

WHEREAS, X shall prepare a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, X shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, Town Council authorizes X on behalf of Town A to prepare the County ABC Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by Town Council upon completion.

ADOPTED this XX day of December, 20XX at the meeting of the Town Council.

**Resolution for Authorized Representation**

Name of Jurisdiction \_\_\_\_\_

Governing Body \_\_\_\_\_

Address \_\_\_\_\_

**RESOLUTION**

WHEREAS, \_\_\_\_\_ has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and

WHEREAS, \_\_\_\_\_ is able to act on behalf of \_\_\_\_\_ in the analysis and development of a hazard mitigation plan; and

WHEREAS, \_\_\_\_\_ shall prepare a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

WHEREAS, \_\_\_\_\_ shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

NOW THEREFORE, \_\_\_\_\_ authorizes \_\_\_\_\_ on behalf of \_\_\_\_\_ to prepare the Washington County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by \_\_\_\_\_ upon completion.

ADOPTED this \_\_\_\_\_ at the meeting of the Town Council.

\_\_\_\_\_  
Mayor



Date:

How will these hazards affect you?

Hazard \_\_\_\_\_

Structure Loss (Task A.1.)					Contents Loss (Task A.2.)					
Name/ Description of Structure	Structure Replacement Value (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Structure (\$)	Replacement Value of Contents (Step 3) (\$)	x	Percent Damage (Step 4) (%)	=	Loss to Contents (\$)
			x		=				x	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
		x		=			x		=	
<b>Total Loss to Structure</b>						<b>Total Loss to Contents</b>				

Structure Use and Function Loss (Task A.3.)							Structure Loss + Content Loss + Function Loss (\$)		
Name/ Description of Structure	Average Daily Operating Budget (Step 3) (\$)	x	Functional Downtime (Step 4) (# of days)	+	Displacement Cost per Day (Step 3) (\$)	x		Displacement Time (Step 4) (\$)	=
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
		x		+		x		=	
<b>Total Loss to Structure Use &amp; Function</b>									
									<b>Total Loss for Hazard Event (Task B.2.)</b>

REMINDER-Wash. Co. Planning Task Force Meeting March 12, 2007 10:00 am

File Edit View Tools Message Help

Reply Reply All Forward Print Delete Previous Next Addresses

This message is High Priority.

**From:** Strategic Teaching Associates  
**Date:** Monday, March 05, 2007 11:53 AM  
**To:** Kyle Vandewater; Willy Grimke; William Cook; Dr. Tom Phelan; Ken Talkington; Doug Brownell; Ray Rathbun; Joseph Childs; Maureen VanBuren; John Boyce  
**Cc:** Ian Miller; Sergeant David Kolb; Lips, Edward  
**Subject:** REMINDER-Wash. Co. Planning Task Force Meeting March 12, 2007 10:00 am

**Attach:** SEMO Worksheet 3b.doc (57.4 KB) SAMPLE RESOLUTION For Authorized Representation.doc (57.9 KB)  
Resolution for Authorized Representation.doc (24.6 KB) Minutes 2-27-2007 Mitigation Planning Task Force Mtg.doc (36.4 KB)  
Letter to Non-responding Jurisdictions 3-1-2007.doc (82.1 KB) Agenda 3-12-2007 Task Force Meeting.doc (37.4 KB)

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for **Monday, March 12th from 10:00 am - 1:00 pm, to be held in the County Municipal Center, Training Room II, Basement, Building B.**

*(Please Note: In case of inclement weather, the snow date is Tuesday, March 13, 9:00 am-12:00 pm, 2nd floor classroom, Building B. Call Lyn at (315) 622-5924 if questionable.)*

The minutes from the last meeting of February 27, 2007 are attached for your review.  
*(Note: Minutes have been updated to reflect the correct time of 10:00 a.m. for the meeting on March 12, 2007.)*

I look forward to seeing you all at the meeting. **Please respond by reply email or call 315-622-5924 with your availability to attend.**

Thank you for your participation.

Lyn, for Dr. Tom Phelan

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwithdrtom.com](http://www.drpwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
March 12, 2007  
Meeting Number 7  
Training Room II, Basement, Building B, County Municipal Center**

*(Snow date: Tuesday, March 13, Class Room 2<sup>nd</sup> Floor, Building B, 9:00 am-12:00pm)*

**Agenda**

1. Call to Order 10:00 a.m.
2. Roll Call (Please be certain to sign in on the attendance sheet.)
3. Minutes of the February 27, 2007 Meeting
4. Treasurer's Report (used to report on Quarterly Reports due SEMO)
5. Old Business
  - Project Update and Presentation of Current Draft of the Plan
  - Report of communications received
  - Vulnerability Assessment Progress
6. New Business
  - Input needed from some towns
  - Next Step: Mitigation Strategies
7. Program/Discussion
8. Next Meeting: Set Date
9. Adjournment 1:00 p.m.

Strategic Teaching Associates, Inc., [sta@twcnny.rr.com](mailto:sta@twcnny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

March 12, 2007

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:00 a.m. in the Basement Level Classroom at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (10):

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Joseph Childs	Village of Salem, Trustee
Bruce Jordan	NYSEMO
Hugh Dewey	Town of Greenwich Highway Superintendent
Sgt. David Kolb	NYS Police
Jim Woodcock	Town of Hartford Highway Superintendent
Chris Rieben	Town of White Creek Highway Superintendent
Sean Carney	Town of Jackson Highway Superintendent
Eric Shaw	Town of Cambridge Highway Superintendent

### Approval of the Minutes:

The minutes of the February 27, 2007, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent report due January 15, 2007 was available for review. A new Quarterly Report to be filed March 16, 2007, is attached.

### Committee Reports:

There were no committee reports.

### Old Business:

Kyle Vandewater reported that no progress had been made on posting Task Force meeting minutes on the County's website. He and Dr. Phelan will contact the IT department following the meeting. Dr. Phelan provided a CD-Rom with the draft plan containing all meeting minutes to date for posting on the website.

There remain 8 towns or villages that have still not provided input to the Task Force. They are as noted below:

Dresden	
Fort Ann	Village of Hudson Falls
Village of Fort Ann	Putnam
Village of Granville	Whitehall
Village of Greenwich	

Dr. Phelan sent a letter to each jurisdiction informing them of the March 16, 2007, first draft deadline and requesting them to either send information or complete an Authorized Representation form or proxy (see attached).

Dr. Phelan presented one copy of a 209-page draft plan for review. Copies were previously given to Kyle Vandewater and Ed Lips. Kyle made additional copies as needed, and specifically one for Joe Childs of Salem.

#### **New Business:**

Sgt. David Kolb was present from the NYS Police. He agreed to search his records for State Police response to any natural disasters in Washington County. (Following the meeting, Dr. Phelan received word from Sgt. Kolb, that records showed natural hazard response to only two incidents, the floods in December 2000, and the Hadlock Dam failure in 2005.

New information was received from Joan Douglas, Village Clerk, Village of Whitehall on flood damage. Also, new information was received with more to come from Jim Woodcock, Highway Superintendent, Town of Hartford.

Dr. Phelan noted that our next step is Mitigation Strategies. The Task Force presented the following ideas for possible strategies:

1. An aggregate purchase of materials to increase the flow capacity of drainage systems under roadways where washouts have occurred in the past. A suggestion was made to coordinate culvert replacement and drainage ditch improvements with plans for re-paving road over the next 5 years.
2. A hydrological study of the flooding condition in the Village of Salem. The study could be expanded to include all flooding sites in the County. Local engineering capabilities are available from the County if funding could support additional staffing.
3. Support from colleges or universities with expertise in mitigation planning; a recommendation was made to contact RPI, Clarkson, and the NYS College of Environmental Science and Forestry for possible studies.
4. Specific strategies for the Village of Salem were discussed including possible retention ponds and changes to the former railroad bridge. The Task Force agreed that a hydrological study would be required.

5. Slope stability; the County has several sites where slopes are subject to mud slides that damage and close roads. Improvements to these slopes involving excavation or planting could be helpful.

6. There are several sites in the County where dams are considered to be at risk. Some are privately owned; some are beaver dams on private property. Improvements to the dams could prevent flooding causing roads to wash out.

7. The equipment required to excavate drainage ditches and roadways to increase culvert pipe size is not available for local municipal use unless it is contracted. Local highway departments have the expertise to do the work, but not the equipment. A suggestion was made to purchase with mitigation funding an excavator for Towns with the greatest need.

**Program/Discussion:**

The first draft of the Mitigation Plan is due March 16, 2007. The current draft will be updated to include today's meeting minutes and will be submitted by Dr. Phelan on March 16.

Those Towns and Village sent letters with Authorized Representation Forms will be contacted for their responses. If necessary, Dr. Phelan and Kyle Vandewater will visit them in April to gain their input.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

Following the regular meeting, Kyle Vandewater contacted the IT department to request again that the Mitigation Task Force meeting minutes and the draft Mitigation Plan be posted on the County website. The response asked for an update to the DPW home page before the Mitigation Task Force material could be added.

Also following the regular meeting, Dr. Phelan and Kyle Vandewater met with Ian Miller, Resident Engineer, NYS DOT and Joseph Thompson, Assistant Resident Engineer in their office, 3716 Burgoyne Avenue, Hudson Falls. Ian Miller provided information and photos of the Village of Whitehall flooding that occurs annually. We were also referred to Roberta Fox at NYS DOT for additional information.

The next meeting will be scheduled following receipt of information from the eight (8) Towns and Village that have not yet responded.

**Adjournment:**

The meeting was adjourned at 12:30 p.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

----- Original Message -----

**From:** [Strategic Teaching Associates](#)

**To:** [John Boyce](#) ; [Maureen VanBuren](#) ; [Joseph Childs](#) ; [Ray Rathbun](#) ; [Doug Brownell](#) ; [Ken Talkington](#) ; [Dr. Tom Phelan](#) ; [William Cook](#) ; [Willy Grimmke](#) ; [Kyle Vandewater](#)

**Cc:** [Ian Miller](#) ; [Sergeant David Kolb](#) ; [Lips, Edward](#) ; [Bruce Jordan](#)

**Sent:** Tuesday, May 01, 2007 3:20 PM

**Subject:** Washington County Planning Task Force Meeting-May 15, 2007 9:00 a.m.

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for **Tuesday, May 15, 2007 from 9:00 am - 11:00 am, to be held in the County Municipal Center, 2nd Floor Classroom, Building B.**

The minutes from the meeting of March 12, 2007 are attached for your review.

I look forward to seeing you at the meeting. **Please respond by reply email or a call to 315-622-5924 with your availability to attend.**

Thank you for your participation.

Lyn, for Dr. Tom Phelan

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpwithdrtom.com](http://www.drpwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
May 15, 2007  
Meeting Number 8  
2<sup>nd</sup> Floor Classroom, Building B, County Municipal Center**

**Agenda**

1. Call to Order 9:00 a.m.

2. Roll Call (Please be certain to sign in on the attendance sheet.)

3. Minutes of the March 12, 2007 Meeting

4. Treasurer's Report (used to report on Quarterly Reports due SEMO)

1<sup>st</sup> Quarter Report filed March 16, 2007

First Draft of Mitigation Plan, filed March 16, 2007

Review & Recommendations from SEMO

5. Old Business

Mitigation Strategy Review

1. Aggregate purchase of materials and equipment to improve drainage at sites where roads have washed out due to natural hazards in the past. A Federally funded aggregate purchase would enable Towns, Villages, and the County to address mitigation solutions to on-going costly and disruptive problems.

2. A hydrological study of the flooding condition in the Village of Salem. The study could be expanded to include all flooding sites in the County. Local engineering capabilities are available from the County if funding could support additional staffing.

3. Support from colleges or universities with expertise in mitigation planning; a recommendation was made to contact RPI, Clarkson, and the NYS College of Environmental Science and Forestry for possible studies.

4. Specific strategies for the Village of Salem were discussed including possible retention ponds and changes to the former railroad bridge. The Task Force agreed that a hydrological study would be required.

5. Slope stability; the County has several sites where slopes are subject to mud slides that damage and close roads. Improvements to these slopes involving excavation or planting could be helpful.

6. There are several sites in the County where dams are considered to be at risk. Some are privately owned; some are beaver dams on private property. Improvements to the dams could prevent flooding causing roads to wash out.

7. The equipment required to excavate drainage ditches and roadways to increase culvert pipe size is not available for local municipal use unless it is contracted. Local highway departments have the expertise to do the work, but not the equipment. A suggestion was made to purchase with mitigation funding an excavator for Towns with the greatest need.

6. New Business

Mitigation Plan Maintenance

Next Step: Prepare final copy for public comment in June.

7. Program/Discussion

Municipality Adoption Procedure

8. Next Meeting: Set Date

9. Adjournment

11:00 a.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

**Washington County All-Hazard Mitigation Plan Meeting Minutes**  
May 15, 2007

**Call to Order:**

The meeting was called to order by Dr. Tom Phelan at 9:00 a.m. in Second Floor Classroom at the Washington County Municipal Building B, Fort Edward, New York.

**Attendance (5):**

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Joseph Childs	Village of Salem, Trustee
Willie Grimmke	Washington County DPW
Brian Brockway	Town of Fort Edward Highway Superintendent

**Approval of the Minutes:**

The minutes of the March 12, 2007, meeting were distributed and unanimously approved. .

**Treasurer's Report:**

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent report due March 15, 2007, included the first draft of the Mitigation Plan. As of this date, no feedback from SEMO has been received.

**Committee Reports:**

There were no committee reports.

**Old Business:**

Information has been received from the Village of Granville and the Town of Hartford. Proxies were received from the Town of Whitehall, Village of Whitehall, and Town of Fort Ann. All proxies included a resolution from the Board.

There are 5 towns or villages that have still not provided input to the Task Force. They are Dresden, Village of Fort Ann, Village of Hudson Falls, Village of Greenwich, and the Town of Putnam.

Dr. Phelan had sent a letter to each jurisdiction informing them of the March 16, 2007, first draft deadline and requesting them to either send information or complete an Authorized Representation form (proxy).

## **New Business:**

Dr. Phelan recommended the Task Force proceed with setting calendar dates with all committees and the Board of Supervisors for approval and adoption of the Mitigation Plan since the grant deadline is in November 2007. Willie Grimmke agreed to propose presentations to those listed below on the dates listed:

Public Works Committee of the Board	July 31, 2007
Finance Committee	August 9, 2007
Board of Supervisors	August 17, 2007

In a follow-up phone conversation with Ed Lips at SEMO, May 15, 2007, it was indicated that FEMA preliminary review of the plan could take as long as 12 months (currently the case in Clinton County). Ed advised NOT submitting the plan to the County for approval prior to the FEMA review. Dr. Phelan questioned this because the grant expires in November. What is the County to do with such a long delay from FEMA. Ed Lips indicated that possibly a meeting he would attend later in the week would provide clarification.

## **Program/Discussion:**

Dr. Phelan recommended the Task Force review each of the mitigation strategies proposed at the March meeting and develop sub-objectives for each. Included in the sub-objectives should be target dates and assigned responsibilities for those involved. This might require that Memoranda of Agreement be developed with each concerned party to include the following:

1. Vision or Goal
2. Organization Structure
3. Duration of MOA, review, revision procedures
4. Decision to Continue the MOA
5. Consultations (how, reasons for)
6. Annual Evaluation of each objective or strategy
7. Resource Commitment
  - a. Staffing
  - b. Technical Resources
  - c. Funding

With the above in mind, the Task Force expanded each objective as noted below:

1. Aggregate purchase of materials and equipment to improve drainage at sites where roads have washed out due to natural hazards in the past. A Federally funded aggregate purchase would enable Towns, Villages, and the County to address mitigation solutions to on-going costly and disruptive problems.
  - 1.1 Grading to accommodate higher pipes
  - 1.2 Ditch cleaning
  - 1.3 Easement attainment (legal services as required)
  - 1.4 Engineering assessment to determine feasibility of each site improvement
  - 1.5 Ditch line cleaning beyond the right-of-way

Target: 3 years

2. A hydrological study of the flooding condition in the Village of Salem. Specific strategies for the Village of Salem were discussed including possible retention ponds and changes to the former railroad bridge. The study could be expanded to include all flooding sites in the County. Local engineering capabilities are available from the County if funding could support additional staffing.

2.1 Consult with Village Hydrologist

2.2 Consult State DOT study upstream of Route 22 to Railroad as part of the design report of the Route 22 bridge over White Creek.

Target: 1 year

3. Support from colleges or universities with expertise in mitigation planning; a recommendation was made to contact RPI, Clarkson, and the NYS College of Environmental Science and Forestry for possible studies.

3.1 Follow-up on requests send previously by Dr. Phelan

Target: August 2007

4. Combined with #2 above.

5. Slope stability; the County has several sites where slopes are subject to mud slides that damage and close roads. Improvements to these slopes involving excavation or planting could be helpful.

5.1 Create a study to identify all sites in the County (most on private property)

5.1 Identify those already started

5.2 MOA with Cassayuna Fire Department for dam on Mill Pond where land is owned by the Fire Department.

6. There are several sites in the County where dams are considered to be at risk. Some are privately owned; some are beaver dams on private property. Improvements to the dams could prevent flooding causing roads to wash out.

6.1 Identify all potentially hazardous sites.

6.2 Seek MOA with all private property owners whose dams present a risk to County infrastructure.

Target: 3 years

7. The equipment required to excavate drainage ditches and roadways to increase culvert pipe size is not available for local municipal use unless it is contracted. Local highway departments have the expertise to do the work, but not the equipment. A suggestion was made to purchase with mitigation funding five (5) excavators for Towns with the greatest need.

7.1 Group towns and villages for MOA for sharing equipment

1. Easton, Cambridge, White Creek, Jackson

2. Greenwich, Salem, Hebron

3. Fort Edward, Argyle, Kingsbury

4. Hartford, Hebron, Granville, Fort Ann

5. Putnam, Dresden, Whitehall, Hampton

7.2 Add .5 FTE maintenance mechanic to maintain excavators

7.3 Construct 5 pole barn additions to highway department barns where equipment will be housed (Contractor bid and build).

Target: 2 years

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting is scheduled for June 26 at 9:00 a.m. Dr. Phelan and Kyle Vandewater have made plans to meet a week earlier to review any feedback from SEMO.

**Adjournment:**

The meeting was adjourned at 11:10 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

----- Original Message -----

**From:** [Strategic Teaching Associates](#)

**To:** [John Boyce](#) ; [Maureen VanBuren](#) ; [Joseph Childs](#) ; [Ray Rathbun](#) ; [Doug Brownell](#) ; [Ken Talkington](#) ; [Dr. Tom Phelan](#) ; [William Cook](#) ; [Willy Grimmke](#) ; [Kyle Vandewater](#)

**Cc:** [Sergeant David Kolb](#) ; [Bruce Jordan](#) ; [Lips, Edward](#) ; [Ian Miller](#)

**Sent:** Monday, June 18, 2007 2:28 PM

**Subject:** Washington County Planning Task Force Meeting - June 28, 1:00 pm

Dear Planning Task Force Members:

Attached please find the agenda for the next Washington County All-Hazard Planning Task Force Meeting, scheduled for **Thursday, June 28, 2007 from 1:00 pm - 3:00 pm, to be held in the County Municipal Center, 2nd Floor Classroom, Building B.**

The minutes from the meeting of May 15, 2007 are attached for your review.

I know how busy everyone is this time of year, but I urge you to put this date on your calendar as we will be reviewing the evaluation from SEMO. I look forward to seeing you at the meeting.

**Please respond by reply email or a call to 315-622-5924 with your availability to attend.**

Thank you for your continued participation.

Lyn, for Dr. Tom

Lynda Mura, Manager  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drpthwithdrtom.com](http://www.drpthwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
June 28, 2007  
Meeting Number 9  
2<sup>nd</sup> Floor Classroom, Building B, County Municipal Center**

**Agenda**

1. Call to Order 1:00 p.m.

2. Roll Call (Please be certain to sign in on the attendance sheet.)

3. Minutes of the May 15, 2007 Meeting

4. Treasurer's Report (used to report on Quarterly Reports due SEMO)

1<sup>st</sup> Quarter Report filed March 16, 2007

First Draft of Mitigation Plan, filed March 16, 2007

Review & Recommendations from SEMO

5. Old Business

Mitigation Strategy Review

1. Aggregate purchase of materials and equipment to improve drainage at sites where roads have washed out due to natural hazards in the past. A Federally funded aggregate purchase would enable Towns, Villages, and the County to address mitigation solutions to on-going costly and disruptive problems.

2. A hydrological study of the flooding condition in the Village of Salem. The study could be expanded to include all flooding sites in the County. Local engineering capabilities are available from the County if funding could support additional staffing.

3. Support from colleges or universities with expertise in mitigation planning; a recommendation was made to contact RPI, Clarkson, and the NYS College of Environmental Science and Forestry for possible studies.

4. Specific strategies for the Village of Salem were discussed including possible retention ponds and changes to the former railroad bridge. The Task Force agreed that a hydrological study would be required.

5. Slope stability; the County has several sites where slopes are subject to mud slides that damage and close roads. Improvements to these slopes involving excavation or planting could be helpful.

6. There are several sites in the County where dams are considered to be at risk. Some are privately owned; some are beaver dams on private property. Improvements to the dams could prevent flooding causing roads to wash out.

7. The equipment required to excavate drainage ditches and roadways to increase culvert pipe size is not available for local municipal use unless it is contracted. Local highway departments have the expertise to do the work, but not the equipment. A suggestion was made to purchase with mitigation funding an excavator for Towns with the greatest need.

6. New Business

Mitigation Plan Maintenance

Next Step: Prepare final copy for public comment in June.

7. Program/Discussion

Municipality Adoption Procedure

8. Next Meeting: Set Date

9. Adjournment

3:00 p.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

June 28, 2007

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 1:00 p.m. in Second Floor Classroom at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (7):

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Joseph Childs	Village of Salem, Trustee
Willie Grimmke	Washington County DPW
Sgt. David Kolb	NYS Police
Bill Cook	Washington County Emergency Management
Clare Dunn	GIS, Washington County Planning Dept.

### Approval of the Minutes:

The minutes of the May 15, 2007, meeting were distributed and unanimously approved.

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent report due March 15, 2007, included the first draft of the Mitigation Plan. Feedback from Ed Lips, received June 23, 2007, was reviewed and distributed to Clare Dunn, County Planning Department, and Joseph Childs of Salem.

### Committee Reports:

There were no committee reports.

### Old Business:

Information has been received from the Village of Granville and the Town of Hartford. Proxies were received from the Town of Whitehall, Village of Whitehall, and Town of Fort Ann. All proxies included a resolution from the Board.

There remain 5 towns or villages that have still not provided input to the Task Force. They are Dresden, Village of Fort Ann, Village of Hudson Falls, Village of Greenwich, and the Town of Putnam. Dr. Phelan will compose a follow-up letter for Kyle Vandewater to again contact these municipalities. Proxy information will be included.

Dr. Phelan had sent a letter to each jurisdiction informing them of the March 16, 2007, first draft deadline and requesting them to either send information or complete an Authorized Representation form (proxy).

**New Business:**

At the May 15, 2007 meeting, Dr. Phelan recommended the Task Force proceed with setting calendar dates with all committees and the Board of Supervisors for approval and adoption of the Mitigation Plan since the grant deadline is in November 2007. Willie Grimmke agreed to propose presentations to those listed below on the dates listed. It is now recommended by SEMO that these dates be changed, and that final approval follow FEMA review and approval which may take months. The exception will be the presentation to the Public Works Committee of the Board which should now be scheduled in August or September to allow time for updating the plan as per recommendations from Ed Lips.

Public Works Committee of the Board	July 31, 2007
Finance Committee	August 9, 2007
Board of Supervisors	August 17, 2007

NOTE: In a follow-up phone conversation with Ed Lips at SEMO, May 15, 2007, it was indicated that FEMA preliminary review of the plan could take as long as 12 months (currently the case in Clinton County). Ed advised NOT submitting the plan to the County for approval prior to the FEMA review. Dr. Phelan questioned this because the grant expires in November. What is the County to do with such a long delay from FEMA? This question remains unanswered.

**Program/Discussion:**

The Task Force began immediately to work on the recommendations from SEMO.

Dam Failure:

1. Hadlock Pond Dam Failure  
Bill Cook has the complete County file. Dr. Phelan will schedule a time to review that file and bring recommendations to the Task Force. The pond is being refilled this summer, and the new dam should be at full capacity by summer's end.  
There are some residents who could not afford to rebuild following the dam failure whose property might be considered in a strategy to buy out vulnerable sites.
2. Cossayuna Lake Dam  
This is privately owned by the Cossayuna Fire Department. Downstream is largely a nature preserve, but there are 1 or two houses in the path of a failure.
3. Battenkill Dams (there are 8)
  1. Clarks Mills at the Hudson River
  2. Pulp Mill Road
  3. County Route 53 in the Village of Greenwich
  4. Middle Falls Hydro at State Route 29
  5. Mill Dam
  6. Mill Hollow
  7. Prospect Street
  8. Center Falls, near Hardscrabble Lane.
4. Lake Nebo, Town of Fort Ann, tributary to Hadlock Pond (privately owned)  
There are houses on Lake Nebo Road that could be affected.

### Earthquake:

The County has seen little impact for earthquakes, but the most recent did damage some cellars, chimneys, and some structural damage occurred. Documentation will be sought.

### Tornado:

Though there was recall of 5 tornadoes in recent memory, tornadic damage in the County has been limited. The Task Force discussed strategies related to dam failures, flash flooding, earthquakes, and tornadoes such as early warning systems and improved links to the National Weather Service. Currently the County has a Civil Defense Warning System activated by the Emergency Management Office. Recipients of the early warning messages are primarily schools.

### GIS

The County has a new employee, Clare Dunn, a GIS specialist in the Planning Department. On the recommendation of Bill Cook, Clare was asked to join the meeting. She reviewed the current maps in the plan and was informed that the State Mitigation Plan had no 100 Year Flood Plain Map for Washington County. She thought she might be able to help.

Following the Task force meeting, Dr. Phelan, Willie Grimmke, and Kyle Vandewater met with the Planning Office manager to request Clare's assistance with the plan. We agreed to provide a digital copy of our current draft and a copy of the Crosswalk that reviews the first draft submitted to SEMO in March. Both were delivered immediately. Upon review of these documents, the Planning Department will let us know if Clare can assist us.

### Narrative to Support Certain Items in the Current Draft

Dr. Phelan explained the comments from Ed Lips in the Crosswalk Review that indicated a need for more complete description of the maps indicating problem areas where natural hazards had caused expensive damage. Dr. Phelan made copies of all sections of the plan that present by jurisdiction, the reports of damage. All maps and tables are now labeled. The suggestion was to contact each town highway superintendent by phone to ask for more complete information. The Task Force agreed that phone interviews might be the most efficient way to get this information. Dr. Phelan will review Ed Lips' comments on the Crosswalk to determine just where narratives are needed. Kyle Vandewater will let the superintendents know of our intention to call them, and provide them with copies from the plan of their pages so they will have them to refer to when we call. Strategic Teaching Associates, Inc. will arrange the calls and the interviewers.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting was not scheduled pending updates to the plan.

**Adjournment:**

The meeting was adjourned at 3:10 p.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

----- Original Message -----

**From:** [Strategic Teaching Associates](#)

**To:** [John Boyce](#) ; [Maureen VanBuren](#) ; [Joseph Childs](#) ; [Ray Rathbun](#) ; [Doug Brownell](#) ; [Ken Talkington](#) ; [Dr. Tom Phelan](#) ; [William Cook](#) ; [Willy Grimmke](#) ; [Kyle Vandewater](#)

**Cc:** [Brunelle, Greg](#) ; [Ian Miller](#) ; [Bruce Jordan](#) ; [Sergeant David Kolb](#) ; [Lips, Edward](#)

**Sent:** Wednesday, October 24, 2007 3:43 PM

**Subject:** SAVE THE DATE-Nov 28, 2007 Wash. Co. Mit. Planning Task Force Mtg.

Dear Planning Task Force Members,

Attached please find a "**Save The Date**" Memo with details regarding the next Washington County Mitigation Planning Task Force Meeting.

The meeting is scheduled for November 28, 2007 at 9:00 AM, County Municipal Center in Classroom B230.

The newest version of the plan, with all updates included, will be available on CD. The next step in the process will be Task Force approval, making this a very important meeting to attend.

I look forward to seeing you all at the meeting. **Please respond by reply email or call 315-622-5924 with your availability to attend.**

Lyn Mura, for

Dr. Tom Phelan  
Strategic Teaching Associates, Inc.  
E-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com)  
[www.drppwithdrtom.com](http://www.drppwithdrtom.com)  
Phone: (315) 622-5924  
Fax: (315) 622-5775  
4158 Forestbrook Drive  
Liverpool, NY 13090



**SAVE THE DATE:**  
November 28, 2007  
**WASHINGTON COUNTY  
MITIGATION PLANNING  
TASK FORCE MEETING**

Wednesday, November 28th 9:00 AM  
County Municipal Center  
Classroom B230

(Classroom located next to the County Attorney's Office, Building B)

**T**he newest version of the plan will be available on CD. With the exception of those municipalities that did not participate, the plan has been completed, with all updates requested by SEMO included. The next step will be Task Force approval, then submission to FEMA. Call STA at (315) 622-5924 or email: [sta@twcny.rr.com](mailto:sta@twcny.rr.com) with your availability to attend.



**Washington County All-Hazard Mitigation Plan Task Force Meeting  
November 28, 2007  
Meeting Number 10  
2<sup>nd</sup> Floor Classroom (B230), Building B, County Municipal Center**

**Agenda**

1. Call to Order 9:00 a.m.
2. Roll Call (Please be certain to sign in on the attendance sheet.)
3. Minutes of the June 28, 2007 Meeting
4. Treasurer's Report (used to report on Quarterly Reports due SEMO)  
Status of Plan Extension  
First Draft of Mitigation Plan, filed March 16, 2007, has been revised.
5. Old Business  
Report to the Finance Committee September 13, 2007  
Non-participating Jurisdictions  
Confirmation of absence of Master Plans/ Land Use Plans in jurisdictions
6. New Business  
Mitigation Plan Maintenance  
Next Step: Prepare final copy for public comment in June.
7. Program/Discussion  
Municipality Adoption Procedure
8. Next Meeting: Set Date
9. Adjournment 11:00 a.m.

Strategic Teaching Associates, Inc., [sta@twcny.rr.com](mailto:sta@twcny.rr.com) (315) 622-5924 Cell: (315) 243-7605

## Washington County All-Hazard Mitigation Plan Meeting Minutes

November 28, 2007

### Call to Order:

The meeting was called to order by Dr. Tom Phelan at 9:00 a.m. in Second Floor Classroom at the Washington County Municipal Building B, Fort Edward, New York.

### Attendance (10):

Kyle Vandewater	Washington County DPW, Mitigation
Dr. Tom Phelan	Strategic Teaching Associates, Inc., President
Joseph Childs	Village of Salem, Trustee
Willie Grimmke	Washington County DPW
William Cook	Washington County Emergency Management
Heather Baker	GIS, Washington County Planning Dept.
Brian Brockway	Town of Fort Edward, Highway Superintendent
Maureen Van Buren	Fort Ann Central School, Superintendent
Sean Carney	Town of Jackson
Chris Rieben	Town of White Creek

### Approval of the Minutes:

The minutes of the June 28, 2007, meeting were distributed and unanimously approved. .

### Treasurer's Report:

Dr. Phelan stated that this space on each agenda would be used to distribute and discuss the Quarterly Report to SEMO as required under the terms of the grant. The most recent report due March 15, 2007, included the first draft of the Mitigation Plan.

### Committee Reports:

Clare Dunn has left the GIS position, and Heather Baker has replaced her.

A press release announcing this meeting was sent to the media. (See Attachment 1.)

### Old Business:

Dr. Phelan had sent a letter to each jurisdiction informing them of the March 16, 2007, first draft deadline and requesting them to either send information or complete an Authorized Representation form (proxy).

### New Business:

Heather Baker met with the Task Force to discuss GIS support of the mitigation plan. She was given a hard copy of the plan so she could review the maps in need of conversion to GIS format. She agreed to review them.

Dr. Phelan presented a form for surveying each jurisdiction for existing plans. He indicated that the form would be mailed to each chief executive officer requesting that it be completed. (See the attached form, Attachment 2.) The form is being sent to double check the existence of such plans and ordinances, since it was reported earlier that no such plans were in existence.

A report has been requested for the December 21, 2008, meeting of the Washington County Board of Supervisors' meeting. Dr. Phelan will prepare the report and Willie Grimmke will present it. (See the attached draft, Attachment 3.)

**Program/Discussion:**

Hard copies of the draft plan were distributed. The plan will be updated when GIS maps are produced and proxy and records survey forms are received from all jurisdictions.

The time frame for completion of the plan has been extended through June 30, 2008, with an updated draft plan being submitted for FEMA review, through SEMO, no later than March 31, 2008.

**All-Hazard Mitigation Planning Task Force:**

All-Hazard Mitigation Planning Task Force Members

Robert W. Humiston	Town of Argyle
Hugh Dewey	Town of Greenwich
Floyd Pratt	Town of Hebron
Ken Talkington	Hebron
Doug Brownell	Easton Volunteer Fire Company
William H. Cook	Washington County Public Safety
Chris Rieben	Town of White Creek
Sean Carney	Town of Jackson
Ray Rathbun	Telescope Casual Furniture
Joseph Childs	Village of Salem
Maureen Van Buren	Ft. Ann Central School
John Boyce	Fort Hudson Nursing Center
Willy Grimmke	Washington County DPW
Kyle Vandewater	Washington County DPW
Dr. Thomas D. Phelan	Strategic Teaching Associates, Inc.

**Next Meeting:**

The next meeting is was not scheduled pending updates to the plan.

**Adjournment:**

The meeting was adjourned at 11:10 a.m.

Respectfully submitted,  
Thomas D. Phelan, Ed.D.

Attch: 3

Attachment 1:



Department of Public Works  
Highways Solid Waste Engineering

Willy F. Grimmke, P.E. - Superintendent  
Kyle M. Vandewater - Public Works Manager

November 20, 2007

For Immediate Release

WASHINGTON COUNTY MITIGATION PLAN TASK FORCE MEETING

The Washington County Multi-Jurisdictional All-Hazards Mitigation Planning Task Force will hold its next open meeting on November 28, 2007, from 9:00 – 11:00 A.M. at the County Municipal Center, Classroom B230 (classroom located next to the County Attorney's Office, Building B), 383 Broadway, Fort Edward, NY.

A draft of the plan has been reviewed by the New York State Emergency Management Office (SEMO), and additions will be presented at the Wednesday morning meeting. The Draft Plan will be submitted to the Federal Emergency Management Agency (FEMA) for approval. Following FEMA approval, each jurisdiction will provide an opportunity for public review before considering the Plan for adoption.

The Mitigation Planning process started in March of 2005. The public is welcome to review Task Force meeting minutes on the Washington County website for the Department of Public Works at [http://www.co.washington.ny.us/Departments/dpw/dpw\\_haz.htm](http://www.co.washington.ny.us/Departments/dpw/dpw_haz.htm).

Questions about the All-Hazards Mitigation Planning Task Force can be directed to the Washington County Department of Public Works, 383 Broadway, Fort Edward, New York 12828, ATTN: Mitigation Planning Task Force, or by e-mail to Dr. Thomas Phelan at [sta@twcny.rr.com](mailto:sta@twcny.rr.com).

###

Contact: Dr. Thomas Phelan, (315) 622-5924 or e-mail to [sta@twcny.rr.com](mailto:sta@twcny.rr.com)

Attachment 2:



**Washington County Multi-Jurisdictional All-Hazard Mitigation Plan**  
**Record of Review of Jurisdictional Existing Plans**

(Name of Jurisdiction) \_\_\_\_\_

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			
Growth Management Plan			
Capital Improvement Plan/ Program			
Flood Damage Prevention Ordinance			
Floodplain Management Plan			
Flood Insurance Studies or Engineering Studies for Streams			
Hazard Vulnerability Analysis (HAZNY)			
Emergency Management Plan (other than the CEMP)			
Zoning Ordinance			
Building Code			
Drainage Ordinance			
Critical Facilities Map			
Existing Land Use map			
Elevation Certificates			
State Plan			
HAZUS			

Prepared by: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

**Please return to Kyle Vandewater at Washington County DPW or fax to (315) 622-5775.**

Attachment 3:

To: Kyle Vandewater  
From: Dr. Tom Phelan  
Re: Mitigation Plan Status Report  
Date: December 13, 2007

The Washington County All Hazards Mitigation Plan is nearing completion. The second draft has been received at SEMO with positive preliminary feedback from Ed Lips. We have come a long way since our first submission was reviewed in June, 2007.

Though the Task Force worked hard and long to manually develop maps showing sites of flood-damaged roads and infrastructure, the possibility of converting the manual maps to GIS electronic maps is a major improvement. We are working with Heather Baker to convert our present maps. This is far more acceptable to SEMO and FEMA.

Task Force members have repeatedly expressed concern about support from their municipalities in providing existing plans and historical data on past natural disasters. As a safeguard, Dr. Phelan recently sent a checklist to each municipal supervisor or mayor requesting confirmation that all plans in existence had been provided. The checklists are being returned, and they are showing positive results. One supervisor commented, "Our town is small, our rural population has always helped each other in emergencies, and our many long term residents are aware of existing hazards. We just have not done formal written plans. Your project will give us a start." This is a very positive outcome of mitigation planning. We need all municipalities to participate by completing the checklist and by searching their local records for evidence of vulnerability and damage from natural hazards. The more participation we have, the stronger our plan and our chances of final approval. Once approved, municipalities will be able to apply for Federal funds for mitigation projects to reduce the future cost of recovery from damage from natural hazards such as dam failures and washed out roads from flooding.

The project has been extended by SEMO until June 2008. The current next step is to review the responses (checklists) from each municipality and to convert the maps to GIS. Once the checklists are reviewed, the Task Force will want to review any documents not formerly made available for significant input to the plan.

Once this information is added to the plan, it will be sent to SEMO and FEMA for approval. After it is approved, it will be copied and sent to each municipality for public comment and adoption. When the timeframe for FEMA review is estimated, the Task Force will notify municipalities for scheduling of public comment and proposal for adoption. Each municipality is required to adopt the plan with a local resolution.

The current recommended mitigation strategies are as follows:

- 4.1 Improve drainage at sites where roads have washed out due to natural hazards in the past**
- 4.2 Purchase equipment to provide for local personnel to conduct the drainage improvement**
- 4.3 Engineering assessment to determine feasibility of each site improvement**
- 4.4 Improve dams to prevent flooding causing roads to wash out.**

- 4.5 Improve identified sites where slope stability is subject to land subsidence and where excavation or planting could mitigate future damage.**
- 4.6 Complete a hydrological study of flooding conditions in the Village of Salem to determine appropriate mitigation strategies.**
- 4.7 Consider measures to reduce the potential damage from dam failures downstream of the Counties dams, including those on private property whose failure could impact homes and roadways.**

## **APPENDIX 3**

**Agencies Contacted Requesting Information Relating to  
Natural Hazards & Disasters within Washington County**

**&**

**Copy of Letter**

Kimberly Rizzo  
FEMA Region II  
26 Federal Plaza  
New York NY 10278

New York Water Science Center (USGS)  
425 Jordan Road  
Troy NY 12180-8349

US Army Corps of Engineers  
Jacob K. Javits Federal Building  
26 Federal Plaza, Room 2109  
New York NY 10278-0090

Northeast Regional Office  
U.S. Fish & Wildlife Service  
300 Westgate Center Drive  
Hadley MA 01035-9589

National Weather Service  
State Liaison Office  
Albany NY 12203-3640

NYS Dept. of State Coastal Management  
& Codes Bureau  
41 State Street  
Albany NY 12231

US Dept. of Health & Human Services-Region 2  
Jacob K. Javits Federal Building  
26 Federal Plaza  
New York NY 10278

Scott Fitscher  
Natural Resources Conservation Services  
Greenwich Service Center  
2530 State Route 40  
Greenwich NY 12834-9627

US Fish & Wildlife Service  
Southern New England-New York Bight  
Coastal Ecosystems Program  
Shoreline Plaza Route 1A  
PO Box 307  
Charlestown RI 02813

Centers for Disease Control & Prevention  
1600 Clifton Road  
Atlanta GA 30333

Radworth Anderson  
NY State Emergency Management Office  
1220 Washington Avenue, Suite 101  
Albany NY 12226

William Nechamen  
NYS Dept. of Environmental Conservation  
625 Broadway  
Albany NY 12233-3507

NYS Dept. of Transportation  
1220 Washington Avenue  
MC 0871  
Albany NY 12232

NYS Division of State Police  
1220 Washington Avenue  
Building 22  
Albany NY 12226

NYS Dept. of Health  
547 River Street  
Room 253  
Troy NY 12180

NYS Office of Fire Prevention & Control  
41 State Street  
Albany NY 12231

Susan Bergmann  
State Hazard Mitigation Officer  
NYSEMO  
1220 Washington Avenue, Suite 101  
Building 22  
Albany NY 12226

R. Bruce Oswald, LA - Director  
Center for Geographic Information  
NYS Office for Technology  
State Capitol  
Albany NY 12224

Joseph Driscoll, District Manager  
Washington Co. Soil & Water Conservation  
2530 State Route 40  
Greenwich NY 12834-9627

The Feeder Canal Alliance  
65 Ridge Street  
Glens Falls NY 12801

Kathleen Diehl  
Green Mountain & Finger Lakes National Forests  
231 North Main Street  
Rutland VT 05701

Sue Brennan  
Town Historian  
69 Brennan Road  
Argyle NY 12809

Sandra Davis  
Town Historian  
949 Turnpike Road  
Cambridge NY 12816

Agnes Peterson  
Dresden Town Historian  
14057 State Route 22  
Clemons NY 12819

Erline Houser  
Easton Town Historian  
Greenwich NY 12834

Virginia Parrott  
Town Historian  
1133 County Route 16  
Fort Ann NY 12827

R. Paul McCarty  
Town Historian  
85 Broadway  
Fort Edward NY 12828

Lee Comar  
Town Historian  
29 Depot Street  
Middle Granville NY 12849

Tisha Colton  
Town Historian  
2 Academy Street  
Greenwich NY 12834

Carolyn McCullen  
Town Historian  
PO Box 11  
Hampton NY 12837

Sylvia Van Anden  
Town Historian  
PO Box 35  
Hartford NY 12838

Drucille Craig  
Hebron Town Historian  
1317 County Route 31  
Granville NY 12832

Norma Skellie  
Jackson Town Historian  
3511 State Route 22  
Salem NY 12865

Paul Loding  
Kingsbury Town Historian  
210 Main Street  
Hudson Falls NY 12839

Rose Blood  
Putnam Town Historian  
106 County Route 2  
Putnam Station NY 12861

William Cormier  
Town Historian  
PO Box 458  
Salem NY 12865

Marilyn Robinson  
White Creek Town Historian  
Eagle Bridge NY 12057

Carol Senecal  
Town Historian  
327 Buckley Road  
Whitehall NY 12887

Frank Winters  
NYS Office of Cybersecurity  
Critical Infrastructure  
30 S Pearl Street, 11<sup>th</sup> Floor  
Albany, NY 12207



4158 Forestbrook Drive | Liverpool, NY 13090 | ph: 315.622.5924 | fax: 315.622.5775 | e-mail: [sta@twcnny.rr.com](mailto:sta@twcnny.rr.com) | [www.drpwwithdrtom.com](http://www.drpwwithdrtom.com)

August 28, 2006

<Contact Name>  
<Agency>  
<Address>  
<City, State Zip>

Dear :

Washington County (NY) is currently involved in the process of mitigation planning to produce a Multi-Hazard, Multi-Jurisdictional County Mitigation Plan. The County has engaged the professional services of Dr. Thomas Phelan, President, Strategic Teaching Associates, Inc. to facilitate this planning process.

We recognize that the success of this planning process rests upon developing partnerships and information sharing with various local, state, and federal agencies. With this in mind, please accept this as a request for submission of copies of any and all records relating to Natural Hazards and Disasters within Washington County (NY). (Examples: flooding, ice storms, wind storms, mud slides, man-made, biological, and technical hazards; past or current.) For planning purposes relating to our schedule, we are requesting materials be sent by September 22, 2006.

Please send any pertinent information to either of the following addresses:

Mr. Kyle Vandewater  
County Hazard Mitigation Coordinator  
Washington County DPW  
383 Upper Broadway  
Fort Edward, New York 12828

Dr. Thomas Phelan  
Strategic Teaching Associates, Inc.  
4158 Forestbrook Drive  
Liverpool, New York 13090

If you have any questions or would like further information, please call (315) 622-5924 or e-mail [sta@twcnny.rr.com](mailto:sta@twcnny.rr.com). (All materials in electronic format may also be emailed directly to this address.)

With your assistance, we look forward to the successful development of the Washington County Multi-Hazard, Multi-Jurisdictional Mitigation Plan.

Thank you for your cooperation.

Regards,

Dr. Thomas Phelan

# **APPENDIX 4**

## **Washington County**

### **All-Hazard Mitigation Planning Task Force Meeting Sign-In Sheets** *(Transcribed)*



**WASHINGTON COUNTY  
ALL-HAZARD MITIGATION PLAN ORIENTATION MEETING  
April 13, 2006**

**PLEASE PRINT**

<b>Name/Title</b>	<b>Organization/ Town/Village</b>	<b>Telephone Number</b>	<b>E-Mail Address</b>
Al Dunlop	Pilot Knob Fire Dept.		aldunlop@adelphia.net
Maureen Van Buren, Supt.	Fort Ann Central School	639-5594 x2153	mvanburen@fortannschool.org
Willy Grimmke, Supt.	Wash. Co. DPW	746-2440	wgrimmke@co.washington.ny.us
Walter Graham, Supt. of Highways	Town of Kingsbury	747-6231	kingsburyhighway@adelphia.net
John Boyce, Director of Plant Operations	Fort Hudson Nursing Center	747-2811	jboyce@fortjudson.com
Edward Lips	State Emerg. Mgmt. Office	518-292-2368	ed.lips@semo.state.ny.us
Robert W. Humiston, Highway Supt.	Town of Argyle	638-8210	
Hugh Dewey, Highway Supt.	Town of Greenwich	695-6033	
Floyd Pratt, Highway Supt.	Town of Hebron	854-3078	
Paul Zinn, Wash. Co. Deputy EMS Coord.	Washington Co.	642-3887	p735@hotmail.com
Guy Capuano	Village of Salem	854-9712	
Ken Talkington	Hebron	854-3636	lt1073@cs.com
Doug Brownell	Easton Volunteer Fire Co.	692-7503	mapking1@msn.com
Dr. Tom Phelan	Strategic Teaching Associates, Inc.	315-622-5924	sta@twcny.rr.com
Kyle Vandewater	Wash. Co. DPW	518-746-2440	kvandewater@co.washington.ny.us
William H. Cook	Wash. Co. Public Safety	518-742-7520	wcook@co.washington.ny.us
Leon R. Clark Jr, Supervisor	Town of Hampton	518-282-0031	
Chris Rieben, Highway Supt.	Town of White Creek	518-677-3223	
Sean Carney, Highway Supt.	Town of Jackson	518-677-3678	
Gordon Aubry, Sr.	Town of Argyle	518-638-8179	
Jim Woodcock	Town of Hartford	518-632-5255	
Ray Rathbun	Telescope Casual Furniture	518-642-1100 x222	rrathbun@telescopecasual.com
Joseph Childs, Trustee	Village of Salem	518-854-9793	jchilds1@nycap.rr.com







**WASHINGTON COUNTY  
ALL-HAZARD MITIGATION PLAN TASK FORCE MEETING  
July 10, 2006**

**PLEASE PRINT**

<b>Name/Title</b>	<b>Organization/ Town/Village</b>	<b>Telephone Number</b>	<b>E-Mail Address</b>
Kyle Vandewater	Wash. Co. DPW	518-746-2440	kvandewater@co.washington.ny.us
Willy Grimmke, Supt.	Wash. Co. DPW	746-2440	wgrimmke@co.washington.ny.us
Dr. Tom Phelan	Strategic Teaching Associates, Inc.	315-622-5924	sta@twcny.rr.com
Chris Rieben, Highway Supt.	Town of White Creek	518-677-3223	
Sean Carney, Highway Supt.	Town of Jackson	518-677-3678	
Joseph Childs, Trustee	Village of Salem	518-854-9793	jchilds1@nycap.rr.com
Bob Humiston, Highway Supt.	Town of Argyle	638-8210	
Ted Berndt, Citizen	Town of Cambridge		
Bruce Jordan	NYSEMO		
William H. Cook	Wash. Co. Public Safety	518-742-7520	wcook@co.washington.ny.us
Walter Graham, Supt. of Highways	Town of Kingsbury	747-6231	kingsburyhighway@adelphia.net
Frank Baker	Town of Hampton		
John Tanner	Town of Granville		













## **APPENDIX 5**

### **Public Outreach:**

**Media Outlets**

**Press Releases**

**Letter to County Fire Chiefs**

Media Outlets:

The Eagle  
Main Street  
Granville Sentinel  
Post Star (Glens Falls)  
Greenwich Journal  
Whitehall Times

June 26, 2006  
For Immediate Release

#### Washington County Mitigation Plan Task Force Formed

Ft. Edward: Washington County has formed an All-Hazard Mitigation Planning Task Force to develop a plan to reduce the damage that can be caused by natural disasters such as floods and ice storms. The Task Force will hold a meeting on July 10, 2006, from 9:00 – 11:00 a.m. at the County Municipal Center, Training Room 1, 383 Broadway, Fort Edward. The Task Force wishes to extend opportunities for public input in the planning process.

Washington County received a \$30,000 grant from the New York State Emergency Management Office (NYSEMO) to complement local funding to develop an All-Hazard Risk Reduction Plan for all jurisdictions within the county -- county, towns and villages.

Dr. Tom Phelan, president, Strategic Teaching Associates, Inc., has been retained as a consultant to facilitate the planning process. “Public input into this process is so important. I really hope people will come to the meeting to report to the Task Force those situations where damage has been caused in the past by flooding, ice storms, power outages, or other natural disasters.” In the mitigation planning process, information is collected about prior disasters which will then be used to determine steps that might be recommended for preventing further damage in the future.

Arrangements are being made to make all minutes of Task Force meetings available on the County’s website. The process of building the plan should continue into the fall of 2006.

The process begins with a complete and thorough risk assessment including detailed descriptions of all hazards that could affect the County, locations of prior hazards, the extent of the hazard, probability that the hazard could reoccur, maps detailing the information about the hazards, an analysis of the area’s vulnerability to the hazards (residences, businesses, infrastructure, or critical facilities), specific information about the numbers and types of structures , potential casualties, and potential dollar losses for each hazard.

With public input, the Task Force will include all potentially hazardous conditions in the Mitigation Plan. Once the plan is completed and approved by NYSEMO and the Federal Emergency Management Agency (FEMA), the County will be eligible to apply for government assistance in projects to reduce the potential impacts of future disasters.

Questions about the All-Hazard Mitigation Planning Task Force can be directed to the Washington County Department of Public Works, 383 Broadway, Fort Edward, New York 12828, ATTN: Mitigation Planning Task Force or by e-mail to Dr. Phelan at [sta@twcny.rr.com](mailto:sta@twcny.rr.com).

###

Contact: Dr. Thomas Phelan, (315) 622-5924 or e-mail to [sta@twcny.rr.com](mailto:sta@twcny.rr.com)



4158 Forestbrook Drive | Liverpool, NY 13090 | ph: 315.622.5924 | fax: 315.622.5775 | e-mail: [sta@twcny.rr.com](mailto:sta@twcny.rr.com) | [www.drpwithdrtom.com](http://www.drpwithdrtom.com)

October 17, 2006

For Immediate Release

#### WASHINGTON COUNTY MITIGATION PLAN TASK FORCE MEETING

Ft. Edward: The next Washington County All-Hazard Mitigation Planning Task Force will meet on October 30, 2006, from 9:00 – 11:00 a.m. at the County Municipal Center, 2<sup>nd</sup> Floor Classroom, Building B, 383 Broadway, Fort Edward.

The Task Force is moving from the vulnerability assessment phase into the mitigation planning phase. Public input is encouraged, specifically relating to any flooding which has occurred in the past.

Washington County received a \$30,000 grant from the New York State Emergency Management Office (NYSEMO) to complement local funding to develop an All-Hazard Risk Reduction Plan for all jurisdictions within the county – county, towns, and villages.

Dr. Tom Phelan, president, Strategic Teaching Associates, Inc., has been retained as a consultant to facilitate the planning process. “Public input into this process is critical. I hope people will come to the meeting to report situations where damage has been caused in the past by flooding.” In the mitigation planning process, information is collected about prior disasters which will then be used to determine steps that might be recommended for preventing further damage in the future.

Questions about the All-Hazard Mitigation Planning Task Force can be directed to the Washington County Department of Public Works, 383 Broadway, Fort Edward, New York 12828, ATTN: Mitigation Planning Task Force, or by e-mail to Dr. Phelan at [sta@twcny.rr.com](mailto:sta@twcny.rr.com).

###



Department of Public Works  
Highways Solid Waste Engineering

Willy F. Grimmke, P.E. - Superintendent  
Kyle M. Vandewater - Public Works Manager

November 21, 2007

For Immediate Release

WASHINGTON COUNTY MITIGATION PLAN TASK FORCE MEETING

The Washington County Multi-Jurisdictional All-Hazards Mitigation Planning Task Force will hold its next open meeting on November 28, 2007, from 9:00 – 11:00 A.M. at the County Municipal Center, Classroom B230 (classroom located next to the County Attorney's Office, Building B), 383 Broadway, Fort Edward, NY.

A draft of the plan has been reviewed by the New York State Emergency Management Office (SEMO), and additions will be presented at the Wednesday morning meeting. The Draft Plan will be submitted to the Federal Emergency Management Agency (FEMA) for approval. Following FEMA approval, each jurisdiction will provide an opportunity for public review before considering the Plan for adoption.

The Mitigation Planning process started in March of 2005. The public is welcome to review Task Force meeting minutes on the Washington County website for the Department of Public Works at [http://www.co.washington.ny.us/Departments/dpw/dpw\\_haz.htm](http://www.co.washington.ny.us/Departments/dpw/dpw_haz.htm).

Questions about the All-Hazards Mitigation Planning Task Force can be directed to the Washington County Department of Public Works, 383 Broadway, Fort Edward, New York 12828, ATTN: Mitigation Planning Task Force, or by e-mail to Dr. Thomas Phelan at [sta@twcnv.rr.com](mailto:sta@twcnv.rr.com).

###

Contact: Dr. Thomas Phelan, (315) 622-5924 or e-mail to [sta@twcnv.rr.com](mailto:sta@twcnv.rr.com)



June 1, 2006

Dear Washington County Citizen:

We need your help! Washington County, together with all municipalities in the county, is embarking on an initiative to assist communities in reducing risk from natural hazards: the All-Hazard Mitigation Plan. The goal is to reduce costly damage and inconvenience to County residents and businesses caused by natural disasters.

We are seeking information about local hazards that have impacted Washington County communities, no matter how long ago. We will research information from village, town and county records, libraries, newspapers, and historical societies.

The County is seeking volunteers to serve on the Mitigation Plan Task Force, and information on hazards or disasters you may recall. Attached is a two-page form on which we ask that you identify any hazards known to have occurred in your municipality, and that you note those that are most likely to re-occur (most prevalent).

We are especially interested in information from highway departments, emergency responders (fire, police and EMS), schools, not-for-profit organizations, health care facilities, and utilities. You are the people most likely to be directly involved in response to a natural disaster.

If you could take the time, please complete the "Identify the Hazards" worksheet #1 attached. In addition, we would welcome your participation on the Mitigation Plan Task Force which meets about one time each month.

The next meeting of the Mitigation Plan Task Force is June 12, 2006, from 9:00 – 11:00 a.m. at the Washington County Municipal Complex. All are welcome to attend.

For information, contact Kyle Vandewater, Department of Public Works, at (518) 746-2440 or Dr. Tom Phelan via e-mail at [sta@twcny.rr.com](mailto:sta@twcny.rr.com) or by phone at (315) 622-5924.

Your assistance will be greatly appreciated. All information about the Mitigation Plan is available to the public, and public input is welcome.

Sincerely,

*Tom Phelan*

Dr. Tom Phelan, Consultant to Washington County for Mitigation Planning

## **APPENDIX 6**

### **Agency Contacts**

**(Responded to Request for Information Letter)**

<b>Organization</b>	<b>Contact Name/Title</b>
NOAA/National Weather Service (NWS)	Raymond G. O'Keefe/Warning Coordination Meteorologist
State of New York Department of State	Laurence Sombke/Records Access Officer
Washington County Soil and Water Conservation District	Joseph J. Driscoll/District Manager
Town of Hebron	UNKNOWN
US Geological Survey/New York Water Science Center (Troy, NY)	Margaret Phillips/Technical Information Specialist
New York State Emergency Management Office	John A. Agostino/Alternate Governor's Authorized Representative
Town of Dresden (Historian)	Agnes Petersen/Dresden Town Historian
State of New York Department of Health	Robert LoCicero, Esq./Records Access Office

## **Appendix 7**

### **Copies of Resolutions From Towns/Villages Authorizing Washington County To Act As Proxy**



80 George Street, PO Box 314  
Fort Anne, New York 12827-0314  
Phone: (518) 639-8929  
Fax: (518) 639-4209

Town Supervisor  
Gayle A. Hall  
(518) 761-4040  
(518) 761-3322 (Fax)

Town Board Members  
Harold R. Fuller  
Duane A. Burch  
Inez A. Mattison  
Bruce K. Whitney

Town Clerk  
Mary Jane Godfrey  
(518) 639-8929  
(Fax) (518) 639-4209

Superintendent of Highways  
Paul E. Winchell  
Phone/Fax: (518) 639-8950

March 15, 2007

Kyle Vandewater  
Washington County Dept. of Public Works  
383 Broadway  
Fort Edward, NY 12828

Re: Resolution Authorizing Washington County to Act on Behalf of  
the Town of Fort Ann in Connection with the Washington County  
All-Hazard Mitigation Plan Task Force

Dear Kyle:

Enclosed is a certified copy of Resolution #23-07, as titled above.

This resolution was adopted at the Town of Fort Ann Regular Town Board Meeting of  
March 12, 2007.

Sincerely,

Mary Jane Godfrey, Town Clerk

**TOWN BOARD OF THE TOWN OF FORT ANN  
COUNTY OF WASHINGTON, STATE OF NEW YORK**

Resolution No. 23 of 2007

Adopted March 12, 2007

Introduced by INEZ A. MATTISON  
who moved its adoption.

Seconded by HAROLD R. FULLER

**RESOLUTION AUTHORIZING WASH. COUNTY TO ACT ON BEHALF OF THE  
TOWN OF FORT ANN IN CONNECTION WITH THE WASHINGTON COUNTY ALL-  
HAZARD MITIGATION PLAN TASK FORCE**

**WHEREAS**, the Town of Fort Ann has limited capacity to undertake extensive participation in the preparation of a hazard mitigation plan; and

**WHEREAS**, Washington County is able to act on behalf of the Town of Fort Ann in the analysis and development of a hazard mitigation plan; and

**WHEREAS**, Washington County shall prepare a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

**WHEREAS**, Washington County shall deliver a draft copy of the plan for public comment as well as the Town's comment during the planning process and prior to the adoption.

**NOW, THEREFORE, BE IT RESOLVED:**

**Section 1.** The Town Board authorizes Wash. County on behalf of the Town to prepare the Washington County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Town upon completion.

**Section 2.** This resolution shall take effect immediately.

PRESENT:

Gayle A. Hall, Supervisor  
Duane Burch, Councilman  
Harold Fuller, Councilwoman  
Inez Mattison, Councilman  
Bruce K. Whitney, Councilman

AYES: 5  
NAYS: 0  
ABSENT: 0  
{Seal}



Mary Jane Godfrey, Town Clerk  
Town of Fort Ann

(Certification & Seal on Original)

RESOLUTION NO. 18  
INTRODUCED BY: SUPERVISOR VERNON SCRIBNER  
MOTION BY: COUNCILMAN DAVID HOLLISTER  
SECONDED BY: COUNCILMAN STEPHEN LANE  
CARRIED UNANIMOUSLY

**WHEREAS**, The Town of Whitehall has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and

**WHEREAS**, Washington County is able to act on behalf of the Town of Whitehall in the analysis and development of a hazard mitigation plan; and

**WHEREAS**, Washington County shall prepare a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

**WHEREAS**, Washington County shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption.

**NOW THEREFORE**, the Town Board authorizes Washington County on behalf of the Town of Whitehall to prepare the County ABC Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Town Board of Whitehall upon completion.

Adopted this 14<sup>th</sup> day of March, 2007 at the meeting of the Town Board of the Town of Whitehall.

**Resolution for Authorized Representation**

**Village of Whitehall  
Village Board of Trustees  
1 Saunders Street, P.O. Box 207  
Whitehall, New York 12887-0207**

**RESOLUTION:**

**WHEREAS**, the Village of Whitehall has limited capability to undertake extensive participation in the preparation of a hazard mitigation plan; and

**WHEREAS**, Washington County is able to act on behalf of the Village of Whitehall in the analysis and development of a hazard mitigation plan; and

**WHEREAS**, Washington County shall prepare a hazard mitigation plan in accordance with 44 FEMA requirements at 44 C.F.R. 201.6; and

**WHEREAS**, Washington County shall deliver a draft copy of the Plan for public comment as well as the governing body's comment during the planning process and prior to adoption,

**NOW THEREFORE**, the Village Board of Trustees authorizes Washington County on behalf of the Village of Whitehall to prepare the Washington County Multi-Hazard Mitigation Plan, which shall be reviewed and considered for adoption by the Village Board of Trustees upon completion.

**ADOPTED** this 5<sup>th</sup> day of March, 2007 at the regular meeting of the Village Board of Trustees of the Village of Whitehall.

(Signature on original/on file)  
Joan C. Douglas  
Clerk-Treasurer

**SEAL:** (on original/on file)

## **APPENDIX 8**

**Details Relating To:**

**Record of Review of Jurisdictional Existing Plans**



Department of Public Works  
Highways Solid Waste Engineering

Willy F. Grimmke, P.E. - Superintendent  
Kyle M. Vandewater - Public Works Manager

**MEMORANDUM**

TO: Town Supervisors & Village Mayors  
FROM: Kyle M. Vandewater, COUNTY HAZARD MITIGATION COORDINATOR  
Dr. Thomas Phelan, CONSULTANT TO WASHINGTON COUNTY  
DATE: **29 November 2007**  
re: Record of Review of Jurisdictional Existing Plans

The Mitigation Planning Task Force met on Wednesday, November 28<sup>th</sup> and reviewed the latest draft version of the Washington County All-Hazards Mitigation Plan. Discussion revealed that some information is still needed for the Plan to be completed.

As we will soon be submitting the final version of the Mitigation Plan to FEMA for review, your input on the attached "Record of Review of Jurisdictional Existing Plans" is critical.

Please take a moment to complete the table, and return by December 21, 2007 to:  
Kyle Vandewater at Washington County DPW, Fax # (518) 746-2441, or  
Dr. Tom Phelan, Fax # (315) 622-5775.

Thank you for your cooperation.

Washington County Multi-Jurisdictional All-Hazard Mitigation Plan

Record of Review of Jurisdictional Existing Plans

(Name of Jurisdiction) \_\_\_\_\_

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			
Growth Management Plan			
Capital Improvement Plan/ Program			
Flood Damage Prevention Ordinance			
Floodplain Management Plan			
Flood Insurance Studies or Engineering Studies for Streams			
Hazard Vulnerability Analysis (HAZNY)			
Emergency Management Plan (other than the CEMP)			
Zoning Ordinance			
Building Code			
Drainage Ordinance			
Critical Facilities Map			
Existing Land Use map			
Elevation Certificates			
State Plan			
HAZUS			

Prepared by:

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-mail: \_\_\_\_\_

Please return to Kyle Vandewater at Washington County DPW or fax to (315) 622-5775.



## Washington County Multi-Jurisdictional All-Hazard Mitigation Plan

### Record of Review of Jurisdictional Existing Plans

Name of Jurisdiction	Date Survey Mailed	Completed Response Received	Form Completed by: Name/Title
Argyle, Town of	11/29/07		
Argyle, Village of	11/29/07		
Cambridge, Town of	11/29/07		
Cambridge, Village of	11/29/07		
Dresden, Town of	11/29/07		
Easton, Town of	11/29/07	X	John Rymph, Supervisor
Fort Ann, Town of	11/29/07		
Fort Ann, Village of	11/29/07		
Fort Edward, Town of	11/29/07	X	Brian Brockway, Highway Supt.
Fort Edward, Village of	11/29/07		
Granville, Town of	11/29/07	X	John Cosey, Supervisor
Granville, Village of	11/29/07	X	Richard Roberts, Village Clerk/Treas.
Greenwich, Town of	11/29/07		
Greenwich, Village of	11/29/07	X	Michael Schreiner, Deputy Mayor
Hampton, Town of	11/29/07	X	Leon Clark, Jr. ,Supervisor
Hartford, Town of	11/29/07	X	Nancy Hall, Supervisor
Hebron, Town of	11/29/07		
Hudson Falls, Village of	11/29/07		
Jackson, Town of	11/29/07		
Kingsbury, Town of	11/29/07	X	Tom Gentile, Code Enforcement Officer
Putnam, Town of	11/29/07		
Salem, Town of	11/29/07		
Salem, Village of	11/29/07	X	Joseph Childs, Village Trustee
White Creek, Town of	11/29/07	X	R. Shay, Supervisor
Whitehall, Town of	11/29/07	X	Vernon Scribner, Supervisor
Whitehall, Village of	11/29/07	X	Patricia Norton, Mayor

No response to date from original or follow-up request

**RECORD OF REVIEW - SUMMARY**

	Argyle, Town	Argyle, Village	Cambridge, Town	Cambridge, Village	Dresden, Town	Easton, Town	Fort Ann, Town	Fort Ann, Village	Fort Edward, Town	Fort Edward, Village	Granville, Town	Granville, Village	Greenwich, Town
<b>Existing Prog./Pol./Technical Documents</b>													
Comprehensive Plan						Yes			Yes			Yes	
Growth Management Plan													
Capital Improvement Plan/Program													
Flood Damage Prevention Ordinance													
Floodplain Management Plan						Yes			Yes				
Flood Insurance Studies or Engineering Studies for Streams									Yes				
Hazard Vulnerability Analysis (HAZNY)													
Emergency Management Plan									Yes			Yes	
Zoning Ordinance									Yes			Yes	
Building Code						Yes			Yes		Yes		
Drainage Ordinance									Yes				
Critical Facilities maps													
Existing Land Use Maps						Yes						Yes	
Elevation Certificates												Yes	
State Plan													
HAZUS													

**RECORD OF REVIEW – SUMMARY**

	Greenwich, Village	Hampton, Town	Hartford, Town	Hebron, Town	Hudson Falls, Village	Jackson, Town	Kingsbury, Town	Putnam, Town	Salem, Town	Salem, Village	White Creek, Town	Whitehall, Town	Whitel Villag
<b>Existing Prog./Pol./Technical Documents</b>													
Comprehensive Plan	Yes		Yes								Partial	Yes	Yes
Growth Management Plan										Yes			
Capital Improvement Plan/Program		In progress										Yes	
Flood Damage Prevention Ordinance	Yes	Yes					Yes						Yes
Floodplain Management Plan											Yes	Yes	
Flood Insurance Studies or Engineering Studies for Streams										Yes			
Hazard Vulnerability Analysis (HAZNY)										Yes			
Emergency Management Plan	Yes		Yes							Yes	Yes	Yes	Yes
Zoning Ordinance	Yes						Yes			Yes		Local Laws	Yes
Building Code	Yes						Yes			Yes	County	County	
Drainage Ordinance							Yes						
Critical Facilities maps													
Existing Land Use Maps	Yes									Yes		County	
Elevation Certificates		Yes											
State Plan													
HAZUS													

*3/08 Have requested copies of existing plans for review and incorporation into Mitigation Plan where appropriate.*

## **APPENDIX 9**

### **FEMA Approval Letter from SEMO September 21, 2009**



September 21, 2009

Mr. Kyle Vandewater  
Assistant Director of Public Works  
Washington County Government Center  
383 Broadway  
Fort Edward, NY 12828

Re: Washington County  
Hazard Mitigation Plan Approval

Dear Mr. Vandewater:

The New York State Emergency Management Office (SEMO) is pleased to inform you that FEMA has approved your all-hazards mitigation plan, pending adoption.

SEMO requested the plan be approved because the FEMA-mandated review period had been exceeded. FEMA honored our request, but also identified areas for improvement and offered comments that would make the plan more consistent with its planning guidelines and more useful to your jurisdiction. Therefore, as you move forward, please remember that:

- a) the current plan is approved pending adoption and will remain in effect for five years from the date of adoption by the first participating jurisdiction;
- b) the current plan does not in all aspects meet FEMA's planning guidelines and should not be used to guide revisions for this plan or other mitigation planning Washington County or its jurisdictions may undertake;
- c) SEMO has committed that it will require FEMA's comments, included in the attached crosswalk document, to be addressed and incorporated in the five-year revision of this all-hazards plan.

That said, SEMO encourages you to consider implementing these plan revisions now, while the process is fresh and your stakeholders are still available: updating both the plan and the County's list of desired mitigation actions in light of new information will make you more competitive in future mitigation project grant cycles. We have attached FEMA's comments in e-mail and are prepared to provide technical assistance for mitigation planning any time you need it.

Once again we'd like to thank you for your interest in SEMO's mitigation programs and your patience as we worked out the details of this review with FEMA.

Please contact Mr. John Fishbein 518-292-2459 or me at 518-292-2370, respectively, if you or your staff have questions or need additional information.

Sincerely,

A handwritten signature in black ink that reads "Richard M. Lord". The signature is written in a cursive style with a long, sweeping underline.

Richard M. Lord

Chief of Mitigation Programs

and Agency Preservation Officer

cc: Applicant file