

8.0 National Flood Insurance Program

Long-term mitigation of potential flood impacts can be best achieved through comprehensive floodplain management regulations and enforcement, particularly at a local level. The National Flood Insurance Program (NFIP) is regulated by FEMA. The goal of this program is to reduce the impact of flooding on private and public structures by providing affordable insurance for property owners. The program encourages local jurisdictions to adopt and enforce floodplain management regulations in order to mitigate the potential effects of flooding on new and existing infrastructure (FEMA, 2009).

Communities that participate in the NFIP adopt floodplain ordinances that require that all insured structures that are damaged over 50-percent of the property's market value must comply with the floodplain ordinance when the structure is repaired/re-built. These repairs could mean changes to the elevation of the structure, acquisition and demolition by the municipality, or relocation to a location outside of the floodplain. Insured structures that are located within floodplains identified on FEMA's Flood Insurance Rate Maps (FIRMs) receive funds if impacted by a flooding disaster. These distributed funds are to be used to mitigate the risk of future flooding by implementing pre-disaster mitigation actions, such as those previously referenced.

The NFIP and other flood mitigation actions are important for the protection of public and private property and public safety. Flood mitigation is valuable to communities because (1) it creates safer environments by reducing loss of life and decreasing property damage; (2) it allows individuals to minimize post-flood disaster disruptions and to recover quicker (homes built to NFIP standards receive less damage from flood events – when damage does occur, the flood insurance program protects the homeowner's investment); and (3) it lessens the financial impacts on individuals, communities, and other involved parties (FEMA, 2009).

8.1 Tompkins County Flood Mapping

FEMA's Q3 flood data, which is derived from their FIRMs, were reviewed for Tompkins County. These datasets were last updated in 1996. Enfield is the only jurisdiction in the County that has never been mapped by FEMA. The Village of Cayuga Heights has been mapped, though there are no floodplains identified within the Village's municipal boundary.

There are a total of about 6,464 acres of land in the County that are located within 100-year or 500-year mapped flood zones. A 100-year flood indicates a flood elevation that has a 1-percent chance of being equaled or exceeded each year. Similarly, a 500-year flood indicates a flood elevation that has 0.2-percent chance of being equaled or exceeded in any given year. The land area in Tompkins County that is mapped within either of these flood zones accounts for, at least portions of, 3,749 tax parcels. The full market value of these parcels, in their entirety, is \$7,423,609,047. Parcels located within mapped floodplains consist of the following land uses: 364 parcels – Commercial, 129 parcels – Community Services, 76 parcels – Forest, 9 parcels – Industrial, 59 parcels – Public Services, 36 parcels – Recreation, 2475 parcels – Residential, 507 parcels – Vacant. As indicated, an overwhelming majority of lands mapped within 100- and 500-year floodplains are residential properties. The majority of identified parcels are located adjacent to Salmon Creek, Taughannock Creek, Fall Creek, Cascadilla Creek, Sixmile Creek,

Cayuga Inlet, Owasco Inlet, Mud Creek, and Virgil Creek. Table 34 lists the total number of parcels mapped in 100- and 500-year floodplains according to their jurisdiction location.

Table 34 – Total Parcels Mapped in 100- and 500-Year Floodplains by Jurisdiction (1996 Q3 FEMA Flood Mapping and 2011 TCPD Tax Parcel Data)		
Jurisdiction	Total Parcels Located in Floodplains (includes entire or partial parcels)	Total Parcels Within Jurisdiction
Town of Caroline	229	1,968
Town of Danby	83	2,009
Town of Dryden (including Villages of Dryden and Freeville)	585	5,818
Town of Groton (including Village of Groton)	244	2,783
Town of Ithaca (including Village of Cayuga Heights)	224	5,434
City of Ithaca	1,874	5,676
Town of Lansing (including Village of Lansing)	202	4,801
Town of Newfield	71	2,328
Town of Ulysses (including Village of Trumansburg)	400	2,637

FEMA has been slowly updating FIRM mapping for Counties within New York State in recent years. An update to the flood mapping in Tompkins County is planned, but no further specifics have been proposed at this time. Future Plan annual reviews and five-year updates will consider any new flood mapping and information that becomes available.

8.2 Tompkins County NFIP Policy and Loss Statistics

National Flood Insurance Program records and claims were analyzed to determine the extent of participation, flood losses, and flood insurance policies within Tompkins County. All of the jurisdictions within the County are current participants in FEMA's NFIP, except for the Town of Enfield. NFIP Policy Data and Loss statistics for all participating jurisdiction in Tompkins County are included on Tables 35 and 36. These data are current as of August 31, 2012.

The information included in Table 35 documents the number of flood insurance policies, coverage amounts, and premium amounts for all jurisdictions within Tompkins County on August 31, 2012. The NFIP policy statistics indicate that the only jurisdiction that does not have any properties currently purchasing flood policies is the Village of Trumansburg. The Town of Enfield has no data, but that is because they currently do not participate in the NFIP. The City of Ithaca has the highest number of policies in-force and the greatest insurance amounts in-force.

The flood loss data included in Table 36 documents the number of losses and payment amounts associated with flood losses from January 1, 1978 to August 31, 2012. It indicates that the City of Ithaca has experienced the highest incidence of loss from flood events, but that the Village of Groton has sustained the most total damage, signified by the amount of total payments. The

Town of Lansing also shows a large amount of total loss and a high total payments value. The Village of Lansing and the Town of Danby have not reported any loss claims since this information started to be collected in 1978. Out of an approximate 34,885 tax parcels in Tompkins County, 364 flood insurance policies were in place as of August 2012. The jurisdictional distribution of these policies is included in Table 35.

Table 35 – NFIP Policy Statistics, Snapshot as of August 31, 2012 (Bureau Net, Policy Information, 2012)			
Jurisdiction	Policies In-Force	Insurance In-Force (whole \$)	Written Premium In-Force
Caroline (Town)	11	\$2,088,100	7,895
Cayuga Heights (Village)	3	\$1,050,000	1,215
Danby (Town)	5	\$1,050,000	1,527
Dryden (Town)	23	\$6,368,800	28,583
Dryden (Village)	27	\$3,449,900	24,064
Enfield (Town)	-	-	-
Freeville (village)	6	\$743,300	3,919
Groton (Town)	15	\$1,445,300	12,352
Groton (Village)	15	\$4,149,900	23,321
Ithaca (Town)	48	\$11,206,200	33,358
Ithaca (City)	139	\$28,801,400	159,258
Lansing (Town)	43	\$6,602,700	28,069
Lansing (Village)	3	\$592,000	2,080
Newfield (Town)	8	\$819,000	4,299
Trumansburg (Village)	0	0	0
Ulysses (Town)	18	\$3,848,400	10,058

Policies in-force = NFIP policies as of August 31, 2012

Insurance in-force = coverage amount for policies in-force

Written premium in-force = premium paid for policies in-force

Table 36 – NFIP Loss Statistics, as of August 31, 2012 for Losses Incurred Since January 1, 1978 (Bureau Net, Claim Information, 2012)					
Jurisdiction	Total Losses	Closed Losses	Open Losses	Closed without Payment Losses	Total Payments
Caroline (Town)	21	17	0	4	\$72,531.40
Cayuga Heights (Village)	4	3	0	1	\$15,790.79
Danby (Town)	0	0	0	0	0
Dryden (Town)	5	5	0	0	\$56,450.54
Dryden (Village)	16	12	0	4	\$84,639.71
Enfield (Town)	-	-	-	-	-
Freeville (village)	4	4	0	0	\$17,760.16
Groton (Town)	6	4	0	2	\$16,773.65
Groton (Village)	12	9	0	3	\$614,682.96
Ithaca (Town)	17	13	0	4	\$35,396.78
Ithaca (City)	86	63	0	23	\$220,430.64
Lansing (Town)	52	41	0	11	\$442,746.94
Lansing (Village)	0	0	0	0	0
Newfield (Town)	2	2	0	0	\$9,297.04
Trumansburg (Village)	3	2	0	1	\$902.32
Ulysses (Town)	1	1	0	0	\$5,798.14

Total losses = all losses submitted regardless of status, total claims

Closed losses = losses that have been paid

Open losses = losses that have not been paid in full

CWOP losses = losses closed without payment

Total payments = total amount paid on losses

According to the NYSOEM State Mitigation Plan (NYSOEM, 2011), there are 11 properties in Tompkins County that have repetitive flood loss, though the TCPD documents 12 parcels that meet the repetitive loss definition (Section 5.1.2). The State Plan includes an estimated value of structures located within 100-year mapped floodplains in Tompkins County. This estimate includes a median sales price of \$164,800 and an estimate of 997 structures in 100-year floodplains, for a total calculated estimated value of \$164,305,600. This potential flood loss estimate is based on 100-year floodplain mapping and estimated values of structures.

8.3 NFIP Mitigation Actions

As part of the Tompkins County Hazard Mitigation Plan Update, each participating jurisdiction was required to evaluate a specific set of mitigation actions aimed at continued compliance and participation with FEMA's NFIP. These mitigation actions are proposed in addition to the mitigation actions already included in this plan. The mitigation actions, incorporated by FEMA

in their 2008 guidance, and included to reduce the impacts of future flood hazard events, consist of the following:

- Revisions to floodplain management ordinances in order to comply with FEMA's latest regulations and remain consistent with the FIRMs;
- The designation of a Floodplain Administrator in each participating jurisdiction;
- Ensuring that staff members have appropriate training to adequately enforce NFIP regulations and ordinances;
- Requiring staff involved in floodplain management and/or regulations to become Certified Floodplain Managers (CFMs);
- Joining the Community Rating System (CRS).

These NFIP specific mitigation actions are further detailed in the Multi-Jurisdictional mitigation action strategies included in Table 33, located in Appendix A. In addition to these NFIP mitigation actions, one of the specific pre-disaster mitigation actions proposed by the Town of Enfield is to become a participating member of the NFIP. The Community Rating System is a voluntary incentive program that recognizes and encourages floodplain management activities at the community level. As a result of CRS participation, flood insurance premium rates are discounted to reflect the reduced flood risk that results from community actions to meet the three goals of the CRS: reduce flood loss, facilitate accurate insurance ratings, and promote flood insurance awareness (FEMA, 2010).

9.0 Plan Maintenance Process

This section details the future maintenance process that will be followed for subsequent plan updates. The Disaster Mitigation Act of 2000 requires that adopted mitigation plans define and document the processes and mechanisms for maintaining and updating the hazard mitigation plan at least once every five years in order for the participating jurisdictions to remain eligible for funding. This hazard mitigation plan maintenance process must include: monitoring and evaluating the plan; updating the plan; providing an implementation schedule; and outlining steps for continued public involvement. A checklist to assist with the monitoring, evaluation, and updating of this Hazard Mitigation Plan is included in Appendix I.

9.1 Plan Monitoring and Evaluation

The 2013 Tompkins County Hazard Mitigation Plan will be monitored on an annual basis to ensure that the goals and objectives of the Plan remain relevant and that the proposed mitigation actions are being implemented efficiently. The Tompkins County Multi-Jurisdictional All-Hazard Mitigation Plan – Implementation Committee will continue to hold annual meetings to review and discuss this document, recent hazard events, and how to incorporate this Plan into other County-wide planning efforts. These annual meetings will be publicized and open to the public, as a way to promote continued public involvement in this process. The Tompkins County Planning Department will be in charge of scheduling and moderating the Implementation Committee annual meetings, and will be responsible for compiling a meeting summary and annual report at the end of every year. This annual report should detail changes made to the HMP document, if any, and how and when these changes will be made. The meeting summary will provide important information regarding hazard events that occurred during the previous year and implementation details associated with the proposed mitigation actions included in the HMP.

The implementation of proposed mitigation actions is important to review to determine whether the plan is being executed correctly. Items that should be reviewed and recorded for each completed mitigation action include the ultimate cost of the activity, the successes and failures of the action in minimizing hazard impacts, and the funding sources used for the action. During each annual meeting of the Implementation Committee, the following HMP components will be assessed:

- Whether the goals and objectives address current and expected conditions;
- Whether the nature, magnitude, and/or type of risks have changed;
- Whether the current resources are appropriate for implementing the plan;
- Whether there are implementation problems or coordination issues with other agencies;
- Whether the outcomes have occurred as expected, and
- Whether agencies and other partners participated as originally proposed.

The schedule and tasks associated with the monitoring of Tompkins County's HMP are included in Appendix I. The annual reports compiled by the TCPD will be posted to the County's website for public review.

9.2 Plan Updating

The 2013 HMP will be updated by addendum at any time during the five-year execution period in which the Implementation Committee determines that a significant change has occurred that warrants such an action. In the event of a hazard occurrence, the goals, actions, and procedures outlines in the Plan will be reviewed, as necessary. If any revisions or changes are warranted, the plan will be updated immediately, or at the next five-year update timeframe, depending on the importance of the proposed change(s) or revision(s). During the updating process, the participating jurisdictions will be contacted to provide updated information concerning the elements of the Plan applicable to their community. This process will be completed through the issuance of a questionnaire to be returned to the Implementation Committee for review prior to their annual meeting.

Approximately 18 months prior to the end of the current five-year execution period, the Plan update process should be initiated. This document represents the first update to Tompkins County's original HMP, review and approved by NYSOEM and FEMA in 2006. Participant and public review will continue to be completed during each five-year Plan Update process. All future plan updates will be submitted for re-approval in accordance with the five-year review schedule dictated in DMA 2000. Following FEMA conditional approval, each participating jurisdiction must formally adopt the new Plan by resolution. These resolutions should be collected and filed in Appendix F for documentation, and submitted to FEMA and NYSOEM for final HMP approval. A user friendly checklist was formulated to aid Tompkins County in competing future five-year updates to the HMP. A copy of this checklist is provided in Appendix I. This checklist will help the County organize and complete revisions to future Plan Updates and will assist the County in adequately meeting the five-year review timeframe instituted by FEMA.

9.3 Local Planning Considerations

Hazard mitigation has become integrated in regional planning in and around Tompkins County. Due to a number of significant storm events, refined climate data and municipal interest mitigation planning is becoming closely engrained in local decision making. As noted in Table 11, approximately half of the jurisdictions in Tompkins County have, or are in the process of updating, community Comprehensive Plans – including Tompkins County. Through the comprehensive planning visioning process, communities can identify key vulnerabilities across a broad range of topic areas and select actions that may help them mitigate those risks. As an example, the Village of Trumansburg identified the following concern in its 2009 Comprehensive Plan, “heavy rainfall in the upstream drainage area of Trumansburg, and its large tributary, Boardman Creek, can produce periods of significant flows through the Village.” As a result of this, the Village recognized the multi-faceted role that stream buffers could play in terms of stabilizing streams, improving water quality and habitat, as well as protecting property. Recommendations for regulated buffers were included in this comprehensive planning effort. The Village then codified this regulation in the update of its municipal zoning code which now

requires stream buffers in certain creekside zones. Buffers now play an active role in the Village's development review and enforcement process.

Continuing with the stream buffer example, several other jurisdictions, including the Town of Ulysses and the Town of Ithaca, have enacted stream buffer regulations from similar processes. Tompkins County has further developed model stream buffer regulations which are currently being considered by several jurisdictions for implementation. The County has also continued to support its *Stream Corridor Restoration & Flood Hazard Mitigation Program*, which has resulted in the planting and protection of over 12,000 linear feet of stream corridor throughout the County. Projects have ranged from restoring stream corridor vegetation to developing, implementing and monitoring riparian easements. The majority of these projects have been advanced thanks to the prioritized guidance of the region's watershed assessments. These watershed assessments highlight the key "hotspots" in need of mitigation in most of the County's watersheds. Information on some of these resources is available at <http://www.tompkinscountyny.gov/planning/water-resources-stream-buffers>. Each of these projects has additionally allowed for the advancement of mitigation education with municipalities, landowners and the several hundred volunteers and contractors involved with these projects.

Stream buffer protection serves as just one example of how mitigation is integrated with planning efforts in Tompkins County. Other significant strides are being made in relation to infestation through local public works and conservation efforts along with a host of flood mitigation efforts.

Thanks to the mitigation planning process, with the inclusion of the required 5-year update of our FEMA approved hazard mitigation plan, this work is even further advanced. Through its review of local plans and projects, Tompkins County is committed to regularly ensuring mitigation planning is integrated. Additionally, the County will continue to convene municipal partners at least annually to revisit the mitigation plan's goals/actions and to encourage the proactive coordination of mitigation in various planning and policy decisions. Lastly, to set an example for the importance of mitigation in local planning, the County is currently in the process of updating its own Comprehensive Plan. As a component of that update, climate adaptation/mitigation has been identified as a key overarching principal that will be addressed in the broad range of chapters of this communitywide plan.

By adopting a resolution to accept the Multi-Jurisdictional All-Hazard Mitigation Plan, each participating jurisdiction agrees to reference and incorporate the document into their future local planning documents, codes, decisions, processes, and regulations. Plan elements will be considered during municipal and County-wide development actions and comprehensive planning. Planning mechanisms and current capabilities recognized among the participating jurisdictions are demonstrated by Table 11 in Section 3.1.1. Table 11 will be revised as new mechanisms and capabilities are adopted and updated by the participating jurisdictions. Table 37 shows how this HMP will be incorporated into the existing and future planning mechanisms and opportunities of each jurisdiction.

Table 37 – Planning Mechanism Incorporation	
Mechanism	How Plan Will be Incorporated
Emergency Planning	Plan will be added/referenced as an Appendix to the County’s Emergency Response/Evacuation Plan (an annex of the CEMP). Hazard risk assessment and vulnerability data included in the mitigation plan will be reviewed during emergency planning and Emergency Response/Evacuation Plan updates. Specific mitigation activities will be incorporated into the annual work plans of TC-DOER and the County Emergency Management Planning Committee.
Annual Budget	Mitigation actions will be considered when setting the annual budgets within participating jurisdictions.
Plans and Programs	Hazard Mitigation Plan information will be considered by each participating jurisdiction during program and protection updates and revisions. Programs and plans will be compared to the Hazard Mitigation Plan to ensure that goals and objectives are consistent among all documents.
Grant Applications and other Funding Opportunities	Data and maps from the HMP may be used as supporting documentation in grant applications. Mitigation actions included in the Plan will be considered during application submission and fund allocation.
Economic Development	Hazard vulnerability information will be reviewed and utilized during the siting of local development efforts within each participating jurisdiction.
Capital Improvement Planning	Current and future projects will be reviewed for hazard vulnerability. Hazard resistant construction standards will be incorporated into the design and location of potential projects, as appropriate.

Some jurisdictions in Tompkins County are taking a more active role in sustainable development, green infrastructure, disaster planning, etc. within their community. After a review of the planning mechanisms and capabilities associated with each jurisdiction, a list of recommended regulatory elements or planning documents was compiled. These potential efforts include:

- Comprehensive/Land Use Plan – Town of Enfield (Update) and City of Ithaca (Update)
- Watershed Protection Plan – all jurisdictions, especially those with repetitive flood loss
- Redevelopment Plan – City of Ithaca
- Land Use Regulation – Towns of Enfield, Caroline, Newfield
- Zoning Code Review and Update – Villages of Freeville and Dryden

- Flood Regulations – Town of Enfield, Villages of Cayuga Heights, Dryden, Lansing and Trumansburg
- Participate in the NFIP – Town of Enfield

Numerous changes and additions were made to this document as part of the five-year HMP Update process. These updates and reorganization have made the 2013 Plan more valuable as a planning tool and more easily implementable. No evidence to support the integration of the 2006 HMP by participating jurisdictions into their local planning mechanisms or processes was noted. No indications of such are included in the Implementation Committee annual meeting notes. An emphasis on such efforts will be placed over the next five-year period. The incorporation of this document in local planning efforts and processes will be reviewed and discussed on an annual basis.

9.4 Public Involvement

It is the intent of Tompkins County and participating jurisdictions to keep the public informed about the hazard mitigation planning efforts, actions, and projects that occur within the County. To accomplish this goal, and in addition to the public involvement already incorporated into the completion and review of this document, the following opportunities for ongoing public involvement will be made available:

- A web link will be provided on Tompkins County's website that will include a digital copy of the hazard mitigation plan and a list of upcoming planning activities and plan updates;
- Public announcements of, and invitations to, annual mitigation committee planning meetings and five-year mitigation plan update events; and
- Completion of public outreach and mitigation training events throughout the County, especially in higher risk hazard areas.

Public outreach efforts will be documented in future plan updates through the inclusion of samples, copies of notices, flyers, web announcements, and/or meeting minutes. If public response is lacking during subsequent update processes, additional ways to expand participation will be considered. Public outreach ideas that may be implemented to increase participation include:

- Distribute targeted questionnaires to local civic, community, and non-profit groups to received public feedback;
- Organize topic specific meetings with key individuals and experts to discuss particular concerns and brainstorm solutions; and
- Hold education programs during various community events to disseminate information and engage the public in discussions on mitigation planning and hazard preparation.

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