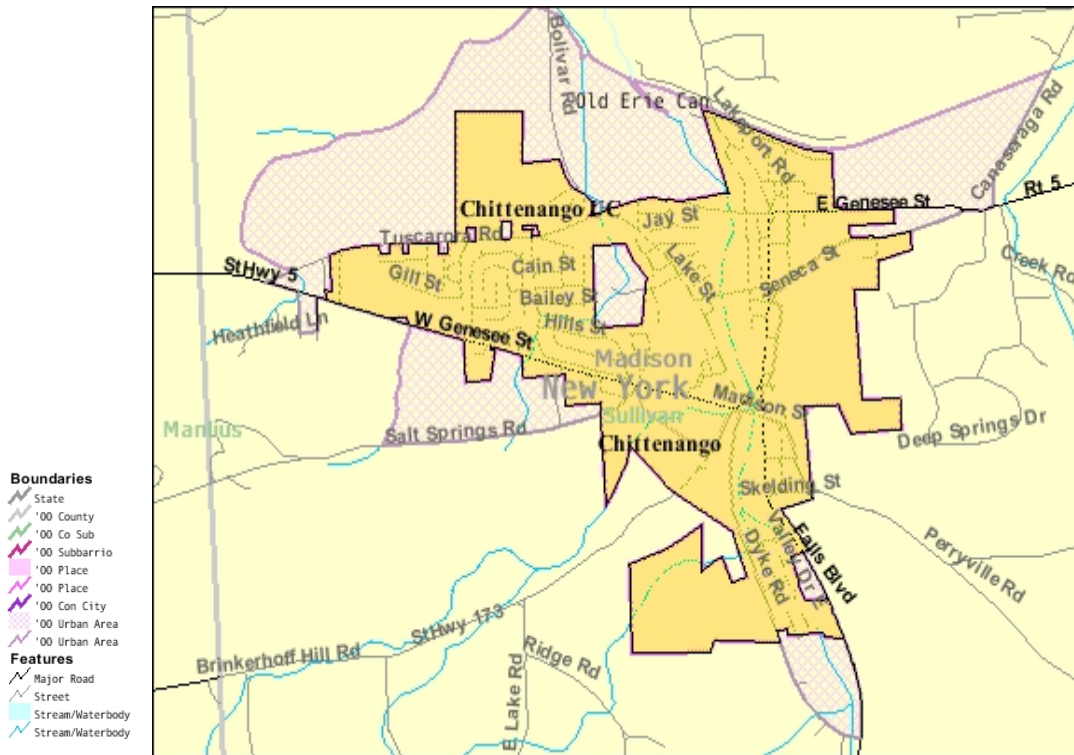


Village of Chittenango



Contact	Title	Phone
Michael Keville	Village Mayor	(315) 870-0971
Jill Doss	Village Clerk	(315) 687-3936
Mark Pulver	Village Administrator	(315) 263-7048
Bob Salmon	Planning Board Chairman	(315) 687-3936
Jeff Geer	Code Enforcement Officer	(315) 415-0440

Background

The Village of Chittenango is a community of 5,081 residents located in the western portion of the county. 71.2% of the residents are between the ages of 18 and 65, while only 12.3 % are over the age of 65 (residents). The village currently encompasses approximately 2.47 square miles. The village has an equalized assessed value of approximately \$178 million dollars, which is distributed across a variety of property classes. There are 1,174 single family occupied homes within the town.

Land Use and Development Trends

According to then Mayor Bob Freunsch, as of April 2006, there were 600 to 650 houses under construction; another 50 houses are under consideration for annexation into the Village. It is expected that 2,000 to 3,000 new houses will be built in the Village within the next ten years.

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Assets

The Chittenango Fire Department is located at 417 Genesee Street in the downtown area. This building is outside of the 100year floodplain but within the 500 year floodplain. This building is equipped with a generator in the case of a power failure.

The Village Hall is located on the east side of Genesee Street in the downtown area just north of the intersection of Routes 5, 13, and 173. This building is wired to accommodate an electrical generator but does not have one on site.

Chittenango High School is located at 150 West Genesee Street just west of the south end of the downtown area. This facility is listed as the Red Cross shelter for the community and has capacity for 470 people. The high school does not have generators and but does have an external hook-up for an outside generator.

Local Organization and Regulations

As of October 23, 1984, the Village has had a local flood management law. A special permit is required from the Village for development within the flood plain. All mechanicals are required to be installed at the first floor or higher within the 100 year floodplain.

A chain of command is written into Village law so that decisions can continue to be made in the event of emergency.

A HAZMAT plan has been adopted by the Village in case of a hazardous materials spill. Escape routes for Village residents are part of this plan.

The Village has an active drainage program for pumping basements that utilizes dry wells.

An active tree maintenance program is in place; trees that are a hazard to houses are removed by a local arborist. New trees are planted under Niagara Mohawk Corporation's "10,000 Tree Program".

A Village resident (Bud Penner, 687-6604) collects rainfall measurements for the National Weather Service.

The Planning Process

Steve Lorraine, Manager for the Madison County Soil & Water Conservation District met with Mayor Ronny Goeler and Village Administrator Bob Freunsch on March 10, 2013 to review the previous hazard mitigation plan and discuss issues that would be included in the updated plan. Mayor Goeler directed Mr. Lorraine to work directly with Village Administrator Bob Freunsch on compiling information. Mr. Lorraine met with the Village Board at the October 24, 2013 public meeting to summarize issues and receive plan approval.

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Public Involvement

Two meetings were held at which members of the public were invited to provide input on the hazard mitigation planning process. These meetings were publicized in the Syracuse Post Standard, Oneida Daily Dispatch, Canastota Bee Journal, and Cazenovia Republican. No members of the public attended these meetings. One citizen did call Madison County Soil and Water Conservation District from the City of Oneida to express concerns about flooding there. As soon as the first draft of the entire plan for Madison County is finished, it will be posted on the Madison County website. All members of the public will be provided a means of providing input at that time.

Input from Neighboring Communities, Agencies, Businesses, Academia, Nonprofits and Other Parties

A copy of the Chittenango HMP has been sent to:

- Chittenango Landing Canal Boat Museum
- Chittenango Fire Department

Existing Plans, Studies, Reports, and Technical Information

- Valley Acres Subdivision Drainage Plan
- Village of Chittenango HAZMAT Plan
- EMA Flood Insurance Study, Village of Chittenango
- Chittenango Fire Department Standard Operating Procedures
- Stearns and Wheler Sewage Treatment Plant Study
- Stonehedge Rehabilitation Center Emergency Plan
- The Village is currently working on a Long Range Plan

Hazards

As part of the Madison County Comprehensive Emergency Management Plan, a Hazard Analysis was conducted using the HAZNY program with data supplied by the National Oceanic & Atmospheric Administration, and ESRI Hazards data. This HAZNY analysis identified Moderately High Danger in order from Severe Storms, Transportation Accidents, Winter Storms, Fires, and HAZMAT (in Transit). The HAZNY analysis identified Moderately Low Danger in order from Ice Storm, Terrorism, Flood, Utility Failure, Water Supply Contamination, Tornado, Oil Spill, HAZMAT (Fixed Site), Ice Jam, Infestation, Radiological (Fixed Site), Extreme Temperatures, Epidemic, Drought, and Explosion. The Madison County Hazard Mitigation Plan is required by FEMA to address natural disasters. Sections of this plan have been written on a County-wide basis for Severe Storms, Transportation Accidents, Winter Storms, Fire, Ice Storm/ Utility Failure, Flood/ Hurricane, and Tornado. The following table is used to determine whether or not the local community's hazard danger differs from the County as a whole for natural disasters and a few chosen man-made disasters. The local community can also decide whether or not a section on a particular hazard should be written specifically for that municipality.

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Hazard	Madison Co. Class.	Madison Co. Ranking	Village of Chittenango Probability Greater (G), Lesser (L) About Equal (E)	Village of Chittenango Issues Beyond County-wide Plan Yes (y), No (n)
Severe Storms	Mod. High	312.2	E	N
Transportation Accidents	Mod. High	285.2	G	N
Winter Storms	Mod. High	272.2	E	N
Fires	Mod. High	265.2	E	Y
Ice Storms	Mod. Low	236.2	E	N
Flood	Mod. Low	222.8	G	Y
Utility Failure	Mod. Low	218.5	E	Y
Tornado	Mod. Low	202.5	E	N
Ice Jam	Mod. Low	180.5	G	Y
Infestation	Mod. Low	173.8	L	N
Extreme Temperatures	Mod. Low	169.8	E	N
Epidemic	Mod. Low	164.2	E	N
Drought	Mod. Low	164.2	L	N
Wildfire	Low	160.5	L	N
Wave Action	Low	159.5	L	N
Dam Failure	Low	159.2	L	N
Hurricane	Low	158.8	E	N
Earthquake	Low	150.5	E	N
Blight	Low	96.2	E	N
Landslide	Not Rated		E	N

Types of Mitigation Measures

This section is used to indicate the types of mitigation actions that already are in use in the Village of Chittenango.

Prevention - Government administrative or regulatory actions or processes that influence the way land and buildings are developed and built. These actions also include public activities to reduce hazard losses.

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	Building Code	Density Controls	Design Review Standards	Easements	Environmental Review Standards	Flood plain Development Regulations	Floodplain zoning
Chittenango Program	State BOCA Codes	No	Planning Board	Stormwater Drainage	SEQR for Large Subdivisions	Engineer's certification required for utilities above flood elevation	No

	Hillside Development Regulations	Open Space Preservation	Performance Standards	Streambank Setback Regulations	Special Use Permits	Stormwater Management Regulations	Subdivision & Development Regulations
State & Federal Programs Available for Ag	No	10% open space required in new subdivisions	Yes	No	Yes	State Regs Apply	Yes

Property Protection - Actions that involve the modification of existing buildings or structures to protect them from a hazard, or removal from the hazard area.

	Acquisition of Hazard Prone Structures	Construction of Barriers Around Structures	Elevation of Structures	Relocation Out of Hazard Areas	Structural Retrofits (e.g.floodproofing)
Chittenango Program	Under Tax Sale	No	No	No	No

Public Education and Awareness - Actions to inform and educate citizens, elected officials, and property owners about the hazards and potential ways to mitigate them.

	Hazard Information Centers	Outreach Programs	Real Estate Disclosure	School-age and Adult Education Programs
Chittenango Program	No	Education of Elected to NIMS Standards	State Rules Apply	Fire Safety Education, Village Government Program for 4 th Graders

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Natural Resource Protection - Actions that, in addition to minimizing hazard losses, also preserve or restore the functions of natural systems.

	Best Management Practices	Forest & Vegetation Management	Sediment & Erosion Control Regulations	Stream Corridor Management	Stream Dumping Regulations	Urban Forestry & Landscape Management	Wetlands Development Regulations & Restoration	Watershed Management
Chittanooga Program	Technical Assistance Available through SWCD	No	State Regs for greater than 1 acre development	Debris clearing and bank stabilization by DPW	State Rules Apply	Tree planting through Onondaga Co. Coop. Extension	State & Federal Rules Apply	Oneida Lake Program

Emergency Services - Actions that protect people and property during and immediately after a disaster or hazard event.

	Critical Facilities Protection	Emergency Response Services	Hazard Threat Recognition	Hazard Warning Systems	Health & Safety Maintenance	Post Disaster Mitigation
Chittanooga Program	Emergency Power for Sewage System	Fire Police EMS DPW	MSDS Sheets on File with Fire Department, MSDS Site Plan for ESCO, Inc.	911 Center Alert System, Local Fire Department Encoder		Red Cross

Structural Projects - Actions that involve the construction of structures to reduce the impact of a hazard.

	Channel Maintenance	Dams/Reservoirs	Levees & Floodwalls	Safe Room/ Shelter
Chittanooga Program	Yes	No	Levee at Valley Acres Subdivision	Red Cross Shelters

Incorporation of Hazard Mitigation Plan requirements into local planning mechanisms

The foregoing list of existing mitigation measures and the proposed mitigation actions that follow will be considered during the writing of the Long Range Plan for the Village.

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Mitigation Actions by Hazard

A. Flooding

Flooding is the greatest hazard specific to the Village of Chittenango. The Village has numerous problems associated with flooding because of its location on relatively flat land at the base of foothills and the fact that Chittenango Creek passes right through the village. Historically, Chittenango began as a mill town that benefited from the hydropower that was available from Chittenango Creek. Unfortunately, much of the downtown area today is located within the 100 year flood plain.

Mitigation Goals

Minimize loss of property, risk of injury, damage to the environment, and loss of infrastructure from 500-year flooding events.

Historical Events

The two benchmark flood events for Chittenango were Hurricane Agnes in *June, 1972* and the *January, 1996* flood caused by snowmelt and rain. During both of these events, water overflowed Chittenango Creek and flowed down Genesee Street through the center of downtown all the way from the Route 13 turn-off to Tuscarora road, a distance of 1 mile.

May 2004 – Seneca Street; Virginia Lane

These two separate locations suffered flooding and soil deposition following a 1 inch rainfall short duration storm. Large amounts of soil washed from farmland located uphill of these streets. Cropland had just been planted and was in a vulnerable condition because no plants were growing and the soil had not settled after tillage practices. On Seneca Street, a number of road culverts plugged with soil causing water to flow over State Route 13 (Genesee Street); one residence suffered gravel deposition in an attached garage.

August 30, 2004

More than five inches of rain fell in an eight hour period. The Valley Acres subdivision was particularly hard hit. 10 houses sustained damage. According to a November 17 article in the Post Standard, one house had eight inches of water on the ground floor while another house had 10,000 gallons of water in its basement in large part from sewer backups.

1981- Flooding closed Routes 5, 173, and 290. County was in State of Emergency.

December, 1983- Flooding occurred along Race Street

October 1977 -Stonehedge Nursing Home evacuated because of flooding.

April 1974 - Flooding closed roads and covered properties along Chittenango Creek. Dyke Road, Route 5, and Route 173 affected.

February, 1951- Basements in Chittenango flooded; homes were without heat.

December 14 & 15, 1901- Water was two or three feet deep in Chittenango.

July, 1897- Bridges destroyed in Town of Sullivan by flood. 3 days of flooding

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March 16, 1865- Major flood swept away 20 bridges between Cazenovia and Chittenango. Lowlands remained flooded for days.

April 15, 1840- Referred to as a Great Flood

Locations vulnerable to flooding

Valley Acres Development: This is an 80 home development built in 1980 that is located on the west side of Chittenango Creek south of the downtown area. 34 of the houses are raised ranches with basements while the remaining 46 houses are colonial ranch houses without a basement. Access is from Dyke Road. A levee separates the development from the flood waters of Chittenango Creek. During large runoff events this development is flooded by a small stream that drains land above Dyke Road. This stream cannot flow directly to Chittenango Creek because of the levee that protects the development from Creek floodwaters.

Chittenango Landing Canal Museum: This is a historic site located on the north side of the village along a no-longer used section of the Erie Canal. During flood events, timbers in the dry dock are actually floating out of place, threatening to cause the destruction of gates connecting the dry dock to the Erie Canal.

Sullivan Park: This is a Town-owned park located between Tuscarora Road and Route 5. A number of tributaries converge in the park. Flooding actually occurs downstream. Road shoulders for Tuscarora Road and Bolivar Road can get washed out. A church located at the northwest corner of these two roads is located within the flooded area. Flooding that formerly occurred within the park has been remedied since a drainage ditch was dug.

Downtown Area – Many of the buildings in the downtown area are located within the 100 year floodplain.

Downtown Area: Buildings located west of Genesee Street in the downtown area are in the 100 year flood plain. During previous flood events water flowing down Genesee Street was kept within the street curbs through the use of sand bags. During peak runoff periods, all of the downtown buildings can be subject to basement flooding because of the gravelly soil there. For this reason, most buildings don't have basements. Few buildings with basements have furnaces or hot water heaters located in the lower levels. Any buildings that do have basements are usually equipped with sump pumps but damage can still occur in the event of a power failure.

Nursing Home: The nursing home is located west of the downtown area on the banks of Chittenango Creek. During earlier flood events, this facility was evacuated; on two of these occasions one of the residents died during the event. During current floods, residents remain in the building, doorways are sandbagged, and excess water is controlled with shopvacs. Because of gravel deposition in Chittenango Creek, a small levee protecting the home is presently threatened with bank erosion.

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Tuscarora Road and Manor Road: This is an area of limited flooding caused by a lack of culvert capacity.

Madison Street (Perryville Road): This hazard area is located south of downtown on the east side of State Route 13 (Falls Boulevard). Because of a lack of culvert capacity under Route 13, water flows south and can flood 9 houses on Perryville Road and 10 houses on Brinkerhoff Street.

Virginia Lane: This is a dead end street located off of Madison Street. This location can suffer gravel deposition from uphill cropland if a heavy rainstorm occurs just after planting.

Seneca Street: The south end of Seneca Street can suffer from gravel deposition from uphill cropland if a heavy rainstorm occurs just after crop planting.

Future Development in Hazard Area

The Eisenhut Property located north of Tuscarora Road and west of Chittenango Creek is in a prime hazard area for development but has some land in the floodplain. Land along Lakeport Road on the north edge of the Village is also in a prime area for development but also has floodplain.) No new development is planned in the floodplain at this time

Potential Losses

According to the Madison County Assessment office records, 404 parcels with a total assessed value just under \$31 million are listed within the 100 year flood plain in the Village of Chittenango. 359 parcels are valued over \$25,000 and have structures on the parcels. It is estimated that 100 of these parcels have basements that could sustain damage in the event of the 100 year flood or electric service interruption. It is estimated that on average these structures could sustain \$5,000 damage. Total damage would be \$500,000.

Damages to 10 houses in the Valley Acres subdivision from the August 30, 2004 flood were estimated to be \$89,000. In an October 1987 study, the U.S. Army Corps of Engineers determined that \$63,900 (\$106,074 in 2005 dollars) of flood damage occurs in Valley acres on an annual basis.

Mitigation Strategies

Project #	Project Name	Description	Lead Agency	Estimated Cost
V/Chittenango#1	Valley Acres Drainage Improvement	Construct diversion structures to channel storm water around the development. This will require cooperation with the Town of Sullivan as this is the source of the water.	Village of Chittenango Public Works	\$3,500,000
V/Chittenango#2	Chittenango Creek Channel Dredging	Initiate regular maintenance dredging of box culvert under the Old Erie Canal (aqua duct) reduces restrictions at the north end of the village that back-up through the downtown corridor.	Village of Chittenango Public Works	\$20,000 annually

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V/Chittenango#3	Elevation of Utilities in 100-year floodplain	Approximately 100 residences in the downtown area of the village have their utilities in basements, below the floodplain. Move utilities from below grade elevation to first floor of residential structures.	Village of Chittenango Code Enforcement	\$500,000
V/Chittenango#4	Annual Streambank Survey and Monitoring Program	Annual streambank inspections to identify log-jams, gravel deposits or other conditions which restrict the flow of Chittenango Creek within the Village of Chittenango. Once identified, restrictions are removed by the Village DPW crews, pending any DEC approvals and/or permits.	Village of Chittenango Public Works	\$10,000 annually

Valley Acres – In May 2005, PLS Engineering, P.C. of Tully, New York submitted a document to the Chittenango Village government entitled Engineering Report for Improved Drainage and Flood Control for the Valley Acres Subdivision. In the Conclusion and Recommendation section of this report, PLS Engineering states:

The total cost of the least expensive combination of required remedial measures is:

- Levee Construction \$2,095,000
- Basin #1 Flow Diversion.....\$ 188,000
- Basin #2 Flow Diversion (Alt. 2).....\$ 450,000
- Interior Drainage System for Valley Acres...\$1,154,000
- Total Estimated Cost.....\$3,887,000

PLS also states that a total project cost of \$1,500,000 appears to be justifiable and, therefore, implementation of this project is not recommended. This is a Low Priority for the Village.

Dredging of gravel from Chittenango Creek – Gravel Removal from the creek would reduce the danger of flooding to the downtown area. The cost of dredging the stream segment between Tuscarora Road and West Genesee Street is based on 550 lineal feet x 1 cubic yard/ lineal foot x \$20/ cubic yard. Total cost would be \$11,000. This is a Low Priority for the Village because permits from NYS DEC would be difficult to obtain.

Downtown – In the estimated 100 residences that still have utilities in basements, elevation of these utilities would cost an average of \$5,000 per house for a total of \$500,000. This is a Medium Priority.

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Prioritization

The STAPLEE process is the means by which proposed mitigation actions are prioritized for a community. The STAPLEE process utilizes the following criteria:

- **Social:** Will this action be acceptable to the community and individuals affected?
- **Technical:** Is the action a long term technically feasible solution with little or no secondary impacts?
- **Administrative:** Are the staff and funding available to implement and maintain the action?
NOTE: Inadequate resource did not eliminate consideration of an action.
- **Political:** Is the action supported by political leaders and the public?
- **Legal:** Does the municipality have the legal authority to implement the proposed action?
- **Economic:** Is this action a cost effective method for providing hazard mitigation and community benefits?
- **Environmental:** Is this action consistent with community environmental goals?

The following table uses the STAPLEE System to rate proposed mitigation actions.

+ 1 is Favorable, -1 is Unfavorable, N is Neutral or Not Applicable

A Score of 6-7 is a high priority, 3-5 is a medium priority, 2 or less is a low priority

Mitigation Action								
	Soc	Tech	Admin	Polit	Legal	Econ	Enviro	Score
Valley Acres Drainage Improvement	+1	+1	-1	+1	N	+1	+1	4
Chittenango Creek Dredging	+1	-1	+1	+1	-1	+1	-1	1
Elevation of Utilities in Downtown Residences	+1	+1	-1	+1	+1	+1	+1	5
Clearing of Chittenango Creek Culverts under Erie Canal	+1	+1	-1	+1	+1	+1	+1	5

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Plan Monitoring and Update

The Madison County Office of Emergency Preparedness will be responsible for monitoring the status of the County Hazard Mitigation Plan and all of the subsections of the plan specific to local municipalities. During the first quarter of every calendar year, the Emergency Preparedness Director will (most likely by e-mail) contact the Village of Chittenango's Administrator and submit a copy of the evaluation form. The Village Administrator will complete and return this form within 10 business days.

During the second quarter of the year, the County Emergency Preparedness Director, will prepare an annual summary report for progress in implementing the County Hazard Mitigation Plan. Included in this plan will be the following:

- A summary and analysis of all disasters that have struck Madison County during the previous calendar year,
- a gap analysis for the hazard mitigation plan for any disasters that occurred during the previous calendar year,
- a listing of funding opportunities made available from FEMA and SEMO during the 12 months prior to the annual summary report,
- a summary of the progress that has been made towards accomplishing mitigation measures during the previous calendar year,
- problems encountered in implementing the plan,
- And, recommendations for changes to the Hazard Mitigation plan.

A copy of this report will be sent to the Village's Administrator and will be posted on the Madison County Website. Public Comment will be accepted based on review of these reports and the County's Plan available on this web site.

Every five years after the plan receives its FEMA approval and adoption by the Village of Chittenango Board, the County Emergency Management Director will update the County Hazard Mitigation Plan and the Village of Chittenango annex based on reports supplied by the Village Administrator and other municipalities, as well as input from the public. This updated plan will be submitted to the Village of Chittenango for approval before being forwarded to FEMA.