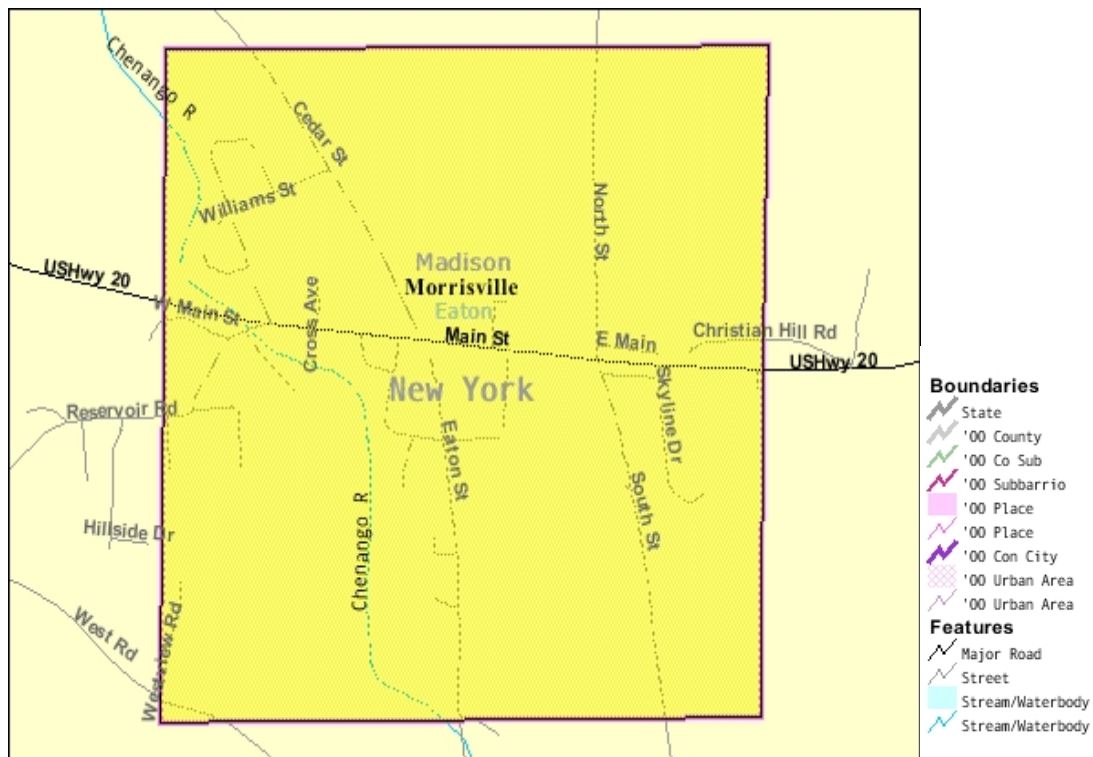


# MADISON COUNTY HAZARD MITIGATION PLAN 2016



Contact	Title	Phone
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## Background

The Village of Morrisville is a community of 1,545 residents located in the central portion of the county. 91.0% of the residents are between the ages of 18 and 65, while only 10.6 % are over the age of 65 (residents). The village currently encompasses approximately 1 square miles. The village has an equalized assessed value of approximately \$31 million dollars, which is distributed across a variety of property classes. There are 164 single family occupied homes within the village.

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## Land Use and Development Trends

Annexation of land into the Village is being considered on the north, south, east, and west. More than 50% of landowners in a given area must request annexation. Space is limited within the Village boundaries. There is little new house construction. In the past two years, the Mobil Gas station expanded but eliminated a Sautter's Diner in the process; a restaurant was remodeled under the new ownership of Morrisville State College; and Wilcox Apartments, a 24 unit subsidized housing facility, was constructed on Cedar Street on the north edge of the Village. Single family houses are being converted to multi-family housing throughout the Village.

## Assets

The Village Office is located at 23 Cedar Street. This building houses offices for the Mayor, Clerk, and Code Enforcement Officer. There is also a substation of the Madison County Sheriff at this location. This building is not equipped with a generator or an outside electric hook-up for a generator.

The Morrisville Fire Department is located at the corner of Union Street and Route 20. Public meetings are held at this location and it is used as an emergency shelter. It has capacity for 60 people. This building is equipped with an outside hook-up for a generator. The Village owns a 30 KW generator that is used to power this facility as well as the Village water supply on an alternating basis.

The Public Works Garage is located at the north end of Cross Ave.. This building is large enough to do repairs on Village owned equipment. This building is not equipped with a generator or an outside electric hook-up for a generator.

A 30 KW diesel generator is owned by the Village. This generator is mounted inside a two ton box van

Village Water Supply – The Village supplies water to its residents. The source of this water is a well located just west of Callahan Drive. Pressure for the system is supplied by two 150,000 gallon tanks located on North Street and Reservoir Road. The system normally uses 60-75,000 gallons per day. During an extended power failure, the Village's 30 KW generator can be used to power the pump between the well and the storage tanks.

Sewage Plant – The Village Sewer System was installed in 2002 and 2003 and came on line during the fall of 2003. The sewage plant is located at the south end of Callahan Drive. The plant is equipped with a natural diesel powered generator that kicks on during a power failure.

Edward R. Andrews Elementary School is located at 55 Eaton Street. This is the official Red Cross shelter for the community. It has capacity for 160 people. This building does not have a generator or external hook-up for a generator.

Cooperative Extension Building is located at 100 Eaton Street. It has a meeting hall and a large kitchen that can accommodate 80 people. This building does not have a generator or an external hook-up for a generator.

Morrisville State College – this state-owned facility has an enrollment of 3,300 students. It has two dining halls and dormitories that house 1,800 students.

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## The Planning Process

Steve Lorraine, Madison County SWCD, met with the Village Board of Trustees at their regular monthly meeting on October 3, 2013. The Board of Trustees directed Mr. Johnston to work with Trustee Doug Mennig to collect the information needed to prepare a section of the mitigation plan on the Village of Morrisville. Mr. Lorraine and Mennig toured the Village and reviewed hazards within the Village. Johnston wrote a first draft of the plan and sent copies to Mayor Forward, Codes Officer Cowan, and Trustee Mennig. Mayor Shepard, Trustee Mennig, and Steve Lorraine reviewed the final draft of the plan on February 28, 2015.

## 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..

<b>Hazard</b>	<b>Madison Co. Class.</b>	<b>Madison Co. Ranking</b>	<b>Village of Morrisville Probability Greater (G), Lesser (L) About Equal (E)</b>	<b>Village of Morrisville Issues Beyond County-wide Plan Yes (y), No (n)</b>
Severe Storms	Mod. High	312.2	E	N
Transportation Accidents	Mod. High	285.2	E	N
Winter Storms	Mod. High	272.2	G	N
Fires	Mod. High	265.2	L	N
Ice Storms	Mod. Low	236.2	E	Y
Flood	Mod. Low	222.8	E	Y
Utility Failure	Mod. Low	218.5	E	Y
Tornado	Mod. Low	202.5	E	N
Ice Jam	Mod. Low	180.5	L	N
Infestation	Mod. Low	173.8	E	N
Extreme Temperatures	Mod. Low	169.8	E	N
Epidemic	Mod. Low	164.2	E	N
Drought	Mod. Low	164.2	E	N

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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		L	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 Morrisville. Appendix D of this plan can be used as a guide as to what mitigation actions can mitigate different hazards.

**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.

	Building Code	Density Controls	Design Review Standards	Easements	Environmental Review Standards	Flood plain Development Regulations	Floodplain zoning
Morrisville Program	State BOCA Codes	No	Village Codes	For Infrastructure	NYS SEQR for large subdivisions	National flood insurance rules	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 Agriculture	No	No	Codes Enforcement	No	Zoning Variance Permits	State Regs Apply	Regs in codes

**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)
Morrisville Program	No	No	No	No	No

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**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
Morrisville Program	No	Education of Elected to NIMS Standards	State Rules Apply	Fire Safety Education

**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
Morrisville Program	Technical assistance through SWCD	No	State Regs for greater than 1 acre development	No	State Rules Apply	Tree maintenance budget form CHIPS program	State & Federal Rules Apply	No

**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
Morrisville Program	No	Fire Police Ambulance	MSDS Sheets on File with Fire Department	911 Center Alert System	No	Red Cross

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**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
Morrisville Program	No	No	No	Red Cross Shelter at Edward R. Andrews Elementary School

## **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 Emergency Action Plan for the Village of Morrisville.

## **Mitigation Actions by Hazard**

### **A. Flooding**

#### **Mitigation Goals**

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

#### **Background**

The Village of Morrisville does has serious problems with flooding during periods of peak runoff. The Village is located in a fairly flat valley with hills on the east and west. Stormwater flowing from the north and east has to pass through a large part of the Village before it can outlet into Callahan Brook. Callahan Brook flows from the northwest to the south.

#### **Historical Events**

*January '96 Flood* – this was a county-wide event but Morrisville was particularly hard hit. Water overflowed a culvert behind the bank on the east side of the Village. The water flowed down U.S. Route 20 flooding the basements of two houses on the southwest corner of Route 20 and Cedar Street. Water eventually flowed into storm sewers that outlet into Callahan Brook.

*April 2004 Flood* – This flood event hit the southern part of Madison County harder than the north. The culvert entrance behind Key Bank overflowed for 2 days and flood waters closed 2 lanes of the 4 lanes of Route 20.

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## **Locations Subject to Hazard**

*Culvert under Route 20* – A culvert under U.S. Route 20 in the past has overflowed at a frequency of once every two years. This culvert flows from behind Key Bank north of 20 and travels southwest diagonally under Route 20 and outlets behind some private houses on the south side of Route 20. This culvert has not overflowed since the Route 20 drainage system was reconstructed in 2007 by NYS DOT.

*Culvert under Eaton Road* – This culvert is downstream from the culvert under Route 20 and flows under houses on the west side of Eaton Road.

*Culvert under Mill Street* – This culvert is downstream of the culverts under Eaton Road and Route 20. This culvert flows under houses on the east side of Mill Street. It outlets into Callahan Brook.

*Culvert under Union Street* – This culvert is undersized because a culvert from Morrisville State College outlets into it. This pipe carries water for approximately 1,000 feet south along Union Street under the College baseball fields and the elementary school fields before outletting on the west side of Eaton Road.

*Culvert on East Main Street* – This culvert takes water from the south side of Route 20 on the east side of the Village. The water flows through pipes under Morrisville State College and outlets into Callahan Brook southwest of the campus.

## **Future Development in Hazard Area**

An apartment complex along Callahan Drive next to the floodplain is in very early stages of consideration.

## **Past Losses**

According to information collected by Tim Cowan, Village Codes Enforcement Officer, flooding emanating from the culvert entrance behind Key Bank has accounted for \$184,848 in damage for the years 1996 to 2005. The April 2005 event accounted for \$11,348 in damage while \$125,000 damage was done in 2004.

## **Existing Mitigation Measures**

In 2007, new drainage pipes were installed along and under U.S. Route 20 by the New York State Department of Transportation as part of a paving project. Two 36 inch diameter pipes, one on each side of Route 20, conduct water west until both outlet into a 48 inch diameter pipe that empties into Callahan Brook. Flooding has not reoccurred in the Village since this new drainage system was installed.

*Key Bank Culvert Entrance Debris Guard* – Flooding coming from overflow of the culvert entrance located behind Key Bank was formerly caused by a lack of capacity as well as debris clogging the culvert. In 2007, a sloping grate was installed over the culvert entrance; this grate functions so that the force of the water pushes debris up over the culvert entrance. The grate was constructed by Morrisville State College and installed by the Village Public Works Department.

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## Proposed Mitigation Measures

Project #	Project Name	Description	Lead Agency	Estimated Cost
V/Morrisville#1	North Street Detention Basin	The incidence of flooding from the overflow of a culvert entrance behind Key Bank can be further reduced through the construction of a detention basin located ¼ mile north of the Village and just west of Route 20. This detention basin would be located on the site of a former mill pond. Survey and Design work is still needed but it is estimated that this project would cost around \$107,000. This project is low priority until it is determined whether improvements to Route 20 will mitigate flooding.	Village of Morrisville Village Board	\$107,000
V/Morrisville#2	Culvert under Mill Street	A new culvert under Mill Street needs to be surveyed and designed. This would be the responsibility of the Village Public Works Department. Technical Assistance is available from the County Soil and Water Conservation District.	Village of Morrisville Village Board	\$65,000

## 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?



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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

Proposed Mitigation Action								
	Soc	Tech	Admin	Polit	Legal	Econ	Enviro	Score
North Street Detention Basin	N	+1	-1	+1	+1	-1	+1	2
Culvert under Mill Street	N	+1	-1	N	+1	+1	+1	3

## 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 Morrisville’s Mayor and submit a copy of the evaluation form. The Village Mayor 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 Mayor 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 Morrisville Board, the County Emergency Management Director will update the County Hazard Mitigation Plan and the Village of Morrisville 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 Morrisville for approval before being forwarded to FEMA.