

### 10.2.35 Town of Wallkill

This section presents the jurisdictional annex for the Town of Wallkill.

#### 10.2.35.1 Contacts

Primary and secondary contacts regarding this plan are identified as follows:

- Edward A. Diana – Town Supervisor  
99 Tower Drive, Building A  
Middletown, NY 10941  
(845) 692-7800
  
- Louis J. Ingrassia Jr. – Commissioner of Public Works  
(845) 326-1435

#### 10.2.35.2 Municipal Profile

##### *Population*

The 2010 U.S. Census reported a population of persons twenty-seven thousand, four hundred twenty-six (27,426). The population at the 2000 Census was twenty-four thousand, six hundred fifty-nine (24,659) for an increase of 11.2%.

##### *Location*

The Town of Wallkill is situated in the northern section of Orange County. It is bordered by the Towns of Wawayanda and Goshen to the south, Town of Hamptonburgh to the east, Town of Crawford to the north, the Towns of Mamakating (Sullivan County) and Mount Hope to the west. Additionally, the Town surrounds the City of Middletown.

##### *Brief History*

Founded in 1722 from two (2) patents (tracts of land purchased from Native Americans between 1703 and 1761), the Town of Wallkill originally spanned into present day Ulster County. The hamlets which comprise the Town were centered on the various churches that sprung up in the area and were named for the characteristics of the settlers (Scotchtown for the prevalence of Scottish settlers, Mechanicstown for industrious inhabitants).

In the early 1800s, due to the Town's location, the area became a pass-through for the lumber and tanning products produced in Sullivan County in route to the Hudson River and a number of turnpikes were constructed. However, the town remained largely rural until the 1960s.

Construction of Route 17 and 64 opened the area up to persons traveling from New York City and the Town saw the population more than double in the following twenty (20) years.

### *Governing Body*

The governing body is the Town Board. The Town of Wallkill elects a Town Supervisor and four (4) councilpersons to this board. The Town Supervisor runs the day-to-day operations. The titles of Town Clerk and Receiver of Taxes are also elected positions.

### *Future Growth*

The Town of Wallkill has several approved and preliminary approval developments ongoing. Of note are the following projects:

The Maple Fields II project, proposed as a sixty (60) unit clustered townhouse conservation subdivision.

Saddle Ridge Residential project, featuring ninety-five (95) attached single family units, sixty-one (61) detached single family units, and one hundred and thirty-two (132) attached townhouse rental units.

Crossview Realty is proposing a thirty-six (36) lot subdivision with no further information given.

Cambridge Manor presently contains eighty (80) units with proposal to add fifty-seven (57) units in three (3) buildings.

Developers were required to perform mitigation actions to compensate for impacts as part of their plan approvals. The aforementioned projects will be required to follow NYS building code, DEC stormwater management, and DEC wetland protection regulations and permitting as well as NYSDOT permitting.

## 10.2.35.3 Hazard Vulnerabilities and Ranking

### *Risk Ranking*

| Hazard Event             | Vulnerability   | Mitigation Priority? |
|--------------------------|-----------------|----------------------|
| Flood                    | High            | Yes                  |
| Severe Storm/Nor'easter  | Moderately High | Yes                  |
| Extreme Wind             | Moderately High | Yes                  |
| Tornado                  | Moderately High | Yes                  |
| Ice Jam                  | Moderately High | Yes                  |
| Wildfires                | Moderately High | Yes                  |
| Winter Storm             | Moderately Low  | Yes                  |
| Hurricane/Tropical Storm | Moderately Low  | Yes                  |
| Extreme Temperatures     | Moderately Low  | Yes                  |
| Drought                  | Moderately Low  | Yes                  |

| Hazard Event | Vulnerability  | Mitigation Priority? |
|--------------|----------------|----------------------|
| Earthquake   | Moderately Low | Yes                  |
| Dam Failure  | Moderately Low | Yes                  |
| Lightning    | Not Ranked     | Yes                  |

*Critical Facilities*

A list of community critical facilities was generated to aid in mitigation planning. The table below summarizes the number of these facilities within the Town of Walkill which may be impacted by any of the previously noted hazards.

This information was used to identify potential needed improvements to existing critical facilities. Critical facilities were identified by the Town as meeting this definition: “Any structure(s) and/or infrastructure within a community whose incapacity or destruction would:

- Have a debilitating impact on the defense or economic security of that community.
- Significantly hinder a community’s ability to recover following a disaster.”

Discretion was left up to the participating jurisdiction to select these facilities.

| Communications Infrastructure | Electrical Power Systems | Water and Wastewater Supply Systems | Emergency Services | Educational | Shelter and Evacuation Facilities | EPA Hazardous Waste Generators |
|-------------------------------|--------------------------|-------------------------------------|--------------------|-------------|-----------------------------------|--------------------------------|
| 1                             | 6                        | 11                                  | 9                  | 7           | -                                 | 4                              |

Locations of the government building, emergency services, and educational facilities are noted below. None of these facilities are listed as in the 500-year floodplain according to Orange County GIS data.

| Facility Name                              | Address  |
|--|--|
| <b>Communications Infrastructure</b>       |  |
| Citizens Telecommunications                | 1715 Route 302   |
| <b>Electrical Power Systems</b>            |  |
| O&R Utility Inc.                           | Dolsontown Road, 48 Gunung Street, 20-24 Industrial Place, 45 Maltese Drive, 14 Wesley Court, 1422 State Route 302 |
| <b>Water and Wastewater Supply Systems</b> |  |
| Water Pump                                 | 30 Scotchtown Place, 146 Golf Links Road (2), Mt. Joy Road, 2459 Goshen Turnpike, Dundee Circle, Sands Road        |
| Sewer Treatment                            | Golf Links Road  |
| Water Tower                                | Overhill Road, Beakes Avenue, 77 Tower Drive   |

| Table 10.2.35c: Location of CFI in the Town of Walkill |                       |
|--|-----------------------|
| Facility Name  | Address               |
| Well Pump Station                                      | 2459 Goshen Turnpike  |
| Well Pump Station                                      | 52 Golf Links Road    |
| Well Pump Station                                      | 65 Tower Drive        |
| Well Pump Station                                      | 144 Golf Links Road   |
| Well Pump Station                                      | 40 California Drive   |
| Well Pump Station                                      | 62 Rykowski Lane      |
| Well Pump Station                                      | 2 Maple Drive         |
| Well Pump Station                                      | 30 Lorelei Drive      |
| Well Pump Station                                      | Mount Joy Road        |
| Water Tank   | 65 Tower Drive        |
| Water Tank   | 75 Overhill Road      |
| Water Tank   | 262 Connors Road      |
| Water Tank   | 570 Route 17M         |
| Sewer Pump Station                                     | 761 Route 211 East    |
| Sewer Pump Station                                     | 135 Bellvernon Avenue |
| Sewer Pump Station                                     | 29 Evan Court         |
| Sewer Pump Station                                     | 106 Brookline Avenue  |
| Sewer Pump Station                                     | 81 Industrial Place   |
| Sewer Pump Station                                     | 126 Belmont Avenue    |
| Sewer Pump Station                                     | 20 St. James Drive    |
| Sewer Pump Station                                     | 55 Western Avenue     |
| Sewer Pump Station                                     | 19 Pleasant Avenue    |
| Sewer Pump Station                                     | 439 Cottage Street    |
| Emergency Services                                     |                       |
| Orange Regional Medical Center                         | 707 East Main Street  |
| ORMC Pavilion – Surgical Center                        | 75 Crystal Run Road   |
| Crystal Run Healthcare Surgical Center                 | 95 Crystal Run Road   |
| Middletown Park Manor Rehabilitation (Assisted Living) | 121 Dunning Road      |
| Braemar at Walkill (Assisted Living)                   | 21 Riverside Drive    |
| Walkill Living Center                                  | 455 Schutt Road       |
| Senior Horizon at Silver Lake                          | 141 Bert Crawford Rd  |
| Patrick Campbell Apartments                            | 88 Senior Way         |
| Walkill Senior Housing                                 | 35 Senior Way         |
| New York State Police                                  | 55 Cristal Run Road   |
| Fire Department – Bloomingburg Station 1               | 117 Godfrey Road      |
| Fire Department – Mechanicstown Station 1              | 22 Victory Street     |

| Table 10.2.35c: Location of CFI in the Town of Walkill |                       |
|--|-----------------------|
| Facility Name  | Address               |
| Fire Department – Mechanicstown Station 2              | 384 Stony Ford Road   |
| Fire Department – Washington Heights Station           | 10 Ohio Place         |
| Fire Department – Circleville Station 2                | 1500 Goshen Turnpike  |
| Fire Department – Howells Station                      | 20 Elm Street         |
| Silver Lake Fire District                              | 26 Maltese Drive      |
| Fire Department – Circleville Station 1                | 2147 Route 302        |
| Fire Department – Pocatello Station                    | 5 Pocatello Road      |
| Town of Walkill Police                                 | 99 Tower Drive        |
| Town of Walkill Ambulance                              | 22 Maltese Drive      |
| Mobile Life Support Services Station 6                 | 489 Route 17M         |
| Mobile Life Support Services Station 6                 | 200 Midway Park Drive |
| Educational  |                       |
| Circleville Elementary                                 | 2100 State Route 302  |
| Circleville Middle School                              | 1951 State Route 302  |
| Pakansink Elementary School                            | 1953 State Route 302  |
| Maple Hill Elementary School                           | 535 County Route 78   |
| Monhagen Middle School                                 | 555 County Route 78   |
| William S. Carter Elementary School                    | 435 East Main Street  |
| Harmony Christian School                               | 1790 Route 211 East   |
| Miscellaneous Town-Owned Facilities                    |                       |
| Town of Walkill DPW Garage                             | 860 Route 17M         |
| Walkill Community Center                               | 8 Wes Warren Drive    |
| Walkill Recreation Center                              | 60 Creamery Road      |
| EPA Hazardous Waste Generators                         |                       |
| Walkill Farms HOA                                      | 270 Schutt Road       |
| Ball Metal Beverage Container Corp.                    | 95 Ballard Road       |
| East Coast Environmental, Inc.                         | 35 Goshen Turnpike    |
| Walkill STP  | 600 Route 211 East    |

While it is assumed that most municipal water systems facilities are not located within the floodplain, the Town will explore hardening/relocation opportunities for those that are located within the floodplain should such actions become necessary due to the incidence of flooding impacts.

By necessity, critical wastewater facilities are located within the 500-year floodplain due to discharge requirements and gravity-fed systems optimization. While relocation is neither desired nor feasible, the Town will seek to harden these facilities where feasibly and fiscally possible.

## **Priority Hazard Events**

The following sections detail the priority hazard events identified by the jurisdiction. Additional information about each hazard including frequency, history, and severity within Orange County is included within Section 5.0 of the main body of the Hazard Mitigation Plan (Volume I).

The probability of climate-related hazard events is generally expected to increase in the future within the Town of Wallkill. This anticipated increase results from the expected increase in weather volatility associated with climate change. The Town’s location on the Wallkill River contributes to anticipated increased flooding occurrences.

Past occurrences of hazard events are indicated in their respective profiles below. Some hazards may not have locally available documentation of past occurrence, but are nonetheless profiled in this annex to instill future mitigation planning consideration.

### *Flood*

The Wallkill River flows north from New Jersey to Rondout Creek and is the major waterbody influencing hydrology throughout the area. Masonic Creek is a tributary that runs through the Washington Heights hamlet and drains Silver Lake to the Wallkill.

Several areas throughout the Town have been identified due to increased vulnerability:

- Draper Brook Drainage area – between Washington Heights and Mechanicstown along rail bed.
- Mill Pond – Dam damaged during Hurricane Irene.
- Scotchtown – Winding Brook overflows the bank due to debris clogging; bank scour also noted in area.
- Prosperous Valley Lake – Northern end floods Prosperous Valley Road, an important connector to Route 17. Has also led to debris and scour to the south of the lake.

FEMA’s Flood Insurance Mapping Program designates areas that are at risk for flooding; low flood risk are areas unlikely to flood, moderate risk are areas within the 500-year floodplain (0.2% likely to flood in any given year), and high risk are areas that frequently flood, up to the 100-year flood risk zone (1% likely to flood in any given year).

| Table 10.2.35e: Summary Of Land Areas In Flood Hazard Areas<br>(Source: HAZUS, FEMA DFIRM Data) |                        |                        |                     |
|---|------------------------|------------------------|---------------------|
| Total Land Area (Acres)   | 100-yr Flood Risk Area | 500-yr Flood Risk Area | Low Risk Flood Area |
| 40,207  | 2,079 (5%)             | 345 (1%)               | 37,746 (94%)        |

Additionally, 3.6% of the Town’s improved value areas (defined as property that is either actively utilized or has been developed) are located within the high or moderate risk flood areas (96.4% is within low risk areas).

Below is a table that illustrates the value of property in the Town of Wallkill that is located within the 500-year floodplain and is categorized by land use type. This table was derived from FEMA floodplain mapping and parcel data from the Orange County Property Assessor.

| Type of Structure    | # Structures in Hazard Area | Value of Structures (in millions) |
|----------------------|-----------------------------|-----------------------------------|
| Residential          | 89                          | \$10.1                            |
| Commercial           | 4                           | \$2.1                             |
| Industrial           | 2                           | \$6.3                             |
| Agricultural         | 0                           | \$0.0                             |
| Religious/Non-profit | 0                           | \$0                               |
| Government           | 1                           | Unknown                           |
| Education            | 0                           | \$0                               |
| Utilities            | 0                           | \$0                               |
| Dams                 | 1                           | Unknown                           |
| Parks                | 0                           | \$0                               |
| Total                | 97                          | \$18.5                            |

#### Historical Occurrence:

In the past ten (10) years, seven (7) flood events have been recorded by the NOAA Storm Events Database for the Town of Wallkill.

- October 28, 2006 – Flash flooding caused by heavy rains (measured at 2.6 inches in Middletown) in the hamlet of Howells; poor drainage led to flooded basements throughout the area.
- April 15, 2007 – A nor'easter bringing heavy rains and wind caused flooding of local waterways (notable the Wallkill River and Moodna Creek). Many roads were shut down as a result.
- March 8, 2008 – Flash flooding occurred in Mechanicstown due to heavy rains (1.5-3 inches), shutting down several roads.
- June 26, 2009 – Flash flooding caused by heavy rains caused the shutdown of Route 17.
- June 30, 2009 – Thunderstorms brought heavy rains, flooding the Metro North Train Station in Mechanicstown.
- July 26, 2009 – Heavy rains caused flash flooding. Route 17 was shut down.

There have been three (3) repetitive loss claims and one (1) substantial damage claim (greater than 50% value lost), according to the 2014 local hazard mitigation plan. Two (2) of the

repetitive loss claims are located within the 100-year floodplain along the Wallkill River; specific addresses are hidden by the Privacy Act of 1979.

### *Extreme Temperatures*

For a description of this hazard, please see section 5.1.

#### Historical Occurrence:

In the past ten (10) years there is no record of any extreme temperatures that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

### *Severe Storms*

The National Weather Service (NWS) defines a severe storm as one with a tornado and/or surface hail 3/4" or greater and/or wind gusts fifty (50) knots (58 mph) or greater. Such storms can cause damage from wind, hail, heavy rainfall, and/or lightning strikes. Within the municipalities of Wallkill and Middletown, a total of approximately \$119,500 of property damages has occurred to severe thunderstorms.

#### Historical Occurrence:

In the past ten (10) years, three (3) severe storms have been recorded by NOAA Storm Events Database for the Town of Wallkill.

- July 17, 2009 – Strong winds caused the collapse of a roof at a construction site.
- July 29, 2011 – Severe storm downed a large tree on John's Road in the hamlet of Scotchtown.
- July 26, 2012 – Trees and power lines were reported down in the hamlet of Fair Oaks during severe storms.

### *Extreme Wind*

For a description of this hazard, please see section 5.2.

#### Historical Occurrence:

In the past ten (10) years there is no record of any extreme winds that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

### *Tornado*

For a description of this hazard, please see section 5.2.



Historical Occurrence:

In the past ten (10) years there is no record of any tornados that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Hurricane/Tropical Storm*

For a description of these hazards, please see section 5.3.

Historical Occurrence:

In the past ten (10) years there is no record of any hurricanes that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Drought*

For a description of this hazard, please see section 5.5.

Historical Occurrence:

In the past ten (10) years there is no record of any droughts that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Earthquakes*

For a description of this hazard, please see section 5.7.

Historical Occurrence:

In the past ten (10) years there is no record of any earthquakes that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Winter Storm*

For a description of this hazard, please see section 5.8.

Historical Occurrence:

In the past ten (10) years there is no record of any winter storms that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Wildfires*

For a description of this hazard, please see section 5.9.

**Historical Occurrences:**

In the past ten (10) years there is no record of any wildfires that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Ice Jam*

For a description of this hazard, please see section 5.10.

**Historical Occurrence:**

In the past ten (10) years there is no record of any ice jams that have explicitly impacted the Town of Wallkill. However, there have been a number of recorded occurrences within Orange County. The information can be found in the main body of the document.

*Dam Failure*

Dam failures can be attributed to natural or man-made hazards. The impoundment of large volumes of water poses a threat; the failure of a dam can lead to catastrophic flooding.

The New York State Department of Environmental Conservation (NYSDEC) maintains a database to classify dams based on the event of a failure. Explanations of dam classifications are noted in the table below.

| Table 10.2.35g: Dam Hazard Potential Classification |  |
|---|--|
| NYSDEC Classification                               | Description  |
| Class "A" or "Low Hazard"                           | A dam failure is unlikely to result in damage to anything more than isolated or unoccupied buildings, undeveloped lands, minor roads such as town or country roads; is unlikely to result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; and/or is otherwise unlikely to pose the threat of personal injuring, substantial economic loss or substantial environmental damage. |
| Class "B" or "Moderate Hazard"                      | A dam failure may result in damage to isolated homes, main highways, and minor railroads; may result in the interruption of important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; and/or is otherwise likely to pose the threat of personal injury and/or substantial economic loss or substantial environmental damage. Loss of human life is not expected.  |
| Class "C" or "High Hazard"                          | A dam failure may result in widespread or serious damage to home (s); damage to main highways, industrial or commercial buildings, railroads, and/or important utilities, including water supply, sewage treatment, fuel, power, cable or telephone infrastructure; or substantial environmental damage; such as the loss of human life or widespread substantial economic loss is likely.   |
| Class "D" or "Negligible or No Hazard"              | A dam that has been breached or removed, or has failed or otherwise no longer materially impounds waters, or a dam that was planned but never constructed. Class "D" dams are considered to be defunct dams posing negligible or no hazard. The department may retain pertinent records regarding such dams.   |

Twenty-three (23) dams are located within the impact area of the Town of Wallkill, the majority of which – twenty-one (21) are classified as Class "D" or "A". One (1) dam is classified as "B" and one (1) is classified as "A".

The Prosperous Valley Lake Spillway is a “B” hazard; the structure appears to be rotting and has caused the flooding and closure of nearby York Road as well as residential property damage. The structure also does not allow for controlled release of water in advance of a flooding event. Failure could cause damage along the extent of the previous flooding events or more severe.

The Woodward Dam/Greenleaf Dike has a capacity of one thousand, six hundred and thirty-three (1,633) acre-feet and is located on Shawangunk Lake. As of the most recent inspection in May 2014, the dam has been upgraded from a “B” hazard to a class “C” hazard. Located in the Town of Mount Hope, a breach of this dam would result in flooding in the northwest portion of the Town of Wallkill. Available mapping shows that eight (8) residences, one (1) garage/barn structure, and one (1) post office would be inundated. Based on 2012 assessment data, these structures have a combined value of \$1.7m.

### *Lightning*

Lightning is often associated with large storm systems. It lacks predictability and can cause property damage due to fire, disable communications systems, and result in injury or death.

However, damages are often isolated when they occur in conjunction with a lightning strike. Five (5) events have been damaging enough to warrant recording for the Town of Wallkill since 1995.

#### Historical Occurrence:

- June 29, 1998 – Lightning strike in Town of Wallkill caused \$40,000 in property damages.
- June 9, 2009 – \$5,000 worth of property damages were reported in Mechanicstown.
- June 26, 2009 – Two (2) events; strike in Circleville resulted in \$5,000 in property damages. The same day, a strike in Washington Heights resulted in \$30,000 in property damages.
- August 21, 2009 – A strike in Michigan Corners resulted in \$750 in property damages.

### 10.2.35.4 Capability Assessment

#### *Planning and Regulatory Capability*

| Table 10.2.35h: Legal and Regulatory Capabilities for Town of Wallkill |   |                                |
|--|---|--------------------------------|
| Regulatory Tools for Hazard Mitigation                                 | Description   | Responsible Department/Agency  |
| Codes and/or Ordinances  | <ul style="list-style-type: none"> <li>• 2010 Residential Code of NYS</li> <li>• 2010 Fire Code of NYS</li> <li>• 2010 Building Code of NYS</li> <li>• 2010 Exiting Building Code of NYS</li> <li>• 2010 Energy Conservation Construction Code of NYS</li> <li>• 2010 Plumbing Code of NYS</li> <li>• 2010 Mechanical Code of NYS</li> <li>• 2010 Fuel Gas Code of NYS</li> <li>• Town of Wallkill Zoning Code of §249</li> </ul>   | Building Department            |
|  | <ul style="list-style-type: none"> <li>• Site Plan and Special Use §249 – 13</li> <li>• Floodplain and Ponding Area Sub-Districts §249 - 15</li> <li>• Soil and Drainage Standards §249 - 16</li> <li>• Rural Agricultural/Low-Density District §249- 19/19.1</li> <li>• Suburban Residential District §249 – 20</li> <li>• Medium – Density Residential District §249 - 22</li> <li>• Multiple Family Residential District- §249 - 23</li> <li>• Shawangunk Kill Corridor Preservation Overlay District §249-70</li> </ul> | Planning Board                 |
| Plans, Manuals, and/or Guidelines                                      | <ul style="list-style-type: none"> <li>• Stormwater Management §203</li> <li>• Town of Wallkill NY Comprehensive Plan 2005</li> <li>• Design Guidelines for Conservation Subdivisions- §249 - 80</li> </ul>   | Planning Board                 |
| Studies  | <ul style="list-style-type: none"> <li>• FIRM Flood Insurance Rate Maps, 2009</li> <li>• Floodplain Studies completed for portions of                             <ul style="list-style-type: none"> <li>○ Pine Island, est. 2010/2011</li> </ul> </li> </ul>   | Town Board/Building Department |

#### *Administrative and Technical*

| Table 10.2.35i: Summary of Administrative and Technical Staff Capabilities for Town of Wallkill             |          |  |
|---|----------|--|
| Staff/Personnel Resources   | <b>p</b> | Department/Agency - Position   |
| Planner(s) or engineer(s) with knowledge of land development and land management practices                  | <b>p</b> | Town Consultant Engineer, Town Consultant Planner to the Planning Board, Commissioner of Public Works, Town Building Inspector |
| Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure | <b>p</b> | Town Consultant Engineer, Town Consultant Planner to the Planning Board, Commissioner of Public Works, Town Building Inspector |
| Planner(s) or engineer(s) with and understanding of natural and/or human-caused hazards                     | <b>p</b> | Town Consultant Engineer, Town Consultant Planner to the Planning Board, Commissioner of Public Works, Town Building Inspector |

| Table 10.2.35i: Summary of Administrative and Technical Staff Capabilities for Town of Wallkill |          |   |
|---|----------|---|
| Staff/Personnel Resources   | <b>p</b> | Department/Agency - Position  |
| Floodplain Manager/Administrator  | <b>p</b> | Town Building Inspector   |
| Surveyors   | <b>p</b> | Town Consultant Engineer  |
| Staff with education or expertise to assess the community's vulnerability to hazards            | <b>p</b> | Department of Public Works Commissioner   |
| Personnel skilled in GIS and/or HAZUS; AutoCad-Civil 3D; ArcViewGIS                             | <b>p</b> | Town Consultant Engineer  |
| Scientists familiar with the hazards of the community   | <b>p</b> | Consultant hired as needed  |
| Emergency manager   | <b>p</b> | Department of Public Commissioner, Town Police Chief, and Local Emergency Manager |
| Grant writer(s)   | <b>p</b> | Various Department Heads  |

*Fiscal*

| Table 10.2.36j: Fiscal Opportunities For Town of Wallkill |   |  |
|---|---|--|
| Financial Resources                                       | Accessible or Eligible to Use (Yes, No, Don't Know) | Comments   |
| Community Development Block Grants                        | Yes   | Due to income levels only certain areas of the Town are eligible |
| Capital Improvements Project funding                      | Yes   | Preparation of a multi – year plan for infrastructure inventory  |
| Authority to levy taxes for specific purposes             | Yes   | Wallkill Drainage Districts                                      |
| Fees for water, sewer, gas, or electric service           | Yes   | Water and Sewer Districts  |
| Impact fees for homebuyers or new developments/homes      | Yes   | Various projects   |
| Incur debt through general obligation bonds               | Yes   | Various projects   |
| Incur debt through special tax bonds                      | Yes   | Various projects   |

*NFIP: Administrator, Vulnerability, Resources, Compliance*

The Town of Wallkill (ID# 360634) participates in the National Flood Insurance Program (NFIP) and is considered in good standing. The Town has been maintaining NFIP participation by performing the duties and actions that were listed in the local laws that their municipal boards adopted. (Local Law #3 of 2009) Participation details as of January 31, 2018, are noted in the

table below. More NFIP data can be found in Section 8.2. Data drawn from the 2014 local hazard mitigation plan is noted.

| Table 10.2.35k: NFIP Participation Data |                         |
|---|-------------------------|
| Data/Characteristics                    | Details                 |
| Date Joined                             | 09/04/1986              |
| Number of Policies in Effect            | 50                      |
| Paid Claims                             | 43                      |
| Claims Cost                             | \$464,735.33            |
| 'Substantial Damage' Claims             | 1*                      |
| Repetitive Loss Claims                  | 0                       |
| Structures in 100-year Flood Plain      | 93*                     |
| Most Current FIRM Data                  | 08/03/2009              |
| Floodplain Ordinance in Effect          | Yes                     |
| Outstanding Compliance Issues           | No*                     |
| Floodplain Administrator                | Town Building Inspector |

\* From 2014 local hazard mitigation plan

The Town Floodplain Administrator has been provided an NFIP best practices guidance package and will be using it to improve local participation in NFIP standards going forward. This package of documents was provided by NYSDHSES and can be found in Appendix F - NFIP Floodplain Administrator Guidance Package.

#### *Hazard Mitigation: Existing and Planning Mechanisms*

##### Emergency Communications, Routes, and Shelters:

The Wallkill Police Department utilizes “Communication Desk” alert service provided by 1<sup>st</sup> Responder Wireless News. Interested parties can subscribe using a link on the Town’s municipal website. Orange County utilizes the CodeRED system for emergency notifications.

The Town has set up their own emergency route map and procedures. These routes were created with input from Orange County and the NYS Police. The Town does not current list an emergency shelter, but has indicated two (2) designated future emergency shelter locations: Town of Wallkill Community Center (8 Wes Warren Dr., Middletown, NY 10940) and Town of Wallkill Recreation Center (60 Creamery Rd., Circleville, NY 10919). The establishment of these shelters is listed as proposed mitigation actions for the Town. More information on these sites can be found in Attachment III.

##### Comprehensive Plan:

The Town of Wallkill Comprehensive Plan, adopted in 2005, states that the Town will implement techniques to prevent increase in development that would lead to increased susceptibility to natural hazards.

Planning Mechanisms:

While this annex has provided a summary and description of existing plans, policies, and regulatory mechanisms that support hazard mitigation, the 2018 Orange County Hazard Mitigation Plan Update is intended to allow for the integration of its recommendations and data into local plans. Listed below are several planning and policy mechanisms that lend themselves to the integration of materials and objectives from this hazard mitigation plan. Columns to the right indicate whether the municipality has utilized hazard mitigation planning elements in the past (as in the aftermath of a previous local hazard mitigation plan) and whether they intend to be utilized in the future (which most, if not all, do).

| Table 10.2.35I: Incorporation of Hazard Mitigation Planning into Existing and Future Planning Mechanisms   |                   |                 |
|--|-------------------|-----------------|
| Planning Mechanism   | Has been Utilized | May be Utilized |
| Capital Improvement Budget: Hazard Mitigation Actions to be considered during the development of annual capital improvement plans. Compliance with Hazard Mitigation goals and objectives as well as the hazard vulnerability of site will be a consideration during the evaluation of infrastructure and facilities projects. | X                 | X               |
| Operating Budget: Hazard Mitigation Actions to be considered within day-to-day operating budgets as funding permits.   | X                 | X               |
| Building & Zoning Ordinances: Review of the hazard mitigation plan and hazard analyses are part of the evaluation of land use, zoning, and development review ordinances and permitted processes.  | X                 | X               |
| Comprehensive Land Use Plan: Elements such as hazard vulnerability and hazard area extents will be considered during the development of future land use maps and other elements of comprehensive planning.   | X                 | X               |
| Human Resource Manual: Employee job descriptions may contain elements related to hazard mitigation planning and associated recommendations.  |                   | X               |
| Grant Applications: Support for funding requests in the form of data, maps, and priority recommendations will be drawn from the hazard mitigation plan.  | X                 | X               |
| Fire Plan: Fire Plans for the municipality and local fire departments can utilize data and mapping in the hazard mitigation plan.  | X                 | X               |
| Local School Service Projects: Municipal officials and staff can explore the possibility of collaboration with local school districts to provide avenues for student community service projects as well as educational opportunities.  |                   | X               |
| Economic Development: Local chambers of commerce and other economic development agencies can utilize the hazard mitigation plan to better inform new/expanding businesses in finding a location.   |                   | X               |

*Summary*

The Town of Wallkill will utilize this Hazard Mitigation Plan to inform the Comprehensive Plan and create a list of potential mitigation actions, including but not limited to improvements to infrastructure, emergency response, and public awareness. Some actions identified:

- Update existing zoning code/ building code requirements to provide stronger mitigation practices.
- Incorporate/ adopt Hazard Mitigation Plan into Town Comprehensive Plan.
- Update town hazard mapping to include latest data.
- Provide change in development review process to evaluate future projects with an eye toward mitigation.

10.2.35.5 Mitigation Strategy and Prioritization

*Past, Completed, and Ongoing Initiatives*

The Town has identified the following list of ongoing hazard mitigation initiatives, most of which included in the Town’s NY Rising Plan. These many of the actions below were also issued as proposed actions in the most recent local hazard mitigation plan in 2014. Only those proposed mitigation actions that were incomplete were included in this plan as re-issued proposed mitigation actions. All other actions have been completed since the 2014 plan was adopted.

| Table 10.2.35m: On-going Mitigation Actions within Town of Wallkill |   |  |           |                           |   |
|---|---|--|-----------|---------------------------|---|
| Corresponding Proposed Action ID                                    | Project Name  | Location   | Cost      | Status                    | Description of Project  |
| TW-19   | Natural Gas/Solar Backup Power for Critical Facilities and Infrastructure | Traffic Lights Rte 211 / E. Main St/ Crystal Run Rd                        | \$220,000 | Funded by NY Rising Grant |   |
| TW-25   |   | Senior Way Back-up Generator   | \$69,660  | Privately funded          |   |
| TW-25   |   | Senior Horizons Back-Up Generator  | \$69,660  | Unfunded                  |   |
| TW-17   | Water and Sewer Treatment Plant Flood Damage Mitigation Measures          | Kosuga, Braeside, Crystal Run, Rykowski, Northern Woods and Woodland Acres | \$998,704 | Unfunded                  | To make changes at water / sewer sites to eliminate interruption to water / sewer services during storms and power outages. 1) Re-enforce well roads; 2) Install back-up power to these sites; 3) Relocation of electrical infrastructure, move out of floodplain; 4) Elevate equipment out of flood waters |



| Table 10.2.35m: On-going Mitigation Actions within Town of Wallkill |   |                 |  |                           |   |
|---|---|-----------------|--|---------------------------|---|
| Corresponding Proposed Action ID                                    | Project Name  | Location        | Cost                                       | Status                    | Description of Project  |
| N/A   | Silver Lake Dam Modifications and Emergency Operations Agreement                        | Silver Lake     | \$100,000                                  | Unfunded                  | To allow discharge of water from Silver Lake in advance for forecast of heavy rain, thus allowing areas upstream to better handle the water volume associated with the predicted rain forecast.   |
| TW-18   | Winding Brook Floodplain Improvements   | Scotchtown Area | \$537,798                                  | Funded by NY Rising Grant | Allow better flow of water through the Winding Brook by: <ul style="list-style-type: none"> <li>Replacing and upgrading culverts that currently have insufficient capacity</li> <li>Addition of storage and retention areas upstream</li> <li>Removal of high-risk structures along floodplain, through buy-out program</li> <li>Revise the local drainage plan, establish a flood protection zone</li> </ul>                 |
| N/A   | Ballard Road at East Galleria Drive Flood Mitigation                                    | Ballard Road    | \$1,207,599                                | Funded by NY Rising Grant | Allow for better storm water movement through intersection by installation of a new culvert pipe in the intersection. This will also ensure the protection of two critical utilities (Gas and Electric) in the area. As well as replace water and sewer lines in area.  |
|   | Interoperability Communication Project for Emergency Responders within Town of Wallkill | Town-wide       | \$150,000 - \$400,000                      | Unfunded                  | To provide a frequency or frequencies for Public Safety Agencies to operate on during emergencies in the town. <ul style="list-style-type: none"> <li>Installation of repeater system</li> </ul>  |
| TW-23   | Circleville Hamlet Preparedness and Public Space Improvements                           | Circleville     | \$1,349,000 (Current Phase cost \$500,000) | Partially Funded          | To increase resiliency to the Circleville area of the town by: <ul style="list-style-type: none"> <li>Installing Solar Panels on Traffic Signals</li> <li>Alterations to recreational center in Circleville Park by adding a Kitchen, Remodeling of Bathroom, Installation of Back-up generator</li> <li>Installation of sidewalks, Upgrade to rail-trail as evacuation route for Schools in the Circleville area.</li> </ul> |

| Table 10.2.35m: On-going Mitigation Actions within Town of Wallkill |   |  |           |                        |   |
|---|---|--|-----------|------------------------|---|
| Corresponding Proposed Action ID                                    | Project Name  | Location                               | Cost      | Status                 | Description of Project  |
| TW-3<br>TW-4  | Channel Daylighting and Riparian Improvements                               | Silver Lake/<br>Mechanicstown<br>Areas | \$615,434 | Funded by<br>NY Rising | To increase movement of storm water by upgrading the culverts already in this area, as well as the possibility of creation of a storm water retention area.   |
|   | Marketing and Outreach Campaign About Life in the Town of Wallkill          | Town-wide                              | \$40,000  | Unfunded               | To increase awareness of the Town of Wallkill Brand by marketing and outreach to town residents, establishing a sense of pride by town residents.   |
|   | Sump Pump Backflow Prevention and Cross-Connection Control                  | Town-wide                              | \$30,000  | Partially<br>Unfunded  | To increase awareness of town residents to the negative impact that sump pump water being pumped into the sanitary sewer system can have on area waterways. This sump pump water can overwhelm the sewer treatment plant and cause the plant to overflow into the Wallkill River. |
| TW-37<br>TW-38<br>TW-39   | Vulnerable Populations and Community Emergency Alert, Education and Support | Town-wide                              | \$20,000  | Unfunded               | Provide timely and accurate to the vulnerable populations of the Town of Wallkill, through social media, print media and public outreach.   |
|   | Back-up Power for Town of Wallkill PD Repeater Site                         | Connors Road                           | \$7,000   | Funded<br>(Completed)  | Provide an emergency generator and necessary connections to power repeater site. Repeater site also provides communications for Silver Lake and Circleville FD's.   |

### *Proposed Initiatives*

Costs for the following actions have been broken down as such: High (H) = Funding not currently in place, estimated above \$100K, Medium (M) = Funding exists, but budgeted over several years/augmented with outside sources, estimated between \$10K and \$100K, and Low (L) = Funding could be allocated/reallocated from existing budget, estimated below \$10K.

Table 10.2.35n: Mitigation Actions/Projects Identified by Town of Wallkill

| Action ID | Action   | Primary Agency   | Funding Source(s) and Cost (low, moderate, high)                  |
|-----------|--|--|---|
| TW-1      | Cleanup of Wallkill River waterway, remove debris and trees to prevent blockage.   | Department of Public Works (DPW)                         | Local Staff Labor/ L  |
| TW-2      | Cleanup of debris, trees in waterways on private properties/in coordination with property owners.  | DPW  | Local Staff Labor/ L  |
| TW-3      | Conduct enhanced stormwater management/flood mitigation study of Masonic-Silver-Creek-Silver Lake Watershed.   | Town Board, Planning Board, Consulting Team              | Local Funding; HMGP, USDA-NRCS, NY Rising Grant Funding/ M        |
| TW-4      | Investigate capacity and downstream flooding issues from Silver Lake down to Middletown School fields along Route 211.   | Town Board, Planning Board, Consulting Team              | Local Funding; HMGP, USDA-NRCS, NY Rising Grant Funding/ M        |
| TW-5      | Develop study and design for construction of detention basin(s) to capture downstream flow from Monhegan Lake watershed area into downtown Middletown.                   | Town Board, Planning Board, Consulting Team              | Local Funding; HMGP, PDM, CFA, NY Rising Grant Funding/ H         |
| TW-6      | Conduct feasibility study with Palisades Interstate Park Commission (PIPC) on enhanced regional stormwater management in Highland Lakes State Park.                      | Orange County Planning                                   | County Funding; PIPC, OPRHP/EPF, USDA-NRCS, HMGP Grant Funding/ M |
| TW-7      | Redesign and reinforce drainage channel at intersection of Mt. Hope Rd. and Pocatello Rd. behind firehouse. Repair damage.   | DPW  | Local Staff Labor, USDA-NRCS, HMGP, PDM, NYSDOT Grant Funding/ M  |
| TW-8      | Identify existing infrastructure repair projects as opportunities for mitigation improvements.   | DPW  | Local Staff Labor, HMGP, PDM Grant Funding/ L                     |
| TW-9      | Inspect, investigate Prosperous Valley Road spillway for repairs. Consider telemetry remote with control gate for pre-release.   | DPW, Consulting Team                                     | Local Staff Labor, Local Funding, HMGP, PDM Grant Funding/ L      |
| TW-10     | Investigate improvements at stream down from High Barney Road.   | DPW  | Local Staff Labor, Local Funding, USDA-NRCS Grant Funding/ L      |
| TW-11     | Investigate improvements/repairs at Farm Pond on Kunkel property near Playtogs/Redners.  | DPW  | Local Staff Labor, Local Funding, USDA-NRCS Grant Funding/ L      |
| TW-12     | Work with O&R Utilities to identify critical power grid priorities/vulnerable areas. Develop plan to strengthen these components to reduce likelihood of future outages. | Town Board, Orange County Planning, O&R, Consulting Team | Local Funding, O&R, HMGP, PDM, CFA Grant Funding/ L               |
| TW-13     | Provide general cleanup of debris in channels, streams, and rivers.  | DPW  | Local Staff Labor/ L  |
| TW-14     | Stream bank cleanup and stabilization projects.  | DPW  | Local Staff Labor/ L  |
| TW-15     | Investigate structural improvements at water treatment plant to protect it in the event of a breach of Monhagen Lake Dike and the event of 500-yr flood event.           | Town Board, Consulting Team                              | Local Funding, HMGP, PDM Grant Funding/ H                         |

Table 10.2.35n: Mitigation Actions/Projects Identified by Town of Walkill

| Action ID | Action  | Primary Agency                              | Funding Source(s) and Cost (low, moderate, high) |
|-----------|---|---|--|
| TW-16     | Establish alternate emergency shelter location from Monhagen MS/ Maple Hill Elementary in the event of a breach of Monhagen Lake Dike.  | Town Board                                  | Local Funding/ L                                 |
| TW-17     | Investigate structural improvements/relocation of sewer treatment plant and water treatment plant/pumps within floodplain of the Walkill and will protect them from a 500-yr flood event. | Town Board, Consulting Team                 | Local Funding, HMGP, PDM Grant Funding/ H        |
| TW-18     | Replace culverts and stabilize banks along Winding Brook.   | DPW   | Local Staff Labor/ M                             |
| TW-19     | Provide backup power for key traffic signals in the event of widespread outages to reduce gridlock from hampering emergency vehicle access.   | Town Board, DPW                             | NYSDOT, HMGP, PDM Grant Funding/ M               |
| TW-20     | Increase capacity of emergency fuel storage tanks in the Town of Walkill.   | Town Board, DPW                             | HMGP, PDM, CFA Grant Funding/ M                  |
| TW-21     | Develop "Selective Reduction/ Rationing Plan" for local emergency services fuel storage with tiered system for different levels of alert.   | Town Board, DPW                             | Local Funding/ L                                 |
| TW-22     | Establish or expand access to public cooling centers.   | Town Board                                  | HMGP Grant Funding/ L                            |
| TW-23     | Assess needs of backup electrical power generators at emergency service centers, sewer, and water systems.  | Town Board, DPW                             | HMGP, NY Rising Grant Funding/ L                 |
| TW-24     | Investigate improvements or relocation of Fire substation in flood plain on Stony Ford Road   | DPW   | Local Funding, HMGP, PDM Grant Funding/ M        |
| TW-25     | Conduct vulnerability assessment of shelters and multi-family facilities, such as senior housing or large apartment complexes and review emergency backup power needs and solutions.      | DPW, Consulting Team                        | HMGP, PDM Grand Funding/ L                       |
| TW-26     | Get standing approval/agreement between local municipalities and Orange County to be able to clear debris from drainage crossings in County jurisdiction without regulatory approvals.    | Town Board, Orange County                   | Local Staff Labor/ L                             |
| TW-27     | Develop agreements/action plan for use of large private facilities, such as Galleria Mall, for population shelters in case of widespread emergency  | Town Board                                  | Local Staff Labor/ L                             |
| TW-28     | Investigate telemetry remote capabilities to conduct an "advance release" of water from local dams/spillways to increase capacity prior to significant rainfall event                     | Town Board, Consulting Team                 | HMGP, PDM, NY Rising Grant Funding/ M            |
| TW-29     | Develop agreement with DEC to have ability to cleanup Walkill River Waterway via "Bed & Banks " permits as needed for regular maintenance without normal regulatory approvals             | Town Board, DPW                             | Local Staff Labor/ L                             |
| TW-30     | Provide planning review officials with access to continued training on enhanced stormwater management and low impact development techniques.  | Town Board, Planning Board                  | Local Staff Labor, Local Funds/ L                |
| TW-31     | Incorporate local law prohibiting the storage of debris, brush, or similar clogging elements near the banks of waterways.   | Town Board, Planning Board, Consulting Team | Local Staff Labor, DEC Grant Funding/ L          |

| Table 10.2.35n: Mitigation Actions/Projects Identified by Town of Walkill |  |   |   |
|---|--|---|---|
| Action ID   | Action   | Primary Agency                                | Funding Source(s) and Cost (low, moderate, high)                      |
| TW-32   | Conduct bi-annual waterway inspections to identify properties which are violating debris storage restrictions along banks of waterways.                                | DPW, Consulting Team                          | Local Staff Labor, Local Funds/ L                                     |
| TW-33   | Have local Floodplain Administrator obtain certification.  | DPW   | Local Staff Labor/ L  |
| TW-34   | Develop and Emergency Response Plan.   | Town Board, Consulting Team                   | Local Funds, HMGP, PDM, NY Rising Grant Funding/ M                    |
| TW-35   | Joint and participate in activities for NFIP Community Rating System.  | DPW   | Local Staff Labor, HMGP Grant Funding/ L                              |
| TW-36   | Periodically review and update floodplain management program and monitoring activities.  | DPW   | Local Staff Labor, NFIP Grant Funding/ L                              |
| TW-37   | Expand awareness, outreach, and sign-ups for existing Public Safety Alert System. Coordinate with county 'code red' system.  | Town Board                                    | Local Funding, HMGP, PDM, NSF Grant Funding/ L                        |
| TW-38   | Educate public about emergency preparation and response actions.   | Town Board                                    | Local Funding, HMGP, PDM, NSF Grant Funding/ L                        |
| TW-39   | Support disaster preparedness training for agencies serving vulnerable populations and the general public.   | Town Board                                    | Local Funding, Local Staff Labor, HMGP, PDM, NSF Grant Funding/ M     |
| TW-40   | Inform residents of problems associated with debris and brush located near banks of waterways.   | Town Board, DPW                               | Local Funding, Local Staff Labor, HMGP, PDM, NSF Grant Funding/ L     |
| TW-41   | Update flood hazard maps- particularly in densely settled areas  | DPW   | Local Funding, HMGP, PDM, NSF Grant Funding/ L                        |
| TW-42   | Adopt a Real Estate Disclosure code to inform property buyers of local hazards.  | Town Board                                    | Local Staff Labor/ L  |
| TW-43   | Develop community outreach program to private property owners to ensure cleanup of waterways on their properties, or secure permissions for the municipality to do so. | Town Board                                    | Local Funding/ L  |
| TW-44   | Establish a system to create/protect undeveloped buffers around wetlands, streams, and rivers. Encourage riparian vegetation.  | Town Board, Consulting Team                   | Local Funding, EPA, NYSDEC/EPF, OPRHP/EPF, USDA-NRCS Grant Funding/ L |
| TW-45   | Develop a plan that identifies local and regional flood mitigation capacity areas which could be used to mitigate large stormwater events in vulnerable areas of town  | Town Board, Consulting Team                   | Local Funding, NYSDEC/EPF, OPRHP / EPF, HMGP, PDM Grant Funding/ M    |
| TW-46   | Acquisition of repetitive loss (RL) and severe repetitive loss (SRL) properties within municipal limits.   | Town, Highway Department, Building Department | FEMA, NYS OEM/H   |

STAPLEE forms were completed for each of these actions. A table with these evaluations can be found in Attachment II of this jurisdictional annex.

“STAPLEE” refers to the following lenses of evaluation: social, technological, administrative, political, legal, economic, and environmental.

*Future Needs*

The Town has not identified any future needs.

**10.2.35.6 Hazard Area Extent and Location**

A map demonstrating the location of certain hazard areas is attached as Attachment I.

**Attachment I**

**Hazard Area Extent and Location Map -  
Town of Wallkill**

**Legend**

**NYSDEC Bulk Storage Facilities**

- NYSDEC Bulk Storage Facilities

**Dam Locations**

- Dam Locations

**Critical Infrastructure**

- AIRPORT
- AMBULANCE
- DPW
- ELDER CARE
- FIREHOUSE
- GOVERNMENT
- HOSPITAL
- JAIL
- MEDICAL
- POLICE
- RADIO TOWER
- RESERVOIR
- SCHOOL
- TRAIN STATION

**Other Features**

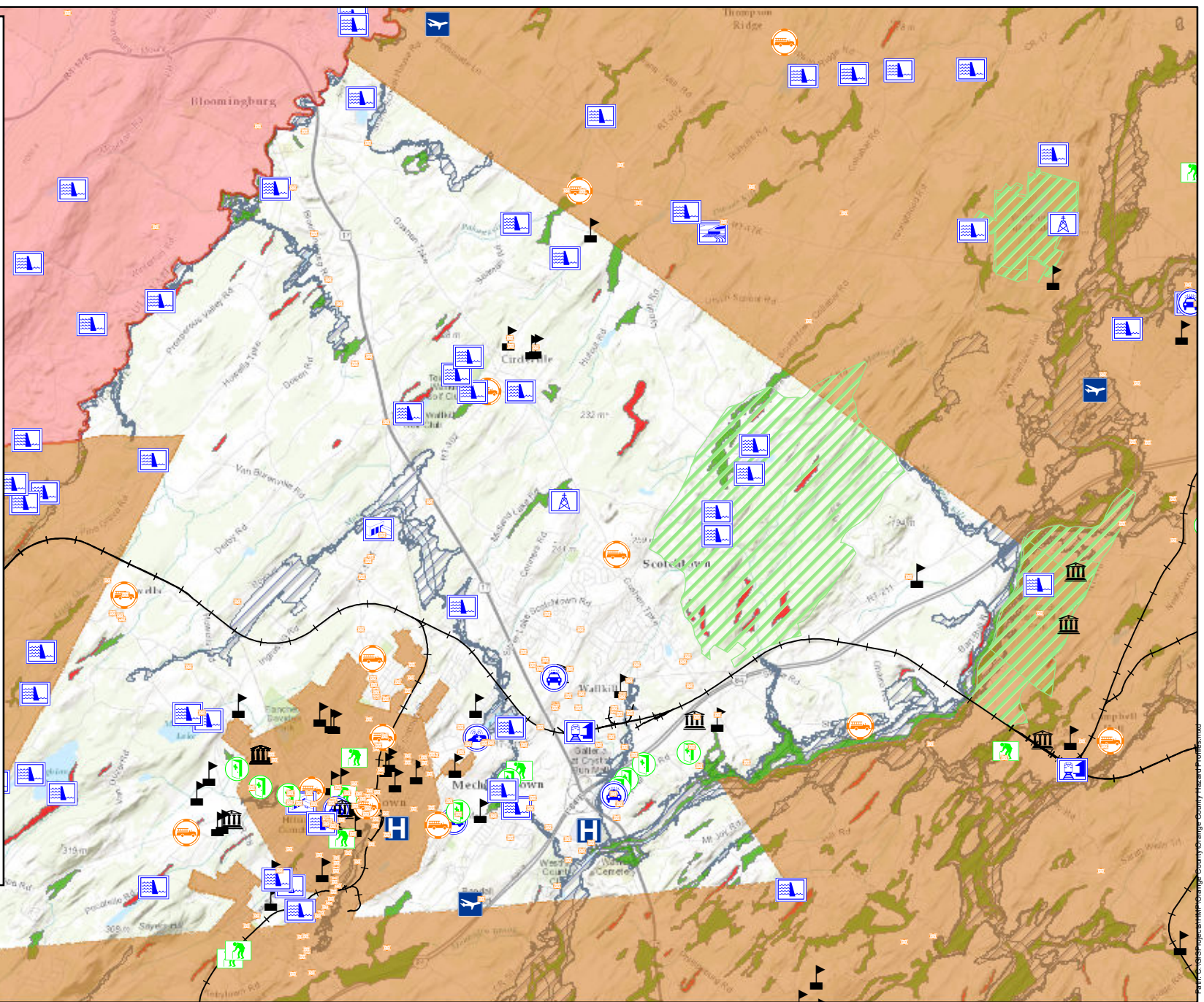
- NYS\_Railroad
- Parks
- Orange Municipal Boundaries Page Area of Interest
- Orange Municipal Boundaries
- Surrounding Counties
- Orange County

**Land Slide Rating**

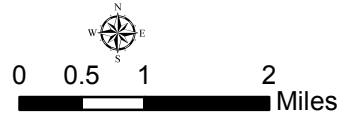
- 37 - 48
- 49 - 58
- 59 - 69
- 70 - 79

**Floodplain**

- 100 Year Flood
- 500 Year Flood



Sources: \_\_\_\_\_





## **Attachment II**

# **STAPLEE Mitigation Action Cost/Benefit Analysis - Town of Wallkill**

**STAPLEE Criteria Consideration Tables**  
**Mitigation Action Prioritization and Comparison**

Jurisdiction: Town of Wallkill

| Action ID | Action  | S   | T | A | P | L | E | E | Can action be easily implemented? | Does action achieve multiple plan objectives? | Can action be quickly implemented? | Level of action benefits | Level of action overall costs | Priority ranking |
|-----------|---|---|---|---|---|---|---|---|-----------------------------------|---|------------------------------------|--------------------------|-------------------------------|------------------|
|           |   | + = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A |   |   |   |   |   |   |                                   |   |                                    |                          | Levels = high, medium, or low |                  |
| TW-1      | Cleanup of Wallkill River waterway, remove debris and trees to prevent blockage   | +   | + | 0 | + | + | 0 | + | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-2      | Cleanup of debris, trees in waterways on private properties/in coordination with property owners.   | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-3      | Conduct enhanced stormwater management/flood mitigation study of Masonic-Silver-Creek-Silver Lake Watershed   | +   | + | - | + | + | - | + | 0                                 | 0   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-4      | Investigate capacity and downstream flooding issues from Silver Lake down to Middletown School fields along Route 211                                 | +   | + | - | + | + | - | 0 | 0                                 | 0   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-5      | Develop study and design for construction of detention basin(s) to capture downstream flow from Monhegan Lake watershed area into downtown Middletown | +   | + | - | + | + | - | - | 0                                 | +   | 0                                  | High                     | High                          | High             |
| TW-6      | Conduct feasibility study with Palisades Interstate Park Commission (PIPC) on enhanced regional stormwater management in Highland Lakes State Park    | +   | + | - | + | + | - | 0 | 0                                 | 0   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-7      | Redesign and reinforce drainage channel at intersection of Mt. Hope Rd. and Pocatello Rd. behind firehouse  | +   | + | - | + | + | - | 0 | 0                                 | 0   | +                                  | Medium                   | Medium                        | Medium           |
| TW-8      | Identify existing infrastructure repair projects as opportunities for mitigation improvements   | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-9      | Inspect/investigate Prosperous Valley Road spillway for repairs; consider telemetry remote with control gate for pre-release                          | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-10     | Investigate improvements at stream down from High Barney Road   | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Medium                   | Low                           | Medium           |
| TW-11     | Investigate improvements / repairs at Farm Pond on Kunkel property near Playtogs / Redners  | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Low                      | Low                           | Medium           |

**STAPLEE Criteria Consideration Tables**  
**Mitigation Action Prioritization and Comparison**

Jurisdiction: Town of Wallkill

| Action ID | Action  | S   | T | A | P | L | E | E | Can action be easily implemented? | Does action achieve multiple plan objectives? | Can action be quickly implemented? | Level of action benefits | Level of action overall costs | Priority ranking |
|-----------|---|---|---|---|---|---|---|---|-----------------------------------|---|------------------------------------|--------------------------|-------------------------------|------------------|
|           |   | + = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A |   |   |   |   |   |   |                                   |   |                                    |                          | Levels = high, medium, or low |                  |
| TW-12     | Work with O&R Utilities to identify critical power grid priorities / vulnerable areas; develop plan to strengthen these components to reduce likelihood of future outages | +   | + | + | + | + | + | 0 | +                                 | +   | +                                  | Medium                   | Low                           | High             |
| TW-13     | Provide general cleanup of debris in channels, streams, and rivers  | +   | + | + | + | + | 0 | 0 | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-14     | Stream bank cleanup and stabilization projects  | +   | + | 0 | + | + | 0 | 0 | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-15     | Investigate structural improvements at water treatment plant to protect it in the event of a breach of Monhagen Lake Dike   | +   | + | 0 | + | + | - | 0 | 0                                 | +   | -                                  | High                     | High                          | Medium           |
| TW-16     | Establish alternate emergency shelter location from Monhagen MS / Maple Hill Elementary in the event of a breach of Monhagen Lake Dike                                    | +   | + | + | + | + | + | 0 | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-17     | Investigate structural improvements / relocation of sewer treatment plant and water treatment plant / pumps within floodplain of Wallkill                                 | +   | + | 0 | + | + | - | 0 | 0                                 | 0   | -                                  | High                     | High                          | Medium           |
| TW-18     | Replace culverts and stabilize banks along Winding Brook  | +   | + | - | + | + | - | 0 | -                                 | 0   | +                                  | High                     | Medium                        | High             |
| TW-19     | Provide backup power for key traffic signals in the event of widespread outages to reduce gridlock from hampering emergency vehicle access.                               | +   | + | 0 | + | + | - | 0 | 0                                 | +   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-20     | Increase capacity of emergency fuel storage tanks in the Town of Wallkill   | +   | + | 0 | 0 | 0 | - | - | 0                                 | +   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-21     | Develop "Selective Reduction/ Rationing Plan" for local emergency services fuel storage with tiered system for different levels of alert                                  | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-22     | Establish or expand access to public cooling centers  | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Low                      | Low                           | Medium           |
| TW-23     | Assess needs of backup electrical power generators at emergency service centers, sewer, and water systems   | +   | + | 0 | + | + | 0 | 0 | 0                                 | +   | 0                                  | Medium                   | Low                           | High             |

**STAPLEE Criteria Consideration Tables**  
**Mitigation Action Prioritization and Comparison**

Jurisdiction: Town of Wallkill

| Action ID | Action   | S   | T | A | P | L | E | E | Can action be easily implemented? | Does action achieve multiple plan objectives? | Can action be quickly implemented? | Level of action benefits | Level of action overall costs | Priority ranking |
|-----------|--|---|---|---|---|---|---|---|-----------------------------------|---|------------------------------------|--------------------------|-------------------------------|------------------|
|           |  | + = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A |   |   |   |   |   |   |                                   |   |                                    |                          | Levels = high, medium, or low |                  |
| TW-24     | Investigate improvements or relocation of Fire substation in flood plain on Stony Ford Road  | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | 0                                  | Low                      | Medium                        | Low              |
| TW-25     | Conduct vulnerability assessment of shelters and multi-family facilities and review emergency backup power needs and solutions   | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-26     | Get standing approval/agreement between local municipalities and County to be able to clear debris from drainage crossings in County jurisdiction without regulatory approvals | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-27     | Develop agreements/action plan for use of large private facilities, for population shelters in case of widespread emergency  | 0   | 0 | + | + | 0 | 0 | 0 | 0                                 | +   | +                                  | High                     | Low                           | High             |
| TW-28     | Investigate telemetry remote capabilities to conduct an "advance release" of water from local dams/spillways   | +   | + | 0 | + | + | 0 | 0 | 0                                 | 0   | +                                  | Medium                   | Medium                        | Medium           |
| TW-29     | Develop agreement with DEC to have ability to cleanup Wallkill River Waterway  | +   | + | + | + | + | 0 | + | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-30     | Provide planning review officials with access to training on enhanced stormwater management and low impact development techniques  | +   | + | 0 | + | + | 0 | + | 0                                 | 0   | 0                                  | Medium                   | Low                           | High             |
| TW-31     | Incorporate local law prohibiting the storage of debris, brush, or similar clogging elements near the banks of waterways   | +   | + | 0 | + | + | + | + | 0                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-32     | Conduct bi-annual waterway inspections; identify properties which are violating debris storage restrictions along banks of waterways   | +   | + | + | + | + | 0 | + | +                                 | 0   | +                                  | Low                      | Low                           | Medium           |
| TW-33     | Have local Floodplain Administrator obtain certification   | +   | + | 0 | + | + | + | + | +                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-34     | Develop and Emergency Response Plan  | +   | + | 0 | + | + | 0 | + | 0                                 | +   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-35     | Join and participate in activities for NFIP Community Rating System  | +   | + | - | + | + | + | + | +                                 | +   | +                                  | Medium                   | Low                           | High             |
| TW-36     | Periodically review and update floodplain management program and monitoring activities   | +   | + | 0 | + | + | 0 | + | 0                                 | +   | 0                                  | Medium                   | Low                           | High             |

**STAPLEE Criteria Consideration Tables**  
**Mitigation Action Prioritization and Comparison**

Jurisdiction: Town of Wallkill

| Action ID | Action   | S   | T | A | P | L | E | E | Can action be easily implemented? | Does action achieve multiple plan objectives? | Can action be quickly implemented? | Level of action benefits | Level of action overall costs | Priority ranking |
|-----------|--|---|---|---|---|---|---|---|-----------------------------------|---|------------------------------------|--------------------------|-------------------------------|------------------|
|           |  | + = benefit (favorable), - = cost (unfavorable), 0 = neutral or N/A |   |   |   |   |   |   |                                   |   |                                    |                          | Levels = high, medium, or low |                  |
| TW-37     | Expand awareness, outreach, and sign-ups for existing Public Safety Alert System   | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-38     | Educate public about emergency preparation and response actions  | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-39     | Support disaster preparedness training for agencies serving vulnerable populations and the general public                    | +   | + | - | + | + | + | + | +                                 | 0   | +                                  | High                     | Medium                        | High             |
| TW-40     | Inform residents of problems associated with debris and brush located near banks of waterways                                | +   | + | + | + | + | + | + | +                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-41     | Update flood hazard maps- particularly in densely settled areas  | 0   | + | 0 | + | + | 0 | + | -                                 | 0   | +                                  | Medium                   | Low                           | High             |
| TW-42     | Adopt a Real Estate Disclosure code to inform property buyers of local hazards   | +   | + | 0 | + | 0 | 0 | + | 0                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-43     | Develop community outreach program to private property owners to ensure cleanup of waterways on their properties             | +   | + | 0 | + | 0 | 0 | + | 0                                 | 0   | +                                  | Low                      | Low                           | Low              |
| TW-44     | Establish a system to create/protect undeveloped buffers around wetlands, streams, and rivers; encourage riparian vegetation | 0   | + | - | + | 0 | - | + | 0                                 | +   | 0                                  | Medium                   | Low                           | High             |
| TW-45     | Develop a plan that identifies local and regional flood mitigation capacity areas  | +   | + | - | + | + | 0 | 0 | 0                                 | +   | 0                                  | Medium                   | Medium                        | Medium           |
| TW-46     | Acquisition of repetitive loss and severe repetitive loss properties within municipal limits                                 | 0   | + | 0 | 0 | + | 0 | + | 0                                 | +   | 0                                  | High                     | Medium                        | High             |

**Attachment III**

**Hazard Mitigation Worksheets -  
Town of Wallkill**

## Mitigation Actions and Strategy Detail Worksheet

| <b>Action Worksheet</b>   |   |
|---|---|
| Name of Jurisdiction  | Town of Warwick   |
| Name of Hazard Mitigation Plan  | Orange County Multi-Jurisdictional Hazard Mitigation Plan   |
| <b>Potential Actions/Projects (not being implemented at this time)</b>                          |   |
| Action/Project Number   | WT – 1  |
| Name of Action/Project  | Relocation of Fuel Supply   |
| Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered | Relocate fuel supply station to higher elevation for DPW & police vehicles; upgrade existing prison pumps, etc., locate alternative facilities add propane storage to convert generators to dual fuel.<br>\$1,500,000 |
| <b>Plan for Implementation</b>  |   |
| Responsible Organization  | DPW Commissioner (lead), Town Consultant Engineer, Town Board   |
| Action/Project Priority   | High  |
| Potential Funding Sources   | HMGP, HMA, CDBG, General Fund, NYSDEC Grants, NYS Legislative Members' Initiatives  |
| Other assisting organizations, entities, etc.   | N/A   |
| Local planning mechanisms to be used in project/action implementation, if any                   | None.   |
| <b>Progress Report</b>  |   |
| Date of status report   |   |
| Report of progress  |   |
| Evaluation of effectiveness   |   |

## Mitigation Actions and Strategy Detail Worksheet

| <b>Action Worksheet</b>   |   |
|---|---|
| Name of Jurisdiction  | Town of Wallkill  |
| Name of Hazard Mitigation Plan  | Orange County Multi-Jurisdictional Hazard Mitigation Plan   |
| <b>Potential Actions/Projects (not being implemented at this time)</b>                          |   |
| Action/Project Number   | WT – 2  |
| Name of Action/Project  | Emergency Generators  |
| Summary of Evaluation: Benefits (losses avoided), estimated costs, and other factors considered | Add emergency generators at 7 water & sewer districts to automatically startup in the event of power failure.<br>\$670,000. |
| <b>Plan for Implementation</b>  |   |
| Responsible Organization  | DPW Commissioner (lead), Town Consultant Engineer, Town Board, Water District Operator, Sewer District Operator             |
| Action/Project Priority   | High  |
| Potential Funding Sources   | HMGP, Municipal Bonds, User Fees  |
| Other assisting organizations, entities, etc.   | N/A   |
| Local planning mechanisms to be used in project/action implementation, if any                   | None.   |
| <b>Progress Report</b>  |   |
| Date of status report   |   |
| Report of progress  |   |
| Evaluation of effectiveness   |   |



Orange County  
Multi-Jurisdictional All Natural Hazard Mitigation Plan  
Emergency Shelter Questionnaire

|   |  |
|---|--|
| Name of Your Municipality:                              | <u>Town of Walkill</u>   |
| Common Name of Your Emergency Shelter:                  | <u>Future Emergency Shelter<br/>Town of Walkill Community Center</u> |
| Street Address of Your Emergency Shelter:               | <u>8 Wes Warren Drive<br/>Middletown, NY 10940</u>                   |
| Name of the Owner of Your Emergency Shelter:            | <u>Town of Walkill</u>   |
| Name of the Regular Occupant of Your Emergency Shelter: | <u>Town of Walkill</u>   |

|   |   |
|---|---|
| Name of Your Municipality:                              | <u>Town of Walkill</u>  |
| Common Name of Your Emergency Shelter:                  | <u>Future Emergency Shelter<br/>Town of Walkill Recreation Center</u> |
| Street Address of Your Emergency Shelter:               | <u>60 Creamery Road<br/>Circleville, NY 10919</u>                     |
| Name of the Owner of Your Emergency Shelter:            | <u>Town of Walkill</u>  |
| Name of the Regular Occupant of Your Emergency Shelter: | <u>Town of Walkill</u>  |

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

**RESOLUTION  
TO AUTHORIZE THE ACCEPTANCE AND ADOPTION OF THE  
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE FOR  
ORANGE COUNTY, NEW YORK**

**WHEREAS**, the Orange County Department of Emergency Services, with the assistance from Barton & Loguidice, D.P.C., has gathered information and prepared the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York; and

**WHEREAS**, the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York has been prepared in accordance with the Disaster Mitigation Act of 2000 and Title 44 Code of Federal Regulations (CFR), Part 201; and

**WHEREAS**, Title 44 CFR, Chapter 1, Part 201.6(c)(5) requires each local government participating in the preparation of a Multi-Jurisdictional Mitigation Plan or Plan Update to accept and adopt such plan; and

**WHEREAS**, the Town of Wallkill, has reviewed the 2016 Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, has found the document to be acceptable, and as a local unit of government, has afforded its citizens an opportunity to comment and provide input regarding the Plan Update and the actions included in the Plan;

**WHEREAS**, the Town of Wallkill, will consider the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County during the implementation and updating of local planning mechanisms, and will incorporate the hazard assessment data, hazard vulnerabilities, and mitigation actions in these mechanisms, where applicable;

**NOW THEREFORE, BE IT RESOLVED**, that the Town of Wallkill, as a participating jurisdiction, adopts the Multi-Jurisdictional Hazard Mitigation Plan Update for Orange County, New York, dated May 2016.

This resolution was thereupon declared duly adopted on \_\_\_\_\_.

\_\_\_\_\_  
(Supervisor)

\_\_\_\_\_  
(Clerk)