

Town of Orwell

Jurisdictional Annex

Town of Orwell

1.0 Contacts

The contacts for the Town of Orwell regarding this plan were identified as follows:

- William Potter –Town Supervisor
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2.0 Municipal Profile

Population

The 2016 American Community Survey estimated that 1,427 people live in the Town of Orwell. The Town's population has increased since the 2000 Census population (1,254) by 13.8% (U.S. Census Bureau, 2016).

Location

The Town of Orwell is located in the northern portion of Oswego County and is bordered by the Towns of Richland and Albion to the west, Orwell to the north, Redfield to the east, and Albion and Williamstown to the south. Orwell is located approximately five (5) miles east of the Interstate 81 corridor and 1.5 miles north of State Route 13.

Brief History

The Town of Orwell was formed in 1817. The area was first settled by Europeans in 1806 along the banks of the Salmon River, which provided fertile agricultural land. Early settlers had small-scale subsistence farms, first crop production and later livestock and dairy. Lumbering was the first large industry as the Town was largely forested. The Salmon River was used to float logs from Redfield and Osceola to the east. The W. H. Lattimer Chair Factory operated between

the 1880s and 1950s, and cheese factories were also prevalent. Today, Orwell has two (2) hydroelectric plants on the Salmon River (Doyle and Graham, 2016).

Governing Body

The Town of Orwell is governed by a five (5) member Town Board, led by the Town Supervisor.

Future Growth

The Town of Orwell is seeking stable growth. The Town has had several new residential subdivisions constructed since the 2012 County HMP. No new commercial developments have been completed.

3.0 Hazard Vulnerabilities and Ranking

3.1. Risk Assessment

The following scale was developed to determine hazard vulnerability for the jurisdiction. Each event was given a ranking from one (1) through three (3) for the severity of impact based on extent, onset warning, impact in damages and injury, and frequency: three (3) represents the greatest impact (large area, no warning, severe damage, and regular occurrence); two (2) represents moderate impact (several locations, hours of warning, moderate damage, and infrequent occurrence); and one (1) represents low impact (one location, days of warning, minor damage, and rare occurrence). The scores for each of these four (4) categories were used to assign an overall vulnerability for each hazard, as follows:

- Low: 5 or less
- Moderate: 6 to 8
- High: 9 or greater

Table 1: Hazard Vulnerability by Event						
Hazard Event	Extent	Onset	Impact (Damages and Injury)	Frequency	Vulnerability Rank	Jurisdiction Rank
Severe Winter Storm	3	1	2	3	High	1
Severe T-Storm/Wind/Tornado	3	1	3	3	High	2
Flood	2	2	2	3	High	3
Ice Storm	3	1	3	2	High	4
Utility Failure	3	3	3	1	High	5
HAZMAT Transit	1	3	1	1	Moderate	6
Dam Failure	2	3	3	1	High	7

3.2. Critical Facilities

Critical facilities are defined as any facility that is critical for emergency response or that requires special emergency response in the event of hazardous incidents as identified by the Town of Orwell. The tables below denote the number and locations of critical facilities within the Town.

Table 2: Critical Infrastructure in the Town of Orwell			
Facility Name	Address (Street, Town/Town/Hamlet)	Parcel Located in Floodplain	Structure Located in Floodplain
Transportation Network			
Evacuation Routes	-	-	-
Bridges	-	-	-
Public Utilities			
Water System Facilities	off of CR 2	No	No
Cell Tower	off of CR 30	No	No
National Grid Substation	off of CR 22	No	No
Municipal Services			
Orwell Town Hall	1999 County Rt 2 Orwell, NY 13426	No	No
Orwell Town Highway Garage	1999 County Rt 2 Orwell, NY 13426	No	No
Emergency and Medical Services			
Orwell Volunteer Fire Dept	2000 County Rt 2 Orwell, NY 13426	No	No
Community Services			
Unity Acres, Inc.	2290 County Rt 2 Orwell, NY 13426	100YR	No
Dams			
Autumn Lake Dam	Trib. to Beaver Dam Brook off of Fawn Lake Rd	-	-
Bennets Bridge Dam	Salmon River Reservoir, off of Dam Rd	-	-
Cedar Lake Dam	Beaverdam Brook off of Fawn Lake Rd	-	-
Dike B for Dam NY00374	Salmon River Reservoir	-	-
Lighthouse Hill Dam	Salmon River Reservoir, off of County Rt 22	-	-
Oswego County Hospital Ice Pond Dam	Front Brook off of County Rt 2	-	-
Sage Pond Dam	off of Lorton Lake Dr	-	-

4.0 Priority Hazard Events

The following sections detail the priority hazard events identified by the jurisdiction. Additional information about County-selected hazards including frequency, history, and severity is included within Section 5.0 of the main body of the Plan.

The probability of climate-related hazard events is expected to increase in the future within the Town of Orwell. Climate change is expected to cause an increase in weather volatility, rising sea level, and greater temperature extremes.

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

4.1 Natural Hazards

Natural hazards selected to be profiled for the Town of Orwell are described in detail below.

4.1.1 Severe Winter Storm

For a description of this hazard, please see Section 5.1.4 of the main body of the Plan.

Hazard Vulnerability

Severe winter storms typically occur about eleven (11) times annually in Oswego County. These storms typically affect most or all of the County. The entire Town of Orwell is susceptible to damages from a severe winter storm event. The Town Highway Dept. clears Town streets during heavy snow events, and the Town works with the Oswego County Highway Dept. and NYS Dept. of Transportation for clearing of other roadways. Roadway safety is a major concern during severe winter storm events. Orwell, along with other areas in Oswego County, is a popular snowmobiling location during the winter.

Historical Hazard Occurrences and Damage Estimates

The Town of Orwell has been affected by a number of county-wide severe winter storm events, described in Section 5.1.4 of the main body of the Plan. Severe winter storms typically occur several times annually in Oswego County. These storms typically affect most or all of the County. The NCDC does not report any winter storm records or damage estimates specific to the Town of Orwell. Orwell accumulates a large amount of snow and is a popular snowmobiling area during the winter.

Future Potential Impacts

The Town of Orwell will continue to experience severe winter storm events in the future. Severe winter storms are common throughout Oswego County and occur about eleven (11) times annually.

4.1.2 Severe Thunderstorm, Wind, or Tornado

For a description of these hazards, please see Section 5.1.1 of the main body of the Plan.

Hazard Vulnerability

The entire Town is moderately susceptible to damages from a severe thunderstorm, wind, or tornado or coastal storm event due to its moderate extent, hours of warning, and high frequency. Fallen trees from severe winds can damage overhead utility lines, resulting in power outages. In addition, these events are likely to result in damages to private and public infrastructure and property.

Historical Hazard Occurrences and Damage Estimates

In addition to the 101 severe storm events reported within Oswego County, the NCDC reports three (3) specific severe storm events that occurred in the Town of Orwell between 2014 and 2017 (Table 3). All three (3) events were severe thunderstorm winds. Estimated property damages for the Town of Orwell ranged from \$5,000 to \$10,000 (Table 5). Actual damages were likely greater than those estimated by the NCDC.

Table 3: Severe Storm Event Records for the Town of Orwell				
Event Type	Date	Magnitude	Estimated Property Damage	Estimated Crop Damage
Thunderstorm Wind	7/8/14	55 kts	\$12,000	-
Thunderstorm Wind	9/10/16	50 kts	\$10,000	-
Thunderstorm Wind	8/4/17	50 kts	\$8,000	-
Total			\$23,000	-

Future Potential Impacts

Severe storms are a common event in the Town of Orwell and will continue to occur in the future. The frequency and magnitude of severe storm events may increase due to climate change.

4.1.3 Flood

For a description of this hazard, please see Sect Section 5.1.2 of the main body of the Plan.

Hazard Vulnerability

The Town of Orwell is drained by the Salmon River, which drains to Lake Ontario. 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 4 summarizes the amount of land within the Village of Lacona that is located within 100-year and 500-year floodplains and low-risk flood areas.

Table 4: Summary of Areas in Floodplains (Source: FEMA DFIRM 2011)			
Town of Orwell Total Area	Percent of Total Area		
	100-Year Floodplain	500-Year Floodplain	Area of Minimal Flood Hazard
26,507 acres	6.73%	0.00%	93.27%

Table 5 below summarizes the value of properties in the Town of Orwell that are located within the 100-year floodplain and is categorized by land use type. This table was derived from FEMA floodplain mapping and parcel data from the Oswego County Real Property Tax Office.

Table 5: Parcels within to 100-year Flood Events and Their Estimated Structure Values				
Type of Structure	# Parcels in 100-Year Floodplain	Approx. Structure Value* in 100-Year Floodplain	# Parcels in 500-Year Floodplain	Approx. Structure Value* in 500-Year Floodplain
Agricultural	8	\$47,200	0	-
Commercial	0	-	0	-
Community Services	1	\$1,086,000	0	-
Industrial	0	-	0	-
Residential	67	\$6,168,400	0	-
Utility	2	\$17,544,300	0	-
Other**	68	\$148,000	0	-
Total	146	\$24,993,900	0	-
*Structure Value estimated by subtracting parcel's Land Assessed Value from Total Assessed Value (Oswego County Real Property Tax Office, 2018)				
**Includes parcels classified as vacant; recreational; and wild forest/conservation land/parks.				

Historical Hazard Occurrences and Damage Estimates

According to NOAA's Storm Events Database, in the past fifteen (15) years, no flood records were noted to specifically impact the Town of Orwell. However, the Town was impacted by flash flooding along the Salmon River on September 30, 2010. During this event, flash flooding occurred along the Salmon River from Redfield to Lake Ontario after heavy rains the day before (3.2 inches of rain fell overnight) and a release of 16,000 to 17,000 CFS from two (2) Brookfield Power hydroelectric stations. The Town has also been impacted by numerous county-wide flood records described in Section 5.1.2 of the main body of the plan.

As described in Section 6.0 of this annex, no NFIP loss claims have been paid as of July 2018 in the Town of Orwell. There are no repetitive loss properties in the Town of Orwell.

Future Potential Impacts

Properties along the Salmon River, which flows through the center of the Town, and its tributaries are vulnerable to flooding. Approximately 6.7% of the Town of Orwell is within a mapped 100-year floodplain. One of the Village's critical facilities, Unity Acres, is located on a parcel that intersects the 100-year floodplain, but the facility itself is outside of the floodplain (Table 2).

4.1.4 Ice Storm

For a description of this hazard, please see Section 5.1.3 of the main body of the plan.

Hazard Vulnerability

Historically, ice storms have occurred about once every seven (7) years in Oswego County. These storms typically affect most or all of the County. The entire Town of Orwell is moderately susceptible to damages from an ice storm event due to its large extent and moderate damage potential and frequency.

Historical Hazard Occurrences and Damage Estimates

The Town of Orwell was affected by the three (3) county-wide ice storm events recorded by the NCDRC, which are described in Section 5.1.3 of the main body of the plan. No damage estimates or records related to ice storms are reported specifically for the Town of Orwell.

Future Potential Impacts

The Town of Orwell will continue to experience ice storm events in the future, as will the rest of Oswego County. The Town Highway Dept. completes tree maintenance within Town road right of ways to minimize potential damages to overhead utility lines, which is common

during ice storms. Private utility right of ways are generally maintained by the individual utility companies.

4.2 *Technological Hazards*

Technological hazards selected to be profiled for the Town of Orwell are described in detail below.

4.2.1 Utility Failure

Hazard Vulnerability

A utility failure involves the loss of electricity, natural gas supply, phone service, or water supply as a result of an internal system failure. While utility failures are often associated with natural hazard events, this hazard on its own does not include loss of utility access due to other disaster events. The Town of Orwell primarily has overhead utility lines, including electricity and phone networks. A utility failure could impact the developed portion of the Town. The Town's vulnerability to utility failures was determined to be moderate due to the widespread extent and fast onset of a utility failure.

Historical Hazard Occurrences and Damage Estimates

The Town of Orwell was impacted by a widespread electricity failure in 2003 that impacted much of the northeastern U.S., which resulted in power outages for about one (1) day. No specific utility failure records are available for the Town itself. The Town is more likely to experience utility failures associated with a severe storm, ice storm, or severe winter storm than a purely technologically-caused utility failure.

Future Potential Impacts

The Town will remain susceptible to utility failures in the future. However, the Town is more likely to encounter utility failures due to a natural hazard event than this hazard occurring on its own.

4.2.2 HAZMAT in Transit

Hazard Vulnerability

Hazardous Materials (HAZMAT) in Transit events involve the uncontrollable release of flammable, toxic, corrosive, chemically instable, or combustible materials during transport that can damage infrastructure, pollute the environment, and/or cause injuries or death. The Town of Orwell contains several major roadways, County Routes 2, 22, and 50. County Route 2 runs east to west through the center of the Town. County Route 50 runs north to south from County Route

2 to the northern boundary of the Town, and County Route 22 runs northwest to southeast through the western half of the Town. A transportation accident involving hazardous materials on this roadway has the potential to impact a portion of the Town of Orwell.

Historical Hazard Occurrences and Damage Estimates

There are no specific records of HAZMAT in transit events in the Town of Orwell. This hazard has been documented in other portions of the County (see main body of this plan update for details). However, the Town of Orwell elected to include this hazard due to the moderate risk posed by major roadways that run directly through the Town.

Future Potential Impacts

Although HAZMAT in transit events are infrequent, the Town remains susceptible to future HAZMAT incidents along County Routes 2, 22, and 50.

4.2.3 Dam Failure

Hazard Vulnerability

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 Table 5.13 (Appendix A of the main body of the plan).

There are seven (7) dams in the Town of Orwell, three of which are Class A (low hazard) dams located on the Salmon River, a Tributary to Beaverdam Brook, and Front Brook. Two (2) of the dams in the Town are Class B (moderate hazard) and two are Class C (high hazard).

The Class B dams, Cedar Lake Dam and Sage Pond Dam, are both located on Beaverdam Brook. Cedar Lake Dam impounds water for recreational purposes with a normal capacity of 251 acre-feet. The dam has a length of 200 feet and is 15 feet high, for a capacity of 448 acre-feet. The dam consists of earth construction. Sage Pond Dam impounds water for recreational purposes with a normal capacity of 280 acre-feet. The dam has a length of 110 feet and is 13 feet high, for a capacity of 350 acre-feet. The dam consists of earth construction.

The Class C Dams, Bennetts Bridge Dam and Lighthouse Hill Dam, are both located on the Salmon River. Bennetts Bridge Dam is a gravity dam that impounds water for hydroelectricity generation and recreational purposes with a normal capacity of 51,650 acre-feet. The dam has a length of 725 feet and is 60 feet high, and has a capacity of 69,000 acre-feet. The Lighthouse Hill Dam is also a gravity dam that is used for hydroelectric purposes. It has a normal

capacity of 3,100 acre-feet. The dam has a length of 880 feet and is 85 feet high, and has a capacity of 3,100 acre-feet.

Historical Hazard Occurrences and Damage Estimates

There are no records of dam failures occurring in the Town of Orwell. The Town elected to include this hazard due to the potential for significant damages to occur should any of the Class B or Class C dams fail.

Future Potential Impacts

Should the dam fail, properties immediately downstream of the dam would be susceptible to flooding, including the fish hatchery and a number of residential properties.

5.0 Capability Assessment

5.1 Planning and Regulatory Capability

The Town's HMP update will be incorporated into and referenced by future updates of the plans, policies, ordinances, programs, studies, and reports listed in Table 6, below.

Table 6. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Orwell	Notes
Plans		
Comprehensive/Land Use Plan	X	Adopted.
Post-Disaster Recovery Plan	X	In place.
Watershed Protection Plan	X	In place.
Comprehensive Emergency Management Plan	X	In place.
Policies/Ordinances		
Building Codes	<ul style="list-style-type: none"> • 2010 Residential Code of NYS • 2010 Fire Code of NYS • 2010 Building Code of NYS • 2010 Existing Building Code of NYS • 2010 Energy Conservation Construction Code of NYS • 2010 Plumbing Code of NYS • 2010 Mechanical Code of NYS • 2010 Fuel Gas Code of NYS 	Code Enforcement Officer
Flood Regulations	X	Adopted.
Site Plan Review Requirements	X	In place.
Real Estate Disclosure Requirement	X	In place.

Table 6. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Orwell	Notes
Programs		
NFIP Participant	X	Current participant.
Public Education/Awareness Program	X	Fire dept. responsible.
Stream Maintenance Program	X	Highway Dept. Responsible
Storm Drainage Maintenance Program	X	Highway Dept. Responsible
Mutual Aid Agreements	X	Agreements with neighboring jurisdictions and Oswego County
Studies/Reports		
Hazard Analysis/Risk Assessment	X	Oswego County HMP- 2012
Floodplain Maps and/or Studies	X	FEMA- 2011
Staff/Development		
Building Code Official	X	Town Code Enforcement Officer
Local Floodplain Administrator	X	Town Code Enforcement Officer
Public Information Official	X	Town Supervisor

5.2 Emergency Communications, Routes, and Shelters

The Town of Orwell, along with Oswego County, utilize the HyperReach emergency communications system. Major transportation routes within the Town include County routes, County Routes 2, 22, and 50. The Town of Orwell has two (2) established emergency shelters:

- Orwell Fire Hall – 2000 CR 2, Orwell, NY 13426
- Greater Victory Fellowship Church – 2056 CR 2, Orwell, NY 13426

The Orwell Fire Hall and church are ADA-compliant. The Fire Department is able to accommodate people with special medical needs. For example, it is able to re-fill oxygen cylinders using a cascade system (the Fire Department has done this in the past during power outages for residents). The Fire Hall could accommodate pets during an emergency.

5.3 Temporary and Permanent Housing Locations

The potential temporary and permanent housing locations listed below were identified for displaced residents in the Town of Orwell based on the 2017 NYS Hazard Mitigation Planning Standards.

- **Potential Temporary and Permanent Housing Location**
 - Town Picnic Area- CR 2 and CR 22, Orwell, NY 13426

6.0 National Flood Insurance Program

Long-term mitigation of potential flood impacts can be best achieved through comprehensive floodplain management regulations and enforcement at a local level. The National Flood Insurance Program (NFIP), regulated by FEMA, aims to reduce the impact of flooding on private and public structures by providing affordable insurance for property owners. The program encourages local jurisdictions to adopt and enforce floodplain management regulations in order to mitigate the potential effects of flooding on new and existing infrastructure (FEMA, 2015).

Communities that participate in the NFIP adopt floodplain ordinances. If an insured structure incurs damage costs that are over 50% of its market value, the owner must comply with the local floodplain regulations when repairing or rebuilding the structure. A structure could be rebuilt at a higher elevation, or it could be acquired and demolished by the municipality or relocated outside of the floodplain. Insured structures that are located within floodplains identified on FEMA's Flood Insurance Rate Maps (FIRMs) may receive payments for structure and content losses if impacted by a flood event.

The NFIP and other flood mitigation actions are important for the protection of public and private property and public safety. Flood mitigation is valuable to communities because it:

- Creates safer environments by reducing loss of life and decreasing property damage;
- Allows individuals to minimize post-flood disaster disruptions and to recover quicker (homes built to NFIP standards generally experience less damage from flood events, and when damage does occur, the flood insurance program protects the homeowner's investment); and
- Lessens the financial impacts on individuals, communities, and other involved parties (FEMA, 2015).

The Town of Orwell currently participates in the NFIP. As of July 2018, the Town had one (1) flood insurance policy in-force, with a total coverage of \$350,000, however, no NFIP claims have been filed for properties located within the Town. In addition, there are no repetitive loss properties located in the Town of Orwell as of October 2017.

The Town's Code Enforcement Officer serves as the Local Floodplain Administrator, and flood maps are available for viewing and copying at the Town Hall (1999 County Route 2, Sandy Creek, NY 13145). The Town has been maintaining NFIP participation by performing the duties and actions that were listed in the local laws adopted by the Town Board. The Town will continue to comply with the NFIP by enforcing floodplain management requirements and regulating new development in Special Flood Hazard Areas, in addition to other required duties.

7.0 Mitigation Strategy and Prioritization

7.1 Past, Completed, and Ongoing Initiatives

The Town of Orwell proposed two (2) mitigation actions in the 2012 Oswego County HMP. The details and status of those actions are described in Table 7 below.

Table 7. 2012 Hazard Mitigation Actions Town of Orwell				
Proposed Mitigation Action	Hazard(s) Mitigated	2012 Goals & Objectives Met	Implementing Agency	Status
Install security fencing around public water supply in Town Orwell	Terrorism	4-c	Town of Orwell Highway/DPW Dept.	
Join the NFIP	Flood, Severe Storm	4-a, 4-b	Town of Orwell municipal board	

7.2 Proposed Mitigation Actions

The Town proposed three (3) new mitigation actions to be included in the HMP update. These actions are described in Table 8, below and on worksheets included in Attachment A.

Table 8. 2018 Proposed Mitigation Actions Town of Orwell									
Action ID	Mitigation Action	Hazard(s) Mitigated	Implementing Agencies (Lead* & Support)	Planning Mechanism	Timeframe	New or Existing Development	Estimated Cost	Funding Source(s)	Priority
Orwell 1	Renovate existing fire department (including backup generator upgrade)	All	Town Fire Dept.*	Comprehensive Emergency Management Plan	5 years	Existing	\$500,000	FEMA- PDM; USDA-RD Community Facilities Grant	1 (High)
Orwell 2	Purchase variable message sign for Fire Dept to inform residents before and during emergencies	All	Town Fire Dept.*	Comprehensive Emergency Management Plan	3 years	Existing	\$15-20K	FEMA- PDM; USDA-RD Community Facilities Grant	2 (High)
Orwell 3	Inventory hazard trees and conduct routine maintenance	Ice Storm, Severe Storm	Town Highway Superintendent* utility companies	Comprehensive Emergency Management Plan	5 years	Existing	\$100K	FEMA- PDM; Private (utility companies)	3 (High)
Potential Funding Sources FEMA PDM: https://www.fema.gov/pre-disaster-mitigation-grant-program USDA-RD Community Facilities Grant: https://www.rd.usda.gov/programs-services/community-facilities-direct-loan-grant-program									

7.3 Cost-Benefit Analysis

Each of the Town's proposed mitigation actions were evaluated and prioritized using the STAPLEE cost-benefit analysis. The Town's STAPLEE worksheet is provided in Attachment B. The STAPLEE analysis includes the following lenses of evaluation: social, technological, administrative, political, legal, economic, and environmental.

8.0 Works Cited


Doyle, Shawn and Graham, Rose. 2016. "Town of Orwell". *History of Oswego County, New York, Marking the Bicentennial*. Eds Shawn Doyle, Roy Reehil, Debra Allen, Justin White, Janet Clerkin, Kelly Jordal, and Kara Alheim. Oswego, NY: Oswego County, New York, 2016. 88-93. Print.


U.S. Census Bureau. 2016. "Summary File." 2012 – 2016 American Community Survey. U.S. Census Bureau's American Community Survey Office, 2016. Web. Accessed 5 September 2018. Available from:
<https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>


Figure 1


**Hazard Area Extent and Location Map –
Town of Orwell**


Legend

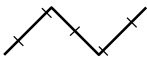
- 


Municipal Boundaries
- 


FEMA 100-Year Floodplain
- 


FEMA 100-Year Floodplain- Floodway
- 


FEMA 500-Year Floodplain
- 


Streams
- 


Active Railroads
- 

Critical Facilities
- 

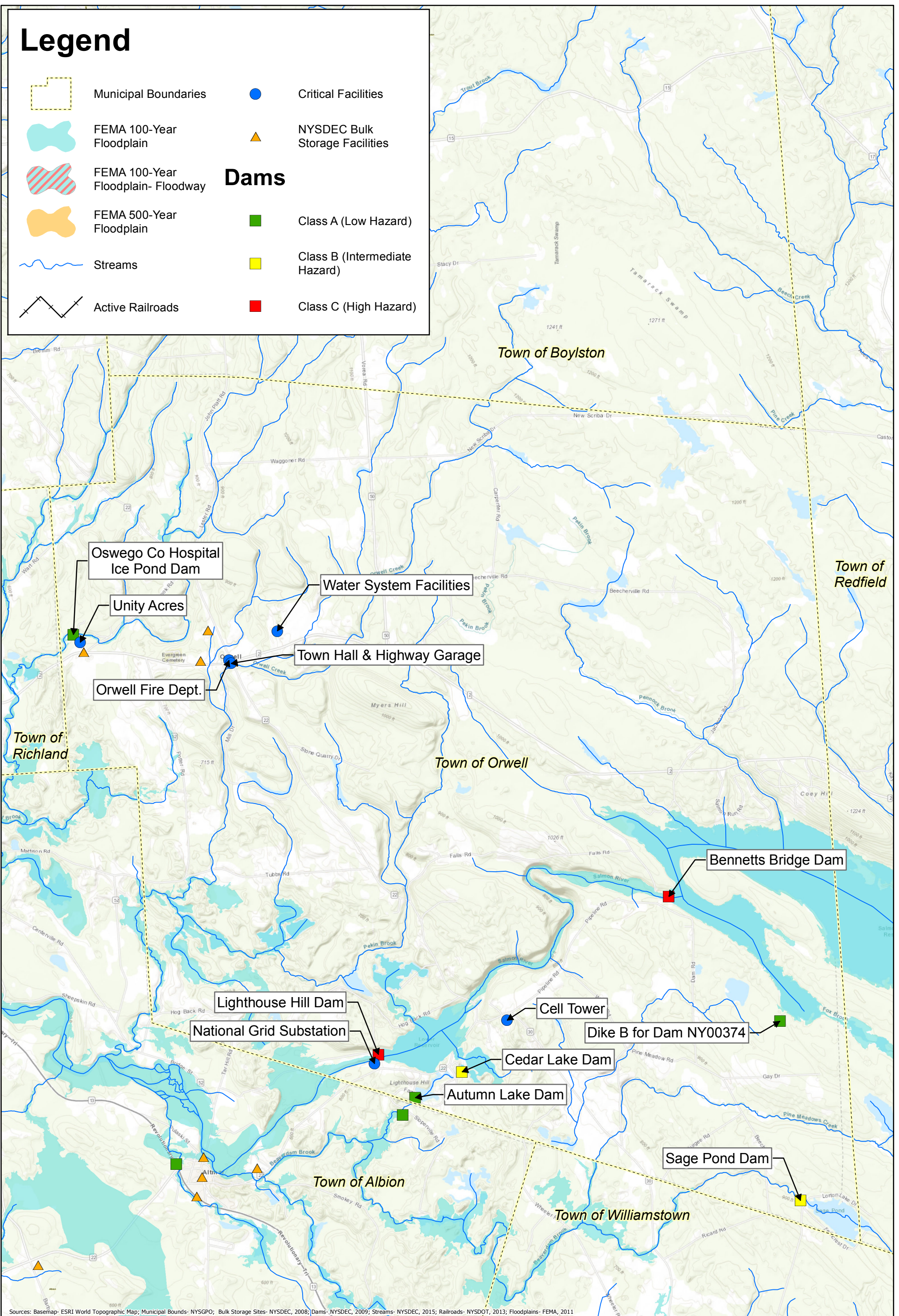
NYSDEC Bulk Storage Facilities
- 

Dams
- 

Class A (Low Hazard)
- 

Class B (Intermediate Hazard)
- 

Class C (High Hazard)



Sources: Basemap- ESRI World Topographic Map; Municipal Bounds- NYSGPO; Bulk Storage Sites- NYSDEC, 2008; Dams- NYSDEC, 2009; Streams- NYSDEC, 2015; Railroads- NYSDOT, 2013; Floodplains- FEMA, 2011

Attachment A

**Mitigation Action Worksheets –
Town of Orwell**

Oswego County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction:	Town of Orwell
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Mitigation Action Worksheet	
Project Name:	Renovate existing fire department (including backup generator upgrade)
Project Number:	Orwell 1
Risk/Vulnerability	
Hazard of Concern:	All
Description of the Problem:	The Orwell Fire Dept is one of the Town's emergency shelter locations. The Fire Dept lacks enough space to accommodate a large number of people during an emergency event.
Action of Project Intended for Implementation	
Description of the Solution:	Renovate Fire Dept (the non-truck bay areas) including an expansion to add a handicap accessible and family restroom, conversion of the existing kitchen to a larger commercial style space to feed more people, and increasing square footage to better accommodate residents during an emergency when sheltering was needed. The existing emergency generator at the Fire Dept is undersized for such an operation and would need to be upgraded to accommodate the proposed renovations.

Is this project related to a Critical Facility? Yes X No

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)

Level of Protection:	Medium	Estimated Benefits (losses avoided):	Improved sheltering accommodations for Town residents.
Useful Life:	Long-term		
Estimated Cost:	\$500,000		

Plan for Implementation			
Prioritization:	High (#1)	Desired Timeframe for Implementation:	1-5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA- PDM, USDA-RD Community Facilities Grant
Responsible Organization:	Town Fire Dept.	Local Planning Mechanisms to be used in Implementation, if any:	Comprehensive Emergency Management Plan

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	No changes to current sheltering abilities.
	Renovate Fire Dept- create additional community space only	\$300,000	Partial solution.
	Renovate Fire Dept- add community space, kitchen and bathroom upgrades, new generator	\$500,000	More complete solution- adds space and improves accommodations for residents.

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Oswego County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction:	Town of Orwell
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Mitigation Action Worksheet	
Project Name:	Purchase variable message sign for Fire Dept. to inform residents before and during emergencies
Project Number:	Orwell 2
Risk/Vulnerability	
Hazard of Concern:	All
Description of the Problem:	Currently the Town has difficulty communicating critical information to residents during emergencies and disasters
Action of Project Intended for Implementation	
Description of the Solution:	Purchase variable message board and install at Fire Dept. to alert residents and travelers of hazardous conditions (visible to people travelling along County Rt 2 and County Rt 22)

Is this project related to a Critical Facility? Yes _____ No X

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)

Level of Protection:	Medium	Estimated Benefits (losses avoided):	Better informed public
Useful Life:	Long-term		
Estimated Cost:	\$20,000		

Plan for Implementation			
Prioritization:	High (#2)	Desired Timeframe for Implementation:	1-3 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA- PDM
Responsible Organization:	Town Fire Dept.	Local Planning Mechanisms to be used in Implementation, if any:	Comprehensive Emergency Management Plan

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	Communication issues remain.
	Install variable message board at Fire Dept.	\$20,000	Immediate notification of travelers likely to encounter hazardous conditions
	Alert residents via radio, TV, or door-to-door notification by emergency response agencies	\$5,000	Door-to-door notification not practical; some residents may not have access to TV/radio or just don't listen to them.

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Oswego County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction:	Town of Orwell
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Mitigation Action Worksheet	
Project Name:	Inventory hazard trees and conduct routine maintenance
Project Number:	Orwell 3
Risk/Vulnerability	
Hazard of Concern:	Ice Storm, Severe Storm
Description of the Problem:	Hazardous trees or those weakened by infestation or disease (i.e., emerald ash borer can be damaged during severe storm events and cause damage to overhead utility lines and public infrastructure.
Action of Project Intended for Implementation	
Description of the Solution:	Identify and develop database of hazardous trees near critical facilities and utility lines. Remove or prune problem trees within Town right of way/on Town properties, and communicate with utility companies regarding maintenance of their right of ways.

Is this project related to a Critical Facility? Yes X No

(If yes, this project must intend to protect to the 500-year flood event or the actual worst damage scenario, whichever is greater.)

Level of Protection:	Medium	Estimated Benefits (losses avoided):	Prevent widespread power outages and protect critical infrastructure.
Useful Life:	10 years		
Estimated Cost:	\$100,000		

Plan for Implementation			
Prioritization:	High (#3)	Desired Timeframe for Implementation:	1-5 years
Estimated Time Required for Project Implementation:	1 year	Potential Funding Sources:	FEMA- PDM; Town budget
Responsible Organization:	Town Highway Superintendent	Local Planning Mechanisms to be used in Implementation, if any:	Comprehensive Emergency Management Plan

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	Lack documentation of hazard tree areas
	Inventory and remove or prune hazard trees within Town right of way/properties	\$90,000	Protects Town infrastructure but utility lines may still be at risk if maintenance companies are unaware of hazard areas.
	Inventory hazard trees within Town right of ways/properties and utility line corridors. Remove/prune trees on Town properties, and coordinate with utility companies to ensure hazard trees are removed as soon as possible.	\$100,000	Proactive measure to protect of Town infrastructure and utility lines

Progress Report (for Plan Maintenance)	
Date of Status Report:	
Report of Progress:	
Update Evaluation of the Problem and/or Solution:	

Attachment B

**STAPLEE Table –
Town of Orwell**

Worksheet #6

STAPLEE Criteria Consideration Table

Mitigation Action Prioritization and Comparison

Jurisdiction	Town of Orwell
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