

Town of Redfield

Jurisdictional Annex

Town of Redfield

1.0 Contacts

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

- Tanya Yerdon –Town Supervisor
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Town Website: <http://townofredfield.com/>

2.0 Municipal Profile

Population

The 2016 American Community Survey estimated that 536 people live in the Town of Redfield. The Town's population has increased since the 2000 Census population (607) by 11.7% (U.S. Census Bureau, 2016).

Location

The Town of Redfield is located in the northeastern portion of Oswego County and is bordered by the Towns of Boylston and Orwell to the west, Williamstown to the south, the Town of Osceola (Lewis County) to the east, and the Town of Worth (Jefferson County) to the north. Redfield is located approximately eleven (11) miles east of the Interstate 81 corridor.

Brief History

The Town of Redfield was formed in 1800, the largest and second oldest Town in Oswego County. The Redfield area was first settled in the 1790s by European pioneers from Connecticut. Settlement increased during the War of 1812 as the Fort Stanwix and Sackets Harbor military route intersected the Town. Logging was the dominant industry in Redfield, and a number of sawmills operated during the 1800s. The forests in Redfield had a large percentage of hemlock trees, the bark of which were used for tanning. Agriculture was another important industry in the Town of Redfield throughout the late 1800s, particularly along the Salmon River. Today, logging remains one of the most significant industries in the Town (Doyle and Grant, 2016).

Governing Body

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

Future Growth

The Town of Redfield is seeking stable growth. In early 2017, a large wind farm was proposed to be located in the northern part of the Town and in the neighboring Town of Worth (Jefferson County). The project has not yet been approved. No other significant developments have occurred within the Town since the County's 2012 HMP was 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
Utility Failure	3	3	2	1	High	1
Severe Winter Storm	3	1	2	3	High	2
Fire	1	3	2	1	Moderate	3
Ice Storm	3	1	3	2	High	4
Wildfire	2	3	2	1	Moderate	5
Severe Thunderstorm, Wind, or Tornado	3	1	3	3	High	6
Flood	2	2	3	3	High	7
Water Supply Contamination	2	3	2	1	Moderate	8

Table 1: Hazard Vulnerability by Event						
Hazard Event	Extent	Onset	Impact (Damages and Injury)	Frequency	Vulnerability Rank	Jurisdiction Rank
Radiological Fixed	1	3	2	1	Moderate	9
HAZMAT Transit	1	3	1	1	Moderate	10
Transportation Accident	2	3	2	1	Moderate	11

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 Redfield. The tables below denote the number and locations of critical facilities within the Town.

Table 2: Critical Facilities in the Town of Redfield			
Facility Name	Address (Street, Town/Town/Hamlet)	Parcel Located in Floodplain	Structure Located in Floodplain
Transportation Network			
Evacuation Routes	-	-	-
Bridges	-	-	-
Public Utilities			
Cell Tower	off of County Rt 17	No	No
Cell Tower	off of Waterbury Rd	100YR	No
Municipal Services			
Town Highway Garage	1 Balcom Dr, Redfield, NY 13437	No	No
Redfield Town Office	4830 County Rt 17 Redfield, New York 13437	100YR	100YR
Emergency and Medical Services			
Redfield Volunteer Fire Co.	4879 County Rt 17 Redfield, New York 13437	No	No
Community Services			
U.S. Post Office	7 School Rd Redfield, NY 13437	No	No
Dams			
Dike C for Dam NY00374	Dike C for Dam NY00374	-	-
Dike D for Dam NY00374	Dike D for Dam NY00374	-	-

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 Redfield. 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 Redfield 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 Redfield 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. Redfield, along with other areas in Oswego County, is a popular snowmobiling location during the winter.

Historical Hazard Occurrences and Damage Estimates

The Town of Redfield 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 Redfield. Redfield is known as one of the snowiest places in the country, with total accumulations of over 300 inches in recent years.

Future Potential Impacts

The Town of Redfield 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 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 years in Oswego County. These storms typically affect most or all of the County. The entire Town of Redfield 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 Redfield was affected by the three county-wide ice storm events recorded by the NCDC, 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 Redfield.

Future Potential Impacts

The Town of Redfield 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.

4.1.3 Wildfire

A wildfire is an uncontrollable combustion of trees, brush, or grass involving a substantial land area which may have the potential for threatening human life and property. Wildfires often begin unnoticed and spread quickly and are usually signaled by dense smoke that fills the area for miles around. In Oswego County, past occurrences of wildfires were caused by open burning.

Hazard Vulnerability

The Town of Redfield is moderately susceptible to a wildfire. The Town primarily consists of forested cover and also has a large number of agricultural properties. A wildfire event could impact a moderate amount of the Town and would come with little to no warning. The Town of Redfield experienced 0 to 0.8 wildfires per square mile between 2003 and 2017 (see Figure 5.9, Appendix A of the main body of the report).

Historical Hazard Occurrences and Damage Estimates

There are no historical records or damage estimates of wildfires within the Town of Redfield. Previous wildfire events within Oswego County were generally caused by open burning during dry weather. The NYSDEC implemented a statewide open burn ban in 2010, which has helped reduce the number of wildfires throughout the state. Wildfires generally do not cause significant property damages as they tend to occur in undeveloped portions of the County. Crop damage is more likely to occur. However, the jurisdiction or County would likely incur significant costs associated with firefighting and other emergency response needs.

Future Potential Impacts

The Town of Redfield is largely undeveloped and remains susceptible to wildfires, though the risk is relatively low. The statewide open burn ban is expected to remain in effect, which lessens the risk of wildfires.

4.1.4 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 nine (9) specific severe storm events that occurred in the Town of Redfield between 1993 and 2017. Seven (7) events were thunderstorm winds, one (1) was hail, and one (1) was a funnel cloud. Estimated property damages for the Town of Redfield ranged from \$5,000 to \$50,000 (Table 3). Actual damages were likely greater than those estimated by the NCDC.

Table 3: Severe Storm Event Records for the Town of Redfield				
Event Type	Date	Magnitude	Estimated Property Damage	Estimated Crop Damage
Hail	5/15/1993	1 inch	\$50,000	-
Thunderstorm Wind	9/3/1993	-	\$5,000	-
Thunderstorm Wind	6/15/2000	-	\$8,000	-
Thunderstorm Wind	8/1/2005	50 kts	\$10,000	-
Thunderstorm Wind	9/28/2010	56 kts	\$10,000	-
Thunderstorm Wind	9/2/2013	50 kts	\$15,000	-
Thunderstorm Wind	6/20/2016	50 kts	\$10,000	-
Funnel Cloud	8/16/2016	-	-	-
Thunderstorm Wind	8/22/2017	50 kts	\$10,000	-
Total			\$118,000	-

Future Potential Impacts

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

4.1.5 Flood

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

Hazard Vulnerability

The Town of Redfield 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 Town of Redfield 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 2013)			
Town of Redfield Total Area	Percent of Total Area		
	100-Year Floodplain	500-Year Floodplain	Area of Minimal Flood Hazard
59,709 acres	7.96%	0.00%	91.68%

Table 5 below summarizes the value of properties in the Town of Redfield 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 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	0	-	0	-
Commercial	2	\$737,100	0	-
Community Services	3	\$127,300	0	-
Industrial	1	\$0	0	-
Residential	100	\$6,364,400	0	-
Utility	1	\$344,492	0	-
Other**	124	\$277,000	0	-
Total	231	\$7,850,292	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, one (1) flood record was noted to specifically impact the Town of Redfield. This event occurred on September 30, 2010 and involved 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. Total damages of \$10,000 for the Town of Redfield during this event were estimated by the NCDL. 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 Redfield. There are no repetitive loss properties in the Town of Redfield.

Future Potential Impacts

Properties along the Salmon River, which flows through the center of the Town, and its tributaries are vulnerable to flooding. Approximately 7.9% of the Town of Redfield is within a mapped 100-year floodplain. Two of the Town's critical facilities, a cell tower and the Town Hall, are located on parcels that intersects the 100-year floodplain. The cell tower itself is outside

of the floodplain (Table 2), but the Town Hall is adjacent to the mapped floodplain. The Town Hall has a total estimated structure value of \$127,300.

4.2 *Technological Hazards*

Technological hazards selected to be profiled for the Town of Redfield 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 Redfield 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 Redfield 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 Fire

Hazard Vulnerability

The Town of Redfield had a moderate vulnerability ranking for fires. These events tend to be more localized, affecting one (1) to several structures at a time. However, there is little to no warning and substantial structural damages and injuries or deaths are likely to occur. The portion of the Town just north of the Salmon River, which is most densely developed, would be the most vulnerable area for a fire event.

Historical Hazard Occurrences and Damage Estimates

Structural fires occur occasionally within the Town. The Redfield Hotel, located at 4886 County Route 17, caught fire on July 31, 2009. The Hotel was a very popular location in the Town, especially for snowmobilers during the winter.

Future Potential Impacts

The Town of Redfield is largely undeveloped. The developed portions (primarily in the southern part of the Town near County Route 17 and County Route 47, north of the Salmon River) are most susceptible to structure fires.

4.2.3 Water Supply Contamination

Hazard Vulnerability

The Town of Redfield would be moderately vulnerable to water supply contamination due to the moderate extent, fast onset, and moderate damage or injury potential for this hazard. All properties in the Town are currently dependent on private wells for potable water. While unlikely, contamination could be caused due to localized groundwater contamination, such as during flooding events.

Historical Hazard Occurrences and Damage Estimates

There are no historical records or damage estimates for water supply contamination in the Town of Redfield. However, if this event were to occur, it has the potential to cause a moderate number of injuries or loss of life.

Future Potential Impacts

The Town is susceptible to a water supply contamination event, but the risk is relatively low.

4.2.4 Radiological Fixed Site

Hazard Vulnerability

A fixed-site radiological incident could occur at the Exelon Fitzpatrick Nuclear Power Plant or Ninemile Point Nuclear Power Plant which are located in the Town of Scriba. These facilities are about twenty-five (25) miles west of the Town of Redfield. An accident at either nuclear plant may affect residents in the Town of Redfield, however, the Town is outside of the ten (10) mile Emergency Planning Zone of the nuclear plants.

Historical Hazard Occurrences and Damage Estimates

There are no available records for radiological fixed site events in the Town or Oswego County. The Town of Redfield elected to profile this hazard due to the nuclear power plants located in the County and potential for numerous injuries or loss of life if an accident were to occur at these facilities.

Future Potential Impacts

The Town is not highly susceptible to radiological fixed-site events.

4.2.5 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 Redfield contains several major roadways, County Routes 2 and 17. County Route 2 runs east to west through the southern half of the Town. County Route 17 runs north to south through the center of the Town. A transportation accident involving hazardous materials on these roadways has the potential to impact a portion of the Town of Redfield.

Historical Hazard Occurrences and Damage Estimates

There are no specific records of HAZMAT in transit events in the Town of Redfield. This hazard has been documented in other portions of the County (see main body of this plan update for details). However, the Town of Redfield 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 and 17.

4.2.6 Transportation Accident

Hazard Vulnerability

For the purposes of hazard mitigation, a transportation accident is defined as an accident on land, water, or in the air resulting in mass casualties or a substantial loss of property. The Town of Redfield contains County Routes 2 and 17, two main transportation routes. There is potential for major accidents to occur, especially as a result of poor road conditions during a

winter storm or ice storm. A transportation accident on County Routes 2 and 17 has the potential to impact a portion of the Town of Redfield.

Historical Hazard Occurrences and Damage Estimates

While minor vehicular accidents are relatively common throughout the County, there are no specific records of major transportation accidents in the Town of Redfield (accidents involving mass casualties or substantial loss of property). The Town elected to profile this hazard due to the increased risk of this hazard occurring along main roadways.

Future Potential Impacts

Major transportation accidents are infrequent, but the Town remains susceptible to future incidents along main roadways, particularly as a result of natural hazards such as a severe winter storm or ice storm. Transportation accidents do not pose a large risk to infrastructure, however, they are likely to cause injuries or loss of life. Maintaining roadway safety and clearly designating evacuation routes can aid in prevention of transportation accidents.

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 Redfield	Notes
Plans		
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 	Town Code Enforcement Officer
Subdivision Regulations	X	Adopted.
Property Set-Back Ordinance	X	In place.
Flood Regulations	X	Adopted.

Table 6. Planning Mechanisms and Capabilities		
Planning Mechanism	Town of Redfield	Notes
Site Plan Review Requirements	X	In place.
Real Estate Disclosure Requirement	X	In place.
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
Hydraulic Study	X	In progress
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 Redfield, 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 Redfield has two (2) established emergency shelters:

- Redfield Town Hall- 4830 CR 17, Redfield, NY 13437
- Redfield Fire Dept.- 4879 CR 17, Redfield, NY 13437

The Town Hall and Fire Dept. are both ADA-compliant. The Town has a dog shelter that may be used to house pets during an emergency, if space is available.

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 Redfield based on the 2017 NYS Hazard Mitigation Planning Standards.

- **Potential Temporary and Permanent Housing Location**
 - Redfield Town Park- CR 17, Redfield, NY 13437

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 Redfield currently participates in the NFIP. As of July 2018, the Town had five (5) flood insurance policies in-force, with a total coverage of \$439,000, 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 Redfield 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 Redfield proposed four (4) mitigation actions in the 2012 Oswego County HMP. The details and status of those actions are described in Table 7 below. The Town has completed several mitigation-related projects in recent years.

Table 7. 2012 Hazard Mitigation Actions Town of Redfield				
Proposed Mitigation Action	Hazard(s) Mitigated	2012 Goals & Objectives Met	Implementing Agency	Status
Implement response protocols to remove debris jams from waterways	Flood	3-c	County DPW, Municipal DPW/Highway, Fire Depts., Canal Corps, USACE	Ongoing- Highway Dept. handles this sufficiently.
Implement response protocols to remove ice jams from waterways	Ice jam	4-d, 4-e, 5-a, 5-e	County DPW, Municipal DPW/Highway, Fire Depts., Canal Corps, USACE	Ongoing- Highway Dept. handles this sufficiently.
Tree removal CR 39, CR 27, Ryan Rd, Hayes Dr, Jess Dr, Teachout Rd – Town Redfield	Utility failure	3-b	Town of Redfield Highway, County Highway	Ongoing- Highway Dept. handles this sufficiently.
Upgrade culverts/bridges Town of Redfield: Ryan Rd, Yerdon Dr, Harvester Mill Rd, Littlejohn Dr, Abe's Dr, Castor Dr, Fox Rd, CR 17, Waterbury Rd	Severe storm, flood, winter storm, ice jam	4-d, 5-f	Town of Redfield Highway, County Highway	Ongoing- Highway Dept. has completed some culvert/bridge upgrades but more remain (i.e. Little John Rd)

7.2 Proposed Mitigation Actions

The Town proposed two (2) 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 Redfield									
Action ID	Mitigation Action	Hazard(s) Mitigated	Implementing Agencies (Lead* & Support)	Planning Mechanism	Timeframe	New or Existing Development	Estimated Cost	Funding Source(s)	Priority
Redfield 1	Establish centralized public outreach by adding hazard mitigation information to Town website	All	Town Fire Dept*, Town Highway Dept	Comprehensive Emergency Management Plan	1 year	Existing	\$500	Town budget	1 (High)
Redfield 2	Little John Rd rehabilitation (elevate road, replace culverts)	Flood	Town Highway Dept*	Highway Dept. Improvement Plan	1-2 years	Existing	\$100-500K	FEMA- PDM, NYSDOT- CHIPS	2 (High)
Potential Funding Sources FEMA PDM: https://www.fema.gov/pre-disaster-mitigation-grant-program NYSDOT CHIPS: https://www.dot.ny.gov/programs/chips									

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.

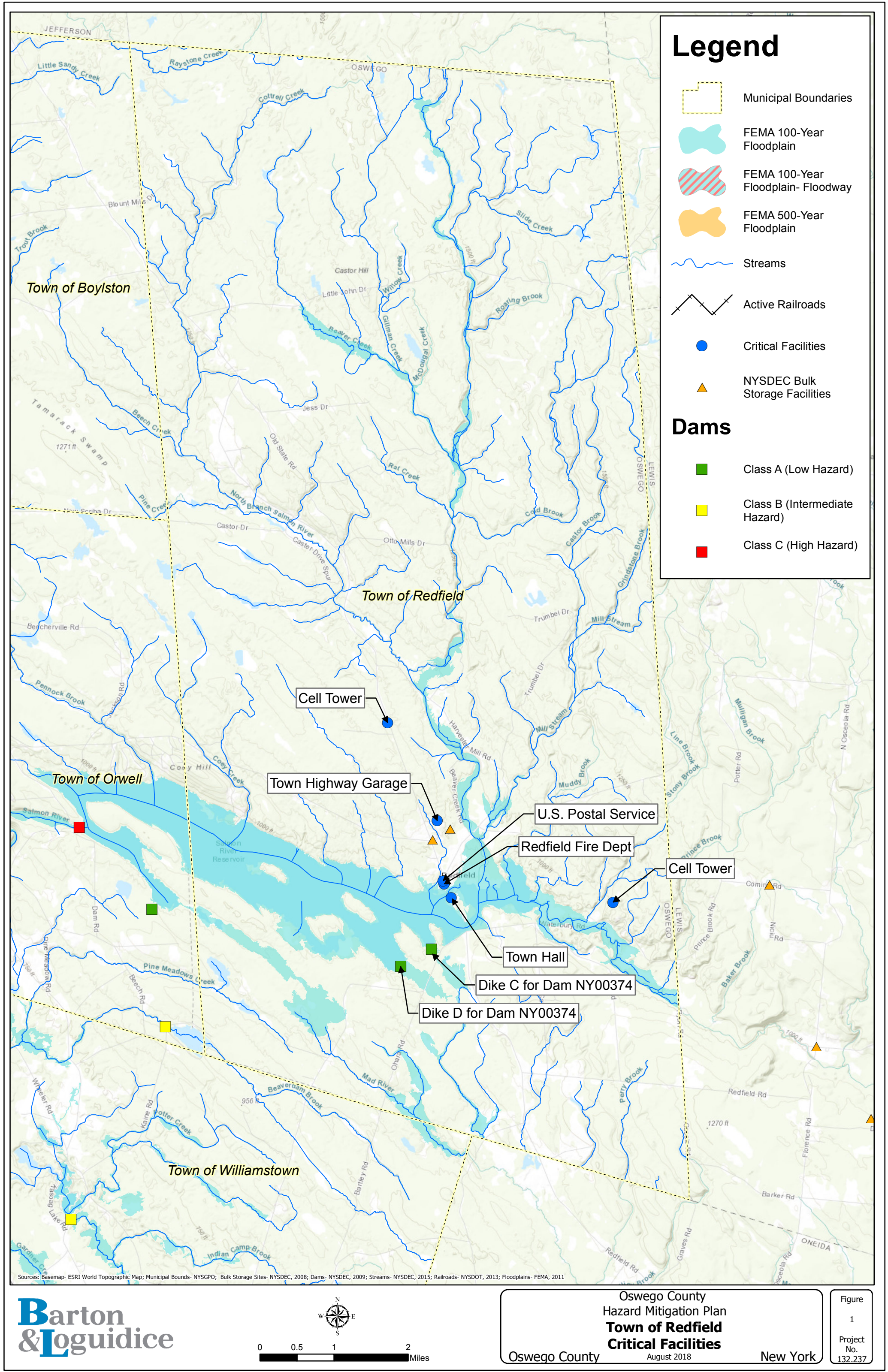
8.0 Works Cited

Doyle, Shawn and Grant, Liz. 2016. "Town of Redfield". *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. 104-110. 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 Redfield**



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 Redfield**

Oswego County Multi-Jurisdictional Hazard Mitigation Plan

Name of Jurisdiction:	Town of Redfield
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Mitigation Action Worksheet	
Project Name:	Establish centralized public outreach by adding hazard mitigation information to Town website
Project Number:	Redfield Town 1
Risk/Vulnerability	
Hazard of Concern:	All
Description of the Problem:	Currently the Town lacks a central point for people to access information regarding hazard mitigation as well as emergency preparedness and response.
Action of Project Intended for Implementation	
Description of the Solution:	Add hazard information, hazard mitigation information, emergency preparedness resources, and steps to take during emergencies to the Town website.

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):	Increased efficiency for Town staff (fewer public questions during emergencies), better informed public.
Useful Life:	Long-term, ongoing- update as needed		
Estimated Cost:	\$500		

Plan for Implementation			
Prioritization:	#1 (High)	Desired Timeframe for Implementation:	1 year
Estimated Time Required for Project Implementation:	6 months -1 year	Potential Funding Sources:	Town budget
Responsible Organization:	Town Fire Dept., Highway 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	Public continues to lack knowledge of how to prepare/what to do in an emergency situation.
	Add emergency preparedness resources to website.	\$500	Better informed public in general.
	Add hazard mitigation, emergency preparedness resources, and specific protocol for residents to follow during particular hazard events within the Town.	\$500	Better protection- more specific local information available.

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 Redfield
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Mitigation Action Worksheet	
Project Name:	Little John Rd rehabilitation (elevate road, replace culverts)
Project Number:	Redfield Town 2
Risk/Vulnerability	
Hazard of Concern:	Flood
Description of the Problem:	Portions of Little John Rd experience repetitive flooding issues, particularly the area near a beaver dam and stream crossing. This causes road erosion and travel safety issues.
Action of Project Intended for Implementation	
Description of the Solution:	Elevate roadway and replace culverts along flood-prone portion of road.

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):	Improved road safety and decrease in flooding issues.
Useful Life:	Long-term- 15+ years		
Estimated Cost:	\$1 million		

Plan for Implementation			
Prioritization:	#2 (High)	Desired Timeframe for Implementation:	1-2 years
Estimated Time Required for Project Implementation:	2 years	Potential Funding Sources:	FEMA- PDM; NYSDOT- CHIPS
Responsible Organization:	Town Highway Dept.	Local Planning Mechanisms to be used in Implementation, if any:	Highway Dept. Improvement Plan

Three Alternatives Considered (Including No Action)			
	Action	Estimated Cost	Evaluation
Alternatives:	No Action	\$0	.Flooding risks remain.
	Elevate road and replace culverts for flood susceptible sections of road.	\$500,000	Decrease in flooding issues
	Replacement of entire 1-mile stretch of road	\$1 million	Not required at this time

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 Redfield**

Worksheet #6

STAPLEE Criteria Consideration Table

Mitigation Action Prioritization and Comparison

Jurisdiction	Town of Redfield
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[illegible]