



**ANNEX D**  
**TOWN OF CANADICE**

# ANNEX D: TOWN OF CANADICE

- Jurisdiction Profile ..... 2
  - Overview ..... 2
  - Population and Demographics ..... 3
  - Population Growth ..... 3
  - Future Development ..... 3
  - Plan Maintenance ..... 4
  - Public Participation ..... 4
- Hazard Profiles ..... 6
  - Dam Failure ..... 6
  - Drought ..... 8
  - Extreme Cold ..... 9
  - Extreme Heat ..... 10
  - Flood ..... 11
  - Hail ..... 15
  - Ice Storm ..... 17
  - Landslide ..... 18
  - Lightning ..... 19
  - Snow Storm ..... 21
  - Tornado ..... 22
  - Wildfire ..... 24
  - Wind ..... 28
  - Climate Change Considerations ..... 29
  - Human-Caused Hazards ..... 29
- Previous Mitigation Actions ..... 30
- New Mitigation Actions ..... 34
- Capability Assessment ..... 40

# ANNEX D: TOWN OF CANADICE

## JURISDICTION PROFILE

### OVERVIEW

The Town of Canadice is located in Ontario County, New York, with a population of just over 1,600. The Town of Canadice is in the Finger Lakes region of New York and is in the southwestern part of its county. According to the United States Census Bureau, the town has a total area of 32.5 square miles of which 30.0 square miles is land and 2.4 square miles is water. The eastern town line is partly defined by Honeoye Lake, the western town line by Hemlock Lane, and Canadice Lake is entirely within the town, both minor Figure Lakes. The southern and western town lines form a part of the border of Livingston County. Figure D-1 shows the general location of the Town of Canadice.

## TOWN OF CANADICE CONTACT INFORMATION

Name: Christopher Vastola

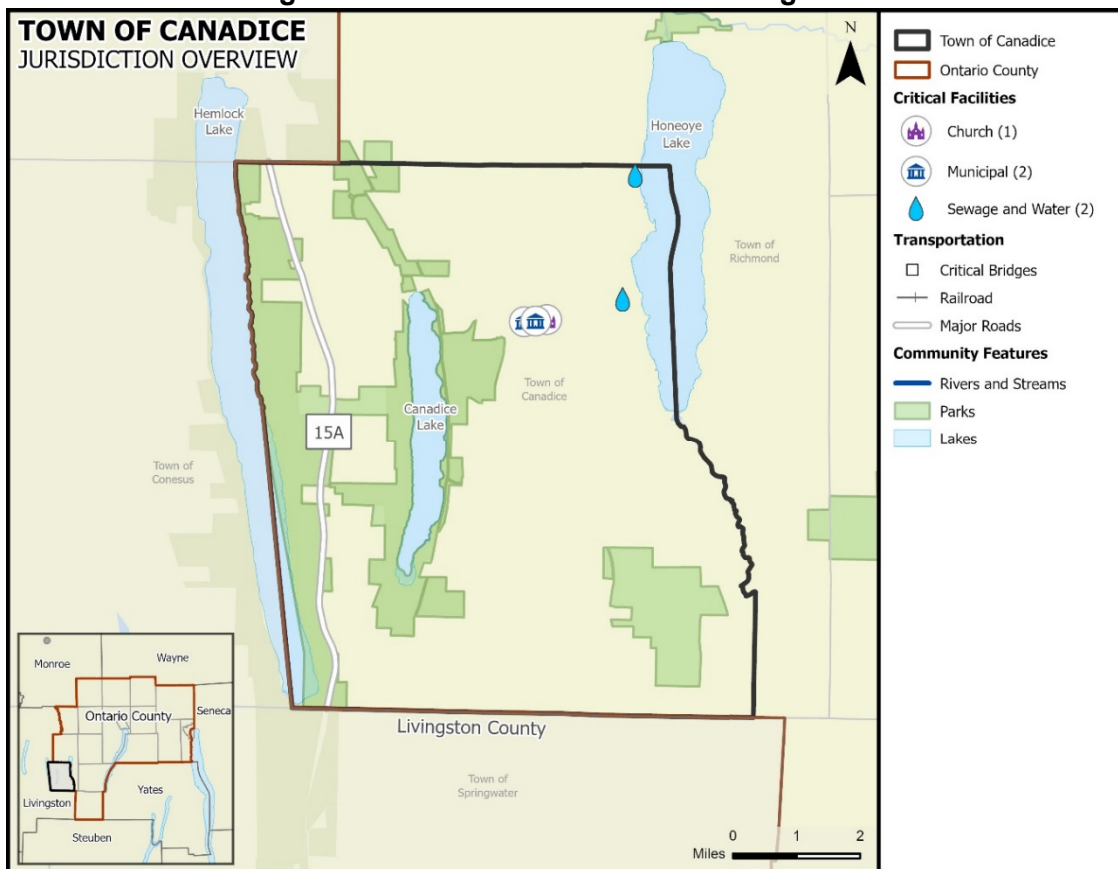
Title: Town Supervisor

Phone: (585) 367-2050, ext. 1

Address: 5949 County Rd 37, Springwater, NY 14560

Email: [supervisor@canadice.org](mailto:supervisor@canadice.org)

Figure D-1. Town of Canadice Planning Area<sup>1</sup>



<sup>1</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023)

## ANNEX D: TOWN OF CANADICE

### POPULATION AND DEMOGRAPHICS

According to the 2020 Census population count, the Town of Canadice has an official population of 1,668 residents, a 4 percent increase since the 2010 census. Table D-1 summarizes select characteristics of vulnerable or sensitive populations in the Town of Canadice using data from the U.S. Census Bureau 2021 American Community Survey (ACS) five-year estimates. Note that in some cases the 2021 ACS estimates may differ from the 2020 Census count; the ACS estimates are used throughout this section for consistency.<sup>2</sup>

Between official U.S. Census population counts, the estimate uses a formula based on new residential building permits and household size. It is simply an estimate and there are many variables involved in achieving an accurate estimation of people living in a given area at a given time.

**Table D-1. Population Distribution for the Town of Canadice**

JURISDICTION	TOTAL 2010 POPULATION	TOTAL 2021 POPULATION	PERCENTAGE CHANGE	ESTIMATED VULNERABLE OR SENSITIVE POPULATIONS <sup>3</sup>		
				Youth (Under 5)	Elderly (Over 65)	Below Poverty Level
Town of Canadice	1,664	1,690	1.56%	68	369	118

### POPULATION GROWTH

The official 2020 Town of Canadice population is 1,668. Overall, the Town of Canadice experienced a decrease in population between 1990 and 2020 of 1.4 percent, or a decrease by 189 residents. Between 2010 and 2020, the Town of Canadice experienced a population growth. Table D-2 provides historic change rates in the Town of Canadice.

**Table D-2. Population Growth for the Town of Canadice, 1990-2020<sup>4</sup>**

JURISDICTION	1990 <sup>5</sup>	2000 <sup>6</sup>	2010	2020	POP CHANGE 1990-2020	PERCENT OF CHANGE	POP CHANGE 2010-2020	PERCENT OF CHANGE
Town of Canadice	1,857	1,846	1,664	1,668	-189	-1.4%	4	0.2%

### FUTURE DEVELOPMENT

To better understand how future growth and development in the Town of Canadice might affect hazard vulnerability, it is useful to consider population growth, occupied and vacant land, the potential for future development in hazard areas, and current planning and growth management efforts. This section includes an analysis of the projected population change, and economic

<sup>2</sup> Source: <https://www.census.gov/en.html> and <https://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/2021/>

<sup>3</sup> The Estimated Vulnerable or Sensitive Populations are based off the 2021 American Community Survey 5-Year Estimates Data Profiles.

<sup>4</sup> U.S. Census Bureau

<sup>5</sup> Source: <https://www2.census.gov/library/publications/decennial/1990/cp-1/cp-1-34-2.pdf?#>

<sup>6</sup> Source: <https://www2.census.gov/library/publications/2003/dec/phc-3-34.pdf>

## ANNEX D: TOWN OF CANADICE

impacts. D-3, as provided by Cornell University’s Program on Applied Demographics<sup>7</sup>. **This information is only available at the County level**; however, the population projection shows an increase in population density for the County, which would mean overall increase for the planning area.

**Table D-3. Ontario County Population Projections**

LAND AREA (SQ MI)	2010		2020		2030		2040	
	Population							
	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)	Total Number	Density (Land Area, SQ MI)
644	107,931	167.59	111,349	172.90	114,374	177.60	114,770	178.21

### PLAN MAINTENANCE

The Ontario County Hazard Mitigation Plan Update provides explanation on how each participating jurisdiction will be involved in implementing, evaluating, and enhancing the Plan over time. Please see Section 27 of this Plan for additional information regarding plan maintenance for the entire planning area.

Periodic revisions of the Plan are required to ensure that goals, objectives, and mitigation actions are kept current. When the plan is discussed in these sections it includes the risk assessment and mitigation actions as a part of the monitoring, evaluating, updating and review process. Revisions may be required to ensure the Plan remains in compliance with federal and state statutes and regulations. Table D-4 indicates the department and title of the party responsible for Plan monitoring, evaluating, updating, and review of the Plan.

**Table D-4. Team Member Responsible for Plan Monitoring, Evaluating, Updating, and Review of the Plan**

JURISDICTION	TITLE
Town of Canadice	Town Supervisor

### PUBLIC PARTICIPATION

A series of public meetings were held throughout the Ontario County planning area to collect public and stakeholder input. Topics of discussion included the purpose of hazard mitigation, discussion of the planning process, and types of natural hazards. In addition, a public survey was developed to solicit public input during the planning process from citizens and stakeholders and to obtain data regarding the identification of any potential hazard mitigation actions or problem areas. The survey was promoted by local officials and a link to the survey was posted on the Town of Canadice’s website. A total of 6 surveys were completed for the Town of Canadice. Additional meeting documentation and survey results can be viewed in Appendix E and Appendix B, respectively.

<sup>7</sup> Source: <https://pad.human.cornell.edu/counties/projections.cfm>

## ANNEX D: TOWN OF CANADICE

Public input was an integral part of the preparation of this Plan and will continue to be essential for Plan updates. The public will be directly involved in the annual evaluation, monitoring, reviews and cyclical updates. Changes or suggestions to improve or update the Plan will provide opportunities for additional public input. The public can review the Plan on the Town of Canadice's website, where officials and the public are invited to provide ongoing feedback, via email.

The Planning team is responsible for notifying stakeholders and community members on an annual basis and maintaining the Plan. Media, including local newspaper and radio stations, will be used to notify the public of any maintenance or periodic review activities during the implementation, monitoring, and evaluation phases. Additionally, local news media will be contacted to cover information regarding Plan updates, status of grant applications, and project implementation. Local and social media outlets, such as Facebook and X (formerly known as Twitter), will keep the public and stakeholders apprised of potential opportunities to fund and implement mitigation projects identified in the Plan.

# ANNEX D: TOWN OF CANADICE

## HAZARD PROFILES

### DAM FAILURE

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the dam failure hazard for each participating jurisdiction impacted by dam failure (Section 5). The National Dam Safety Review Board (in coordination with FEMA) and the National Inventory of Dams (NID) lists a total of 10 dams in the entire Ontario County planning area, including all jurisdictions. Each of these dams were analyzed individually by location, volume, elevation, and condition (where available) when determining the risk, if any, for each dam. Each dam site was further analyzed for potential risks utilizing FEMA’s National Flood Hazard Layer to map locations and fully understand development near the dam and topographical variations that may increase risk. Based on the detailed analysis, the planning team was able to determine that only 1 of the 10 dams identified pose a risk to the Town of Canadice.

**Table D-5. Town of Canadice Dam Survey<sup>8</sup>**

LOCATIONS AT RISK	DAM NAME	HEIGHT (Ft.)	MAX STORAGE (Acre Ft.)	CONDITION	HAZARD CLASSIFICATION
Town of Canadice	Canadice Lake Dam	11	16,195	Satisfactory	High

#### **Canadice Lake Dam**

Canadice Lake Dam is located in the Town of Canadice and is owned by the City of Rochester. The earthen dam was constructed in 1947 and it primarily serves as a water supply source. Dam failure presents a low to moderate threat for the Town of Canadice and loss of life is not expected. The area located near the dam is semi-rural with approximately 50 residential structures and several access roads within 3 miles of the dam. Extensive damages are not anticipated in the event of a breach due to the limited storage of the dam. Maximum storage capacity is 16,195 acre-feet. In the event of a breach during extreme conditions, a dam failure could cause limited infrastructure damages, minor power outages and could disrupt utility systems.

In the event of a breach, it is estimated that the average breach width would be 195.2 feet with a maximum breach flow of 10,862 cubic feet per second according to the National Weather Service (NWS) Dam Break Equation. A dam breach could result in an estimated depth of up to 3-5 feet, with the highest depth in the immediate area of the dam.

There are no reported dam failure events or other dam incidents recorded during the reporting period. While the Town of Canadice is profiling dam failure, there are no known incidents, events, or damages as a result of dam failure in the planning area.

#### *PROBABILITY OF FUTURE EVENTS*

Based on historical occurrences of dam failures, the probability for future events is considered “Unlikely” for the Town of Canadice, meaning an event is possible in the next ten years.

---

<sup>8</sup> National Inventory of Dams

## ANNEX D: TOWN OF CANADICE

### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of potential hazard impacts. None of the identified critical facilities in the Town of Canadice were located within the estimated dam inundation zone. Impacts to critical facilities located in estimated inundation zones are listed in the dam failure hazard profile (Section 5).

Flooding is the most prominent effect of dam failure. If the dam failure is extensive, a large amount of water would enter the downstream waterways forcing them out of their banks. There may be significant environmental effects, resulting in flooding that could disperse debris and hazardous materials downstream that can damage local ecosystems. If the event is severe, debris carried downstream can block traffic flow, cause power outages, and disrupt local utilities.

Annualized loss-estimates for dam failure are not available; neither is there a breakdown of potential dollar losses for critical facilities, infrastructure and lifelines, or hazardous-materials facilities. Historically, the overall severity of impact from a dam failure for the Town of Canadice would be considered “Limited,” meaning it could result in injuries that can be treated with first-aid, critical facilities being shut down for 24-hours or less and less than 10 percent of the property in the estimated breach inundation area destroyed or with major damage.



## ANNEX D: TOWN OF CANADICE

### DROUGHT

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the drought hazard for each participating jurisdiction (Section 6). Drought conditions are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area. Historical drought data for the County, including the Town of Canadice, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 6 of the Plan Update.

#### *PROBABILITY OF FUTURE EVENTS*

According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience a drought event approximately once every one to two years. This frequency supports a “Highly Likely” probability of future events.

#### *VULNERABILITY AND IMPACT*

While the entirety of the Ontario County planning area, including the Town of Canadice, is exposed to drought events, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from these events. However, drought impacts are mostly experienced in water shortages, breaks in water lines, or crop and livestock losses on agricultural lands and typically have minimal impact on buildings.

The Town of Canadice planning team members identified critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of potential hazard impacts caused by drought events. Drought impacts to critical facilities are similar across the entire planning area and are listed in detail in the drought hazard profile (Section 6). The following critical facilities would be vulnerable to drought events in the Town of Canadice:

**Table D-6. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The population over 65 in the Town of Canadice is estimated at 22 percent of the Town’s total population and children under the age of 5 are estimated at 4 percent, or an estimated total of 437 potentially vulnerable residents in the Town of Canadice based on age. In addition, an estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-7).

**Table D-7. Populations at Greater Risk**

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Canadice	369	68	118

Historic losses are reported on a county-wide basis. Please see Section 6 of this Plan for additional information on historical and annualized losses for the entire planning area.

## ANNEX D: TOWN OF CANADICE

### EXTREME COLD

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the extreme cold hazard for each participating jurisdiction (Section 7). Extreme cold events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area. For the purposes of evaluating this hazard, the following NCEI reporting categories are included under extreme cold: cold/wind chill, extreme cold, frost/freeze, and winter weather. Historical extreme cold data for the County, including the Town of Canadice, are provided on a County-wide basis per the NCEI database. Therefore, all historical events are listed in Section 7 of the Plan Update.

#### *PROBABILITY OF FUTURE EVENTS*

According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience an extreme cold event approximately once every year. This frequency supports a “Highly Likely” probability of future events.

#### *VULNERABILITY AND IMPACT*

While the entirety of the Ontario County planning area, including the Town of Canadice, is exposed to extreme cold events, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from these events. However, the Town of Canadice planning team members identified the following critical facilities (Table D-8) as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by this hazard. Extreme cold impacts to critical facilities are similar across the entire planning area and are listed in detail in the extreme cold hazard profile (Section 7). The following critical facilities would be vulnerable to extreme cold events in the Town of Canadice:

**Table D-8. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The population over 65 in the Town of Canadice is estimated at 22 percent of the Town’s total population and children under the age of 5 are estimated at 4 percent, or an estimated total of 437 potentially vulnerable residents in the Town of Canadice based on age. In addition, an estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-9).

**Table D-9. Populations at Greater Risk**

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Canadice	369	68	118

Historic losses are reported on a county-wide basis. Please see Section 7 of this Plan for additional information on historical and annualized losses for the entire planning area.

## ANNEX D: TOWN OF CANADICE

### EXTREME HEAT

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the extreme heat hazard for each participating jurisdiction (Section 8). Extreme heat events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area. Historical extreme heat data for the County, including the Town of Canadice, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 8 of the Plan Update.

#### *PROBABILITY OF FUTURE EVENTS*

According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience an extreme heat event approximately once every year. This frequency supports a “Highly Likely” probability of future events.

#### *VULNERABILITY AND IMPACT*

While the entirety of the Ontario County planning area, including the Town of Canadice, is exposed to extreme heat events, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from these events. However, the Town of Canadice planning team members identified the following critical facilities (Table D-10) as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by this hazard. Extreme heat impacts to critical facilities are similar across the entire planning area and are listed in detail in the extreme heat hazard profile (Section 8). The following critical facilities would be vulnerable to extreme heat events in the Town of Canadice:

**Table D-10. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The population over 65 in the Town of Canadice is estimated at 22 percent of the Town’s total population and children under the age of 5 are estimated at 4 percent, or an estimated total of 437 potentially vulnerable residents in the Town of Canadice based on age. In addition, an estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-11).

**Table D-11. Populations at Greater Risk**

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Canadice	369	68	118

Historic losses are reported on a county-wide basis. Please see Section 8 of this Plan for additional information on historical and annualized losses for the entire planning area.

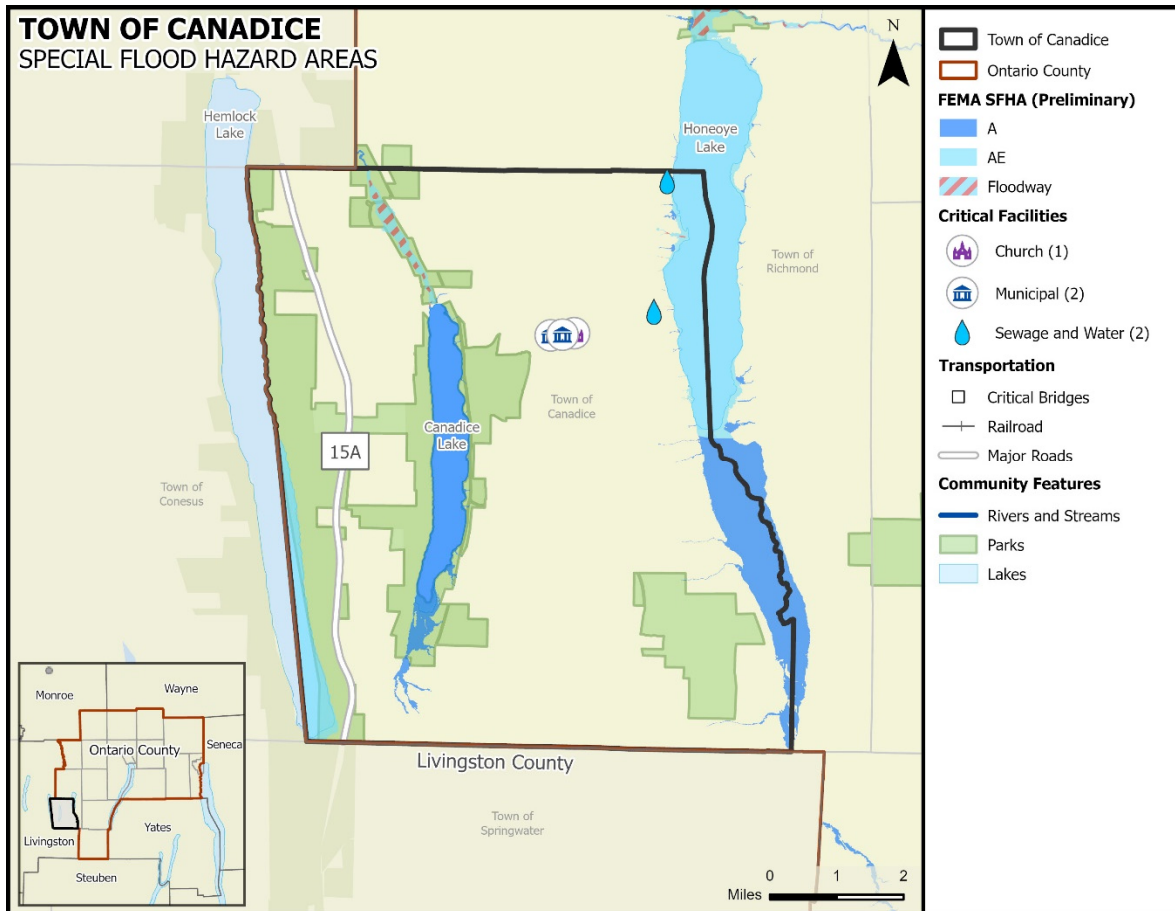
# ANNEX D: TOWN OF CANADICE

## FLOOD

### HAZARD DESCRIPTION, LOCATION, & EXTENT

The Ontario County Hazard Mitigation Plan Update provides a hazard description and extent of the flood hazard for the entire Ontario County planning area in Section 9. Flood hazard delineations with elevations are available in portions of the Town of Canadice, some areas feature flood hazard boundary maps only with no flood elevations. The location of estimated flood zones for the Town of Canadice, based on the Digital Flood Insurance Rate Maps (DFIRM) from FEMA is illustrated in Figure D-2.

**Figure D-2. Estimated Flood Zones in the Town of Canadice<sup>9</sup>**



### HISTORICAL OCCURRENCES

Table D-12 provides the historical occurrences of flood events for the Town of Canadice according to the Storm Prediction Center (NOAA), National Centers for Environmental Information (NCEI) database for Ontario County. From January 1996 through to August 2023, 6 flood events were known to have impacted the Town of Canadice, based upon NCEI records. Flood events are often reported on a county-wide basis, or under-reported for individual municipalities, particularly in smaller communities.

<sup>9</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), Ontario County Preliminary Flood Data (2023)

## ANNEX D: TOWN OF CANADICE

**Table D-12. Historical Flood Events, 1996-2023<sup>10</sup>**

JURISDICTION	DATE	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Canadice	7/13/2010	0	0	\$40,755	\$0
	4/26/2011	0	0	\$1,448,552	\$0
	7/28/2014	0	0	\$43,509	\$0
	5/18/2015	0	0	\$18,682	\$0
	6/14/2015	0	0	\$62,054	\$0
	7/23/2017	0	0	\$24,198	\$0
<b>Totals</b>		<b>0</b>	<b>0</b>	<b>\$1,637,750</b>	

Based on the list of historical flood events for the Town of Canadice no reported events have occurred since the 2018 Plan.

### *PROBABILITY OF FUTURE EVENTS*

While some incidents may be reported at the local municipal level, as indicated above, County level events provide a more robust risk assessment for each participating jurisdiction. According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience approximately one to two flood events every year. This frequency supports a “Highly Likely” probability of future events.

### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified critical facilities as assets that are considered the most important to the planning area and are susceptible to a range of potential impacts from a variety of natural hazards, including those facilities located in the regulatory floodplain. There are no critical facilities in the Town of Canadice located in the floodplain. Historic loss estimates due to flood are presented in Table D-13 below.

**Table D-13. Potential Annualized Losses, 1996-2023<sup>11</sup>**

JURISDICTION	NUMBER OF EVENTS	PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Town of Canadice	6	\$1,637,750	\$59,555

While all citizens are at risk of the impacts of a flood, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-14). While warning times for these type of hazard events should be substantial enough for individuals to seek shelter, individuals who work and recreate outside are also vulnerable to potential impacts of a flood event.

<sup>10</sup> Events are reported from January 1996 through August 2023; values are in 2023 dollars.

<sup>11</sup> Historical events are reported from January 1996 through August 2023; values are in 2023 dollars.

## ANNEX D: TOWN OF CANADICE

**Table D-14. Populations at Greatest Risk**

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Canadice	118

The severity of a flooding event varies depending on the relative risk to citizens and structures located within each jurisdiction. Table D-15 depicts the level of impact for the Town of Canadice.

**Table D-15. Town of Canadice Impact**

JURISDICTION	IMPACT	DESCRIPTION
Town of Canadice	Limited	It is anticipated that the Town could anticipate an impact of “Limited” with critical facilities shut down for a week or less, and less than 10 percent of property would be destroyed or damaged.

### *NATIONAL FLOOD INSURANCE PROGRAM (NFIP) PARTICIPATION*

The Town of Canadice currently participates in the National Flood Insurance Program and is in good standing. The community has adopted a flood damage prevention ordinance that includes the minimum requirements for development in special flood hazard areas.

### *NFIP COMPLIANCE AND MAINTENANCE*

The Town of Canadice has developed mitigation actions that relate to NFIP participation, maintenance or compliance. Compliance and maintenance actions can be found in Section 26. Flooding was identified by the Town of Canadice as a low risk hazard during hazard ranking activities at the Risk Assessment Workshop. However, many of the mitigation actions for the jurisdiction were developed with flood mitigation in mind.

The Town of Canadice Code Enforcement Officer is designated as the local floodplain administrator and is responsible for maintaining compliance in the NFIP through development regulations as outlines in the community flood damage prevention ordinance. The floodplain administrator is responsible for

- Permitting and inspecting construction activity in the floodplain
- Ensuring conformance with floodplain permit requirements
- Enforcing floodplain regulations
- Identifying Substantially Damaged structures and ensuring compliance during reconstruction
- Identifying Substantial Improvements in proposed development permit applications and ensuring compliance during construction
- Providing floodplain map and flood insurance information to the public
- Coordinating with FEMA to maintain the community’s participation in the NFIP
- Keeping records of construction in the floodplain

Table D-16 provides the most recent CAC/CAV dates along with the current status for the jurisdiction.

## ANNEX D: TOWN OF CANADICE

**Table D-16. Compliance History**

JURISDICTION	DATE OF LAST CAC	DATE OF LAST CAV	CURRENT NFIP STATUS	POLICIES IN FORCE
Town of Canadice	N/A	8/13/2014	Good Standing	3

### *REPETITIVE LOSS*

Table D-17 shows repetitive loss and severe repetitive loss properties for the Town of Canadice.

**Table D-17. Repetitive Loss and Severe Repetitive Loss Properties**

JURISDICTION	BUILDING TYPE	NUMBER OF LOSSES
Town of Canadice	2-4 Family	0
	Assumed Condo	0
	Non-Residential	0
	Other Residential	0
	Single Family*	2

## ANNEX D: TOWN OF CANADICE

### HAIL

#### *HAZARD DESCRIPTION, LOCATION, & EXTENT*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location and extent of the hail hazard for each participating jurisdiction (Section 10). Hail events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area.

#### *HISTORICAL OCCURRENCES*

Historical evidence across the planning area demonstrates that the Town of Canadice is vulnerable to hail events overall. However, a total of 0 reported historical hail events impacted the Town of Canadice between January 1956 through August 2023; these events were reported to NCEI and NOAA databases and may not represent all hail events to have occurred during the past 67.5 years.

#### *PROBABILITY OF FUTURE EVENTS*

Historical hail events are often reported on a county-wide basis. While some incidents may be reported at the local municipal level, as indicated above, county level events provide a more robust risk assessment for each participating jurisdiction. According to historical records for the Ontario County planning area, the Town of Canadice can expect a hail event approximately every one to two years. This frequency supports a “Highly Likely” probability of future events.

#### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified the following critical facilities as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by hailstorm events. Hail impacts to critical facilities are similar across the entire planning area and are listed in detail in the hail hazard profile (Section 10).

**Table D-18. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The U.S. Census data indicates a total of 209 (17 percent of total housing stock) manufactured homes located in the Town of Canadice. In addition, 58 percent (approximately 713 structures) of the housing structures in the Town of Canadice were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damages during significant hail events.

**Table D-19. Structures at Greater Risk**

JURISDICTION	MANUFACTURED HOMES	SFR STRUCTURES BUILT BEFORE 1980
Town of Canadice	209	713

While all citizens are at risk of the impacts of hail, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-20).



## ANNEX D: TOWN OF CANADICE

**Table D-20. Populations at Greatest Risk**

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Canadice	118

Overall, the total loss estimate of property and crops in the Town of Canadice is \$0 with an average annualized loss of \$0. Based on historic loss and damages, the impact of hail damages on the Town of Canadice can be considered “Limited” severity of impact, meaning minor quality of life lost, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed or with major damage.

**Table D-21. Estimated Annualized Losses**

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Town of Canadice	\$0	\$0

## ANNEX D: TOWN OF CANADICE

### ICE STORM

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the ice storm hazard for each participating jurisdiction (Section 11). Ice storm events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area. For the purposes of evaluating this hazard, the following NCEI reporting categories are included under ice storm: sleet, freezing fog, and ice storm. Historical ice storm data for the county, including the Town of Canadice, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 11 of the Plan Update.

#### *PROBABILITY OF FUTURE EVENTS*

According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience an ice storm event approximately once every five years. This frequency supports an “Occasional” probability of future events.

#### *VULNERABILITY AND IMPACT*

While the entirety of the Ontario County planning area, including the Town of Canadice, is exposed to ice storm events, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from these events. However, the Town of Canadice planning team members identified the following critical facilities (Table D-22) as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by this hazard. Ice storm impacts to critical facilities are similar across the entire planning area and are listed in detail in the ice storm hazard profile (Section 11). The following critical facilities would be vulnerable to ice storm events in the Town of Canadice:

**Table D-22. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The population over 65 in the Town of Canadice is estimated at 22 percent of the Town’s total population and children under the age of 5 are estimated at 4 percent, or an estimated total of 437 potentially vulnerable residents in the Town of Canadice based on age. In addition, an estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-23).

**Table D-23. Populations at Greater Risk**

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Canadice	369	68	118

Historic losses are reported on a county-wide basis. Please see Section 11 of this Plan for additional information on historical and annualized losses for the entire planning area.

## ANNEX D: TOWN OF CANADICE

### LANDSLIDE

#### *HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location and extent of the landslide hazard for all participating jurisdictions prone to landslides (Section 12). The entire planning area is primarily at low risk for potential landslides. However, the areas surrounding Honeoye Lake are at a slightly greater risk for landslides.

According to the New York State Hazard Mitigation Plan, the entire population in the Town of Canadice is at a low risk of incidence and low risk for landslide susceptibility (0-1.5%). Since 1996, the entire Ontario County planning area has had two reported incidents and no known damages due to landslides. No landslide incidents have been reported in the Town of Canadice.

#### *PROBABILITY OF FUTURE EVENTS*

Based on available records of historic events there are no known historic events of landslide in the Town of Canadice over the 27.5-year reporting period which provides a probability of one event every ten years or more. This frequency supports an “Unlikely” probability of future events for the Town of Canadice.

#### *VULNERABILITY AND IMPACT*

According to the New York State Hazard Mitigation Plan, the entire population in the Ontario County planning area is at a low risk of incidence. The only known area slightly susceptible to landslide within the planning area is along the banks of the Honeoye Lake. There have been no known impacts to structures or infrastructure in the area due to landslide and there are no critical facilities located in the areas considered at slightly greater risk. The lack of historical events or impacts supports a “Limited” severity of impact meaning injuries and/or illnesses are treatable with first aid, shutdown of facilities and services for 24 hours or less, and less than 10 percent of property is destroyed or with major damage.

## ANNEX D: TOWN OF CANADICE

### LIGHTNING

#### *HAZARD DESCRIPTION, LOCATION, & EXTENT*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location and extent of the lightning hazard for each participating jurisdiction (Section 13). Lightning events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area.

#### *HISTORICAL OCCURRENCES*

There have been no recorded lightning events in the Town of Canadice from January 1996 through August 2023. The NCEI is a national data source organized under the National Oceanic and Atmospheric Administration and considered a reliable resource for hazards. However, historical lightning events have only been reported as independent events to the NCEI in recent years and remain widely underreported. The flash density for the planning area along with input from local team members was utilized in evaluating the jurisdiction's risk. The flash density for the entire planning area indicates regular occurrences of lightning events that simply are not being reported.

#### *PROBABILITY OF FUTURE EVENTS*

Based on historical records and input from the planning team the probability of occurrence for future lightning events in the Town of Canadice is considered "Highly Likely", or an event probable in the next year. The planning team stated that lightning occurs regularly in the area.

#### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified the following critical facilities as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by lightning events. Lightning impacts to critical facilities are similar across the entire planning area and are listed in detail in the lightning hazard profile (Section 13).

**Table D-24. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

While all citizens are at risk to the impacts of lightning, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the Town of Canadice's population live below the poverty level (Table D-25).

**Table D-25. Populations at Greatest Risk**

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Canadice	118

With no historical lightning events or losses, the impacts of lightning events can be considered "Limited" with injuries or illness treatable with first aid, critical facilities and services shut down for 24 hours or less, and less than 10 percent of property destroyed. Overall, the average losses anticipated for the Town of Canadice due to lightning are considered negligible.

ANNEX D: TOWN OF CANADICE

**Table D-26. Potential Annualized Losses**

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATE
Town of Canadice	\$0	\$0

# ANNEX D: TOWN OF CANADICE

## SNOW STORM

### HAZARD DESCRIPTION, LOCATION, EXTENT, & HISTORICAL OCCURRENCES

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location, and extent of the snow storm hazard for each participating jurisdiction (Section 14). Snow storm events are not confined to specific geographic boundaries and are considered similar for all participating jurisdictions throughout the planning area. For the purposes of evaluating this hazard, the following NCEI reporting categories are included under snow storm: blizzard, heavy snow, winter storm, and lake effect snow. Historical snow storm data for the County, including the Town of Canadice, are provided on a county-wide basis per the NCEI database. Therefore, all historical events are listed in Section 14 of the Plan Update.

### PROBABILITY OF FUTURE EVENTS

According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience a snow storm event approximately once every year. This frequency supports a “Highly Likely” probability of future events.

### VULNERABILITY AND IMPACT

While the entirety of the Ontario County planning area, including the Town of Canadice, is exposed to snow storm events, existing buildings, infrastructure, and critical facilities are not likely to sustain significant damage from these events. However, the Town of Canadice planning team members identified the following critical facilities (Table D-27) as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by this hazard. Snow storm impacts to critical facilities are similar across the entire planning area and are listed in detail in the snow storm hazard profile (Section 14). The following critical facilities would be vulnerable to snow storm events in the Town of Canadice:

**Table D-27. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

The population over 65 in the Town of Canadice is estimated at 22 percent of the Town’s total population and children under the age of 5 are estimated at 4 percent, or an estimated total of 437 potentially vulnerable residents in the Town of Canadice based on age. In addition, an estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-28).

**Table D-28. Populations at Greater Risk**

JURISDICTION	POPULATION 65 AND OLDER	POPULATION UNDER 5	POPULATION BELOW POVERTY LEVEL
Town of Canadice	369	68	118

Historic losses are reported on a county-wide basis. Please see Section 14 of this Plan for additional information on historical and annualized losses for the entire planning area.

## ANNEX D: TOWN OF CANADICE

### TORNADO

#### *HAZARD DESCRIPTION, LOCATION, & EXTENT*

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location and extent of the tornado hazard for each participating jurisdiction (Section 15). The risk of a tornado is not confined to specific geographic boundaries and the risk of an event is considered similar for all participating jurisdictions throughout the planning area.

#### *HISTORICAL OCCURRENCES*

According to the National Centers for Environmental Information (NCEI) Storm Events database, from January 1994 through August 2023, no tornado events are known to have impacted the Town of Canadice.

#### *PROBABILITY OF FUTURE EVENTS*

Historical tornado events are often reported on a county-wide basis, particularly when multiple smaller jurisdictions are impacted. While some incidents may be reported at the local municipal level, county level events provide a more robust risk assessment for each participating jurisdiction due to their similar geographic locations. According to historical records for the Ontario County Planning Area, the Town of Canadice can expect to experience a tornado event once every five years. This frequency supports an “Occasional” probability of future events.

#### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified the following critical facilities as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by tornado events. Tornado impacts to critical facilities are similar across the entire planning area and are listed in detail in the tornado hazard profile (Section 15).

**Table D-29. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

According to the American Community Survey (ACS) five-year estimates for 2021, a total of 209 manufactured homes are located in the Town of Canadice (17 percent of total housing stock). In addition, 58 percent (approximately 713 structures) of the housing units were built before 1980. These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during tornado events.

**Table D-30. Structures at Greater Risk**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Town of Canadice	713	209

While all citizens are at risk to the impacts of a tornado event, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-31).

ANNEX D: TOWN OF CANADICE

**Table D-31. Populations at Greatest Risk**

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Canadice	118

The total loss estimate due to tornado events is \$0 (in 2023 dollars), having an approximate annual loss estimate of \$0. Based on historic damages and best available data the impact of a tornado event on the Town of Canadice would be considered “Limited”, with injuries and illness treatable with first aid, critical facilities and services shutdown for 24-hours or less and less than 10 percent of properties destroyed or with major damage.

**Table D-32. Estimated Average Annual Losses**

JURISDICTION	TOTAL PROPERTY & CROP LOSS	AVERAGE ANNUAL LOSS ESTIMATES
Town of Canadice	\$0	\$0



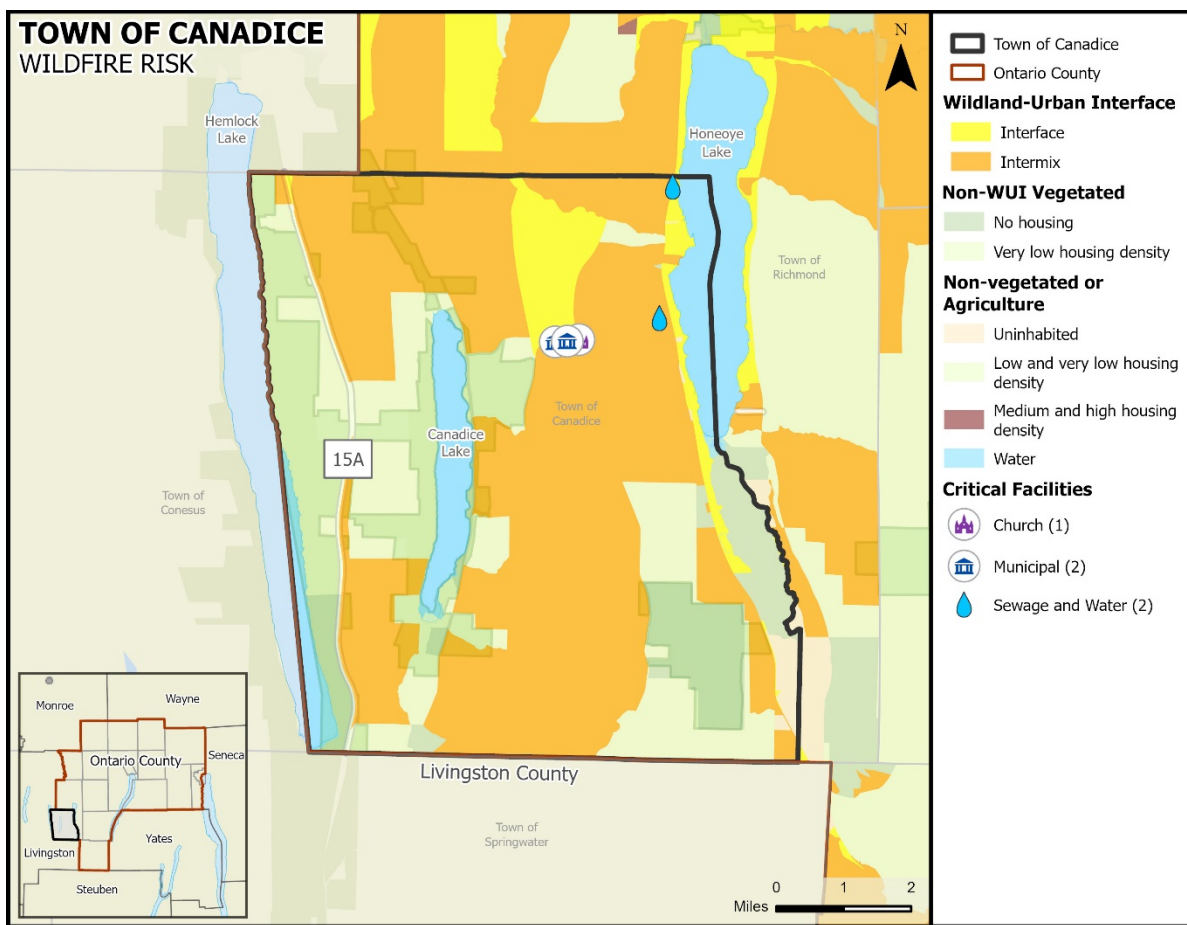
# ANNEX D: TOWN OF CANADICE

## WILDFIRE

### HAZARD DESCRIPTION, & LOCATION

The Ontario County Hazard Mitigation Plan Update provides a hazard description of the wildfire hazard for each participating jurisdiction (Section 16). A wildfire event can be a potentially damaging consequence of drought conditions, lightning, or wind event, if the conditions allow. Wildfires can vary greatly in terms of size, location, intensity, and duration. While wildfires are not confined to any specific geographic location, they are most likely to occur in open grasslands, highly vegetative areas, or along the forest floor, when conditions are favorable. The threat to people and property from a wildfire event is greater in the fringe areas where developed areas meet open grass lands, such as the Wildland Urban Interface (WUI). (Figure D-3). The Town of Canadice planning area is considered at low risk for wildfires with limited WUI areas.

Figure D-3. Town of Canadice Wildland Urban Interface Map<sup>12</sup>



The New York State Department of Environmental Conservation (NYS DEC), Division of Forest Protection regularly identifies Fire Danger Rating Area (FDRA) Risk across the state. Reviewing a combination of temperature, wind, relative humidity, fuel and/or drought conditions, the Division

<sup>12</sup> Map sources: ESRI OpenStreetMap (Custom: no labels), Census TIGER/LINE (2022), Ontario County Information Technology Department (2023), USGS ScienceBase Catalog (2022)

## ANNEX D: TOWN OF CANADICE

of Forest Protection issues color coded danger alerts. The entire planning area, including the Town of Canadice, had a “Low” FDRA Risk rating as of October 2023 (Section 16, Figure 16-2).

### *EXTENT*

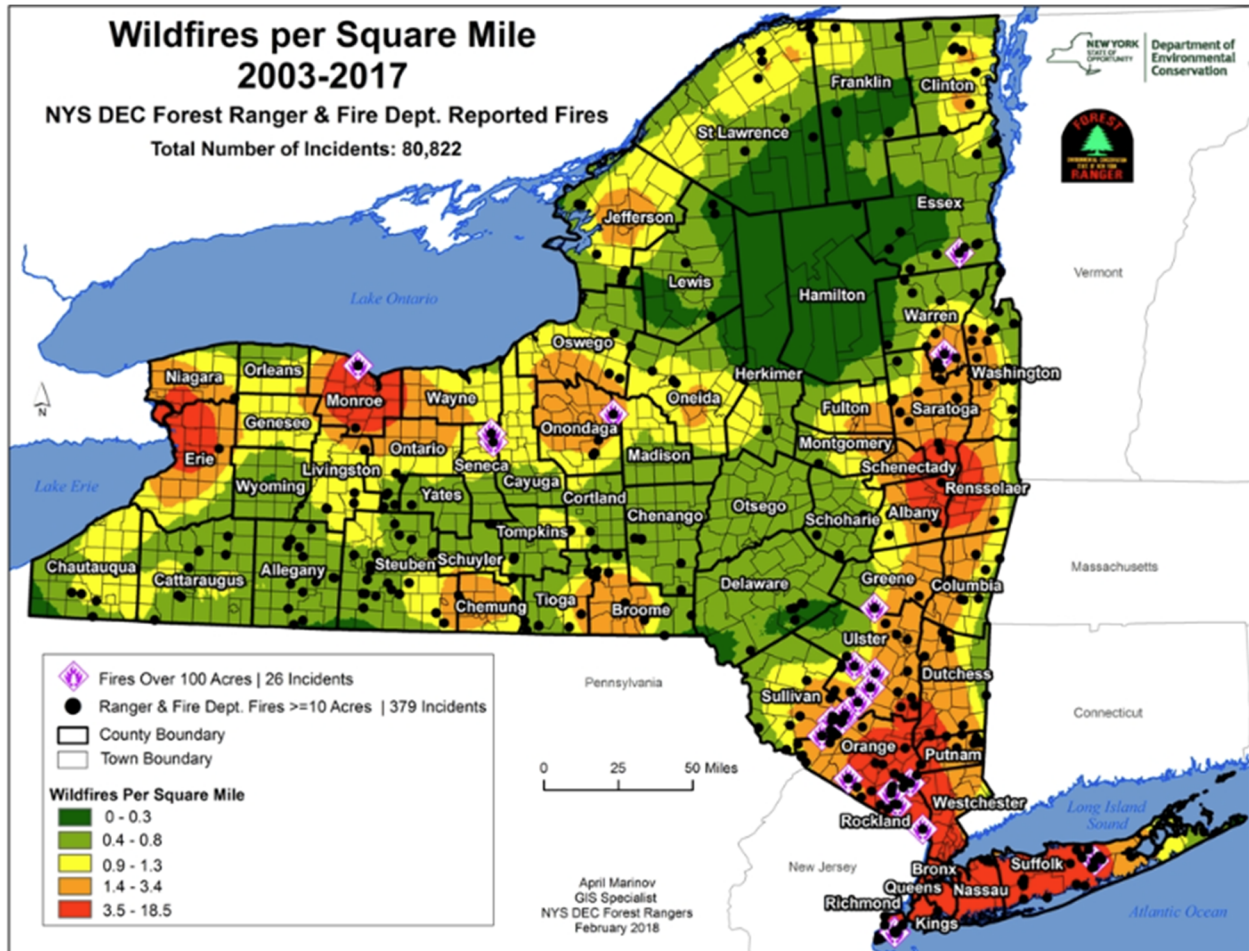
Risk for a wildfire event is measured in terms of magnitude and intensity using the Keetch Byram Drought Index (KBDI), a mathematical system for relating current and recent weather conditions to potential or expected fire behavior. The KBDI is available at the county level. The Ontario County Hazard Mitigation Plan Update provides KBDI levels and descriptions along with the range of historical KBDI levels for the planning area (Section 16).

The average extent to be mitigated for the planning area is a KBDI of 200-300. At this level fires more readily burn and will carry across an area with no gaps. Heavier fuels will not readily ignite and burn. Expect smoldering and the resulting smoke to carry into and possibly through the night. Based on historical records and readily available fuel, the planning area can anticipate a KBDI range from 0 to 500. At the high end of this range fire intensity begins to significantly increase. Fires will readily burn in all directions exposing mineral soils in some locations. Larger fuels may burn or smolder for several days creating possible smoke and control problems.

The NYS DEC provides historical wildfire statistics from 2003 through 2017 (Figure D-4). Detailed data on historic wildfires in the planning area, including damages, acres burned, fatalities, or injuries, was not available. There were no wildfires greater than 100 acres in Ontario County during that same period, but the southern portions of County have experienced incidents greater than 10 acres. The Ontario County planning area can anticipate limited future wildfire events, burning less than 10 acres.

## ANNEX D: TOWN OF CANADICE

Figure D-4. Wildfires per Square Mile, 2003-2017



### *HISTORICAL OCCURRENCES*

Between 2003 and 2022 there were 1,553 wildfire events in Ontario County. These incidents are reported countywide. Most of the incidents (877) were brush or brush and grass mixture fires followed by natural vegetation (309), and grass fires (240). Based on data provided for historical wildfire events for the Ontario County planning area, 235 events have occurred since the 2018 Plan.

### *PROBABILITY OF FUTURE EVENTS*

With 1,553 events in a 19-year period, a wildfire event within the Ontario County planning area, including participating jurisdictions, is “Highly Likely” meaning an event is probable within the next year.

### *VULNERABILITY AND IMPACT*

The Town of Canadice planning team members identified the following critical facilities as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by wildfire events. Wildfire impacts to critical facilities are similar across the entire planning area and are listed in detail in the wildfire hazard profile (Section 16).

ANNEX D: TOWN OF CANADICE

**Table D-33. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

For the Town of Canadice, the impact from a wildfire event can be considered "Limited," meaning injuries and/or illnesses are treatable with first aid, complete shutdown of facilities and services for 24-hours or less and less than 10 percent of property is destroyed or with major damage. Severity of impact is gauged by acreage burned, homes and structures lost, injuries and fatalities.

## ANNEX D: TOWN OF CANADICE

### WIND

#### HAZARD DESCRIPTION, LOCATION, & EXTENT

The Ontario County Hazard Mitigation Plan Update provides a hazard description, location and extent of the wind hazard for each participating jurisdiction (Section 17). Wind events are not confined to specific geographic boundaries and is considered similar for all participating jurisdictions throughout the planning area.

#### HISTORICAL OCCURRENCES

Since 1956, two wind events are known to have occurred in the Town of Canadice. Table D-34 presents information on known historical events impacting the Town of Canadice.

**Table D-34. Historical Wind Events, 1956-2023<sup>13</sup>**

JURISDICTION	DATE	MAGNITUDE (knots)	DEATHS	INJURIES	PROPERTY DAMAGE	CROP DAMAGE
Town of Canadice	10/15/2017	50	0	0	\$7,204	\$0
	8/8/2019	50	0	0	\$2,309	\$0
<b>TOTALS</b>		<b>(MAX EXTENT)</b>	<b>0</b>	<b>0</b>	<b>\$9,513</b>	<b>\$0</b>

Based on the list of historical wind events for the Town of Canadice, one of the reported events has occurred since the 2018 Plan.

#### PROBABILITY OF FUTURE EVENTS

Historical wind events are often reported on a county-wide basis. While some incidents may be reported at the local municipal level, as indicated above, county level events provide a more robust risk assessment for each participating jurisdiction. According to historical records for the Ontario County planning area, the Town of Canadice can expect to experience a wind event every year. This frequency supports a “Highly Likely” probability of future events.

#### VULNERABILITY AND IMPACT

The Town of Canadice planning team members identified the following critical facilities as assets that are considered the most important to the planning area. These facilities are susceptible to a range of impacts caused by wind events. Wind impacts to critical facilities are similar across the entire planning area and are listed in detail in the wind hazard profile (Section 17).

**Table D-35. Critical Facilities at Risk**

JURISDICTION	CRITICAL FACILITIES
Town of Canadice	1 Church, 2 Recreational Community Facilities, 2 Municipal Buildings, 2 Sewage and Water Facilities

According to the American Community Survey (ACS) five-year estimates for 2021, a total of 209 manufactured homes are located in the Town of Canadice (17 percent of total housing stock). In addition, 58 percent (approximately 713 structures) of the housing units were built before 1980.

<sup>13</sup> Historical events are reported from January 1956 through August 2023. Magnitude is listed when available. Damage values are in 2023 dollars.

## ANNEX D: TOWN OF CANADICE

These structures would typically be built to lower or less stringent construction standards than newer construction and may be more susceptible to damage during significant wind events.

**Table D-36. Structures at Greater Risk**

JURISDICTION	SFR STRUCTURES BUILT BEFORE 1980	MANUFACTURED HOMES
Town of Canadice	713	209

While all citizens are vulnerable to the impacts of wind events, forced relocation and disaster recovery drastically impacts low-income residents who lack the financial means to travel, afford a long-term stay away from home, and to rebuild or repair their homes. An estimated 7 percent of the Town of Canadice’s population live below the poverty level (Table D-37).

**Table D-37. Populations at Greatest Risk**

JURISDICTION	POPULATION BELOW POVERTY LEVEL
Town of Canadice	118

Impact of wind events experienced in the Town of Canadice would be considered “Limited,” with injuries or illness treatable with first aid, less than 10 percent of property destroyed and critical facilities shut down for less than 24-hours. Over the 67.5-year reporting period there has been a total of \$9,513 damages (in 2023 dollars) in the Town of Canadice due to wind events. The estimated average annual loss from a wind event is \$141.

**Table D-38. Estimated Annualized Losses**

JURISDICTION	TOTAL PROPERTY & CROP LOSS	ANNUAL LOSS ESTIMATES
Town of Canadice	\$9,513	\$141

## CLIMATE CHANGE CONSIDERATIONS

The Ontario County Hazard Mitigation Plan Update provides climate change considerations for all natural hazards for the entire planning area as climate change impacts are considered similar across all participating jurisdictions in Ontario County unless otherwise stated. Please see Sections 5 through 17 of this Plan Update for additional information on climate change considerations by hazard.

## HUMAN-CAUSED HAZARDS

The Ontario County Hazard Mitigation Plan Update provides a detailed hazard profile for human-caused hazards including fire, hazardous materials, infestation, terrorism, utility failure, and water supply contamination. Information for these hazards is limited and typically reported at the county level. As such, the evaluation of human-caused hazards is considered similar for all jurisdictions in the Ontario County planning area. Please see Sections 18 through 23 of this Plan Update for additional information on human-caused hazards evaluated for this plan.

## ANNEX D: TOWN OF CANADICE

### PREVIOUS MITIGATION ACTIONS

<b>Previous Action Worksheet</b>	
<b>TCanad-1: Stormwater management and erosion control improvements</b>	
<b>Name of Jurisdiction:</b>	Town of Canadice
<b>Name of Haz. Mit. Plan:</b>	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
<b>Risk / Vulnerability</b>	
<b>Problem being Mitigated:</b>	Concerns with flooding, stormwater management and erosion control. Issues with stormwater management facilities not being effective or needing maintenance. Roadside culverts plug up causing flooding on Lawrence Hill Road (primarily the north/south leg, but also on the east/west leg although somewhat less severe. Rip rap is also frequently displaced by excess water flow.
<b>Potential Actions/Projects (not being Implemented at this time)</b>	
<b>Actions/Projects Considered with Summary Evaluation of Each:</b>	Information not reflected in 2018 Plan
<b>Action or Project Intended for Implementation</b>	
<b>Action/Project Number:</b>	TCanad-1: Stormwater management and erosion control improvements
<b>Name of Action or Project:</b>	
<b>Action or Project Description:</b>	Investigate other approaches to rip rap, such as cable concrete, etc. which may prove to remain in place better than the rock that is currently being used.
<b>Summary of Evaluation Benefits (losses avoided):</b>	Benefits: preservation of road surface, shoulders, and drainage ditches
<b>Estimated Cost:</b>	Estimated Cost: \$45,000
<b>Other Factors Considered:</b>	
<b>Plan for Implementation</b>	
<b>Responsible Organization:</b>	Town of Canadice Highway Dept.
<b>Action/Project Priority:</b>	Medium
<b>Timeline for Completion:</b>	2019
<b>Potential Fund Sources:</b>	FEMA HMGP Funding and Public Works Department
<b>Local Planning Mechanisms to be Used in Implementation, if any:</b>	Floodplain Management Program
<b>2024 Analysis</b>	
<b>Date of Status Report:</b>	
<b>Report of Progress:</b>	Defer to Plan Update. Town has received WQIP grant for ditch stabilization to happen in 2024 along with Capitol Improvement Road Project.
<b>Evaluation of Effectiveness:</b>	

## ANNEX D: TOWN OF CANADICE

<b>Previous Action Worksheet</b>	
<b>TCanad-2: Fire hydrant inventory, assessment &amp; installation</b>	
<b>Name of Jurisdiction:</b>	Town of Canadice
<b>Name of Haz. Mit. Plan:</b>	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
<b>Risk / Vulnerability</b>	
<b>Problem being Mitigated:</b>	Fire hydrants - some areas are underserved and could use hydrants.
<b>Potential Actions/Projects (not being Implemented at this time)</b>	
<b>Actions/Projects Considered with Summary Evaluation of Each:</b>	Install additional dry hydrants at area water sources
<b>Action or Project Intended for Implementation</b>	
<b>Action/Project Number: Name of Action or Project:</b>	TCanad-2: Fire hydrant inventory, assessment & installation
<b>Action or Project Description:</b>	Survey potential areas that can be served by additional dry hydrant locations. Install additional dry hydrants at area water sources
<b>Summary of Evaluation Benefits (losses avoided): Estimated Cost: Other Factors Considered:</b>	Benefits: adequate water supplies for firefighting purposes \$10,000 est.
<b>Plan for Implementation</b>	
<b>Responsible Organization:</b>	Local Fire Departments
<b>Action/Project Priority:</b>	Low
<b>Timeline for Completion:</b>	2020
<b>Potential Fund Sources:</b>	Town Budget
<b>Local Planning Mechanisms to be Used in Implementation, if any:</b>	Emergency Response Plan
<b>2024 Analysis</b>	
<b>Date of Status Report: Report of Progress: Evaluation of Effectiveness:</b>	Completed and Defer to Plan Update. Hemlock Fire Dept. is looking into grant funding to install a new dry hydrant in 2024 on Coykendall Hill Road. The Installation of public water serviced by the Canadice Water District along the southern end of Honeoye Lake has provided fire hydrants to the residents along County. Rd. 36 and associated private roads.



## ANNEX D: TOWN OF CANADICE

<b>Previous Action Worksheet</b>	
<b>TCanad-3: Aquatic invasive species prevention on Canadice and Hemlock Lakes</b>	
<b>Name of Jurisdiction:</b>	Town of Canadice
<b>Name of Haz. Mit. Plan:</b>	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
<b>Risk / Vulnerability</b>	
<b>Problem being Mitigated:</b>	Need aquatic invasive species prevention on Canadice and Hemlock Lakes. Vegetative invasive species can also disrupt drainage ditches.
<b>Potential Actions/Projects (not being Implemented at this time)</b>	
<b>Actions/Projects Considered with Summary Evaluation of Each:</b>	Establish a program for public education for invasive species Also develop a strategy for eradication of invasive species
<b>Action or Project Intended for Implementation</b>	
<b>Action/Project Number:</b>	TCanad-3: Aquatic invasive species prevention on Canadice and Hemlock Lakes
<b>Name of Action or Project:</b>	TCanad-3: Aquatic invasive species prevention on Canadice and Hemlock Lakes
<b>Action or Project Description:</b>	Make literature available at boat launches on Canadice Lake in DEC kiosks. Vegetative invasive species spraying program.
<b>Summary of Evaluation Benefits (losses avoided):</b>	Water intake for City of Rochester remain clear
<b>Estimated Cost:</b>	Improved fishery \$50,000
<b>Other Factors Considered:</b>	Drainage ditches remain clear of vegetation
<b>Plan for Implementation</b>	
<b>Responsible Organization:</b>	Town Highway Department with support from Finger Lakes PRISM
<b>Action/Project Priority:</b>	Medium
<b>Timeline for Completion:</b>	2019
<b>Potential Fund Sources:</b>	DEC Grants if available otherwise Town Budget
<b>Local Planning Mechanisms to be Used in Implementation, if any:</b>	Honeoye Lake Watershed Management Plan
<b>2024 Analysis</b>	
<b>Date of Status Report: Report of Progress: Evaluation of Effectiveness:</b>	Defer to Plan Update.

## ANNEX D: TOWN OF CANADICE

<b>Previous Action Worksheet</b>	
<b>TCanad-4: Install erosion control measures/structures</b>	
<b>Name of Jurisdiction:</b>	Town of Canadice
<b>Name of Haz. Mit. Plan:</b>	Ontario County Multi-Jurisdictional Hazard Mitigation Plan – 2015
<b>Risk / Vulnerability</b>	
<b>Problem being Mitigated:</b>	Severe erosion of drainage ditch and damage/loss of roadway and shoulder on Curtis Road.
<b>Potential Actions/Projects (not being Implemented at this time)</b>	
<b>Actions/Projects Considered with Summary Evaluation of Each:</b>	Replace current rip rap with other material that will withstand force of water and prevent displacement.
<b>Action or Project Intended for Implementation</b>	
<b>Action/Project Number:</b>	TCanad-4: Install erosion control measures/structures
<b>Name of Action or Project:</b>	TCanad-4: Install erosion control measures/structures
<b>Action or Project Description:</b>	Install cable concrete or other erosion control structure to mitigate issue, especially on Curtis Rd. Replace current rip rap with other material that will withstand force of water and prevent displacement.
<b>Summary of Evaluation Benefits (losses avoided):</b>	Benefit: Protect road surface and shoulder from loss \$80,000- \$100,000
<b>Estimated Cost:</b>	
<b>Other Factors Considered:</b>	
<b>Plan for Implementation</b>	
<b>Responsible Organization:</b>	Highway Department
<b>Action/Project Priority:</b>	High
<b>Timeline for Completion:</b>	Ongoing
<b>Potential Fund Sources:</b>	OCSWCD, Town staff
<b>Local Planning Mechanisms to be Used in Implementation, if any:</b>	Honeoye Lake Watershed Management Plan
<b>2024 Analysis</b>	
<b>Date of Status Report:</b>	Completed. The Town lost the round 16 WQIP grant funding which the engineered project was counting on for funding. A cross culvert in the area of question was upsized in 2022, diverting a larger volume of water halfway down the hill. Cutting the total ditch volume seems to slow the velocity.
<b>Report of Progress:</b>	
<b>Evaluation of Effectiveness:</b>	

# ANNEX D: TOWN OF CANADICE

## NEW MITIGATION ACTIONS

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
1	1.4	Flood, Tornado, Wildfire, Wind	Tree Trimming Annual Maintenance Program: Tree maintenance is a priority to due utility wires. A plan will need to be developed and implemented. This project protects infrastructure, reduces cost of reparation, and prevents injury to residents.	Adopt and implement a routine tree trimming program that clears tree limbs in right-of-way; Remove dead trees from right-of way and drainage systems on a scheduled basis.	No	Further review required	12 months	Town Highway Department, in coordination with Coordination with State and County for utilization of service provider	Staff Time \$50,000 (annually)	Reduce damages to infrastructure; Ensure continuity of services during and after event; Reduce damages associated with power outages; Reduce risk of injuries or fatalities to vulnerable populations.	Local Department Budget, Staff time	M	Safety/Security
2	3.2	Flood	Debris Maintenance Education: The build-up of debris can compromise the performance of bridges and culverts, jeopardizing these installations (as well as the associated roadways). This project protects the community and reduces risk of flooding.	Educate community on the impact of debris in drainage systems located on private property up stream of culvert pipes.	No	N/A	12 months	Town Board	Staff Time	Reduce damages caused by flooding by maintaining or restoring drainage capacity.	Local Department Budget	M	Communication
3	5.4	Flood	Stormwater management and erosion control improvements at Lawrence Hill Road (primarily the north/south leg, but also on the east/west leg: Extreme rainfall events result in high stormwater flow rates, which result in the destabilization of stream channels (including streambanks), that causes erosion and deposition within	Assess current infrastructure for necessary upgrades such as ditch stabilization, rip rap, cable concrete, etc. to preserve road surface, shoulders, and drainage ditches.	No	Further review required	2024	Town Highway Department	\$60,000	Reduce the risk of flood damages due to erosion or scour during flood events. Reduce risk of injuries to residents; Reduce burden on emergency services during and after a flood event.	Local Department Budget; Local bonds; WQIP grant	H	Safety/Security

# ANNEX D: TOWN OF CANADICE

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
			these streams, as well as stream migration. The erosion of streambanks and migration of stream channels can jeopardize adjacent buildings, bridges, culverts, roadways, utilities, and other infrastructure. This project protects the community and reduces risk of flooding.										
4	5.4	Wildfire, Fire	Fire hydrant inventory, assessment & installation at Coykendall Hill Road: There are some areas within the town that have limited capacity to address fire hazards.	Survey potential areas that can be served by additional dry hydrant locations. Install additional dry hydrants at area water sources.	No	N/A	24 months	Hemlock (Local) Fire Department	\$12,500 per hydrant	Reduce risk of wildfires and the spread of wildfire by increasing water access and firefighting capabilities.	Local Department Budget; HMGP, BRIC, CDBG, PA 406 (when applicable) local bonds	L	Safety/Security
5	3.1	Extreme Heat, Drought	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme heat and drought to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include heat advisory warning alerts, water conservation techniques, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Promote hazard awareness and protect residents from potential injuries and damages.	Local Department Budget, Staff time	M	Communication

# ANNEX D: TOWN OF CANADICE

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
6	3.1	Extreme Cold, Ice Storm, Snow Storm	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of extreme cold, ice storms and snow storms to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include identifying warming stations, install warning signs at hazardous bridges and roadways subject to ice, mitigation measures to prevent frozen pipes ways, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
7	3.1	Hail, Tornado, Wind	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare bi-lingual tips for avoiding impacts of hail, tornado, and wind to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include harden/retrofitting structures, tree removal/branch maintenance, covered parking, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication

# ANNEX D: TOWN OF CANADICE

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
8	3.1	Lightning	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Prepare tips for avoiding impacts of lightning to be disseminated via press release, social media to educate citizens of hazards that can threaten the area and mitigation measures to reduce injuries, fatalities, and property damages. This can include installation of surge protectors, tree removal/branch maintenance, etc.	No	N/A	12 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication
9	3.1	Landslide	Public Awareness Program: The general public may not have a full understanding of the risk associated with hazards impacting the planning area. Education programs can provide life safety benefits to residents in the area and provide information on mitigation measures residents can employ to reduce damages to their property.	Educate property owners, elected officials, and planning and zoning decision-makers about landslide risks and best management and development practices to minimize risk/damage, which can include: avoid building near steep slopes, close to cliffs, near drainage ways, or stream channels, planting ground cover on slopes; build channels or deflection walls to direct the flow around buildings, installation of flexible pipe fittings to avoid gas or water leaks, and/or use of sandbags, retaining walls or k-rails (Jersey barriers).	No	N/A	36 months	Town Board, Ontario County Emergency Management	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication

# ANNEX D: TOWN OF CANADICE

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
10	3.1	Infestation	Invasive Species: Ontario County is at risk of being infested with invasive species which could cause great economic hardship to the community and storm water management.	Secure funding for education and best management practices to reduce damage from invasive species on county-wide own properties and private own properties.	No	N/A	36 months	Town Board, Ontario County Soil and Water Conservation District and Cooperative Extension	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	L	Communication
11	3.3	Dam Failure, Drought, Flood, Landslide, Snow Storm Tornado, Wildfire, Wind	Code Enforcement: There is a code enforcement officer shortage throughout the county. and those smaller jurisdictions may need to evaluate and update coding to follow the County (who will potentially take lead if position is vacant)	If applicable, need to evaluate and update coding to follow the County.	No	N/A	As needed	Town Board	Staff Time	Ensures compliance to current code and restrictions. Reduce damages to structures and infrastructure; Reduce risk of injuries or fatalities.	Local Department Budget	L	Communication
12	3.1	Fire, HazMat	Public Awareness Program: The general public may not be aware of the risk fire and hazardous material releases as it related to the County.	Work with local fire departments and volunteer fire departments on ways to protect residents and the community from the effects of structural fires and hazardous material releases. This can include monitoring home fire alarms/carbon monoxide alerts, fire extinguishers in home, proper safety tips, etc.	No	N/A	36-60 months	Town Board, in conjunction with Local Fire Departments	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication

# ANNEX D: TOWN OF CANADICE

TOWN OF CANADICE PROPOSED PROJECTS													
*Projects related to Critical Facilities (CF) will protect the facility to the 500-year event or worst damage scenario, whichever is greater.													
Project #	Goal / Objective being Met	Hazard to be Mitigated	Project Name and Description of the Problem	Description of the Solution	CF?*	EHP Issues	Estimated Timeline	Lead Agency	Estimated Costs	Estimated Benefits	Potential Funding Sources	Priority	Community Lifeline
13	3.1	Terrorism	Public Awareness Program: The general public may not be aware of the risk of potential domestic terrorism that could impact the County.	Work with county and local departments to better protect critical infrastructure from potential domestic or foreign terrorism. Educate the public on what to do if they have concerns on a potential threat.	No	N/A	36-60 months	Town Board, in conjunction with Local Police Department	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
14	3.1	Utility Failure	Public Awareness Program: The effects of utility failure no related to hazard events has caused power outages and inability for critical services to remain operational, effecting operations	Work with local utility providers to educate the public on ways to enhance utility operations through sending out notification to service customers by mail or paperless enrollment.	No	N/A	36-60 months	Town Board, in conjunction with local utility providers	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
15	3.1	Water Supply Contamination	Public Awareness Program: The effects of water contamination has been experienced throughout the County.	Work with local water districts on educating the public of what they can do to prevent water contamination and/or damage to water infrastructure, such as clearing out drains, better protection of critical infrastructure throughout the community, etc.	No	N/A	36-60 months	Town Board, in conjunction with water districts	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Budget	L	Communication
16	3.1	Dam Failure	Dam Inundation Risk	Identify the area potentially at- risk in the event of dam failure and educate residents at risk on ways they can mitigate and reduce the effects of downstream impacts in the event of inundation.	No	N/A	12 months	Town Board	Staff Time	Reduce risk to citizens by educating the public on how to prepare for hazards and disasters.	Local Department Budget, Staff time	M	Communication



# ANNEX D: TOWN OF CANADICE

## CAPABILITY ASSESSMENT

COMMUNITY CAPABILITY CHECKLIST	Town of Canadice
<b>PLANS</b>	
Capital Improvements Plan	
Climate Change Adaptation Plan	
Comprehensive/Master/Land Use Plan	X
Community Wildfire Protection Plan	
Continuity of Operations	
Drought Contingency Plan	
Economic Development Plan	
Emergency Management Action Plan	
Emergency Operations Plan	
Emergency Response Plan and Pandemic Plan Annex	
Extreme Heat Plan/Protocol	
Evacuation Plan	
Floodplain Management Plan	
Hazard Mitigation Plan	X
Local Waterfront Revitalization Plan	
Natural Resource Conservation Plan	
Open Space Plan	
Stormwater Management Plan	
Transportation Plan	
Watershed Protection Plan	X
<b>POLICIES/ORDINANCES</b>	
Building Codes	X
Construction Site Stormwater Runoff Control	X
Post-Construction Stormwater Management in New Development and Redevelopment	
Critical Infrastructure Protection	

## ANNEX D: TOWN OF CANADICE

COMMUNITY CAPABILITY CHECKLIST	Town of Canadice
Fire Codes	
Floodplain Ordinance	X
Illicit Discharge Detection and Elimination	X
Local Environmental Review	X
Local Wetland Regulations	X
Public Maintenance of Streets, Bridges, other	X
Regulation of Invasive Species	
Regulation for Prevention of Water Contamination	X
Regulation for Unsafe/Defective Structures	X
Sediment and Erosion Control Measures	X
Site Plan Review Requirements	X
Steep Slope Ordinance	X
Stream Buffer Ordinance	
Stormwater/ Drainage Ordinance	X
Subdivision Regulations	X
Timber Harvesting Regulations	X
Tree Protection or Landscaping Ordinance	X
Use of Pollutants: Road Salt Use, Fertilizers, Pesticides, etc.	X
Wildfire Ordinance	
Winter Road Maintenance	X
Zoning Ordinance/Land Use Restrictions	X
Additional Hazard-Related Regulations or Plans	X
PROGRAMS	
Firewise Communities	
Floodplain Maps/Flood Insurance Studies	X
Hydrologic/ Hydraulic Studies	
Mutual Aid Agreement	

## ANNEX D: TOWN OF CANADICE

COMMUNITY CAPABILITY CHECKLIST	Town of Canadice
National Flood Insurance Program Participant	X
NFIP Community Rating System Participant	
Property Acquisition Program	
Public Education/ Awareness Programs	
Stream Maintenance Program	
Storm Drainage Systems Maintenance Program	
StormReady Communities	
Warning Systems/ Services	
STAFF / DEPARTMENTS	
Building Code Official	X
Emergency Manager	
Engineer/Public Works Official	
Environmental Conservation Specialist	
Floodplain Administrator	X
GIS Specialist	
Personnel with Hazard Knowledge	
Planners	
Public Information Official	
Resource Development/ Grant Writer	